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powering people

TEG report on EU taxonomy for environmentally sustainable activities

A Eurelectric response paper

September 2019

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.

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KEY MESSAGES

- 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 (i.e. Clean Energy Package when it comes to the energy sector) and the EU long-term decarbonisation objectives should be ensured. It should also be recalled that sustainable finance is not the only vehicle in this context. Cohesion, regional and structural funds will also bring a much needed support on the pathway to decarbonisation. The next EU Multiannual Financial Framework (MFF) is for instance a key budgetary instrument in achieving the agreed political objectives on fighting climate change and in accomplishing the clean energy transition in the EU.

- **The EU electricity industry is committed to achieve a carbon-neutral electricity mix in Europe by 2045** and serve as a solution-maker towards the achievement of the EU climate objectives under the Paris Agreement.

- **A carbon neutral power system will be dominated by RES which would represent more than 80% of the electricity mix by 2045.** To allow for a cost-efficient transition while keeping the lights on, such a system-wide shift will see a significant increase of variable generation, but also require **firm, dispatchable and flexible carbon neutral and low-carbon capacity to ensure security of supply.**

- **Such firm, dispatchable and flexible carbon neutral and low-carbon capacity will be provided by competing sources from both within and outside the power sector** such as hydropower, biomass, nuclear power, demand response, batteries, power-to-gas, power-to-x. Some of these technologies are already fully commercially available at scale while others will be deployed in the medium to long term.

- With this in mind, Eurelectric asks the TEG to go beyond the technology-specific screening criteria and to **recognize the necessity of a system approach**: the possibility to evaluate technologies based on their ability to support a system with high shares of variable RES and therefore contribute to security of supply should be included.

- **In principle, Eurelectric supports the introduction of the proposed emission performance threshold of 100g CO2/kWh** as it will catalyse sustainable finance into renewable-based

and carbon-neutral technologies in line with EU Long-Term Strategy. But careful consideration should be given on the potential impact of such threshold on the cost of the transition and on security of supply. **This threshold cannot be applied without a careful consideration on the following power system realities:**

- To ensure a cost-efficient energy transition while keeping the lights on, **a transitional flexible set-up for highly efficient natural gas fired units** may be required, especially while large scale deployment of demand response, storage and power-to-gas technologies is yet to happen. In this context, a specific approach should be envisaged for specific gas infrastructures which directly connect highly efficient natural gas fired units needed for security of power supply.
- **Nuclear** – which is internationally recognized as a crucial asset in the fight against climate change and in particular in the EU Long-Term Strategy – **should be included within the taxonomy scope,** while of course being subject to appropriate DNSH criteria[1].
- **It should be clarified that the proposed threshold applies to power generation only** and not to the entire life cycle of a plant. Reaching 0g CO2/kWh by 2050 will be impossible even for RES, if construction and decommissioning phases are taken into account.
- It is also necessary to **ensure consistency in the objectives, methodologies and assumptions with other emission performance thresholds** in place in current European legislation (such as in the EIB lending criteria or in the Electricity Regulation EU/2019/943).

- The proposed **Life Cycle Evaluation should be uniformly applied in form of technology-specific standard values for the upstream LCE instead of project-specific individual measurements** to avoid unnecessary administrative burden. On the basis of those technology-specific LCE standard values, **technologies that have sufficient evidence of being far below or far above the threshold of the Emission Performance Standard of 100g CO2 / kWh should be exempted from the LCE assessment**. For example, on this basis, investments in wind, solar, new and existing hydropower projects, nuclear and new and existing geothermal power plant should be exempted from the LCE assessment.

- There is clear evidence that much higher levels of electrification are required to achieve a carbon neutral economy. **All investments in the electricity grid infrastructure (both at transmission and distribution level) should therefore be defined as sustainable** to support decarbonisation of the EU economy through electrification based on renewable and carbon-neutral electricity supply.

- The proposed Taxonomy currently does not reflect the complexity, the uncertainty and the ongoing innovation around different types of decarbonised gases, the related gas infrastructure adaptation needs and the challenges and opportunities of sector coupling. We therefore call on the Technical Expert Group to take into account this complexity and to acknowledge the need to further develop technical screening criteria to assess the different types of gas infrastructure investments and upgrades needed to enable the deployment of decarbonised gases complying with the proposed threshold, while ensuring that investments which do not support the long term decarbonisation objectives are not

[1] Oesterreichs Energie does not support the inclusion of nuclear in the Taxonomy.

de facto considered as sustainable. Indeed, 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.**

- Last but not least, **for the assessment of the sustainability of a portfolio of assets, the taxonomy should not only use the 'share of revenue' (turnover)** as it does not adequately reflect the efforts of a company to transition to sustainable activities. Such assessment should be complemented with the **EBITDA** (earnings) and with the **use of planned investments or investments in the last year**.

Introduction

The EU electricity industry is striving to achieve a carbon-neutral electricity mix in Europe by 2045 and serve as a solution-maker towards the achievement of the EU climate objectives under the Paris Agreement.

A decarbonised power sector is indeed at the heart of the European fight against climate change. Deep decarbonisation of the EU economy is achievable with 60% of electrification according to our recent Decarbonisation Pathways study[2], and we are committed to deliver. Decarbonised electricity is increasingly recognised as the key solution to decarbonise the entire economy (transport, buildings and industry) at an affordable cost.

To deliver carbon neutral electricity by 2045, investments in clean electricity generation, distribution networks and other transition-enabling technologies such as storage and demand response will be needed. Eurelectric's Decarbonisation Pathways study indicates investment needs of € 89-111 bn/year in order to achieve this objective.

In this perspective, the European Power sector welcomes and supports the objective of the Commission Action Plan on Sustainable Finance to enable inclusive growth and encourage capital markets to re-orient capital flows in society's long-term needs for innovation and infrastructures. The translation of policy goals into a clear European framework for investors and managers of capital is key to accelerate the shift to a resource-efficient and low-carbon economy.

