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**COMMISSION DELEGATED REGULATION (EU) …/...**

**of XXX**

**amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities (Text with EEA relevance)**

*DRAFT*

# EXPLANATORY MEMORANDUM

## 1. CONTEXT OF THE DELEGATED ACT

### 1.1 General background and objective

Regulation (EU) 2020/852 of the European Parliament and of the Council (the 'Taxonomy Regulation')[1] establishes the framework for the creation of the EU Taxonomy of environmentally sustainable economic activities. The Taxonomy Regulation provides that these economic activities should comply with the technical screening criteria set out in the delegated acts adopted by the Commission.

The first delegated act specifying the technical screening criteria under which certain economic activities qualify as contributing substantially to climate change mitigation or climate change adaptation and not causing significant harm to any of the other relevant environmental objectives ('the first Taxonomy Climate Delegated Act') was adopted on 4 June 2021[2]. The Commission has also adopted on 6 July 2021 a delegated act specifying the content, methodology, and presentation of the information to be disclosed by both non-financial and financial undertakings required to report about the alignment of their activities with the EU Taxonomy alignment ('Taxonomy Disclosures Delegated Act')[3].

The first Taxonomy Climate Delegated Act has set out technical screening criteria for economic activities having the potential to contribute to climate change mitigation and adaptation in most sectors. However, not all relevant sectors and activities have been covered in that Delegated Act. Notably, it was not possible to take a decision as to the inclusion of nuclear energy in the first Taxonomy Climate Delegated Act due to the need to deepen the assessment of the 'do no significant harm' ('DNSH') aspects of nuclear energy, which was ongoing at the time.[4] As regards natural gas, the Commission announced that further reflection was needed on how to address the role of gas in the decarbonisation of the economy.

In establishing the technical screening criteria for climate mitigation, the Commission should take into account and provide incentives for the ongoing and necessary transition towards a climate-neutral economy in accordance with Article 10(2) of the Taxonomy Regulation. As announced in the Commission Communications adopted on 21 April 2021 and 6 of July

[1] Regulation (EU) 2020/852 of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (OJ L 198, 22.6.2020, p. 13).

[2] Commission Delegated Regulation (EU) 2021/2139 of 4.6.2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives, Brussels, 4.6.2021, C(2021) 2800 final.

[3] Commission Delegated Regulation (EU) 2021/2178 of 6.7.2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by specifying the content and presentation of information to be disclosed by undertakings subject to Articles 19a or 29a of Directive 2013/34/EU concerning environmentally sustainable economic activities, and specifying the methodology to comply with that disclosure obligation, Brussels, 6.7.2021 C(2021) 4987 final.

[4] The complementary steps of the assessment, namely the report by the Joint Research Centre, the review by the experts under Article 31 of the Euratom Treaty and the review by the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER), are available on the Commission's website.

2021[5], the objective of this Delegated Regulation is to complement the first Taxonomy Climate Delegated Act. This Delegated Regulation sets out the technical screening criteria for additional economic activities in the energy sectors which were not included in the first Taxonomy Climate Delegated Act, in particular in the natural gas and nuclear energy sectors. Moreover, to enhance market transparency and the information of investors, this Delegated Regulation provides for specific disclosures requirements for the natural gas and nuclear energy sectors by amending the Taxonomy Disclosures Delegated Act.

### 1.2 Legal background

This Delegated Regulation is based on the empowerments set out in Articles 8(4), 10(3) and 11(3) of the Taxonomy Regulation. This Delegated Regulation amends the first Taxonomy Climate Delegated Act by adding technical screening criteria for certain economic activities in the natural gas and nuclear energy sectors that have not been included in that Delegated Act. The technical screening criteria are set out in accordance with the requirements of Article 19 of the Taxonomy Regulation. This Delegated Regulation also amends the Taxonomy Disclosures Delegated Act by providing for specific disclosure requirements for natural gas and nuclear energy sectors.

In accordance with Article 31 of the Inter-institutional Agreement of 13 April 2016 on Better Law-Making[6], this Delegated Regulation combines in a single act two interrelated empowerments of the Taxonomy Regulation, namely those laid down in Articles 10(3) and 11(3), concerning the technical screening criteria for climate change mitigation and climate change adaptation respectively.

## 2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

As regards natural gas, this Delegated Regulation builds on the recommendations of the Technical Expert Group on Sustainable Finance (TEG), a Commission expert group composed of diverse private and public sector stakeholders set up in 2018. The mission of the TEG consisted of helping the Commission to develop the EU Taxonomy technical screening criteria in line with the Commission's legislative proposals of May 2018 and taking into account the objectives of the European Green Deal.

The TEG published two interim versions of its recommendations in its reports of December 2018 and in June 2019. Both reports were subject to an open call for feedback, to which 257 and 830 responses were received, respectively. During its mandate, the TEG also engaged with over 200 additional experts to develop recommendations for the technical screening criteria for climate change mitigation and climate change adaptation[7]. The Commission also organised two meetings with stakeholders to gather views on the TEG report in June 2019 and in March 2020.

[5] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal, Brussels, 21.4.2021, COM/2021/188 final; Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Strategy for Financing the Transition to a Sustainable Economy, Strasbourg, 7.6.2021, COM/2021/390 final.

[6] Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on Better Law-Making (OJ L 123, 12.5.2016, p. 1);

[7] EU Expert Group on Sustainable Finance, Financing a sustainable European economy – Technical report – Taxonomy: Final report of the Technical Expert Group on Sustainable Finance, March 2020.

Furthermore, the technical screening criteria for natural gas, which were initially included in the first Taxonomy Climate Delegated Act, were published on the Better Regulation portal for a four-week feedback period between 20 November and 18 December 2020, to which 46.591 stakeholders responded. Those criteria have also been discussed with the Member States' experts and observers from the European Parliament, at several meetings of the Member States Expert Group on Sustainable Finance in 2020 and 2021.

As regards nuclear energy, the TEG has not included nuclear energy activities in their recommendations. Although the TEG has recognised that energy generation from nuclear energy has a high potential to substantially contribute to climate change mitigation, it was not able to reach a firm conclusion as to whether nuclear energy does no significant harm to other environmental objectives, considering in particular waste management, impact on biodiversity and water as well as potential pollution aspects. The TEG has, therefore, recommended that a more detailed assessment of nuclear energy should be carried out, involving experts with a high level of relevant expertise.

The Commission has therefore set up a specific process for an in-depth assessment of the DNSH aspects of nuclear energy. First, a technical assessment of nuclear energy under the Taxonomy Regulation and the DNSH criterion has been prepared by the Joint Research Centre (JRC), the European Commission's science and knowledge service.

The JRC report concluded that:

(i) nuclear energy can make a substantial contribution to the climate change mitigation objective and meanwhile does not do significant harm to the other four environmental objectives of the Taxonomy Regulation provided that it meets the proposed technical screening criteria;

(ii) deep geological repositories can be considered – at the state of today's knowledge – appropriate and safe means of isolating spent fuel and other high-level radioactive waste from the biosphere for very long time scales and the necessary technologies are now available;

(iii) where and when the environmental impacts are potentially harmful, appropriate measures to prevent the impacts or to mitigate their consequences can be implemented using existing technology; and

(iv) compliance with the provisions of the Euratom legislation and licensing processes provides sufficient confidence that the impact of the nuclear energy full lifecycle, including the back end of the nuclear fuel cycle, to humans and the environment remains below harmful levels.

That report has been reviewed by Member States' experts on radiation protection and waste management appointed by the Scientific and Technical Committee under Article 31 of the Euratom Treaty, as well as by experts from the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER).

The opinion of the Group of Experts referred to under Article 31 of the Euratom Treaty provides a positive assessment of the JRC report[8]. The experts agree with the main findings of

[8] A dissenting opinion (out of the 2932 experts from the 27 Member States) annexed to the report stated that the focus of the JRC report left out the consideration of some key risks, such as nuclear proliferation and low-probability, but high-impact accidents which are more acute for nuclear activities than for other energy technologies covered by the Taxonomy. However, it should be noted that the assessment of those issues was

the report, whilst offering a small number of observations on possible improvements. For example, in their opinion, the existing European legal framework provides an adequate system to ensure the highest level of protection of workers, members of the public and the environment in the EU. For activities outside the Union, they find that international standards provide for a comparable level of protection and note that compliance with those standards should be incorporated in the technical screening criteria for such activities. Furthermore, the Group of Experts confirmed the view of the JRC that deep geological repositories are considered, at the state of today's knowledge, an appropriate and safe solution for the management of high-level waste, and noted that the technology for this is already available today. The Group of Experts confirmed also the JRC's assessment of the consequences of severe accidents which, however, was limited in scope. The Group of Experts noted that other direct and indirect impacts of severe accidents, not analysed by JRC as such, have not been assessed for any economic activities under the EU Taxonomy. Such assessment may also be important for understanding the broader impacts of severe accidents but may be more difficult to assess.

The opinion of the SCHEER experts is that the findings and recommendations of the JRC report with respect to non-radiological impacts are overall comprehensive. However, in the view of the experts, some findings require further assessment and evidence. Notably they consider that comparing nuclear power to other energy generating technologies as doing no more harm is different to "do no significant harm". The SCHEER also expressed the view that the existence of a regulatory framework is not in itself sufficient to mitigate all relevant risks and advocated for a deeper analyses of some aspects, in particular of the impacts of mining and milling (which is mostly done outside the Union):

- the uncertainties regarding the final disposal of high-level nuclear waste that is still an open research question; and
- the impact of radiation on the environment, specifically with regard to the protection of water and marine resource.

When establishing the technical screening criteria for nuclear energy related activities, the Commission has duly taken into account and addressed the observations of the SCHEER. In particular, the mining and milling activities have not been included in this Delegated Act and the remaining observations have been addressed by the technical screening criteria.

As regards the process of adoption of this Delegated Act, it was decided that an impact assessment was not necessary for natural gas energy activities, given that:

- this Delegated Act will implement policy choices already made and will only complement the first Taxonomy Climate Delegated Act;
- the first Taxonomy Climate Delegated Act was based on advice received from the TEG and from the Platform on Sustainable Finance and was accompanied by a proportionate impact assessment.
- the criteria for most activities which are planned to be included in this Delegated Act, , have been already subject to an impact assessment and public consultation as part of the preparation of the first Taxonomy Climate Delegated Act.

With respect to nuclear energy activities, it was decided that an impact assessment was not necessary given that a detailed technical assessment was carried out as detailed above.

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not included in the scope of the work specified in the Terms of Reference provided to JRC, as the assessment framework was based on the process followed by the TEG.

The relevant technical and policy issues concerning the natural gas and nuclear energy have, therefore, been in the public domain throughout the course of legislative deliberations on the Taxonomy Regulation, the work of the TEG, and the finalisation of the first Taxonomy Climate Delegated Act. They have also been discussed several times with Member States and the European Parliament. Stakeholders have submitted extensive feedback to the Commission on these activities, based on the options discussed for the first Climate Delegated Act for gas-activities, and on the JRC report and expert committee reviews for nuclear activities. Advanced disclosure of a draft delegated act to the public would have been likely to influence the markets.

