II

(Non-legislative acts)

REGULATIONS

COMMISSION DELEGATED REGULATION (EU) 2022/1214

of 9 March 2022

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 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 ([1]), and in particular Articles 8(4), 10(3) and 11(3) thereof,

Whereas:

(1) The technical screening criteria set out in Commission Delegated Regulation (EU) 2021/2139 ([2]) cover severaleconomic sectors and activities that have a potential to contribute to the Union climate change mitigation and climate change 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 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 Union's economy.

(3) As set out in 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 Commission Communication of 6 July 2021 ('Strategy for Financing the Transition to a Sustainable Economy'), theestablishment of technical screening criteria for energy generation from fossil gas was postponed in view of the

([1]) OJ L 198, 22.6.2020, p. 13.

([2]) 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).

need for further technical assessment, notably on the transitional role of fossil gas in the decarbonisation of the economy ([3]). The establishment of technical screening criteria for nuclear energy generation activities was also postponed awaiting an in-depth expert assessment, launched in 2020, of whether the nuclear life-cycle, and notably nuclear waste, could be considered compatible with the requirement, laid down in Article 17 of Regulation (EU) 2020/852, that an activity can do no significant harm to other environmental objectives. In the light of those assessments, it is necessary to recognise that the fossil gas and nuclear energy generation activities 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, high-efficiency co-generation of power and heat/cool, and production of heat/cool in efficient district heating and cooling systems 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 electricity generation, high-efficiency co-generation of power and heat/cool, and production of heat/cool in efficient district heating and cooling systems, where such electricity generation, high-efficiency co-generation of power and heat/cool, and production of heat/cool in efficient district heating and cooling systems do not yet comply with that appropriate threshold, as in addition to the use of climate-neutral energy and more investments in already low-carbon economic activities and sectors, the transition requires substantial reductions in greenhouse gas emissions in other economic activities and sectors for which there are no technologically and economically feasible low-carbon alternatives. All those economic activities should be qualified as transitional under Article 10(2) of Regulation (EU) 2020/852, given that technologically and economically feasible low-carbon alternatives may not yet be commercially available at a sufficient scale to cover the energy demand in a continuous and reliable manner. In particular, for electricity generation, it is appropriate to provide for an alternative approach to directly limiting the greenhouse gas emissions. Under this alternative approach, that should deliver similar results over a 20 years period, facilities may reach such results by limiting the number of hours in operation or by advancing the switch to renewable or low-carbon gases to an earlier date. 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 renewables or low carbon gases by a specific date. Finally, the 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 climate and environmental goals of the Union. In that light, investments in renewables need to scale-up to meet the needs of the energy market of the Union for more renewable and clean energy.

(6) Nuclear energy-related activities are low-carbon activities, they do not constitute energy from renewable sources as defined in Article 2, second subparagraph, point (1) of Directive (EU) 2018/2001 of the European Parliament and of the Council ([4]), and 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 ([5]), 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 change mitigation objectives was extensive and clear'. Moreover, a number of Member States' plans include nuclear energy along with renewable energy in the energy sources to be used to meet climate targets,

([3]) 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 6 July 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).

([4]) 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).

([5]) 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

including the 2050 decarbonisation objective set out in Regulation (EU) 2021/1119 of the European Parliament and of the Council ([6]). Finally, by providing a stable baseload of 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) Scientific review conducted by experts ([7]) concluded that technical screening criteria for 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 storageand final disposal of nuclear waste. Those technical screening criteria should therefore reflect the highest standards of nuclear safety, radiation protection and radioactive waste management, building upon requirements laid down in the Treaty establishing the European Atomic Energy Community ('Euratom Treaty') and in legislation adopted under that Treaty, and in particular in Council Directive 2009/71/Euratom ([8]). That Directive contains a high-level nuclear safety objective covering all stages of the life-cycle of each nuclear installation, including the siting, design, construction, commissioning, operation and decommissioning of such installations. In particular, that Directive calls for significant safety enhancements in the design of new reactors, including the so-called Generation III+ reactors, for which 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 minimised 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 developments, the use of that type of fuel should be set out as a requirement in the technical screening criteria, taking into account its licensing within the Union.