Finance should work to catalyse long-term innovation and enable rapid deployment of the best available solutions for the decarbonisation, electrification and digitalisation of the economy**. To achieve sustainable finance, we believe that financial sector will play a key role for delivering those solutions which seek to mitigate and adapt to effects of climate change and environmental degradation.** It is key to develop a system where companies' efforts are appropriately assessed by financial institutions and finance is properly mobilized. Further, it is important that the chosen setup does **not impose unjustified burdens and administrative costs**. As a consequence, the EU Taxonomy be **consistent with the EU acquis** (i.e. Clean Energy Package when it comes to the energy sector) **and the EU long-term decarbonisation objectives.**[3]

Creating a common language for investors and assets managers is crucial to support the transition towards a carbon-neutral economy. Eurelectric welcomes the effort of the European Commission Technical Expert Group (TEG) on taxonomy to provide recommendations on developing technical screening criteria for complying with the EU climate change mitigation objectives, adaptation objectives and 'do not significant harm' (DNSH) to other environmental objectives. **Eurelectric members strongly call on the co-legislators to ensure that the EU taxonomy and related technical screening criteria take a forward looking approach to determine whether an economic activity is environmentally sustainable, while supporting the enhancement of innovative business models.** This is particularly relevant because the taxonomy is not only relevant to assess the sustainability of individual activities, facilities or projects, but also to assess the sustainability of portfolios of assets involving sustainable and non-sustainable activities, and, in particular, to assess companies which are involved in a variety of taxonomy-eligible and non-eligible activities. Specifically, the energy transition will involve the transformation of the activities of virtually all energy companies, which have to gradually phase-down their "traditional" non-taxonomy-eligible business and

[2] https://cdn.eurelectric.org/media/3457/decarbonisation-pathways-h-5A25D8D1.pdf
[3] More details are available in the section 1 providing feedback on the methodology used.

replace it with sustainable businesses. This is a process that has already started: energy companies across Europe and the world have already focus most (or all) of their new investments in sustainable activities, but still operate existing assets (and will continue to do so for a number of years, if we want to maintain the current levels of security of supply). Inevitably, a significant (although decreasing) part of these companies revenues and EBITDA will come from these traditional activities and businesses during the transition process.

Because of this, the taxonomy should not only reward current performance, but also take companies' transitional plans into account. In our view, the TEG proposal to use the 'share of revenue' (turnover), for the assessment of portfolios of activities is not appropriate because of two reasons:

- **the TEG Report's use of revenues (turnover) is a less adequate financial measure because they are less stable and too influenced by commodity prices and other market conditions**. Thus, the revenue does *not* give the right picture of a company's contribution reaching the sustainable goals of EU. **EBITDA (earnings) is a more appropriate measuring instrument, is mostly preferred by investors and financial analysts and is more stable regarding market conditions**. Additionally, seen in the light of creating right incentives, EBITDA of eligible activities such as distribution or renewables tends to be higher than EBITDA of thermal generation;

- however, this "backward looking" measure should be **complemented with the use of planned investments or investments in the last year**, as a basis for the evaluation of portfolios of Taxonomy-eligible and non-eligible activities **since this would give a more accurate picture of how sustainable a company or an activity is.** Using a company's yearly level of investment as an additional measurement instrument will show if the company is actually in a sustainable transformation.

When looking at the energy sector, the ultimate goal of the EU taxonomy must be to ensure the best investment framework allowing a cost –efficient decarbonisation. If not well-designed, with a sufficiently broad scope and taking existing EU regulation on sustainability as its point of departure, there's an evident risk that much-needed capital for the energy transition rather is steered away from climate mitigation activities.

We also welcome this momentum for change in the financial system, with the other developments at international level as for example, the report of the Financial Stability Board's Task Force on Climate-related Financial Risk Disclosure (TCFD[4]), the setup of a Network of Central Banks and Supervisors Network for Greening the Financial System (NGFS)[5] in order to enhance the role of the financial system in managing risks and mobilising capital for green and low-carbon investments. With co-operation between all these initiatives and in a co-ordinated way we could achieve:

- a harmonised definition of sustainability activities (EU Taxonomy; Climate Bond Initiative (CBI) Taxonomy[6]; International Capital Market Association (ICMA) Taxonomy[7]);

- promoting better disclosure of climate-related risks and opportunities to increase transparency in financial markets (TCFD and Guidelines on reporting climate-related information of European Commission);

[4] https://www.fsb-tcfd.org/
[5] https://www.mainstreamingclimate.org/ngfs/
[6] https://www.climatebonds.net/standard/taxonomy
[7] https://www.icmagroup.org/green-social-and-sustainability-bonds/news/

- better risk management through the integration of climate impact into investment decisions and strategies (regulation of the European Parliament on sustainability-related disclosures in the financial sector and the work of the NGFS);

- dissemination of best practices to spur investment in low-emissions and resilient infrastructure (combining thresholds with "do not significant harm (DNSH)" criteria require rethink finance for climate);

- a balance between technologies. In accordance with the tracking Clean Energy Progress[8] of International Energy Agency (IEA) only six low carbon technologies (includes two renewable technologies) are on track to penetrate markets sufficiently: solar PV, Bioenergy power generation, electric vehicles, rail, data centres & networks, energy storage) consistent with the 2ºC goal. However, the majority of technologies and processes need more progress to be on track with the 2050 Paris agreement goals (e.g. international collaboration in order to promote the development of decarbonisation efforts; empowering the national governments with the tools for a just and inclusive transition; carbon pricing can providing the signals needed to leverage and shift capital towards low carbon technologies).

1. Feedback on the methodology used

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** (i.e. Clean Energy Package when it comes to the energy sector) **and the EU long-term decarbonisation objectives should be ensured.**

Eurelectric **generally supports the methodology used** and its framework for establishing a common language (taxonomy) in order to create transparency and to provide a basis for the right signals to investors and businesses in question. Hence, it is an appropriate approach to focus both on the contribution to the environmental objective *and* whether an activity implies significant harm (DNSH) to the other environmental objectives.