No further open consultation was, therefore, necessary to prepare this Delegated Act.

The Platform on Sustainable Finance and the Member States Expert Group have been consulted in accordance Articles 10(4) and 11(4), and respectively, Articles 23(4) and 24(2) of the Taxonomy Regulation.

## 3. LEGAL ELEMENTS OF THE DELEGATED ACT

The empowerments to adopt delegated acts are provided for under Articles 8(4), 10(3) and 11(3) of the Taxonomy Regulation.

Article 1 lays down the amendments to the first Taxonomy Climate Delegated Act.

Article 2 lays down the amendments to the Taxonomy Disclosures Delegated Act.

Article 3 specifies the dates of the entry into force and application of the Delegated Regulation.

Annex I to this Regulation lays down the amendments to Annex I of the first Taxonomy Climate Delegated Act.

Annex II to this Regulation lays down the amendments to Annex II of the first Taxonomy Climate Delegated Act.

Annex III to this Regulation adds a new Annex XII to the Taxonomy Disclosures Delegated Act.

*DRAFT*

**COMMISSION DELEGATED REGULATION (EU) …/...**

**of XXX**

**amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities (Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2020/852 of the European Parliament and of the Council of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088[9], and in particular Articles Art 8(4), 10(3) and 11(3) thereof,

Whereas:

(1) The technical screening criteria set out in the Commission Delegated Regulation (EU) 2021/2139[10] cover several economic sectors and activities that have a potential to contribute to the Union climate change mitigation and adaptation objectives. Those economic sectors and activities were chosen because of their share in overall greenhouse gas emissions, and their proven potential for avoiding the production of greenhouse gas emissions, reducing such emissions, or removing such emissions. In addition, those economic sectors and activities have a proven potential to enable such avoidance, reduction and removal for other economic sectors and activities, or to ensure long-term storage of such emissions for such other sectors and activities.

(2) The total energy use accounts for approximately 75% of direct greenhouse gas emissions in the Union. Thus, the energy sector has a crucial role in continuing to reduce greenhouse gas emissions. The technical screening criteria laid down in Delegated Regulation (EU) 2021/2139 therefore cover a wide range of economic sectors and activities related to the energy supply chain, ranging from electricity or heat generation from different sources, through transmission and distribution networks to storage, as well as heat pumps and the manufacture of biogas and biofuels. However, Delegated Regulation (EU) 2021/2139 does not contain technical screening criteria for economic activities in the fossil gas and nuclear energy sectors, despite their potential to contribute to the decarbonisation of the economy.

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9 OJ L 198, 22.6.2020, p. 13.

10 Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives (OJ L 442, 9.12.2021, p. 1–349).

(3) As set out in the Commission Communication of 21 April 2021 ('EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal') and in the Commission Communication of 6 July 2021 ('Strategy for Financing the Transition to a Sustainable Economy'), the establishment of technical screening criteria for energy generation from fossil gas was postponed in view of the need for further technical assessment, notably on the transitional role of fossil gas in the decarbonisation of the economy[11]. The establishment of technical screening criteria for energy generation from nuclear was also postponed awaiting an in-depth expert assessment, launched in 2020, of whether the nuclear lifecycle, and notably nuclear waste, could be considered compatible with the requirement, laid down in Article 17 of Regulation (EU) 2020/852[12], that an activity can do no significant harm to other environmental objectives. In the light of those respective assessments, it is necessary to recognise that the fossil gas and nuclear energy sectors can contribute to the decarbonisation of the Union's economy.

(4) In accordance with Article 10(2) of Regulation (EU) 2020/852 covering transitional economic activities, it is necessary to lay down technical screening criteria for electricity generation from fossil gas where greenhouse gas emissions from fossil gas are below an appropriate threshold. In addition, it is necessary to lay down technical screening criteria for the use of fossil gas in high efficiency co-generation of power, heating and cooling, and efficient district heating and cooling, where such electricity generation, high efficiency co-generation of power, heating and cooling, and efficient district heating and cooling does not yet comply with that appropriate threshold. All those economic activities should be qualified as transitional under Article 10(2) of Regulation (EU) 2020/852, given that renewable energies that comply with the appropriate threshold are not yet commercially available at a sufficient scale. The technical screening criteria should facilitate an accelerated phase-out from more emissions-intensive energy sources, including solid fossil fuels. In addition, in order to fulfil the requirements laid down in Article 10(2), first subparagraph, points (a), (b) and (c), of Regulation (EU) 2020/852 the technical screening criteria for the use of fossil gas should also ensure that robust evidence is available to demonstrate that the same energy capacity cannot be generated with renewable sources, and that effective plans are put in place for each facility, in line with the best performance in the sector, to switch entirely to renewable or low carbon gasses by a specific date. Proof should be provided that from a certain date, a minimum share of renewables will exist in each facility in electricity generation, high-efficiency co-generation of power, heating and cooling, and efficient district heating and cooling. Finally, those technical screening criteria should provide for a time-limited recognition of the contribution of those activities to decarbonisation.

(5) Renewables will play a fundamental role in meeting the EU climate and environmental goals. In this light, investments in renewables need to scale-up to meet the needs of EU energy market for more renewable and clean energy.

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11 See Communication from the Commission of 21 April 2021 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal(COM/2021/188 final) and Communication from the Commission of 7 June 2021 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Strategy for Financing the Transition to a Sustainable Economy, (COM/2021/390 final).

12 OJ L 198, 22.6.2020, p. 13

(6) Nuclear energy-related energy activities are low-carbon activities, they do not constitute renewable energy in line with Directive (EU) 2018/2001[13] as referred to in Article 10(1), point (a) of Regulation (EU) 2020/852 and do not fall under the other categories of economic activities listed in points (b) to (i) of that provision. Such nuclear energy related economic activities should be qualified under Article 10(2) of Regulation (EU) 2020/852, in the absence of technologically and economically feasible low-carbon alternative at a sufficient scale to cover the energy demand in a continuous and reliable manner. In addition, in the Final report of the Technical Expert Group on Sustainable Finance from March 2020[14], it was stated that 'nuclear energy generation has near to zero green-house gas emissions in the energy generation phase' and 'evidence on the potential substantial contribution of nuclear energy to climate mitigation objectives was extensive and clear'. Finally, by providing a stable baseload energy supply, nuclear energy facilitates the deployment of intermittent renewable sources and does not hamper their development, as required by Article 10(2), point (b), of Regulation (EU) 2020/852. Nuclear-energy related activities should therefore be considered as complying with Article 10(2) of Regulation (EU) 2020/852.

(7) The scientific review conducted by experts[15] concluded that the technical screening criteria concerning nuclear energy related economic activities should ensure that no significant harm is done to other environmental objectives due to potential risks arising from the long-term storage and final disposal of nuclear waste. Those technical screening criteria should reflect the highest standards of nuclear safety, radiation protection and radioactive waste management, building upon requirements laid down in the Euratom Treaty and in Union legislation adopted under that Treaty, and in particular in Council Directive 2009/71/Euratom. That Directive contains a high-level nuclear safety objective covering all stages of the lifecycle of each nuclear installation, including the siting, design, construction, commissioning, operation and decommissioning of such installations. In particular, the Directive calls for significant safety enhancements in the design of new reactors, including the so-called Generation III+ reactors, for which the state of the art knowledge and technology should be used taking into account the latest international safety requirements.

Those requirements provide for an effective implementation of the nuclear safety objective, including the application of the defence-in-depth principle and of an effective safety culture. Those requirements ensure that the impact of extreme human-made and natural hazards, including earthquakes and floods, is minimized and that accidents, abnormal operations and failures or loss of control systems are prevented, inter alia by protective structures or back-up cooling and electricity supply systems.

(8) Accident-tolerant fuel for nuclear power plants which provides additional protection against accidents resulting from structural damages to fuel or reactor components has become available in the market. In order to take into account those recent technological

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14 The TEG report available on: https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

14 The TEG report available on: https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

15 JRC report: Technical assessment of nuclear energy with respect to the 'do no significant harm' criteria of Regulation (EU) 2020/852 ('Taxonomy Regulation') available on: https://ec.europa.eu/info/file/210329-jrc-report-nuclear-energy-assessment_en

developments, the use of that type of fuel should be set out as a requirement in the technical screening criteria.

(9) Worldwide, research and development efforts are ongoing to develop new nuclear reactor technologies that use closed fuel cycles or fuel self-breeding concepts and that minimise the production of high-level radioactive waste. Although those Generation IV reactors are not yet commercially viable, technical screening criteria should be laid down for such reactors in light of their potential contribution to the objective of decarbonisation and minimisation of waste.

(10) It is necessary to ensure that new nuclear power plants use the most advanced solutions resulting from technological progress. The technical screening criteria for such new nuclear power plants should therefore provide for regular reviews of each investment project, and for technical parameters that correspond to the best-available technology in view of the outcomes of sustained research and development efforts and the continuous improvements of technologies.

(11) Annex II to the Euratom Treaty and Council Regulation (Euratom) No 2587/1999[16] establish thresholds and other requirements for the notification to the Commission of investments in nuclear energy. In order to ensure compliance with the technical screening criteria covering such investments, such investments should be subject to an opinion from the Commission, irrespective of whether such notification is compulsory on the basis of those thresholds and other requirements, and all issues concerning the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and the technical screening criteria identified by the Commission in its opinion should besatisfactorily addressed.

(12) In view of the long lead times for investments in new nuclear generation capacity, extending the service time of selected existing nuclear installations can support the decarbonisation of the energy system in the near to medium term. The technical screening criteria for such extensions should, however, include modifications and safety upgrades to ensure that those nuclear installations comply with the highest achievable safety standards and the safety objective requirements laid down in legislation adopted under the Euratom Treaty.

(13) In the light of the expected technological and scientific developments, investments in the construction and safe operation of new nuclear installations using best available technologies and approved by an appropriate date by Member States' competent authorities in accordance with applicable national law should be subject to technical screening criteria and to time-limits that will encourage the use of new reactors with closed fuel cycle or fuel self-breeding once they become commercially available. These time-limits should be appropriately reviewed according to the progress in the development of such technologies.

(14) The technical screening criteria related to climate objectives should not cause significant harm to any of the other environmental objectives. Specifically for nuclear energy related economic activities, it is necessary to ensure that the long term disposal of waste does not cause significant and long-term harm to the environment, as referred to in Article 17(1), point (d)(iii), of Regulation (EU) 2020/852. It is therefore

[16] Council Regulation (Euratom) No 2587/1999 of 2 December 1999 defining the investment projects to be communicated to the Commission in accordance with Article 41 of the Treaty establishing the European Atomic Energy Community (OJ L 315, 9.12.1999, p. 1).

appropriate to set out in the technical screening criteria specific requirements for a radioactive waste management fund and a nuclear decommissioning fund, and to require operational final disposal facilities for all radioactive waste, which should enable projects covered by this Regulation to avoid any export of radioactive waste for disposal in third countries. Low and intermediate level radioactive waste is currently being disposed of in near-surface disposal facilities in several Member States already, and substantial experience and know-how have been accumulated during decades of operating those facilities. For high-level radioactive waste and spent fuel, deep geological disposal represents the state of the art solution broadly accepted in the expert community world-wide as the safest and most sustainable option for the end point of the management of high-level waste and spent fuel considered as waste. Member States, while retaining responsibility for their policies in respect of the management of their spent fuel and low, intermediate or high-level radioactive waste, are to include planning and implementation of disposal options in their national policies. Latest 2021 reporting from Member States demonstrates that substantial progress is presently accomplished in the realisation of the first deep geological disposal facilities on the Union territory. Therefore realistic solutions are becoming available for Member States to develop and operate such facilities by 2050.