(9) Worldwide, research and development efforts are ongoing to develop new nuclear reactor technologies that use, among others, closed fuel cycles or fuel self-breeding concepts and that minimise the production of high-level radioactive waste ('Generation IV reactors'). 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 radioactive waste.

(10) Nuclear energy is part of the future energy sources in a number of Member States, as part of their decarbonisation efforts. The scenarios assessed by the Commission lead to a decarbonised energy system based on renewables to a very large extent and on nuclear energy with a stable installed capacity compared to current levels. As the nuclear installations being currently exploited age, they need safety upgrades to extend operational life as well as newly built nuclear installations to replace obsolete installations. This is a continuous process that should ensure the availability of the necessary capacity for the decarbonisation of the energy system by 2050 and beyond this date as needed. Accordingly, significant investments in nuclear energy will be needed throughout the period until 2050 and beyond. 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. Specific dates should be defined to ensure phasing in of new technologies compatible with sustainable decarbonisation as soon as they become available.

([6]) Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law') (OJ L 243, 9.7.2021, p. 1).

([7]) 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

([8]) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18).

(11) Annex II to the Euratom Treaty and Council Regulation (Euratom) No 2587/1999 ([9]) establish thresholds and other requirements for the notification to the Commission of investments in nuclear energy. To ensure, for the purpose of meeting the goals of the taxonomy, the highest possible regard to the principles and requirements of the Euratom legislation, including the nuclear safety objective, such investments should be subject to an opinion from the Commission, irrespective of whether Annex II to the Euratom Treaty and Regulation (Euratom) No 2587/1999 require any notification. For the same reason, all issues concerning the application of Article 10(2) and Article 17 of Regulation (EU) 2020/852 and the technical screening criteria identified by the Commission in its opinion should be satisfactorily 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, require modifications and safety upgrades to ensure that those nuclear installations comply with the highest achievable safety standards and with all 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 development and future use of Generation IV reactors with closed fuel cycle or fuel self-breeding once they become commercially available. These time-limits should be appropriately reviewed in light of progress in the development of such technologies.

(14) The technical screening criteria related to climate change mitigation or climate change adaptation objectives should ensure that economic activities do 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 appropriate to set out in the technical screening criteria specific requirements for a radioactive waste management fund and a nuclear decommissioning fund, which can be combined, in line with the principle that waste generators should be responsible for the cost of managing it, and to require operational final disposal facilities for all radioactive waste, which should prevent any export of radioactive waste for disposal in third countries. In several Member States, low and intermediate level radioactive waste is currently being disposed of in near-surface disposal facilities already, and substantial experience and know-how in waste management have been accumulated during decades of operating those near-surface disposal facilities. For high-level radioactive waste and spent fuel, deep geological disposal represents the state of the art solution that is broadly accepted in the expert community worldwide as the safest and the most sustainable option for the end point of the management of high-level radioactive 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, should include planning and implementation of disposal options in their national policies, in particular under the national programmes for the management of spent fuel and radioactive waste, covering all types of spent fuel and radioactive waste and all stages of spent fuel and radioactive waste management from generation to disposal. The national programmes' content is specified in Council Directive 2011/70/Euratom ([10]) and includes key performance indicators to monitor progress transparently. The Member States have to report regularly on the progress of implementation of the national programmes to the Commission. Reporting from Member States from 2021 demonstrates that substantial progress is made in the realisation of the first deep geological disposal facilities on the Union territory. Realistic solutions are becoming available for Member States to develop and operate such facilities by 2050. Therefore, the inclusion of a corresponding requirement in the technical screening criteria ensures that no significant harm is caused to the environment.

([9]) 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).

([10]) Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ L 199, 2.8.2011, p. 48).

(15) It is necessary that non-financial and financial undertakings provide investors with a high degree of transparency concerning their investments in fossil gas and nuclear energy generation activities for which technical screening criteria should be laid down. To provide that transparency, specific disclosure requirements for non-financial and financial undertakings should be laid down. In order to ensure comparability of the information disclosed to investors, that information should be presented in the form of a template that indicates clearly the proportion of fossil gas and nuclear energy activities in the denominator and, where appropriate, the numerator 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 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. To ensure that such information is clearly identified by end-investors, the Commission will consider amending the requirements on the financial and insurance advice given by distributors.