While well-intended, we believe that **the proposal (as modified by the European Parliament and draft TEG recommendations) does not seem fully consistent with the European Commission's own long-term climate strategy** and pathways towards achieving carbon neutrality by 2050. As a concrete example, the European Commission Communication "A Clean Planet for all - A European strategic long-term vision for a prosperous, modern competitive and climate neutral economy" [9] sets out "*four main routes to a more sustainable, competitive and secure energy system in 2050: energy efficiency, renewable energy, nuclear energy and carbon capture and storage*" and forecasts that nuclear share in 2050 will remain fairly similar across all scenarios (12-15%, compared to 18% in the 2030 projection and 26% in 2015). Nuclear installed capacity in 2050 is only slightly lower than current level (99-121 GW versus 122 GW in 2015), and, in all cases, higher than both the 2030 projection (97 GW) and the Baseline in 2050 (87 GW). In addition, the European Investment Bank (EIB) draft lending criteria has also recently been revised to support decarbonisation targets and specifically includes nuclear generation, recognising its importance to the energy transition.

Last but not least, the evaluation of electricity generating technologies seems to have been performed for each technology individually. **A holistic view of the energy system is missing.** With

[8] https://www.iea.org/tcep/
[9] https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf - (pages 76-77)

such technology specific approach, the TEG recommendations risk leading to non-optimized scenarios regarding costs and decarbonisation efficiency, since the screening criteria might disqualify technologies that qualified activities might need for full functionality in the system. Eurelectric believes the proposal would be more useful if a holistic final step would be introduced that would have the power to adjust the overall sustainability credit of certain technologies from a system performance perspective. Consequently, **TEG should not only introduce technology-wide criteria, but also introduce a possibility to value technologies based on their system-wide contribution.**

2 Feedback on the proposed Technical Screening Criteria

In our view, careful consideration of scientific literature on climate and further coordination with other competent DGs in the European Commission, in particular DG ENER, would be needed to define screening criteria that are well integrated into EU energy policy and carbon neutrality prospects.

Furthermore, as already mentioned, it is vital to ensure the **right balance between setting forward-looking criteria that are practicable and reality-proofed while at the same time acknowledging the technological dynamics** (i.e. implying an ongoing development and advancement in terms of better solutions being employed).

Based on the current Taxonomy report, it is **not possible to assess whether the proposed technical screening criteria (TSC) will ensure such balance in the long-run**. Therefore, ongoing amendments of the proposed TSCs will most likely be needed. Eurelectric therefore calls on the European Commission to ensure **the involvement of experts from real economy industries** being affected by this regulatory setup, like the energy industry, throughout the process (development and possible future amendments of TSCs). It is crucial in particular to maintain stakeholder's involvement in the Platform for Sustainable Finance (Article 15). Furthermore, it is important to **avoid disproportionate bureaucracy** e.g. in terms of reporting and documentation. In particular, reporting obligations deriving from current TEG proposals (e.g. LCE assessment required for each individual project for all power generation technologies except PV, wind and existing hydro) could represent a significant investment barrier.

Last but not least, if/when amendments to the TSCs will be introduced, they should be accompanied by **a grandfathering clause** to avoid that retroactive changes on agreed investments.

2.1 The application of Emission Performance Standards should take into account transition enabling technologies and carbon neutral technologies

In its report, the TEG proposed a "*technology-agnostic emissions threshold of 100g CO_2/ KWh*" for electricity generation, "*reduced every five year in line with a trajectory to net-zero CO_2 in 2050*".

In principle, Eurelectric supports the proposed emission performance threshold as it will catalyse sustainable finance into renewable-based and carbon-neutral technologies in line with EU Long-Term Strategy.

As specified in the Eurelectric Decarbonisation Pathways study, **direct electrification based on renewable-based and carbon-neutral electricity supply will make a major contribution to help Europe meet its climate targets.**

Careful consideration should be given on the potential impact of such threshold on the cost of the transition and on security of supply.

However, first it should be clarified that the proposed EPS applies to power generation only and not to the entire value chain of the power plant (for instance the construction or decommissioning phases). Indeed, if we link this TEG proposal with the fact that the TEG requires that the carbon impact of almost all power generation technologies is to be assessed on LCE basis, we do not see as feasible to reach a threshold of 0g CO2/kWh by 2050, even for carbon neutral technologies such as RES, if construction and decommissioning phases are taken into account.

Second, it is necessary to ensure consistency of the threshold with other emission performance thresholds in place in current European legislation, such as in the EIB Lending criteria or in the Electricity Regulation EU/2019/943 for the implementation of capacity mechanisms. That does not necessarily mean that the same values should be applied, but it is necessary to make sure that there is consistency in the objectives, methodologies and assumptions.

Third, we need to take into account that **renewables will represent more than 80% of the electricity mix by 2045** driven by rapid cost decline, increasing capacity factors, and large untapped resource potentials. Solar and wind will account for ~15 % and ~50% of supply respectively. This will be enabled by distribution renewal/build within national borders and significant transmission build within and between regions, which allow the benefits of renewables to be shared across Europe.

To reach a high-renewables future in line with EU decarbonisation objectives, there will be a significant demand for firm and dispatchable carbon-neutral generation to ensure security of supply when variable RES production is not sufficient and balance load and non-dispatchable generation, e.g. PV and windpower, on all time scales from seconds to seasons. This will be provided by competing energy sources from both within and outside the power sector. Traditional sources include firm generation capacity such as **hydropower, biomass, thermal** and **nuclear power**. In addition, we will see a much larger role played by **demand side response** from dispatch of new electric end-uses such as electric vehicles, as well as **storage and flexible production and use of "electric" enabled fuels such as hydrogen and power-to-gas or power-to-liquids.**

Having said this, it is important to highlight that each region will take a different decarbonisation path given different starting points with their existing electricity supply mix. For example, Norway's power sector is already ~90% carbon-free while Poland relies on coal for 80% of energy supply. In addition, regions have varying access to energy supply resources (e.g. solar in southern Europe vs wind in the North Sea or hydropower in mountainous regions) with significant differences on interconnection capacities among EU regions. At the same time, while there are a number of new competing sources to deliver flexibility (such as batteries or demand-side response) the availability of carbon-free firm technology, able to ensure security of supply in a seasonal time-scale (when variable RES production is not sufficient) is currently limited to nuclear, hydro, and biomass.