(15) It is necessary to provide a high degree of transparency to investors concerning fossil gas and nuclear energy activities for which technical screening criteria are to be laid down. Commission Delegated Regulation (EU) 2021/2178[17] should therefore be amended to introduce specific disclosure requirements for non-financial and financial undertakings. The information to be disclosed pursuant to those requirements should be presented in the form of a template that indicates clearly the proportion of gas and nuclear energy activities in the denominator of key performance indicators of those undertakings. In order to provide a high degree of transparency to investors in financial products referred to in Article 5 and Article 6 of Regulation (EU) 2020/852 concerning exposures to fossil gas and nuclear energy activities, for which technical screening criteria are to be laid down, the Commission will amend or propose to amend the disclosure framework pertaining to those financial products as appropriate to provide for full transparency over the whole life of those financial products.

(16) The fossil gas and nuclear energy sectors are characterised by rapid technological development. It is necessary to review the technical screening criteria covering those economic activities regularly, as required by Article 19(5) of Regulation (EU) 2020/852. In addition, based on the conditions laid down in Article 10(2) of Regulation (EU) 2020/852, the review should cover the appropriateness of the periods of time laid down in the technical screening criteria are, and the applicable share of renewable and low-carbon gases in the fossil gas facilities.

(17) Delegated Regulation (EU) 2021/2139 and Delegated Regulation (EU) 2021/2178 should therefore be amended accordingly.

(18) The amendments to Delegated Regulation (EU) 2021/2139 and Delegated Regulation (EU) 2021/2178 laid down in this Delegated Regulation are closely linked. In order to ensure coherence between those provisions, which should enter into force at the same

[17] Commission Delegated Regulation (EU) 2021/2178 of 6 July 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by specifying the content and presentation of information to be disclosed by undertakings subject to Articles 19a or 29a of Directive 2013/34/EU concerning environmentally sustainable economic activities, and specifying the methodology to comply with that disclosure obligation (OJ L 443, 10.12.2021, p. 9).

time so as to facilitate a comprehensive view of the legal framework for stakeholders and to facilitate the application of Regulation (EU) 2020/852, it is necessary to include those provisions in a single Regulation.

(19) It is necessary to provide non-financial and financial undertakings with sufficient time to assess whether their economic activities relating to fossil gas and nuclear energy comply with the technical screening criteria laid down in this Regulation, and to report on the basis of that assessment in accordance with Delegated Regulation (EU) 2021/2178. The date of application of this Regulation should therefore be deferred to 1 January 2023.

HAS ADOPTED THIS REGULATION:

*Article 1*

**Amendments to Delegated Regulation (EU) 2021/2139**

Delegated Regulation (EU) 2021/2139 is amended as follows:

(1) the following Article 2a is inserted:

*'Article 2a*

**Review**

When performing the review referred to in Article 19(5) of Regulation (EU) 2020/852, the Commission shall also review and assess the necessity to amend the following:

(a) the length of the time-limits referred to in Annex I, Section 4.27, Section 4.28, Section 4.29, point 1(b), Section 4.30, point 1(b) and Section 4.31, point 1(b);

(b) the share of renewable and low-carbon gasses referred to in Annex I, Section 4.29, point 1(b), Section 4.30, point 1(b) and Section 4.31, point 1(b).

Any review of the time-limit referred to in Annex I, Section 4.27 shall take into account the commercial availability of technologies referred to in Annex I, Section 4.26.'

(2) Annex I is amended in accordance with Annex I to this Regulation.

(3) Annex II is amended in accordance with Annex II to this Regulation.

*Article 2*

**Amendments to Delegated Regulation (EU) 2021/2178**

Delegated Regulation (EU) 2021/2178 is amended as follows:

(1) in Article 8, the following paragraphs 6 and 7 are added:

‘6. Non-financial undertakings and financial undertakings shall disclose the proportion of economic activities referred to in Sections 4.26, 4.27 and 4.28, of Annexes I and II to Delegated Regulation (EU) 2021/2139 in their key performance indicators.

Non-financial undertakings and financial undertakings shall disclose the proportion of economic activities referred to in Sections 4.29, 4.30 and 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in their key performance indicators.

This paragraph shall not apply to the key performance indicators referred to in Sections 1.2.3 and 1.2.4 of Annex V and Section 3 of Annex VII to this Regulation.

7. The information referred to in paragraph 6 shall be presented in tabular form by using the templates set out in Annex XII to this Regulation.’

(2) The text set out in Annex III to this Regulation is added as Annex XII to Delegated Regulation (EU) 2021/2178.

*Article 3*

**Entry into force and application**

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2023.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [date]

For the Commission

*The President*
*Ursula VON DER LEYEN*

# ANNEX I

In Annex I to Delegated Regulation (EU) 2021/2139, the following Sections 4.26, 4.27, 4.28, 4.29, 4.30 and 4.31 are inserted:

**‘4.26. Pre-commercial stages of advanced technologies with minimal waste from the fuel cycle**

*Description of the activity*

Research, development, demonstration and deployment of innovative electricity generation facilities, licenced by Member States’ competent authorities in accordance with applicable national law, that produce energy from nuclear processes with minimal waste from the fuel cycle.

The activity is classified under NACE code M72 and M72.1 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006.

An economic activity in this category is an activity as referred to in Article 10(2) of Regulation (EU) 2020/852[18] where it complies with all the technical screening criteria set out in this Section.

*Technical screening criteria*

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General criteria pertaining to substantial contribution to climate change mitigation and Do no significant harm (‘DNSH’)

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1. The project related to the economic activity (‘the project’) is located in a Member State which complies with all of the following:

   (a) has fully transposed Council Directive 2009/71/Euratom*2 and Council Directive 2011/70/Euratom**3;

   (b) complies with the Euratom Treaty and the Union legislation adopted on its basis, in particular, Council Directive 2009/71/Euratom, Council Directive 2013/59/Euratom, and Council Directive 2011/70/Euratom as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU;

   (c) has in place, as of the approval date of the project, a radioactive waste management fund and a nuclear decommissioning fund which can be combined;

   (d) has demonstrated that it will have resources available at the end of the estimated useful life of the nuclear power plant corresponding to the estimated cost of radioactive waste management and decommissioning in compliance with Commission Recommendation 2006/851/Euratom;

[18] OJ L 198, 22.6.2020, p. 13

(e) has operational final disposal facilities for all very low-, low- and intermediate-level radioactive waste, notified to the Commission both under Article 41 Euratom Treaty and included in the national programme updated under Council Directive 2011/70/Euratom**3;

(f) has a plan with detailed steps to have in operation, by 2050, a disposal facility for high-level radioactive waste.

2. The project is part of a EU-financed research programme or the project has been notified to the Commission, the Commission has given its opinion on it and all the issues raised in the opinion in respect of the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and of the technical screening criteria laid down in this Section have been satisfactorily addressed. No separate notification is required where the project has been notified in accordance with Article 41 of the Euratom Treaty, the Commission has communicated its views in accordance with Article 43 of the Euratom Treaty and all the issues raised by the Commission in respect of the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and of the technical screening criteria laid down in this Section have been satisfactorily addressed.

3. The Member State concerned has committed to report to the Commission every five years for each project:

(a) the adequacy of the accumulated resources referred to in point 1(c);

(b) actual progress in the implementation of the plan referred to in point 1(f).

4. The activity complies with national legislation that transposes the Union legislation referred to in point 1(a) and (b), including as regards the evaluation, in particular through stress tests, of the resilience of the Union nuclear power plants against extreme natural hazards, including earthquakes. Accordingly, the activity takes place on the territory of a Member State where the operator of a nuclear installation:

(a) has submitted a demonstration of nuclear safety, whose scope and level of detail is commensurate with the potential magnitude and nature of the hazard relevant for the nuclear installation and its site (Article 6, point (b), of Directive 2009/71/Euratom);(b) has taken defence-in-depth measures to ensure, *inter alia*, that the impact of extreme external natural and unintended man-made hazards is minimised (Article 8b(1), point (a) of Directive 2009/71/Euratom);

(c) has performed an appropriate site and installation-specific assessment when the operator concerned applies for a licence to construct or operate a NPP (Article 8c(1) of Directive 2009/71/Euratom).

The activity fulfils the requirements of the of Directive 2009/71/Euratom, supported by the latest international guidance through IAEA and WENRA, contributing to increasing the resilience of the ability of new and existing NPPs to cope with extreme natural hazards, including floods and extreme weather conditions.

5. Radioactive waste referred to in points (e) and (f) of paragraph 1 is disposed of in the Member State in which it was generated, unless there is an agreement between the Member State concerned and the Member State of destination, as established in Directive 2011/70/Euratom[19]. In this case, the Member State of destination has radioactive waste management and disposal programmes and a suitable disposal facility in operation in compliance with the requirements ofDirective 2011/70/Euratom.

Additional criteria pertaining to substantial contribution to climate change mitigation

The activity aims at generating or generates electricity using nuclear energy. Life cycle greenhouse gas (GHG) emissions from the generation of electricity from nuclear energy below the threshold of 100 g CO2e/kWh.

Life cycle GHG emission savings calculated using Commission Recommendation 2013/179/EU[20]on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

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

Additional criteria pertaining to Do no significant harm ('DNSH')

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|---|---|
| (2) Climate change adaptation | The activity complies with the criteria set out in Appendix A to this Annex.<br><br>The activity complies with the requirements laid down in Article 6(b), 8b(1), point (a) and Article 8c(a) of Directive 2009/71/Euratom[21].<br><br>The activity fulfils the requirements of Directive 2009/71/Euratom[22] implemented in accordance with international guidance of IAEA and WENRA relating to extreme natural hazards, including floods and extreme weather conditions. |

[19] OJ L 199, 2.8.2011, p. 48.
[20] Commission Recommendation 2013/179/EU of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations (OJ L 124, 4.5.2013, p.1).
[21] OJ L 172, 2.7.2009, p. 18.
[22] OJ L 172, 2.7.2009, p. 18.