(16) To enhance investor confidence, compliance with the technical screening criteria related to fossil gas activities should be verified by an independent third party. To ensure an impartial and diligent verification of compliance, the independent third-party should have the resources and expertise to perform that verification, be independent to avoid any conflict of interest with the owner or the funder, and should not be involved in the development or operation of such fossil gas activities. In addition to the verification mechanism, financial and non-financial undertakings may be subject to specific verification requirements provided in other Union legislation on sustainable finance that cover compliance with the technical screening criteria. In accordance with Article 26(1), point (c), of Regulation (EU) 2020/852, the Commission should review the provisions required for setting up verification mechanisms of compliance with the criteria set out in that Regulation.

(17) The fossil gas and nuclear energy sectors are characterised by rapid technological development. It is therefore necessary to review the technical screening criteria covering energy generation activities in those sectors 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, such review should cover the appropriateness of the periods of time laid down in the technical screening criteria.

(18) Delegated Regulation (EU) 2021/2139 and Commission Delegated Regulation (EU) 2021/2178 ([11]) should therefore be amended accordingly. The amendments to Delegated Regulation (EU) 2021/2139 and Delegated Regulation (EU) 2021/2178 do not mandate any investments, but are intended to help financial markets and investors to identify, subject to strict conditions, relevant gas and nuclear related activities needed for the transition of the Member States' energy systems towards climate neutrality in line with Union climate goals and commitments.

(19) 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 time 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.

(20) It is necessary to provide non-financial and financial undertakings with sufficient time to assess whether their economic activities related 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,

([11]) 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).

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 dates 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).

Any review of the date referred to in point (2) of Sections 4.27 and 4.28 to Annex I shall take into account the technical progress in accident-tolerant fuel commercialisation in the Union and worldwide.';

(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, 7 and 8 are added:

'6. Non-financial undertakings and financial undertakings shall disclose the amount and proportion of:

(a) the taxonomy-aligned 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 the denominator and the numerator of their key performance indicators;

(b) the taxonomy-eligible, but not taxonomy-aligned, 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 the denominator of their key performance indicators;

(c) the taxonomy-non-eligible nuclear energy related activities in the denominator of their key performance indicators.

7. Non-financial undertakings and financial undertakings shall disclose the amount and proportion of:

(a) the taxonomy-aligned 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 the denominator and the numerator of their key performance indicators;

(b) the taxonomy-eligible, but not taxonomy-aligned, 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 the denominator of their key performance indicators;

(c) the taxonomy-non-eligible fossil gas related activities in the denominator of their key performance indicators.

8. The information referred to in paragraphs 6 and 7 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.

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, 9 March 2022.

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 to produce energy from nuclear processes 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 where it complies with all the technical screening criteria set out in this Section.

Technical screening criteria

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) the Member State has fully transposed Council Directive 2009/71/Euratom *[1] and Council Directive 2011/70/Euratom *[2];

   (b) the Member State complies with the Treaty establishing the European Atomic Energy Community ('Euratom Treaty') and with legislation adopted on its basis, in particular, Directive 2009/71/Euratom, Directive 2011/70/Euratom and Council Directive 2013/59/Euratom *[3], as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU of the European Parliament and of the Council *[4] and Directive 2000/60/EC of the European Parliament and of the Council *[5];

   (c) the Member State 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) the Member State 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 *[6];

   (e) the Member State has operational final disposal facilities for all very low-, low- and intermediate-level radioactive waste, notified to the Commission under Article 41 Euratom Treaty or Article 1(4) of Council Regulation (Euratom) No 2587/1999, and included in the national programme updated under Directive 2011/70/Euratom;

   (f) the Member State has a documented plan with detailed steps to have in operation, by 2050, a disposal facility for high-level radioactive waste describing all of the following:

      (i) concepts or plans and technical solutions for spent fuel and radioactive waste management from generation to disposal;

      (ii) concepts or plans for the post-closure period of a disposal facility's lifetime, including the period during which appropriate controls are retained and the means to be employed to preserve knowledge of that facility in the longer term;

(iii) the responsibilities for the plan implementation and the key performance indicators to monitor its progress;

(iv) cost assessments and financing schemes.