Large scale deployment of demand response and storage are indeed yet to happen. Beside the CO2-free, proven, large-scale storage technology of hydropower storage in reservoirs providing firmness by its rotating masses, other seasonal storage technologies, vital to provide large-scale firmness across all regions, are far from being mature. This means that in the short to medium term, and depending on the starting point of the different member states, thermal capacity, such as highly efficient natural gas fired units, may be needed to balance the overall electricity system

and ensures security of supply, especially in the winter months, when there is a structural deficit of RES production vs demand. In this context**, a specific approach should be envisaged for some gas infrastructures for direct connections to highly efficient natural gas fired units needed for security of supply**.

In our view, to allow for a cost-efficient energy transition and ensure a level playing field among EU power generators, Eurelectric believes that the **TEG should not only introduce technology-specific criteria, but also introduce the possibility to value technologies based on their system-wide contribution to security of supply. This may require a transitional flexible setup for highly efficient natural gas fired units** especially while large scale deployment of demand response, storage and power-to-gas technologies is yet to happen. Such set up should be clearly defined and should be subject to strict conditions:

- Fugitive emissions across the gas supply chain need to be physically measured rather than estimated.
- 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 viable while ensuring the security of supply.
- 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)

Outside the EU Sustainable Finance Action Plan, it is important to highlight that support and dedicated funding will be required for member states that face a more difficult starting point in the electrification and energy transition journey. Support for investment costs must be especially targeted at coal-reliant regions as well as on energy-intensive industries subject to carbon leakage risks. To facilitate the structural change in regions heavily reliant on coal related jobs or carbon intensive electricity production. For example, a **Just Energy Transition Fund under the next multi-annual financial framework (MFF) for 2021-2027 should be created** to support carbon intensive regions and the Member States with a different starting point, considering the commercial availability of transition technologies and specific needs of vulnerable consumers. Last but not least, regional integration and shared resources can also reduce the cost of this transition for those just beginning the journey.

2.2 Application of the Life Cycle Evaluation

The TEG Taxonomy Report proposes to determine the eligibility of electricity generation activities based on ISO 14044-compliant Life Cycle Evaluation (LCE) analysis. **Eurelectric supports the use of one unambiguous standard as the essential basis for LCE analysis to be performed.**

However, Eurelectric would welcome further guidance: the proposed ISO 14044 criteria do not give sufficiently detailed advice on how/what exactly would be required in a LCE analysis. In concrete, the ISO 140044 does not give any guidance neither on how to set system borders nor on the use of possible valuation methods – hence, no effective and reasonable comparison between specific technologies, projects, activities can be made. The shortcomings of ISO 14044 might undermine investment security and lead to unequal competition. Furthermore, Eurelectric considers that existing methodologies for LCE quantitative aspects are already available and perfectly usable (mainly ISO 14040 for LCA and ISO 14025 for environmental claims, with specific

Product Categories Rules for Electricity, Steam and hot/cold water generation and distribution). It is important to also stress that new LCE developments would require expertise, transparency and consensus building, as for the European program Product Environmental Footprint, and should be handled by a competent body, not by the TEG. The proposal to publish the guidance on such new LCE methodology by November 2019 therefore does not seem reasonably feasible. Before such guidance is published it would be beneficial to consult with industry on their experiences and practical knowledge. Eurelectric stands ready to assist in this work.

Even though Eurelectric agrees on having a life cycle evaluation approach, we support an exemption from this obligation for certain acknowledged technologies based on their LCE emissions data. Several technologies have a very low carbon footprint and requiring individual LCE analyses to be conducted for each individual project would lead to unnecessary administrative costs. Hence, the requirements pursuant to the taxonomy must be commensurate with the goal to be achieved and resources spent. This is consistent with the eligibility criteria of Climate Bond Standard (CBI)[10].

Following the comment made above, we believe that LCE should be uniformly applied in form of technology-specific standard values for the upstream LCE instead of project-specific individual measurements. The European Commission in cooperation with the Platform for Sustainable Finance (Article 15) should develop the technology-specific LCE standard values up to the time the technical evaluation criteria in form of non-binding guidelines are transposed into delegated acts. The guidance on the LCE approach from the TEG could be a first step for the creation of the technology-specific LCE standard values.

Eurelectric believes that an ongoing assessment of the LCE emission data for each technology is needed. Our suggestion would be to exempt from the LCE obligation technologies that have sufficient evidence of being far below or far above the threshold of the Emission Performance Standard of 100g CO2 / kWh. It may require to define clear de-minimis or maximum thresholds. However, this should be done with caution. For instance, concentrated solar power installations may be supported by fossil fuels facilities that sometimes show lower thermal efficiency than OCGT – CCGT plants. There should not be justification to omit a LCE analysis in such cases.

Based on most recent UN's Intergovernmental Panel on Climate Change (IPCC) data[11], several technologies on top of those already proposed for an exemption by the TEG fulfil this prerequisite and should thus be exempted from an obligatory LCE analysis

[10] https://www.climatebonds.net/standard/solar; https://www.climatebonds.net/files/files/Hydropower%20Criteria%20Background%20Paper.pdf (please see box 4 on page 33 „Both Wind and Solar have zero Scope 1 emissions, and therefore are automatically eligible for Certification, as long as they have no fossil fuel back up. The Solar Criteria state that solar (with concentrated solar thermal in mind) can have backup of up to a maximum of 15% of generation. This is also consistent with a 100 gCO2e/kWh threshold in the vast majority of realistic cases.").