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|---|---|
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex .<br>Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed, in accordance with a water use and protection management plan, developed in consultation with relevant stakeholders.<br>In order to limit thermal anomalies associated with the discharge of waste heat, operators of inland nuclear power plants utilising once-through wet cooling by taking water from a river or a lake control:<br>a) the maximum temperature of the recipient freshwater body after mixing, and<br>b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.<br>The temperature control is implemented according to the individual licence conditions for the specific operations, where applicable, and/or threshold values in line with Union law.<br>The activity complies with the Industry Foundation Classes (IFC) standards. |
| (4) Transition to a circular economy | A plan for the management of both non-radioactive and radioactive waste is in place and ensures maximal reuse or recycling of such waste at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, the reflection in financial projections or the official project documentation.<br>During operation and decommissioning, the amount of radioactive waste is minimised and the amount of free-release materials is maximised in accordance with Directive 2011/70/Euratom[23], and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom[24].<br>A financing scheme is in place to ensure adequate funding for all decommissioning activities and for the management of spent fuel and radioactive waste, in compliance with Directive 2011/70/Euratom[25] and Commission Recommendation 2006/851/Euratom[26]. |
| (5) Pollution prevention and | The activity complies with the criteria set out in Appendix C to this Annex. |

[23] OJ L 199, 2.8.2011, p. 48.
[24] OJ L 13, 17.1.2014, p. 1.
[25] OJ L 199, 2.8.2011, p. 48.
[26] OJ L 330, 28.11.2006, p. 31.

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| control | Non-radioactive emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants. No significant cross-media effects occur.<br><br>For nuclear power plants greater than 1 MW thermal input but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193 of the European Parliament and of the Council[27].<br><br>Radioactive discharges to air, water bodies and ground (soil) comply with individual licence conditions for the specific operations, where applicable, or national threshold values in line with Directive 2013/59/Euratom[28] and Council Directive 2013/51/Euratom[29].<br><br>Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom[30] and Directive 2013/59/Euratom[31].<br><br>An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimize the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom[32] that considers radioactive waste storage, including long-term storage, as an interim solution, but not an alternative to disposal. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

[27] Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants (OJ L 313, 28.11.2015, p. 1)

[28] OJ L 13, 17.1.2014, p. 1.

[29] Council Directive 2013/51/Euratom of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption (OJ L 296, 7.11.2013, p. 12)

[30] (OJ L 199, 2.8.2011, p. 48).

[31] OJ L 13, 17.1.2014, p. 1.

[32] OJ L 199, 2.8.2011, p. 48.

### 4.27. Construction and safe operation of new nuclear power plants, for the generation of electricity or heat, including for hydrogen production, using best-available technologies

For the purposes of this Section, best-available technologies means technologies that fully comply with the requirements of Council Directive 2009/71/Euratom[*1] and fully respect the most recent technical parameters of the International Atomic Energy Agency ('IAEA') standards and the Western European Nuclear Regulators Association ('WENRA') Safety Reference Levels.

*Description of the activity*

Construction and safe operation of new nuclear installations, for which the construction permit has been issued by 2045 by Member States' competent authorities in accordance with applicable national law, to produce electricity and/or, process heat, including for the purposes of district heating or industrial processes such as hydrogen production (new nuclear installations or NNIs), as well as their safety upgrades.

The activity is classified under NACE codes D35.11 and F42.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006.[33]

An economic activity in this category is an activity as referred to in Article 10(2) of Regulation (EU) 2020/852[34] where it complies with all the technical screening criteria set out in this Section.

*Technical screening criteria*

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General criteria pertaining to substantial contribution to climate change mitigation and Do no significant harm ('DNSH')

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1. The project related to the economic activity ('the project') is located in a Member State which complies with all of the following:

   (a) has fully transposed Council Directive 2009/71/Euratom*2 and Council Directive 2011/70/Euratom**3;

[33] Regulation (EC) No. 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains (OJ L 393, 30.12.2006, p. 1).

[34] OJ L 198, 22.6.2020, p. 13.

(b) complies with the Euratom Treaty and the Union legislation adopted on its basis, in particular, Council Directive 2013/59/Euratom, Council Directive 2009/71/Euratom and Council Directive 2011/70/Euratom as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU;

(c) has in place, as of the approval date of the project, a radioactive waste management fund and a nuclear decommissioning fund which can be combined;

(d) has demonstrated that it will have resources available at the end of the estimated useful life of the nuclear power plant corresponding to the estimated cost of radioactive waste management and decommissioning in compliance with Commission Recommendation 2006/851/Euratom;

(e) has operational final disposal facilities for all very low-, low- and intermediate-level radioactive waste, notified to the Commission both under Article 41 of the Euratom Treaty and included in the national programme updated under Council Directive 2011/70/Euratom**3;

(f) has a plan with detailed steps to have in operation, by 2050, a disposal facility for high-level radioactive waste.

2. The project fully applies the best-available technology and accident-tolerant fuel. The technology is certified and approved by the national safety regulator.

3. The project has been notified to the Commission, the Commission has given its opinion on it and all the issues raised in the opinion in respect of the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and of the technical screening criteria laid down in this Section have been satisfactorily addressed. No separate notification is required where the project has been notified in accordance with Article 41 of the Euratom Treaty, the Commission has communicated its views in accordance with Article 43 of the Euratom Treaty and all the issues raised by the Commission in respect of the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and of the technical screening criteria laid down in this Section have been satisfactorily addressed.

4. The Member State concerned has committed to report to the Commission every five years for each project:

(a) the adequacy of the accumulated resources referred to in point 1(c);

(b) actual progress in the implementation of the plan referred to in point 1(f).

5. The Commission shall review starting in 2025 and at least every 10 years the technical parameters corresponding to the best-available technology on the basis of the assessment by the European Nuclear Safety Regulators' Group (ENSREG).

6. The activity complies with national legislation that transposes the Union legislation referred to in point 1 (a) and (b), including as regards the evaluation, in particular through stress-tests, of the resilience of the Union nuclear power plants against extreme natural hazards, including earthquakes. Accordingly, the activity takes place on the territory of a Member State where the operator of a nuclear installation:

(a) has submitted a demonstration of nuclear safety, whose scope and level of detail is commensurate with the potential magnitude and nature of the hazard relevant for the nuclear installation and its site (Article 6, point (b), of Directive 2009/71/Euratom);

(b) has taken defence-in-depth measures to ensure, *inter alia*, that the impact of extreme external natural and unintended man-made hazards is minimised (Article 8b(1), point (a), of Directive 2009/71/Euratom);

(c) has performed an appropriate site and installation-specific assessment when the operator concerned applies for a licence to construct or operate a NPP (Article 8c(1) of Directive 2009/71/Euratom).

The activity fulfils the requirements of Directive 2009/71/Euratom, supported by the latest international guidance through IAEA and WENRA, contributing to increasing the resilience of the ability of new and existing NPPs to cope with extreme natural hazards, including floods and extreme weather conditions.

7. Radioactive waste referred to in points (e) and (f) of paragraph 1 is disposed of in the Member State in which it was generated, unless there is an agreement between the Member State concerned and the Member State of destination, as established in Directive 2011/70/Euratom[35]. In this case, the Member State of destination has radioactive waste management and disposal programmes and a suitable disposal facility in operation in compliance with the requirements of Directive 2011/70/Euratom.

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Additional criteria pertaining to substantial contribution to climate change mitigation

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The activity generates electricity using nuclear energy. Life cycle greenhouse gas (GHG) emissions from the generation of electricity from nuclear energy below the threshold of 100 g CO2e/kWh.

Life cycle GHG emission savings calculated using Commission Recommendation 2013/179/EU[36]on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

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

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[35] OJ L 199, 2.8.2011, p. 48.

[36] Commission Recommendation 2013/179/EU of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations (OJ L 124, 4.5.2013, p.1).

| Additional criteria pertaining to Do no significant harm ('DNSH') | |
|---|---|
| (2) Climate change adaptation | The activity complies with the criteria set out in Appendix A to this Annex.<br><br>The activity complies with the requirements laid down in Article 6(b), Article 8b(1), point (a) and Article 8c(a) of Directive 2009/71/Euratom[37].<br><br>The activity fulfils the requirements of Directive 2009/71/Euratom[38] implemented in accordance with international guidance of IAEA and WENRA relating to extreme natural hazards, including floods and extreme weather conditions. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex.<br>Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed, in accordance with a water use and protection management plan, developed in consultation with relevant stakeholders.<br>In order to limit thermal anomalies associated with the discharge of waste heat, operators of inland nuclear power plants utilising once-through wet cooling by taking water from a river or a lake control:<br>a) the maximum temperature of the recipient freshwater body after mixing, and<br>b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.<br>The temperature control is implemented according to the individual licence conditions for the specific operations, where applicable, or threshold values in line with the Union law.<br>The activity complies with the Industry Foundation Classes (IFC) standards. |
| (4) Transition to a circular economy | A plan for the management of both non-radioactive and radioactive waste is in place and ensures maximal reuse or recycling of such waste at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, the reflection |

[37] OJ L 172, 2.7.2009, p. 18.
[38] OJ L 172, 2.7.2009, p. 18.

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| | in financial projections or the official project documentation.<br>During operation and decommissioning, the amount of radioactive waste is minimised and the amount of free-release materials is maximised in accordance with Directive 2011/70/Euratom[39], and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom[40].<br>A financing scheme is in place to ensure adequate funding for all decommissioning activities and for the management of spent fuel and radioactive waste, in compliance with Directive 2011/70/Euratom[41] and Commission Recommendation 2006/851/Euratom[42]. |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br>Non-radioactive emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants. No significant cross-media effects occur.<br>For nuclear power plants greater than 1 MW thermal input but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193 of the European Parliament and of the Council[43].<br>Radioactive discharges to air, water bodies and ground (soil) comply with individual licence conditions for the specific operations, where applicable, and/or national threshold values in line with Directive 2013/59/Euratom[44] and Council Directive 2013/51/Euratom[45].<br>Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom[46] and Directive 2013/59/Euratom[47]. |

[39] OJ L 199, 2.8.2011, p. 48.
[40] OJ L 13, 17.1.2014, p. 1.
[41] OJ L 199, 2.8.2011, p. 48.
[42] OJ L 330, 28.11.2006, p. 31.
[43] Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants (OJ L 313, 28.11.2015, p. 1)
[44] OJ L 13, 17.1.2014, p. 1.
[45] Council Directive 2013/51/Euratom of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption (OJ L 296, 7.11.2013, p. 12)
[46] (OJ L 199, 2.8.2011, p. 48).

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| | An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimize the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom[48] that considers radioactive waste storage, including long-term storage, as an interim solution, but not an alternative to disposal. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

### 4.28 Electricity generation from nuclear energy in existing installations

*Description of the activity*

Modification of existing nuclear installations for the purposes of extension, authorised by Member States' competent authorities by 2040 in accordance with applicable national law, of the service time of safe operation of electricity generation facilities that produce electricity from nuclear energy ('nuclear power plants' or 'NPPs').

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

An economic activity in this category is an activity as referred to in Article 10(2) of Regulation (EU) 2020/852[49] where it complies with all the technical screening criteria set out in this Section.

*Technical screening criteria*

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| General criteria pertaining to substantial contribution to climate change mitigation and Do no significant harm ('DNSH') |

1. The project related to the economic activity ('the project') is located in a Member State which complies with all of the following:
   (a) has fully transposed Council Directive 2009/71/Euratom[*2] and Council Directive 2011/70/Euratom[*3];

[47] OJ L 13, 17.1.2014, p. 1.
[48] OJ L 199, 2.8.2011, p. 48.
[49] OJ L 198, 22.6.2020, p. 13.