For the purposes of point (f), Member States may use plans drawn up as part of the national programme required by Articles 11 and 12 of Directive 2011/70/Euratom.

2. The project is part of a Union financed research programme or the project has been notified to the Commission in accordance with Article 41 of the Euratom Treaty or with Article 1(4) of Council Regulation (Euratom) No 2587/1999, where either of these provisions is applicable, the Commission has given its opinion on it in accordance with Article 43 of the Euratom Treaty, and all the issues raised in the opinion, with relevance for the application of Article 10(2) and 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 on all of the following:

(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).

On the basis of the reports, the Commission shall review the adequacy of the accumulated resources of the radioactive waste management fund and the nuclear decommissioning fund referred to in point 1(c) and the progress in the implementation of the documented plan referred to in point 1(f) and it may address an opinion to the Member State concerned.

4. The activity complies with national legislation that transposes the legislation referred to in point 1(a) and (b), including as regards the evaluation, in particular through stress tests, of the resilience of the nuclear power plants located on the territory of the Union 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 nuclear power plant (Article 8c(a) of Directive 2009/71/Euratom).

5. The activity fulfils the requirements of Directive 2009/71/Euratom, supported by the latest international guidance from the International Atomic Energy Agency ('IAEA') and the Western European Nuclear Regulator's Association ('WENRA'), contributing to increasing the resilience and the ability of new and existing nuclear power plants to cope with extreme natural hazards, including floods and extreme weather conditions.

6. Radioactive waste as referred to in point 1(e) and (f), 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. In that 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.

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 are below the threshold of 100 g CO2e/kWh. Life-cycle GHG emission savings are calculated using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

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. 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. The activity fulfils the requirements of Directive 2009/71/Euratom implemented in accordance with the international guidance of the 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. 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 stakeholders concerned. 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: (a) the maximum temperature of the recipient freshwater body after mixing, and (b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body. The temperature control is implemented in accordance with the individual licence conditions for the specific operations, where applicable, or threshold values in line with Union law. The activity complies with the Industry Foundation Classes (IFC) standards. Nuclear activities are operated in compliance with requirements on water intended for human consumption of Directive 2000/60/EC and of Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.
(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. 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, and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom.

	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 and Recommendation 2006/851/Euratom. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. The relevant elements in this Section are covered by Member States' reports to the Commission in accordance with Article 14(1) of Directive 2011/70/Euratom.
(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. 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. 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 2013/51/Euratom *[7] and Directive 2013/59/Euratom. Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom and Directive 2013/59/Euratom. An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimise the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom 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. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. For sites/operations located in or near biodiversity sensitive areas likely to have a significant effect on biodiversity sensitive areas (including the Natura 2000 network of protected areas, Unesco World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. The sites/operations shall not be detrimental to the conservation status of any of the habitats or species present in protected areas.

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 mean technologies that fully comply with the requirements of Directive 2009/71/Euratom and fully respect the most recent technical parameters of the IAEA standards and the WENRA Safety objectives and 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 or process heat, including for the purposes of district heating or industrial processes such as hydrogen production (new nuclear installations), 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.

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

Technical screening criteria

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) the Member State has fully transposed Council Directive 2009/71/Euratom and Council Directive 2011/70/Euratom;

   (b) the Member State complies with the Euratom Treaty and with legislation adopted on its basis, in particular, Directive 2009/71/Euratom, Directive 2011/70/Euratom and Directive 2013/59/Euratom, as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU and Directive 2000/60/EC;

   (c) the Member State 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) the Member State 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 Recommendation 2006/851/Euratom;

   (e) the Member State has operational final disposal facilities for all very low-, low- and intermediate-level radioactive waste, notified to the Commission under Article 41 of the Euratom Treaty or under Article 1(4) of Council Regulation 2587/1999 and included in the national programme updated under Council Directive 2011/70/Euratom;

   (f) the Member State has a documented plan with detailed steps to have in operation, by 2050, a disposal facility for high-level radioactive waste describing all of the following:

      (i) concepts or plans and technical solutions for spent fuel and radioactive waste management from generation to disposal;

      (ii) concepts or plans for the post-closure period of a disposal facility's lifetime, including the period during which appropriate controls are retained and the means to be employed to preserve knowledge of that facility in the longer term;

      (iii) the responsibilities for the plan implementation and the key performance indicators to monitor its progress;

      (iv) cost assessments and financing schemes.