[11] Source : 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 the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Table A.III.2 | Emissions of selected electricity supply technologies (gCO_2eq/kWh)

Options	Direct emissions	Infrastructure & supply chain emissions	Biogenic CO_2 emissions and albedo effect	Methane emissions	Lifecycle emissions (incl. albedo effect)
	Min/Median/Max	Typical values			Min/Median/Max
Currently Commercially Available Technologies					
Coal—PC	670/760/870	9.6	0	47	740/820/910
Gas—Combined Cycle	350/370/490	1.6	0	91	410/490/650
Biomass—cofiring	n.a.[a]	–	–	–	620/740/890[a]
Biomass—dedicated	n.a.[a]	210	27	0	130/230/420[a]
Geothermal	0	45	0	0	6.0/38/79
Hydropower	0	19	0	88	1.0/24/2200
Nuclear	0	18	0	0	3.7/12/110
Concentrated Solar Power	0	29	0	0	8.8/27/63
Solar PV—rooftop	0	42	0	0	26/41/60
Solar PV—utility	0	66	0	0	18/48/180
Wind onshore	0	15	0	0	7.0/11/56
Wind offshore	0	17	0	0	8.0/12/35
Pre-commercial Technologies					
CCS—Coal—Oxyfuel	14//6/110	17	0	67	100/160/200
CCS—Coal—PC	95/120/140	28	0	68	190/220/250
CCS—Coal—IGCC	100/120/150	9.9	0	62	170/200/230
CCS—Gas—Combined Cycle	30/57/98	8.9	0	110	94/170/340
Ocean	0	17	0	0	5.6/17/28

It is important to mention that the figures provided by the IPCC report refer to plants worldwide. European plants life cycle emission data are usually in the lowest part of the ranges. Moreover, we invite the TEG to take into account that updated figures from the IPCC should be available in the coming month.

As an example, hydro power apparently fulfils the criteria for being exempted from the obligatory LCE analysis. Studies show limited life cycle emissions from hydropower (2.7 gCO_{2e}/kWh)[12]. At the same time, the average hydropower facility apparently has lower LCE than the average PV facility, and is similar to the average wind farm[13]. However, **only *existing* hydro power in the EU is proposed by the TEG to be exempted from the LCE analysis** while *new* hydro power is subject to the requirement of making LCE analyses. In Europe, emission factors for hydropower vary in the range from 2.702 g (run-of-river) to 25.651 g eCO_2/kWh (storage and pumped storage)[14]. Furthermore, **we would welcome further clarifications on the proposed distinction between investments in new and existing hydropower plants** e.g. retrofitting of a plant with existing water rights. According to the Hydropower and Dams World Atlas, the overall hydropower potential is more than 1.000 GWh/year for EU 28 – composed of both investments in entirely new plants and upgrading/retrofitting of existing installations. Such investments significantly enhance the capability to balance weather dependent generation and due to hydropower's rotating masses provides firmness and stability ensuring security of supply. It is therefore important that the taxonomy does not counteract this development.

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

[12] It should be noted that in the table above, the high max values for hydropower is due to the fact that the data are based on all plants worldwide: methane emissions from reservoirs have been registered mainly from tropical hydro reservoirs in Asia and South America. The discussion in this respect is an international one, but from minor relevance in the European context.

[13] Comparison of Lifecycle Greenhouse Gas Emissions of Various Electricity Generation Sources, WNA, July 2011

[14] UBA Deutschland 2018

Geothermal Power plants, the **CO2 emitted has a natural origin, as there are no combustion of fossil fuels.** In facts, all geothermal fields are characterized by a 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 IPCC in the above table, where Geothermal Power Plants are not accountable for any direct emissions.**

Based on the above consideration, geothermal power plants should be exempted from conducting LCE analysis also for new projects. While only existing Geothermal power is proposed by the TEG to be exempted, and it is not clear the reason of this differentiation.

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 – **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.** For that reason, continuous reviews must be made on the technologies excluded from this obligation, as also proposed by the TEG.

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.

2.3 Nuclear generation

The Taxonomy report recognises that "*nuclear energy generation has near to zero greenhouse gas emissions in the energy generation phase and can be a contribution to a climate mitigation objectives*". We welcome this recognition. However, due to "*peer-reviewed evidence of the risk of significant harm to pollution and biodiversity objectives arising from the nuclear value chain*", the TEG has not recommended the inclusion of nuclear energy in the taxonomy at this stage.

The TEG recognises that "*evidence about nuclear energy is complex and more difficult to evaluate in a taxonomy context*". It therefore recommends that more extensive technical work is undertaken on the DNSH aspects of nuclear energy in future and by a group with in-depth technical expertise on nuclear life cycle technologies and the existing and potential environmental impacts across all objectives. In this context we strongly suggest that the TEG seeks direct engagement and input from recognised experts in the field of Nuclear Power and Radiation Protection.

Nuclear will be part of the solution to decarbonise the EU economy by 2050 and is internationally recognized as a crucial asset in the fight against climate change IPCC special report[15] on how to limit the global temperature rise to 1,5°C clearly states that nuclear will be needed to achieve this goal. Nuclear accounts for around a quarter (25 %) of power production in the EU today and almost 50% of the low carbon generation. According to Eurelectric Decarbonisation pathways Study, in the 95% decarbonisation scenario, nuclear generation will represent 13% (876 TWh) of electricity generation in 2045. This role of nuclear to contribute to the decarbonisation of the power sector is also recognised in the recent IEA report 'Nuclear power in a clean-energy system'[16] and in the EC

[15] https://www.ipcc.ch/sr15/
[16] https://webstore.iea.org/nuclear-power-in-a-clean-energy-system

Long-Term Strategy. The European Commission Communication "A Clean Planet for all - A European strategic long-term vision for a prosperous, modern competitive and climate neutral economy"[17] sets out "*four main routes to a more sustainable, competitive and secure energy system in 2050: energy efficiency, renewable energy, nuclear energy and carbon capture and storage*" [18] and foresees that nuclear share in 2050 will remains fairly similar across all scenarios (12-15%, compared to 18% in the 2030 projection and 26% in 2015). Nuclear installed capacity in 2050 is only slightly lower than current level (99-121 GW versus 122 GW in 2015) and, in all cases, higher than both the 2030 projection (97 GW) and the Baseline in 2050 (87 GW). In addition, the EIB draft lending criteria has also recently been revised to support decarbonisation targets and specifically includes nuclear generation, recognising its importance to the energy transition.