(b) complies with the Treaty establishing the European Atomic Energy Community ('Euratom Treaty') and the Union legislation adopted on its basis, in particular, Council Directive 2013/59/Euratom[*4], Council Directive 2009/71/Euratom,[*5] and Council Directive 2011/70/Euratom[*6] as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU of the European Council and of the Parliament[*7];

(c) has in place, as of the approval date of the project, a radioactive waste management fund and a nuclear decommissioning fund which can be combined;

(d) has demonstrated that it will have resources available at the end of the estimated useful life of the nuclear power plant corresponding to the estimated cost of radioactive waste management and decommissioning in compliance with Commission Recommendation 2006/851/Euratom[50];

(e) has operational final disposal facilities for all very low-, low- and intermediate-level radioactive waste, notified to the Commission both under Article 41 of the Euratom Treaty and included in the national programme updated under Council Directive 2011/70/Euratom[*3];

(f) has for projects authorised after 2025 a plan with detailed steps to have in operation, by 2050, a disposal facility for high-level radioactive waste.

2. The upgraded project implements any reasonably practicable safety improvement and makes use of accident-tolerant fuel. The technology is certified and approved by the national safety regulator.

3. The project has been notified to the Commission, the Commission has given its opinion on it and all the issues raised in the opinion in respect of the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and of the technical screening criteria laid down in this Section have been satisfactorily addressed. No separate notification is required where the project has been notified in accordance with Article 41 of the Euratom Treaty, the Commission has communicated its views in accordance with Article 43 of the Euratom Treaty and all the issues raised by the Commission in respect of the application of Article 10(2), Article 17 of Regulation (EU) 2020/852 and of the technical screening criteria laid down in this Section have been satisfactorily addressed.

4. The Member State concerned has committed to report to the Commission every five years for each project:

(a) the adequacy of the accumulated resources referred to in point 1(c);

(b) actual progress in the implementation of the plan referred to in point 1(f).

5. The activity complies with national legislation that transposes the Union legislation referred to in point 1(a) and (b), including as regards the evaluation, in particular through stress-tests, of the resilience of the Union nuclear power plants against extreme natural hazards, including earthquakes. Accordingly, the activity takes place on the territory of a Member State where the operator of a nuclear installation:

[50] Commission Recommendation 2006/851/Euratom of 24 October 2006 on the management of financial resources for the decommissioning of nuclear installations, spent fuel and radioactive waste (OJ L 330, 28.11.2006, p. 31)

(a) has submitted a demonstration of nuclear safety, whose scope and level of detail is commensurate with the potential magnitude and nature of the hazard relevant for the nuclear installation and its site (Article 6, point (b), of Directive 2009/71/Euratom);

(b) has taken defence-in-depth measures to ensure, *inter alia*, that the impact of extreme external natural and unintended man-made hazards is minimized (Article 8b(1), point (a), of Directive 2009/71/Euratom);

(c) has performed an appropriate site and installation-specific assessment when the operator concerned applies for a licence to construct or operate a NPP (Article 8c(1) of Directive 2009/71/Euratom).

The activity fulfils the requirements of Directive 2009/71/Euratom, supported by the latest international guidance through IAEA and WENRA, contributing to increasing the resilience of the ability of new and existing NPPs to cope with extreme natural hazards, including floods and extreme weather conditions.

6. Radioactive waste referred to in points (e) and (f) of paragraph 1 is disposed of in the Member State in which it was generated, unless there is an agreement between the Member State concerned and the Member State of destination, as established in Directive 2011/70/Euratom[51]. In this case, the Member State of destination has radioactive waste management and disposal programmes and a suitable disposal facility in operation in compliance with the requirements of Directive 2011/70/Euratom.

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Additional criteria pertaining to substantial contribution to climate change mitigation

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The activity generates electricity using nuclear energy. Life cycle greenhouse gas (GHG) emissions from the generation of electricity from nuclear energy below the threshold of 100 g CO2e/kWh.

Life cycle GHG emission savings calculated using Commission Recommendation 2013/179/EU[52]on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

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

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Additional criteria pertaining to Do no significant harm ('DNSH')

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[51] OJ L 199, 2.8.2011, p. 48.

[52] Commission Recommendation 2013/179/EU of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations (OJ L 124, 4.5.2013, p.1).

| | |
|---|---|
| (2) Climate change adaptation | The activity complies with the criteria set out in Appendix A to this Annex.<br><br>The activity complies with the requirements laid down in Article 6(b), Article 8b(1), point (a) and Article 8c(a) of Directive 2009/71/Euratom.<br><br>The activity fulfils the requirements of Directive 2009/71/Euratom implemented in accordance with international guidance of IAEA and WENRA relating to extreme natural hazards, including floods and extreme weather conditions. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex.<br>Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed, in accordance with a water use and protection management plan, developed in consultation with relevant stakeholders.<br>In order to limit thermal anomalies associated with the discharge of waste heat, operators of inland nuclear power plants utilising once-through wet cooling by taking water from a river or a lake control:<br>(a) the maximum temperature of the recipient freshwater body after mixing, and<br>(b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.<br>The temperature control is implemented according to the individual licence conditions for the specific operations, where applicable, or threshold values in line with Union law.<br>The activity complies with the Industry Foundation Classes (IFC) standards. |
| (4) Transition to a circular economy | A plan for the management of both non-radioactive and radioactive waste is in place and ensures maximal reuse or recycling of such waste at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, the reflection in financial projections or the official project documentation.<br>During operation and decommissioning, the amount of radioactive waste is minimised and the amount of free-release materials is maximised in accordance with Directive 2011/70/Euratom[53], and in compliance with the radiation protection requirements laid down in |

[53] OJ L 199, 2.8.2011, p. 48.

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| | Directive 2013/59/Euratom.<br>A financing scheme is in place to ensure adequate funding for all decommissioning activities and for the management of spent fuel and radioactive waste, in compliance with Directive 2011/70/Euratom[54] and Commission Recommendation 2006/851/Euratom. |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br>Non-radioactive emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants. No significant cross-media effects occur.<br>For nuclear power plants greater than 1 MW thermal input but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193 of the European Parliament and of the Council[55].<br>Radioactive discharges to air, water bodies and ground (soil) comply with individual licence conditions for the specific operations, where applicable, or national threshold values in line with Directive 2013/59/Euratom[56] and Council Directive 2013/51/Euratom[57].<br>Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom[58] and Directive 2013/59/Euratom[59].<br>An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimize the duration of interim storage, in compliance with Directive 2011/70/Euratom that considers radioactive waste storage, including long-term storage, as an interim solution, but not an alternative to disposal. |

[54] OJ L 199, 2.8.2011, p. 48.
[55] Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants (OJ L 313, 28.11.2015, p. 1)
[56] OJ L 13, 17.1.2014, p. 1.
[57] Council Directive 2013/51/Euratom of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption (OJ L 296, 7.11.2013, p. 12)
[58] (OJ L 199, 2.8.2011, p. 48).
[59] OJ L 13, 17.1.2014, p. 1.

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| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

### 4.29. Electricity generation from fossil gaseous fuels

*Description of the activity*

Construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels. This activity does not include electricity generation from the exclusive use of renewable non-fossil gaseous and liquid fuels referred to in Section 4.7 of this Annex and biogas and bio-liquid fuels referred to in Section 4.8 of this Annex.

The economic activities in this category may be associated with several NACE codes, notably D35.11 and F42.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006[60].

An economic activity in this category is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852[61] where it complies with the technical screening criteria set out in this Section.

*Technical screening criteria*

| Substantial contribution to climate change mitigation |
|---|

1. The activity meets either of the following criteria:

a) Life-cycle GHG emissions from the generation of electricity using fossil gaseous fuels are lower than 100 g CO2e/kWh.

Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU[62] or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

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

Where facilities incorporate any form of abatement, including carbon capture or use of decarbonised fuels, that abatement activity complies with the criteria set out in the relevant Section of this Annex, where applicable.

[60] OJ L 393, 30.12.2006, p. 1.
[61] OJ L 198, 22.6.2020, p. 13.
[62] OJ L 124, 4.5.2013, p.1.

Where the CO2 that would otherwise be emitted from the electricity generation process is captured for the purpose of underground storage, the CO2 is transported and stored underground, in accordance with the technical screening criteria set out in Sections 5.11 and 5.12 of this Annex.

b) for facilities, for which the construction permit is granted by 31 December 2030:

i. direct GHG emissions of the activity are lower than 270g CO2e/kWh of the output energy, or annual GHG emissions of the activity do not exceed an average of 550kgCO2e/kW of the output energy of the facility's capacity over 20 years, and

ii. the power generated by the activity may not yet efficiently be replaced by power generated from renewable energy sources, for the same capacity, and

iii. the facility replaces an existing high emitting electricity generation facility that uses solid or liquid fossil fuels, and

iv. the production capacity of the facility does not exceed the capacity of the replaced facility by more than 15%, and

v. the facility demonstrates compatibility with co-firing of low carbon gaseous fuels and there are effective plans or commitments, approved by the management body, to use at least 30% of renewable or low-carbon gases as of 1 January 2026, and at least 55% of renewable or low-carbon gases as of 1 January 2030, and to switch to renewable or low-carbon gases and the switch takes place by 31 December 2035, and

vi. the replacement leads to a reduction in emissions of at least 55% GHG per kWh of output energy, andviii. the activity takes place on the territory of a Member State that has committed to phase-out the use of energy generation from coal and has reported this in its integrated national energy and climate plan referred to in Article 3 of Regulation EU/2018/1999 or in another instrument.

Compliance with the above criteria is verified by an independent third party. In particular, every year the independent third party shall publish and transmit to the Commission a report certifying the level of direct GHG emissions referred to in point i) or assessing whether the lifecycle annual GHG emissions of the activity are on a credible trajectory to comply with the average threshold over 20 years referred to in point i). On the basis of the reports transmitted to it, the Commission may address an opinion to the relevant operators. The Commission shall take those reports into account when performing the review referred to in Article 19(5) of Regulation (EU) 2020/852.

2. The activity meets either of the following criteria:

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

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

3. Where the activity blends fossil gaseous fuels with gaseous or liquid biofuels , the agricultural biomass used for the production of the biofuels complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001[63] while forest biomass complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.

Do no significant harm ('DNSH')

| | |
|---|---|
| (2) Climate change adaptation | The activity complies with the criteria set out in Appendix A to this Annex. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex. |
| (4) Transition to a circular economy | N/A |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br><br>Emissions are within or lower than the emission levels associated with ranges of the best available techniques (BAT-AEL) ranges set out in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants[64].<br><br>No significant cross-media effects occur.<br><br>For combustion plants with thermal input greater than 1 MW but below the applicable thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193[65]. |

[63] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

[65] OJ L 313, 28.11.2015, p. 1.
[65] OJ L 313, 28.11.2015, p. 1.

| | |
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| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

### 4.30. High-efficiency co- generation of heat/cool and power from fossil gaseous fuels

*Description of the activity*

Construction, refurbishment, and operation of combined heat/cool and power generation facilities using gaseous fuels. This activity does not include high-efficiency co-generation of heat/cool and power from the exclusive use of renewable non-fossil gaseous and liquid fuels referred to in Section 4.19 of this Annex, and biogas and bio-liquid fuels referred to in Section 4.20 of this Annex.