For the purposes of point (f), Member States may use the plans drawn up as part of the national programme required by Articles 11 and 12 of Directive 2011/70/Euratom.

2. The project fully applies the best-available technology and from 2025 accident-tolerant fuel. The technology is certified and approved by the national safety regulator.

3. The project has been notified to the Commission in accordance with Article 41 of the Euratom Treaty or with Article 1(4) of Council Regulation 2587/1999, where either of these provisions is applicable, the Commission has given its opinion on it in accordance with Article 43 of the Euratom Treaty, and all the issues raised in the opinion, with relevance for the application of Article 10(2) and 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 on all of the following:

(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).

On the basis of the reports, the Commission shall review the adequacy of the accumulated resources of the radioactive waste management fund and the nuclear decommissioning fund referred to in point 1(c) and the progress in the implementation of the documented plan referred to in point 1(f) and it may address an opinion to the Member State concerned.

5. The Commission shall review, as of 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 legislation referred to in point 1(a) and (b), including as regards the evaluation, in particular through stress-tests, of the resilience of the nuclear power plants located on the territory of the Union 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 nuclear power plant (Article 8c(a) of Directive 2009/71/Euratom).

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

8. Radioactive waste as referred to in point 1(e) and (f) 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. In that 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.

Additional criteria pertaining to substantial contribution to climate change mitigation
The activity generates electricity using nuclear energy. Life-cycle greenhouse gas (GHG) emissions from the generation of electricity from nuclear energy are below the threshold of 100 g CO2e/kWh. Life-cycle GHG emission savings are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

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. 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. The activity fulfils the requirements of Directive 2009/71/Euratom, implemented in accordance with the international guidance of the 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. 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 stakeholders concerned. 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: (a) the maximum temperature of the recipient freshwater body after mixing, and (b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body. The temperature control is implemented in accordance with the individual licence conditions for the specific operations, where applicable, or threshold values in line with the Union law. The activity complies with the Industry Foundation Classes (IFC) standards. Nuclear activities are operated in compliance with requirements on water intended for human consumption of Directive 2000/60/EC and of Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.
(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. 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, and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom.

	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 and Recommendation 2006/851/Euratom. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. The relevant elements in this Section are covered by Member States' reports to the Commission in accordance with Article 14(1) of Directive 2011/70/Euratom.
(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. 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. 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 2013/51/Euratom and Directive 2013/59/Euratom. Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom and Directive 2013/59/Euratom. An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimise 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.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. For sites/operations located in or near biodiversity sensitive areas likely to have a significant effect on biodiversity sensitive areas (including the Natura 2000 network of protected areas, Unesco World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. The sites/operations shall not be detrimental to the conservation status of any of the habitats or species present in protected areas.

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 nuclear installations that produce electricity or heat from nuclear energy ('nuclear power plants').

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 where it complies with all the technical screening criteria set out in this Section.

Technical screening criteria

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) the Member State has fully transposed Council Directive 2009/71/Euratom and Council Directive 2011/70/Euratom;

   (b) the Member State complies with the Euratom Treaty and with legislation adopted on its basis, in particular, Directive 2009/71/Euratom, Directive 2011/70/Euratom and Directive 2013/59/Euratom, and with applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU and Directive 2000/60/EC;

   (c) the Member State 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) the Member State 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 Recommendation 2006/851/Euratom;

   (e) the Member State has operational final disposal facilities for all very low-, low- and intermediate-level radioactive waste, notified to the Commission under Article 41 of the Euratom Treaty or under Article 1(4) of Council Regulation 2587/1999 and included in the national programme updated under Council Directive 2011/70/Euratom;

   (f) for projects authorised after 2025, the Member State has a documented plan with detailed steps to have in operation, by 2050, a disposal facility for high-level radioactive waste describing all of the following:

      (i) concepts or plans and technical solutions for spent fuel and radioactive waste management from generation to disposal;

      (ii) concepts or plans for the post-closure period of a disposal facility's lifetime, including the period during which appropriate controls are retained and the means to be employed to preserve knowledge of that facility in the longer term;

      (iii) the responsibilities for the plan implementation and the key performance indicators to monitor its progress;

      (iv) cost assessments and financing schemes.