Furthermore, the report "The Costs of Decarbonisation System Costs with High Shares of Nuclear and Renewables" issued by the NEA OECD points out that based on the cost assumptions used in the main scenarios, a mix relying primarily on nuclear energy (and hydropower) is the most cost-effective option to achieve the decarbonisation target of 50 g CO2/kWh.

Firm low-carbon generation capacity such as nuclear and hydro power, have a significant role to play in delivering the most efficient and cost effective solution. With high availability factors, nuclear power plants produce large amounts of firm power, ensuring grid stability, reliability and resilience – key for the future EU energy system. Low-carbon, nuclear power is closely regulated in line with International Scientific Standards[19] and also has several other environmental benefits:

- across the whole fuel cycle, nuclear electricity production emits very limited GHG and other air pollutants, compared to other sources of energy;
- the land required to produce nuclear electricity is significantly lower than other energy sources[20], nuclear is well suited for large-scale desalination of water, which is an important feature in a future with reduced availability of fresh water (IPCC12, Chapter 3, page 213).
- nuclear generated electricity produces less waste than many other sources and that waste which is produced is handled in a responsible manner under the Euratom Treaty, the Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste and the Basic Safety Standards Directive (2013/59/Euratom) to ensure it does not pose a risk to the human health and the environment;

It should also be noted that permanent, international and scientifically recognised solutions for treating high level nuclear waste are currently being deployed in some EU countries and across the world[21] and will be implemented in others. Nuclear energy is the major instrument for decarbonisation across a number of EU member states – 14 member states currently generate electricity from nuclear reactors. Indeed for many member states, particularly Central and Eastern European countries, due to geographical location and other conditions, it is the only reliable low-carbon energy source of electricity (and heat). Without continued operation and further

[17] https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf - p. 76-77
[18] Idem
[19] see IAEA report - 2016, Nuclear Power and sustainable development, https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1754web-26894285.pdf
[20] https://www.nei.org/news/2015/land-needs-for-wind-solar-dwarf-nuclear-plants
[21] Including Operating Geological Disposal Facilities in Finland (VLJ and Loviisa) and Sweden (SFR) for ILW and a Deep Geological Dipsopsal Facility in the USA (Waste Isolation Pilot Plant, New Mexico) for Transuranic Waste

development of nuclear energy, it will be very difficult for these member states, and certainly more expensive and less efficient, to meet the EU and international emission decarbonisation ambitions.

Eurelectric therefore believes that, based upon available evidence today, nuclear should be included within the taxonomy scope, while of course being subject to the appropriate DNSH criteria.[22] Clearly along with all other energy sources, it is appropriate that the TEG should investigate its sustainability credentials and that they should be confirmed by the application of objective criteria (in-line with technology neutrality). However, at this juncture, the exclusion of nuclear would appear inappropriate. Eurelectric agrees with the TEG's suggestion that an expert group of internationally recognised specialists in radiation protection (and who are politically neutral), are appointed to undertake additional work on the DNSH aspects of nuclear. However, the importance of nuclear for achieving net zero and the near term need to secure private finance for nuclear new build projects, means it is imperative that this further step is taken promptly. Today across Europe there is comprehensive track record and compelling evidence that nuclear spent fuel and high-level waste is being managed and stored, effectively and safely, in accordance with the stringent International, EU and national guidelines, regulations and laws. The waste storage is normally in above ground or near surface facilities that can continue to operate safely for an indefinite period into the future. However, solutions are being put in place for **final repositories that also meet long-term safety requirements for high-level nuclear waste** (primarily spent nuclear fuel) and is the preferred longer term waste storage route for some EU Member states. The Swedish KBS-3 multi-barrier system has become an international reference method and is being implemented in both Sweden and Finland (Onkalo). **Onkalo** is under construction and the company in charge (Posiva) expects the application for the operational license to be submitted in 2020. The Swedish final repository for spent nuclear fuel is expected to become operational in the 2020s, too. In parallel, the technology to recycle and reuse nuclear fuel is industrialised and is an available option for the Member States that would want to select this route.

The safety case is unique in the way it considers very long-term climate change and its impact on the **safety of a final repository**, in the case of Sweden and Finland over a period of a million years, meaning that the technology implemented must withstand multiple periods of glaciation. No other infrastructure project assumes such standards of long-term risk assessments. Worst-case scenarios include major earthquakes over a time-scale up to a million years following periods of glaciation. The methodology behind the safety cases for the repositories are developed through extensive international cooperation (OECD, NEA and international scientific expertise).

2.4 Storage

Eurelectric welcomes the TEG's view that all investments in electricity storage, including new pumped hydro, should be considered sustainable. With an increasing integration of renewable energies into the energy system, massive investments in electricity storage are necessary. However, it remains unclear if this principle applies to all forms of energy storage (including for instance hydropower storage plants without the ability to pump, the reservoirs of pumped storage hydropower that also collect natural inflows, gas storages, Liquid Air Energy Storage) or only to electricity storages (incl. hydro pumped storage). This should be made clearer in Chapter 22.10 on Storage of Energy. In our view, all kind of energy storage should be included in the taxonomy.