The economic activities in this category may be associated with NACE codes D35.11 and D35.30 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006[66].

An economic activity in this category is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852[67] where it complies with the technical screening criteria set out in this Section.

*Technical screening criteria*

| Substantial contribution to climate change mitigation |
|---|
| 1. The activity meets either of the following criteria:<br><br>a) The life-cycle GHG emissions from the co-generation of heat/cool and power from gaseous fuels are lower than 100 g CO2e per 1 kWh of energy output of the co-generation.<br><br>Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU[68] or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.<br><br>Quantified life-cycle GHG emissions are verified by an independent third party.<br><br>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 CO2 emitted from the electricity generation is captured, the CO2 shall meet the emissions limit set out in point 1 of this Section and, the CO2 be transported |

[66] OJ L 393, 30.12.2006, p. 1.
[67] OJ L 198, 22.6.2020, p. 13.
[68] OJ L 124, 4.5.2013, p.1.

and stored underground in a way that meets the technical screening criteria for transport of CO2 and storage of CO2 set out in Sections 5.11 and 5.12, respectively of this Annex.

b) for facilities, for which the construction permit is granted by 31 December 2030:

i. the activity achieves primary energy savings of at least 10% compared with the references to separate production of heat and electricity; the primary energy savings are calculated on the basis of formula provided in Directive 2012/27/EU, and

ii. direct GHG emissions of the activity are lower than 270 g CO2e/kWh of the output energy, and

iii. the power and heat generated by the activity may not yet efficiently be replaced by power and heat generated from renewable energy sources, for the same capacity, and

iv. the facility replaces an existing high emitting combined heat/cool and power generation facility, a separate heat/cool generation facility, or a separate power generation facility that uses solid or liquid fossil fuels, and

v. the production capacity of the facility does not exceed the capacity of the replaced facility, and

vi. the facility demonstrates compatibility with co-firing of low carbon gaseous fuels and there are effective plans or commitments, approved by the management body, to use at least 30% of renewable or low-carbon gases as of 1 January 2026, and at least 55% of renewable or low-carbon gases as of 1 January 2030, and to switch to renewable or low-carbon gases and the switch takes place by 31 December 2035, and

vii. the replacement leads to a reduction in emissions of at least 55% GHG per kWh of output energy, and

viii. the refurbishment of the facility does not increase production capacity of the facility, and

ix. the activity takes place on the territory of a Member State that has committed to phase-out the use of energy generation from coal and has reported this in its integrated national energy and climate plan referred to in Article 3 of Regulation EU/2018/1999 or in another instrument.

Compliance with the above criteria is verified by an independent third party.

2. The activity meets either of the following criteria:

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

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

| Do no significant harm (‘DNSH’) | |
|---|---|
| (2) Climate change adaptation | The activity complies with the criteria set out in Appendix A to this Annex. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex. |
| (4) Transition to a circular economy | N/A |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br>Emissions are within or lower than the emission levels associated with the ranges of the best available techniques (BAT-AEL) set out in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants.<br>No significant cross-media effects occur.<br>For combustion plants with thermal input greater than 1 MW but below the applicable thresholds for the BAT conclusions for large combustion plants, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193[69]. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

[69] OJ L 313, 28.11.2015, p. 1.

### 4.31. Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system

*Description of the activity*

Construction, refurbishment and operation of heat generation facilities that produce heat/cool using gaseous fuels connected to efficient district heating and cooling within the meaning of Article 2(41) of Directive 2012/27/EU of the European Parliament and of the Council[70]. This activity does not include production of heat/cool from in an efficient district heating from the exclusive use of renewable non-fossil gaseous and liquid fuels referred to in Section 4.23 of this Annex and biogas and bio-liquid fuels referred to in Section 4.24 of this Annex.

The activity is classified under NACE code D35.30 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006[71].

An economic activity in this category is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852[72] where it complies with the technical screening criteria set out in this Section.

*Technical screening criteria*

| Substantial contribution to climate change mitigation |
|---|

1. The activity meets eitherof the following criteria:

a) Life-cycle GHG emissions from the generation of heat/cool from gaseous fuels are lower than 100 g CO2e/kWh. Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU[73] or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.

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

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 CO2 emitted from the electricity generation is captured, the CO2 shall meet the emissions limit set out in point 1 of this Section and shall be transported and stored underground in a way that meets the technical screening criteria for transport of CO2 and storage of CO2 set out in Sections 5.11 and 5.12, respectively of this Annex.

b) for facilities, for which the construction permit is granted by 31 December 2030:

[70] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).
[71] OJ L 393, 30.12.2006, p. 1.
[72] OJ L 198, 22.6.2020, p. 13.
[73] OJ L 124, 4.5.2013, p.1.

i. The thermal energy generated by the activity is used in an efficient district heating and cooling system as defined in Directive 2012/27/EU, and

ii. the direct GHG emissions of the activity are lower than 270 g CO2e/kWh of the output energy, and

iii. the thermal energy generated by the activity may not yet credibly be replaced efficiently by thermal energy generated from renewable energy sources, for the same capacity, and

iv. the facility replaces an existing high emitting heating/cooling facility using solid or liquid fossil fuel, and

v. the production capacity of the facility does not exceed the capacity of the replaced facility, and

vi. the facility demonstrates compatibility with co-firing of low carbon gaseous fuels and there are effective plans or commitments, approved by the management body, to use at least 30% of renewable or low-carbon gases as of 1 January 2026, and at least 55% of renewable or low-carbon gases as of 1 January 2030, and to switch to renewable or low-carbon gases and the switch takes place by 31 December 2035, and

vii. the replacement leads to a reduction in emissions of at least 55% GHG per kWh of output energy; and

viii. the refurbishment of the facility does not increase production capacity of the facility, and

ix. the activity takes place on the territory of a Member State that has committed to phase-out the use of energy generation from coal and has reported this in its integrated national energy and climate plan referred to in Article 3 of Regulation EU/2018/1999 or in another instrument.

Compliance with the above criteria is verified by an independent third party.

2. The activity meets either of the following criteria:

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

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

| Do no significant harm (‘DNSH’) | |
|---|---|
| (2) Climate change adaptation | The activity complies with the criteria set out in Appendix A to this Annex. |

| | |
|---|---|
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex. |
| (4) Transition to a circular economy | N/A |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br><br>Emissions are within or lower than the emission levels associated with the ranges of the best available techniques (BAT-AEL) set out in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants.<br><br>No significant cross-media effects occur.<br><br>For combustion plants with thermal input greater than 1 MW but below the applicable thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193[74]. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

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# ANNEX II

In Annex II to Delegated Regulation (EU) 2021/2139 the following Sections 4.26, 4.27, 4.28, 4.29, 4.30, and 4.31 are inserted:

**‘4.26 Pre-commercial stages of advanced technologies with minimal waste from the fuel cycle**

*Description of the activity*

Research, development, demonstration and deployment of innovative electricity generation facilities, licenced by Member States’ competent authorities in accordance with applicable

[74] OJ L 313, 28.11.2015, p. 1.

national law, that produce energy from nuclear processes with minimal waste from the fuel cycle.

The activity is classified under NACE code M72 and M72.1 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006 of the European Parliament and of the Council.[75]

*Technical screening criteria*

| Substantial contribution to climate change adaptation |
|---|

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.

2. The physical climate risks that are material to the activity have been identified from those listed in Appendix A to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:

(a) screening of the activity to identify which physical climate risks from the list in Appendix A to this Annex may affect the performance of the economic activity during its expected lifetime;

(b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Appendix A to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;

(c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

(a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;

(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios[76] consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

3. The climate projections and assessment of impacts are based on best practice and available

[75] Regulation (EC) No. 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains (OJ L 393, 30.12.2006, p. 1).

[76] Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports[77] , scientific peer-reviewed publications and open source[78] or paying models.

4. The adaptation solutions implemented:

(a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;

(b) favour nature-based solutions[79] or rely on blue or green infrastructure[80] to the extent possible;

(c) are consistent with local, sectoral, regional or national adaptation plans and strategies;

(d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;

(e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

5. The activity complies with the provisions laid down in the Euratom Treaty and the legislation adopted on its basis, in particular, Council Directive 2013/59/Euratom,[81] Council Directive 2009/71/Euratom,[82] and Council Directive 2011/70/Euratom[83].

6. The activity complies with national legislation that transposes Directive 2009/71/Euratom, including as regards the evaluation, through stress-tests, of the resilience of the Union nuclear power plants against extreme natural hazards, including earthquakes. Accordingly, the activity takes place on the territory of a Member State where the operator of a nuclear installation:

(a) has submitted a demonstration of nuclear safety, whose scope and level of detail is commensurate with the potential magnitude and nature of the hazard relevant for the

[77] Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

[78] Such as Copernicus services managed by the European Commission.

[79] Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services (version of [adoption date]: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en/).

[80] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM/2013/249 final.

[81] OJ L 13, 17.1.2014, p. 1.

[82] OJ L 172, 2.7.2009, p. 18.

[83] OJ L 199, 2.8.2011, p. 48.

nuclear installation and its site (Article 6, point (b), of Directive 2009/71/Euratom).

(b) has taken defence-in-depth measures to ensure, *inter alia*, that the impact of extreme external natural and unintended man-made hazards is minimized (Article 8b(1), point (a), of Directive 2009/71/Euratom).

(c) has performed an appropriate site and installation-specific assessment when the operator concerned applies for a licence to construct or operate a NPP (Article 8c(1) of Directive 2009/71/Euratom).

The activity fulfils the requirements of Directive 2009/71/Euratom, supported by the latest international guidance through IAEA and WENRA, contributing to increasing the resilience of the ability of new and existing NPPs to cope with extreme natural hazards, including floods and extreme weather conditions.