   For the purposes of point (f), Member States may use the plans drawn up as part of the national programme required by Articles 11 and 12 of Directive 2011/70/Euratom.

2. The upgraded project implements any reasonably practicable safety improvement and from 2025 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 in accordance with Article 41 of the Euratom Treaty or with Article 1(4) of Council Regulation 2587/1999, where either of these provisions is applicable, the Commission has given its opinion on it in accordance with Article 43 of the Euratom Treaty, and all the issues raised in the opinion, with relevance for the application of Article 10(2) and 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 on all of the following:

   (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).

   On the basis of the reports, the Commission shall review the adequacy of the accumulated resources of the radioactive waste management fund and the nuclear decommissioning fund referred to in point 1(c) and the progress in the implementation of the documented plan referred to in point 1(f) and it may address an opinion to the Member State concerned.

5. The activity complies with national legislation that transposes the 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 nuclear power plant (Article 8c(a) of Directive 2009/71/Euratom).

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

7. Radioactive waste referred to in point 1(e) and (f) 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. In that 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.

Additional criteria pertaining to substantial contribution to climate change mitigation
The activity generates electricity using nuclear energy. Life-cycle greenhouse gas (GHG) emissions from the generation of electricity from nuclear energy are below the threshold of 100 g CO_2e/kWh. Life-cycle GHG emission savings are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018. Quantified life-cycle GHG emissions are verified by an independent third party.

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. 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. The activity fulfils the requirements of Directive 2009/71/Euratom implemented in accordance with international guidance of the 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. 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 stakeholders concerned. 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: (a) the maximum temperature of the recipient freshwater body after mixing, and (b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body. The temperature control is implemented in accordance with the individual licence conditions for the specific operations, where applicable, or threshold values in line with Union law. The activity complies with the Industry Foundation Classes (IFC) standards. Nuclear activities are operated in compliance with requirements on water intended for human consumption of Directive 2000/60/EC and of Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.
(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. 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, and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom. 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 and Recommendation 2006/851/Euratom.

	An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. The relevant elements in this Section are covered by Member States' reports to the Commission in accordance with Article 14(1) of Directive 2011/70/Euratom.
(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. 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. 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 2013/51/Euratom and Directive 2013/59/Euratom. Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom and Directive 2013/59/Euratom. An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimise 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.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. For sites/operations located in or near biodiversity sensitive areas likely to have a significant effect on biodiversity sensitive areas (including the Natura 2000 network of protected areas, Unesco World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. The sites/operations shall not be detrimental to the conservation status of any of the habitats or species present in protected areas.

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 as referred to in Section 4.7 of this Annex and biogas and bio-liquid fuels as 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.

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

Technical screening criteria

Substantial contribution to climate change mitigation

1. The activity meets either of the following criteria:
   (a) the 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 Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.
   Quantified life-cycle GHG emissions are verified by an independent third party.
   Where facilities incorporate any form of abatement, including carbon capture or use of renewable or low-carbon gases, that abatement activity complies with the criteria set out in the relevant Section of this Annex, where applicable.
   Where the CO_2 that would otherwise be emitted from the electricity generation process is captured for the purpose of underground storage, the CO_2 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) facilities for which the construction permit is granted by 31 December 2030 comply with all of the following:
      (i) direct GHG emissions of the activity are lower than 270g CO2e/kWh of the output energy, or annual direct GHG emissions of the activity do not exceed an average of 550kgCO2e/kW of the facility's capacity over 20 years;
      (ii) the power to be replaced cannot be generated from renewable energy sources, based on a comparative assessment with the most cost-effective and technically feasible renewable alternative for the same capacity identified; the result of this comparative assessment is published and is subject to a stakeholder consultation;
      (iii) the activity replaces an existing high emitting electricity generation activity that uses solid or liquid fossil fuels;
      (iv) the newly installed production capacity does not exceed the capacity of the replaced facility by more than 15 %;
      (v) the facility is designed and constructed to use renewable and/or low-carbon gaseous fuels and the switch to full use of renewable and/or low-carbon gaseous fuels takes place by 31 December 2035, with a commitment and verifiable plan approved by the management body of the undertaking;
      (vi) the replacement leads to a reduction in emissions of at least 55 % GHG over the lifetime of the newly installed production capacity;
      (vii) where the activity takes place on the territory of a Member State in which coal is used for energy generation, that Member State 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 of the European Parliament and of the Council **[8] or in another instrument.