The description of energy storage should consistent with the definition of energy storage in Art. 2 Nr 59 of the Electricity Market Directive (EU 2019/944): "energy storage" means, in the electricity system, deferring the final use of electricity to a moment later than when it was generated, or the

[22] Oesterreichs Energie does not support the inclusion of nuclear in the Taxonomy.

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".

2.5 Transmission & Distribution

As already mentioned, electrification based on renewable and carbon-neutral power supply will play a key role to decarbonise the entire economy at an affordable cost by 2050. There is also clear evidence that much higher levels of electrification than today are required to achieve a carbon neutral economy. On this basis, **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 the further electrification of different sectors of society and the growth of renewable and carbon-neutral energy by 2050.

Therefore, **Eurelectric welcomes the approach by TEG that transmission and distribution infrastructures helping systems to be on a trajectory to full decarbonisation are eligible.**

The report proposes to limit the eligibility of transmission and distribution grid infrastructure projects only in case of direct connection to the grid of new electricity generation plants which emit more than 100 gCO2e/kWh.

From Eurelectric's point of view, there are some improvements that could be incorporated in the TEG proposal:

- First, the rule uses terms which aren't unambiguously defined. The metric says that infrastructure in "systems which are on a trajectory to full decarbonisation" is considered as eligible. The "Additional notes" in the Rationale describe under which condition a system is deemed to be "on a trajectory to full decarbonisation", making use of the 100g CO_2/kWh threshold. But the term "system" as such is not defined. It remains unclear how large the considered "system" is.

- Second, it is not in the decision area of the infrastructure operator how CO_2 intensity new production plants connecting to them will be. TSOs and DSOs do not have influence on this. Therefore, the sustainability of infrastructure investments mustn't be evaluated by the CO_2 intensity of other parties. This would lead to legal security for the TSOs or DSOs concerned. Nevertheless, it must be acknowledged that, in many jurisdictions, the responsibility for the investment in the infrastructure connecting directly a generation facility with the grid is with the generator, not with the DSO or TSO.

- Third, the TEG provision is only practical for implementation if it refers strictly to the infrastructure that is exclusively used for the connection to the grid of a specific generation facility. In our understanding, the TEG proposes to exclude T&D assets that are *"dedicated to directly connecting, or expanding existing direct connection to production plants that are more CO_2 intensive than 100 gCO2e/kWh measured on a LCE basis"*. If this does not refer to direct connection, the TEG provision is then not practical for implementation. Given the nature of electricity, it is technically impossible to clearly define the 'system' boundaries in an interconnected electricity system and, in most cases, to distinguish between transmission and distribution lines carrying different types of generation and therefore to make the difference between a parts of the network which is sustainable and another which is not. The grid operates like water that flows to the lowest point, taking the way of lowest resistance. This means that electrons cannot be controlled in which route they take.

So, a grid connection can never be 0% emissions if the electricity production is not 0% emissions.

- Fourth, most grid constructions or expansions of existing grids are indeed triggered by the construction of new production sites for renewable energies. Therefore, they serve the energy policy and without them decarbonisation is impossible. Furthermore, other than 'traditional' grid reinforcement (lines and substations), investments in electricity grid include innovation and digitalization of the infrastructure, enhancing cybersecurity, allowing predictive maintenance, live monitoring and reporting, flexibility management. Last but not least, grid infrastructure builds to modernise current network should also be considered as sustainable when the reduction in technical network losses is demonstrated (these means reducing CO_2 emissions from non-renewable power generation from the global system).

- Last but not least, distribution and transmission are included in the objective "climate change mitigation" while only transmission lines are included in "climate change adaptation". Distribution lines should be taken into account in this category as well (prevention with water level sensors, adaptation of cables in relation to the temperature increase…). A new distribution line which contributes to a more meshed power network or additional integration of renewables improves resilience and adaptation of all economic activities within that network.

In particular, DSOs will be at the heart of the future decarbonised system as over 85% of all distributed RES generation is already be connected at distribution grid level. The electrification of transport (i.e. e-mobility) and buildings will also be closely linked to distribution grids. Nevertheless, the report expressly mentions electric vehicles charging stations as an eligible activity but only for public transports. It is relevant to include EV charging stations for individual transport as well. The role that the distribution grid and smart grid technologies can contribute to further savings and to the climate mitigation objective is explicitly recognised in the European Parliament's position on the Taxonomy Regulation (Article 6 "Substantial contribution to climate change mitigation", point g) "establishing energy infrastructure required for enabling decarbonisation of energy systems").

Traditional gas infrastructure is currently made to carry natural gas, which carbon intensity is above the proposed threshold of 100gCO_2e/kWh measured on a LCE basis. On this basis, the TEG proposal **exclusion excludes the expansion of traditional gas networks from the taxonomy.**

Given the decarbonisation challenges at hand, Europe should strive to maintain leadership in **key emerging energy carriers such as sustainable hydrogen, sustainable biomethane and synthetic methane, as well as renewable power-to-gas which will be needed** to decarbonise especially specific segments of industrial activity and heavy-duty transport **where no electric alternative to fossil fuels exist.** This is a 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.

In this context, the proposed Taxonomy currently does not reflect the complexity, the uncertainty and the ongoing innovation around different types of decarbonised gases, the related gas infrastructure adaptation needs and the challenges and opportunities of sector coupling. We therefore call on the Technical Expert Group to take into account this complexity and to acknowledge the need to further develop technical screening criteria to assess the different types of gas infrastructure investments and upgrades needed to enable the deployment of decarbonised gases complying with the proposed threshold, while ensuring that investments which

do not support the long term decarbonisation objectives are not de facto considered as sustainable. Indeed, 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.**

2.6 Other issues

- Undue **effects of retroactivity** should be avoided. Especially taking into account when projects have been permitted or are in the process of permitting according to high environmental standards (EIA, nature directives etc.) they should not be disadvantaged in their financing or capital recycling activities by retroactively applying stricter taxonomy related requirements. Also, the desired guidance for investors is most important for new projects.