Do no significant harm ('DNSH')

| | |
|---|---|
| (2) Climate change mitigation | The direct GHG emissions of the activity are lower than 270 g CO2e/kWh. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex.<br>Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed, in accordance with a water use and protection management plan, developed in consultation with relevant stakeholders.<br>In order to limit thermal anomalies associated with the discharge of waste heat, operators of inland nuclear power plants utilising once-through wet cooling by taking water from a river or a lake shall control:<br>a) the maximum temperature of the recipient freshwater body after mixing, and<br>b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.<br>The temperature control is implemented according to the individual licence conditions for the specific operations, where applicable, or threshold values in line with the EU regulatory framework.<br>The activity complies with the Industry Foundation Classes (IFC) standards. |
| (4) Transition to a | A plan for the management of both non-radioactive and radioactive waste is in place and ensures maximal reuse or recycling of such waste |

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|---|---|
| circular economy | at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, the reflection in financial projections or the official project documentation.<br><br>During operation and decommissioning, the amount of radioactive waste is minimised and the amount of free-release materials is maximised in accordance with Directive 2011/70/Euratom[84], and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom[85].<br><br>A financing scheme is in place to ensure adequate funding for all decommissioning activities and for the management of spent fuel and radioactive waste, in compliance with Directive 2011/70/Euratom[86] and Commission Recommendation 2006/851/Euratom[87]. |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex. Non-radioactive emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants. No significant cross-media effects occur.<br><br>For nuclear power plants greater than 1 MW thermal input but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193 of the European Parliament and of the Council[88].<br><br>Radioactive discharges to air, water bodies and ground (soil) comply with individual licence conditions for the specific operations, where applicable, and/or national threshold values in line with Directive 2013/59/Euratom[89] and Council Directive 2013/51/Euratom[90].<br><br>Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom[91] and Directive 2013/59/Euratom[92].<br><br>An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimize the duration |

[84] OJ L 199, 2.8.2011, p. 48.
[85] OJ L 13, 17.1.2014, p. 1.
[86] OJ L 199, 2.8.2011, p. 48.
[87] OJ L 330, 28.11.2006, p. 31.
[88] OJ L 313, 28.11.2015, p. 1.
[89] OJ L 13, 17.1.2014, p. 1.
[90] OJ L 296, 7.11.2013, p. 12.
[91] OJ L 199, 2.8.2011, p. 48.
[92] OJ L 13, 17.1.2014, p. 1.

| | |
|---|---|
| | of interim storage, in compliance with the provision of Directive 2011/70/Euratom[93] that considers radioactive waste storage, including long-term storage, as an interim solution, but not an alternative to disposal. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

### 4.27 Construction and safe operation of new nuclear power plants, for the generation of electricity and/or heat, including for hydrogen production, using best-available technologies

*Description of the activity*

Construction and safe operation of new nuclear installations, for which the construction permit has been issued by 2045 by Member States' competent authorities in accordance with applicable national law, to produce electricity and/or, process heat, including for the purposes of district heating or industrial processes such as hydrogen production (new nuclear installations or NNIs), as well as their safety upgrades.

The activity is classified under NACE codes D35.11 and F42.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006 of the European Parliament and of the Council.[94]

*Technical screening criteria*

| Substantial contribution to climate change adaptation |
|---|

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.

2. The physical climate risks that are material to the activity have been identified from those listed in Appendix A to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:

[93] OJ L 199, 2.8.2011, p. 48.

[94] Regulation (EC) No. 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains (OJ L 393, 30.12.2006, p. 1).

(a) screening of the activity to identify which physical climate risks from the list in Appendix A to this Annex may affect the performance of the economic activity during its expected lifetime;

(b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Appendix A to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;

(c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

(a)for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;

(b)for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios[95] consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports[96] , scientific peer-reviewed publications and open source[97] or paying models.

4. The adaptation solutions implemented:

(a)do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;

(b)favour nature-based solutions[98] or rely on blue or green infrastructure[99] to the extent possible;

[95] Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

[96] Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

[97] Such as Copernicus services managed by the European Commission.

[98] Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services (version of [adoption date]: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en/).

(c)are consistent with local, sectoral, regional or national adaptation plans and strategies;

(d)are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;

(e)where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

5. The activity complies with the provisions laid down in the Euratom Treaty and the legislation adopted on its basis, in particular, Council Directive 2013/59/Euratom,[100] Council Directive 2009/71/Euratom,[101] and Council Directive 2011/70/Euratom[102].

6. The activity complies with national legislation that transposes Directive 2009/71/Euratom, including as regards the evaluation, through stress-tests, of the resilience of the Union nuclear power plants against extreme natural hazards, including earthquakes. Accordingly, the activity takes place on the territory of a Member State where the operator of a nuclear installation:

(a) has submitted a demonstration of nuclear safety, whose scope and level of detail is commensurate with the potential magnitude and nature of the hazard relevant for the nuclear installation and its site (Article 6, point (b), of Directive 2009/71/Euratom).

(b) has taken defence-in-depth measures to ensure, *inter alia*, that the impact of extreme external natural and unintended man-made hazards is minimized (Article 8b(1), point (a), of Directive 2009/71/Euratom).

(c) has performed an appropriate site and installation-specific assessment when the operator concerned applies for a licence to construct or operate a NPP (Article 8c(1) of Directive 2009/71/Euratom).

The activity fulfils the requirements of Directive 2009/71/Euratom, supported by the latest international guidance through IAEA and WENRA, contributing to increasing the resilience of the ability of new and existing NPPs to cope with extreme natural hazards, including floods and extreme weather conditions.

Do no significant harm (‘DNSH’)

[99] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe’s Natural Capital, COM/2013/249 final.

[100] OJ L 13, 17.1.2014, p. 1.

[101] OJ L 172, 2.7.2009, p. 18.

[102] OJ L 199, 2.8.2011, p. 48.

| | |
|---|---|
| (2) Climate change mitigation | The direct GHG emissions of the activity are lower than 270 g CO2e/kWh. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex.<br>Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed, in accordance with a water use and protection management plan, developed in consultation with relevant stakeholders.<br>In order to limit thermal anomalies associated with the discharge of waste heat, operators of inland nuclear power plants utilising once-through wet cooling by taking water from a river or a lake shall control:<br>c) the maximum temperature of the recipient freshwater body after mixing, and<br>d) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.<br>The temperature control is implemented according to the individual licence conditions for the specific operations, where applicable, and/or threshold values in line with the EU regulatory framework.<br>The activity complies with the Industry Foundation Classes (IFC) standards . |
| (4) Transition to a circular economy | A plan for the management of both non-radioactive and radioactive waste is in place and ensures maximal reuse or recycling of such waste at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, the reflection in financial projections or the official project documentation.<br>During operation and decommissioning, the amount of radioactive waste is minimised and the amount of free-release materials is maximised in accordance with Directive 2011/70/Euratom[103], and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom[104].<br>A financing scheme is in place to ensure adequate funding for all decommissioning activities and for the management of spent fuel and radioactive waste, in compliance with Directive 2011/70/Euratom[105] and Commission Recommendation 2006/851/Euratom[106]. |

[103] OJ L 199, 2.8.2011, p. 48.
[104] OJ L 13, 17.1.2014, p. 1.
[105] OJ L 199, 2.8.2011, p. 48.

| | |
|---|---|
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex. Non-radioactive emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants. No significant cross-media effects occur.<br><br>For nuclear power plants greater than 1 MW thermal input but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193 of the European Parliament and of the Council[107].<br><br>Radioactive discharges to air, water bodies and ground (soil) comply with individual licence conditions for the specific operations, where applicable, and/or national threshold values in line with Directive 2013/59/Euratom[108] and Council Directive 2013/51/Euratom[109].<br><br>Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom[110] and Directive 2013/59/Euratom[111].<br><br>An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimize the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom[112] that considers radioactive waste storage, including long-term storage, as an interim solution, but not an alternative to disposal. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

[106] OJ L 330, 28.11.2006, p. 31.
[107] OJ L 313, 28.11.2015, p. 1.
[108] OJ L 13, 17.1.2014, p. 1.
[109] OJ L 296, 7.11.2013, p. 12.
[110] OJ L 199, 2.8.2011, p. 48.
[111] OJ L 13, 17.1.2014, p. 1.
[112] OJ L 199, 2.8.2011, p. 48.

### 4.28 Electricity generation from nuclear energy in existing installations

*Description of the activity*

Modification of existing nuclear installations for the purposes of extension, authorised by Member States' competent authorities by 2040 in accordance with applicable national law, of the service time of safe operation of electricity generation facilities that produce electricity from nuclear energy ('nuclear power plants' or 'NPPs')

The activity is classified under NACE codes D35.11 and F42.2 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006 of the European Parliament and of the Council[113].

*Technical screening criteria*

| Substantial contribution to climate change adaptation |
|---|

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.

2. The physical climate risks that are material to the activity have been identified from those listed in Appendix A to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:

(a) screening of the activity to identify which physical climate risks from the list in Appendix A to this Annex may affect the performance of the economic activity during its expected lifetime;

(b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Appendix A to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;

(c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

(a) for activities with an expected lifespan of less than 10 years, the assessment is performed,

[113] OJ L 393, 30.12.2006, p. 1.

at least by using climate projections at the smallest appropriate scale;

(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios[114] consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports[115] , scientific peer-reviewed publications and open source[116] or paying models.

4. The adaptation solutions implemented:

(a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;

(b) favour nature-based solutions[117] or rely on blue or green infrastructure[118] to the extent possible;

(c) are consistent with local, sectoral, regional or national adaptation plans and strategies;

(d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;

(e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

5. The activity complies with the provisions laid down in the Euratom Treaty and the legislation adopted on its basis, in particular, Council Directive 2013/59/Euratom,[119] Council Directive 2009/71/Euratom,[120] and Council Directive 2011/70/Euratom[121].

[114] Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

[115] Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

[116] Such as Copernicus services managed by the European Commission.

[117] Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services (version of [adoption date]: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en/).

[118] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM/2013/249 final.

[119] OJ L 13, 17.1.2014, p. 1.

6. The activity complies with national legislation that transposes Directive 2009/71/Euratom, including as regards the evaluation, through stress-tests, of the resilience of the Union nuclear power plants against extreme natural hazards, including earthquakes. Accordingly, the activity takes place on the territory of a Member State where the operator of a nuclear installation:

(a) has submitted a demonstration of nuclear safety, whose scope and level of detail is commensurate with the potential magnitude and nature of the hazard relevant for the nuclear installation and its site (Article 6, point (b), of Directive 2009/71/Euratom).

(b) has taken defence-in-depth measures to ensure, *inter alia*, that the impact of extreme external natural and unintended man-made hazards is minimized (Article 8b(1), point (a), of Directive 2009/71/Euratom).

(c) has performed an appropriate site and installation-specific assessment when the operator concerned applies for a licence to construct or operate a NPP (Article 8c(1) of Directive 2009/71/Euratom).

The activity fulfils the requirements of Directive 2009/71/Euratom, supported by the latest international guidance through IAEA and WENRA, contributing to increasing the resilience of the ability of new and existing NPPs to cope with extreme natural hazards, including floods and extreme weather conditions.

Do no significant harm ('DNSH')

| | |
|---|---|
| (2) Climate change mitigation | The direct GHG emissions of the activity are lower than 270 g CO2e/kWh. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex.<br>Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed, in accordance with a water use and protection management plan, developed in consultation with relevant stakeholders .<br>In order to limit thermal anomalies associated with the discharge of waste heat, operators of inland nuclear power plants utilising once-through wet cooling by taking water from a river or a lake shall control:<br>a) the maximum temperature of the recipient freshwater body |

[120] OJ L 172, 2.7.2009, p. 18.
[121] OJ L 199, 2.8.2011, p. 48.

| | |
|---|---|
| | after mixing, and<br>b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.<br>The temperature control is implemented according to the individual licence conditions for the specific operations, where applicable, or threshold values in line with the Union law.<br>The activity complies with the Industry Foundation Classes (IFC) standards. |
| (4) Transition to a circular economy | A plan for the management of both non-radioactive and radioactive waste is in place and ensures maximal reuse or recycling of such waste at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, the reflection in financial projections or the official project documentation.<br>During operation and decommissioning, the amount of radioactive waste is minimised and the amount of free-release materials is maximised in accordance with Directive 2011/70/Euratom[122], and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom[123].<br>A financing scheme is in place to ensure adequate funding for all decommissioning activities and for the management of spent fuel and radioactive waste, in compliance with Directive 2011/70/Euratom[124] and Commission Recommendation 2006/851/Euratom[125]. |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex. Non-radioactive emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the best available techniques (BAT) conclusions for large combustion plants. No significant cross-media effects occur.<br>For nuclear power plants greater than 1 MW thermal input but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193 of the European Parliament and of the Council[126].<br>Radioactive discharges to air, water bodies and ground (soil) comply |

[122] OJ L 199, 2.8.2011, p. 48.
[123] OJ L 13, 17.1.2014, p. 1.
[124] OJ L 199, 2.8.2011, p. 48.
[125] OJ L 330, 28.11.2006, p. 31.
[126] OJ L 313, 28.11.2015, p. 1.

| | |
|---|---|
| | with individual licence conditions for the specific operations, where applicable, and/or national threshold values in line with Directive 2013/59/Euratom[127] and Council Directive 2013/51/Euratom[128]).<br><br>Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom[129] and Directive 2013/59/Euratom[130].<br><br>An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimize the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom[131] that considers radioactive waste storage, including long-term storage, as an interim solution, but not an alternative to disposal. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

### 4.29. Electricity generation from fossil gaseous fuels

*Description of the activity*

Construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels that meet the criteria in point 1(a) of Section 4.29 of Annex I. This activity does not include electricity generation from the exclusive use of renewable non-fossil gaseous and liquid fuels referred to in Section 4.7 of Annex I and biogas and bio-liquid fuels referred to in Section 4.8 of Annex I.

The economic activities in this category may be associated with several NACE codes, notably D35.11 and F42.22 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006[132].

*Technical screening criteria*

| |
|---|
| Substantial contribution to climate change adaptation |

[127] OJ L 13, 17.1.2014, p. 1.
[128] OJ L 296, 7.11.2013, p. 12.
[129] OJ L 199, 2.8.2011, p. 48.
[130] OJ L 13, 17.1.2014, p. 1.
[131] OJ L 199, 2.8.2011, p. 48.
[132] OJ L 393, 30.12.2006, p. 1.

1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.
2. The physical climate risks that are material to the activity have been identified from those listed in Appendix A to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:
(a) screening of the activity to identify which physical climate risks from the list in Appendix A to this Annex may affect the performance of the economic activity during its expected lifetime;
(b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Appendix A to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
(c) an assessment of adaptation solutions that can reduce the identified physical climate risk.
The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:
(a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios[133] consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.
3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports[134], scientific peer-reviewed publications and open source[135] or paying models.
4. The adaptation solutions implemented:
(a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;
(b) favour nature-based solutions[136] or rely on blue or green infrastructure[137] to the extent possible;

[133] Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.
[134] Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.
[135] Such as Copernicus services managed by the European Commission.
[136] Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services (version of [adoption date]: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en/).
[137] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM/2013/249 final.

(c) are consistent with local, sectoral, regional or national adaptation plans and strategies;
(d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;
(e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

Do no significant harm ('DNSH')

| | |
|---|---|
| (2) Climate change mitigation | The direct GHG emissions of the activity are lower than 270 g CO2e/kWh. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex. |
| (4) Transition to a circular economy | N/A |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br><br>Emissions are within or lower than the emission levels associated with ranges of the best available techniques (BAT-AEL) ranges set out in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants[138].<br><br>No significant cross-media effects occur.<br><br>For combustion plants with thermal input greater than 1 MW but below the applicable thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out[139] in Annex II, part 2, to Directive (EU) 2015/2193[140]. |

[138] Commission Implementing Decision (EU) 2017/1442 of 31 July 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for large combustion plants (OJ L 212, 17.8.2017, p. 1).
[139] Commission Implementing Decision (EU) 2017/1442 of 31 July 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for large combustion plants (OJ L 212, 17.8.2017, p. 1).
[140] OJ L 313, 28.11.2015, p. 1.

| | |
|---|---|
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

### 4.30. High-efficiency co- generation of heat/cool and power from fossil gaseous fuels

*Description of the activity*

Construction, refurbishment and operation of combined heat/cool and power generation facilities using gaseous fuels that meet the criteria in point 1(a) of Section 4.30 of Annex I. This activity does not include high-efficiency co-generation of heat/cool and power from the exclusive use of renewable non-fossil gaseous and liquid fuels referred to in Section 4.19 of Annex I and biogas and bio-liquid fuels referred to in Section 4.20 of Annex I.

The economic activities in this category may be associated with NACE codes D35.11 and D35.30 in accordance with the statistical classification of economic activities established by Regulation (EC) No. 1893/2006[141].

*Technical screening criteria*

| Substantial contribution to climate change adaptation |
|---|
| 1. The economic activity has implemented physical and non-physical solutions (‘adaptation solutions’) that substantially reduce the most important physical climate risks that are material to that activity.<br>2. The physical climate risks that are material to the activity have been identified from those listed in Appendix A to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:<br>(a) screening of the activity to identify which physical climate risks from the list in Appendix A to this Annex may affect the performance of the economic activity during its expected lifetime;<br>(b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Appendix A to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;<br>(c) an assessment of adaptation solutions that can reduce the identified physical climate risk.<br>The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:<br>(a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;<br>(b) for all other activities, the assessment is performed using the highest available resolution, |

[141] OJ L 393, 30.12.2006, p. 1.

state-of-the-art climate projections across the existing range of future scenarios[142] consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports[143] , scientific peer-reviewed publications and open source[144] or paying models.

4. The adaptation solutions implemented:

(a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;

(b) favour nature-based solutions[145] or rely on blue or green infrastructure[146] to the extent possible;

(c) are consistent with local, sectoral, regional or national adaptation plans and strategies;

(d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;

(e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

Do no significant harm ('DNSH')

| | |
|---|---|
| (2) Climate change mitigation | The direct GHG emissions of the activity are lower than 270 g CO2e/kWh. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex. |

[142] Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

[143] Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

[144] Such as Copernicus services managed by the European Commission.

[145] Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services (version of [adoption date]: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en/).

[146] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM/2013/249 final.

| | |
|---|---|
| (4) Transition to a circular economy | N/A |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to thisAnnex.<br><br>Emissions are within or lower than the emission levels associated with the ranges of the best available techniques (BAT-AEL) set out in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants.<br><br>No significant cross-media effects occur.<br><br>For combustion plants with thermal input greater than 1 MW but below the applicable thresholds for the BAT conclusions for large combustion plants, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193[147]. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

[147] OJ L 313, 28.11.2015, p. 1.

### 4.31. Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system

*Description of the activity*

Construction, refurbishment and operation of heat generation facilities that produce heat/cool using gaseous fuels connected to efficient district heating and cooling within the meaning of Article 2(41) of Directive 2012/27/EU of the European Parliament and of the Council[148] that meet the criteria in point 1(a) of Section 4.31 of Annex I. This activity does not include production of heat/cool from in an efficient district heating from the exclusive use of renewable non-fossil gaseous and liquid fuels referred to in Section 4.23 of Annex I and biogas and bio-liquid fuels referred to in Section 4.24 of Annex I.

The activity is classified under NACE code D35.30 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006[149].

*Technical screening criteria*

| Substantial contribution to climate change adaptation |
|---|
| 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that activity.<br>2. The physical climate risks that are material to the activity have been identified from those listed in Appendix A to this Annex by performing a robust climate risk and vulnerability assessment with the following steps:<br>(a) screening of the activity to identify which physical climate risks from the list in Appendix A to this Annex may affect the performance of the economic activity during its expected lifetime;<br>(b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Appendix A to this Annex, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;<br>(c) an assessment of adaptation solutions that can reduce the identified physical climate risk.<br>The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:<br>(a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;<br>(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios[150] consistent |

[148] OJ L 315, 14.11.2012, p. 1.
[149] OJ L 393, 30.12.2006, p. 1.
[150] Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.
3. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports[151], scientific peer-reviewed publications and open source[152] or paying models.
4. The adaptation solutions implemented:
(a) do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;
(b) favour nature-based solutions[153] or rely on blue or green infrastructure[154] to the extent possible;
(c) are consistent with local, sectoral, regional or national adaptation plans and strategies;
(d) are monitored and measured against pre-defined indicators and remedial action is considered where those indicators are not met;
(e) where the solution implemented is physical and consists in an activity for which technical screening criteria have been specified in this Annex, the solution complies with the do no significant harm technical screening criteria for that activity.

Do no significant harm ('DNSH')

| | |
|---|---|
| (2) Climate change mitigation | The direct GHG emissions of the activity are lower than 270 g CO2e/kWh. |
| (3) Sustainable use and protection of water and marine resources | The activity complies with the criteria set out in Appendix B to this Annex. |

[151] Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.
[152] Such as Copernicus services managed by the European Commission.
[153] Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services (version of [adoption date]: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en/).
[154] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM/2013/249 final.

| | |
|---|---|
| (4) Transition to a circular economy | N/A |
| (5) Pollution prevention and control | The activity complies with the criteria set out in Appendix C to this Annex.<br><br>Emissions are within or lower than the emission levels associated with the ranges of the best available techniques (BAT-AEL) set out in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants.<br><br>No significant cross-media effects occur.<br><br>For combustion plants with thermal input greater than 1 MW but below the applicable thresholds for the BAT conclusions for large combustion plants, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193[155]. |
| (6) Protection and restoration of biodiversity and ecosystems | The activity complies with the criteria set out in Appendix D to this Annex. |

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[155]OJ L 313, 28.11.2015, p. 1

# ANNEX III

**‘ANNEX XII**

**Standard templates for the disclosure referred to in Article 8(6)**

The information referred to in Article 8(6) shall be presented as follows, for each applicable key performance indicator (KPI).

Template 1

| | |
|---|---|
| The undertaking carries out, funds or has exposures to economic activities described in Sections 4.26, 4.27 and 4.28 of Annexes I and II to Delegated Regulation 2021/2139 | YES/NO |
| The undertaking carries out, funds or has exposures to economic activities described in Sections 4.29, 4.30 and 4.31 to Annexes I and II of Delegated Regulation 2021/2139 | YES/NO |

Template 2

| **Activities** | **Percentage** |
|---|---|
| Proportion of activities referred to in Sections 4.26, 4.27 and 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI [nuclear related activities] | % |
| Proportion of activities referred to in Sections 4.29, 4.30 and 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI [gas related activities] | % |
| **Proportion of other activities not referred to in rows 1 and 2 above in the applicable KPI** | **%** |
| **Total applicable KPI *[reproduced from relevant applicable annexes]*** | **%** |

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