- It is essential for the realization of the energy system transformation that the climate and environmental footprint of existing energy assets be further improved. Independent of the direct gCO2eq / kWh emissions threshold, **retrofitting** should be defined as a sustainable economic activity if it improves the climate or environmental balance of an existing installation and as long as it does not extend the lifetime of highly carbon-intensive assets.

- **Heat pumps should not be included in the CHP criteria**. Heat pumps are using electricity and not producing electricity. They are not operated in CHP. This section needs to be moved to another activity ("heating and cooling").

- Eurelectric proposes that **all investments in Combined Heat and Power (CHP) plants using sustainable biomass or biogas should be eligible under the Taxonomy.** Cogeneration of Heat/Cool and Power plants in combination with heating networks, heat storages and possibly power-to-heat modules are outstandingly capable of supporting the energy and heat transition. On the one hand, those systems can integrate surplus power from renewable energy sources into the heat market. On the other hand, they are capable of guaranteeing electricity and heat supply in times of high residual load. Achieving climate protection targets in the energy and heating sector is especially difficult in urban areas. In these cases, Cogeneration of Heating and Cooling and Power plants represent an efficient use of an energy carrier for the simultaneous production of energy and heat for multi-storey buildings.

- **Biomass:** An EU Taxonomy should firstly apply EU criteria and only in the absence of relevant criteria seek to create new standards. For sustainable biomass, the Taxonomy should only refer to the existing criteria in RED II and avoid creating a new set of criteria, thereby avoiding overlap and confusion between the Taxonomy and the existing directive. RED II was created after a long political discussion and weighing of many considerations, including climate concerns. Thus, also in order to avoid conflicting standards, Eurelectric shall strongly recommend the Taxonomy to aligned according to RED II, i.e. that the 200 g CO2/kWh threshold from RED II prevails. In this connection it would also make more sense if biomass based energy (power and heat) production is treated under 'energy production' and not (just) part of section on 'forestry'.

- **DNSH:** we suggest using a consistent approach between mitigation and adaptation activities. Regarding the DNSH assessment for mitigation activities, we note that it requires the activity to fully meet the qualitative adaptation criteria. In practice this involves that the activity has to significantly contribute positively both to mitigation and adaptation,

whereas the focus of this assessment is that the mitigation activity produces no harm to adaptation. Moreover, due to qualitative nature of this assessment, there is a degree of subjectivity when determining whether the activity meets the DNSH adaptation criteria. That said, we note that for the electricity sector, on a general basis there is an alignment between mitigation and adaptation options, as, for instance, investments in the grid contribute both to decarbonisation (e.g. integration of renewables) and to adaptation objectives (e.g. by making generation more diversified and the network more meshed), both "adaptation of" and "adaptation by". Overall, we believe that the **DNSH Criteria approach should be more consistent among different technologies** and provide concrete thresholds when possible in order to facilitate comparability and just transition between different technologies and different State Members. As the proposal now stands, the sustainability criteria are stringent, while the DNSH criteria have been chosen differently for different power sources. For instance, all technologies have upstream and downstream resource use and environmental impact. However, those issues have not been analysed for all technologies to the same extent. Aiming to be used outside EU boarders, there are still several situations where this goal is not clearly achieved as there are situations where TEG expects national standards to be used, forgetting the fact that in many countries outside EU environmental legislation and standards are no yet in place.

- **Just energy transition:** we recommend the TEG to consider the anticipated social consequences of the energy transition in the methodology for defining the TSC and selecting activities. We have called for the creation of a substantial Just Energy Transition Fund in line with investment needs of carbon intensive regions heavily reliant on coal, exceeding the EUR 5 billion proposed by the European Parliament. This Fund would be specifically used to support the execution of holistic regional energy transition strategies in line with the recommendations of the Coal Regions in Transition Platform. Funding should support, inter alia, the repurposing of old power plant sites and coal mines, brownfield redevelopment, the replacement of high-emitting power plants with low carbon sources, innovation schemes, as well as socially acceptable programmes of retraining and reskilling of workers. Synergies should be sought with existing financing instruments such as European Regional Development Fund (ERDF), Cohesion Policy funds, European Social Fund and InvestEU.

- **Waste:** energy from waste is an important part of the circular economy. According to waste hierarchy (Article 4 of the Waste Framework Directive), incineration process combined with energy recovery is always preferable option to landfilling or disposal of waste without recovery. Not all residual waste can be reused or recycled. Waste incineration with energy recovery would be an appropriate environmentally sustainable activity offering a substantial contribution to climate mitigation. Restricting financing for waste incineration facilities might cause some of the member states to miss their landfill ban targets, if the recycling infrastructure is non-existent. The taxonomy should be consistent with what is also recognised in the parliament decision to allow funding for waste incineration in the outermost regions of Europe. Waste incineration in district heating will have difficulty to comply with the 100g CO_2 / KWh requirement, due to the content of plastics. Eurelectric is of the opinion that energy recovery of waste residues that are left after collection, sorting and material recovery should be exempt from the 100g threshold. Today around 140 million tons of waste is landfilled in EU yearly, with significant greenhouse gas emissions as a result. Energy recovery of waste residues that are left after collection, sorting and material recovery would in fact better fulfil not only the climate mitigation criterion, but also significantly contribute to many of the other sustainability criteria of the taxonomy.

Waste incineration decreases the risk for leakage of poisons, heavy metals and dangerous organic compounds to land, air and water at the same time as it decreases the global emissions of climate gases. Having this holistic perspective in mind the emission of climate gases from the chimney should be excluded for energy recovery of waste residues. Instead, the evaluation should focus on energy efficiency of the combustion process as well as efficient transports, handling and treatment. These requirements should be completed with new criteria on pre-treatment of the waste (collection, sorting and material recovery) before sending the waste residue to energy recovery).

Eurelectric pursues in all its activities the application of the following sustainable development values:

Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability

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