Compliance with the criteria referred to in point 1(b) is verified by an independent third party. The independent third-party verifier has the necessary resources and expertise to perform such verification. The independent third party verifier does not have any conflict of interest with the owner or the funder, and is not involved in the development or operation of the activity. The independent third party verifier carries out diligently the verification of compliance with the technical screening criteria. In particular, every year the independent third party publishes and transmits to the Commission a report:
   (a) certifying the level of direct GHG emissions referred to in point 1(b)(i);

(b) where applicable, assessing whether annual direct GHG emissions of the activity are on a credible trajectory to comply with the average threshold over 20 years referred to in point 1(b)(i);
(c) assessing whether the activity is on a credible trajectory to comply with point 1(b)(v).

When undertaking the assessment referred to in point 1(b), the independent third party verifier takes into account in particular the planned annual direct GHG emissions for each year of the trajectory, realised annual direct GHG emissions, planned and realised operating hours, and planned and realised use of renewable or low carbon gases.
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 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. Emissions are within or lower than the emission levels associated with 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. No significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW 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.
(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 fossil 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.

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

Technical screening criteria

Substantial contribution to climate change mitigation

1. The activity meets either of the following criteria:

(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.

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

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

Where facilities incorporate any form of abatement, including carbon capture or use of renewable or low-carbon gases, that abatement activity complies with the relevant Sections of this Annex, where applicable. Where the CO_2 emitted from the electricity generation is captured, the CO_2 shall meet the emissions limit set out in point 1 of this Section and, the CO_2 be transported and stored underground in a way that meets the technical screening criteria for transport of CO_2 and storage of CO_2 set out in Sections 5.11 and 5.12, respectively of this Annex.

(b) facilities for which the construction permit is granted by 31 December 2030 comply with all of the following:

(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;

(ii) direct GHG emissions of the activity are lower than 270 g CO2e/kWh of the output energy;

(iii) the power and/or heat/cool to be replaced cannot be generated from renewable energy sources, based on a comparative assessment with the most cost-effective and technically feasible renewable alternative for the same capacity identified; the result of this comparative assessment is published and is subject to a stakeholder consultation;

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

(v) the newly installed production capacity does not exceed the capacity of the replaced facility;

(vi) the facility is designed and constructed to use renewable and/or low-carbon gaseous fuels and the switch to full use of renewable and/or low-carbon gaseous fuels takes place by 31 December 2035, with a commitment and verifiable plan approved by the management body of the undertaking;

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

(viii) the refurbishment of the facility does not increase production capacity of the facility;

(ix) where the activity takes place on the territory of a Member State in which coal is used for energy generation, that Member State 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 criteria referred to in point 1(b) is verified by an independent third party. The independent third party verifier has the necessary resources and expertise to perform such verification. The independent third party verifier does not have any conflict of interest with the owner or the funder, and is not involved in the development or operation of the activity. The independent third party verifier carries out diligently the verification of compliance with the technical screening criteria. In particular, every year the independent third party publishes and transmits to the Commission a report:

(a) certifying the level of direct GHG emissions referred to in point 1(b)(ii);

(b) assessing whether the activity is on a credible trajectory to comply with point 1(b)(vi).

On the basis of the reports transmitted to it, the Commission may address an opinion to the operators concerned. 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, including 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. Emissions are within or lower than the emission levels associated with 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. No significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW 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.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

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 fossil gaseous fuels connected to efficient district heating and cooling within the meaning of Article 2, point (41) of Directive 2012/27/EU. This activity does not include production of heat/cool 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.

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

Technical screening criteria

Substantial contribution to climate change mitigation

1. The activity meets either of 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 Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018.
Quantified life-cycle GHG emissions are verified by an independent third party.
Where facilities incorporate any form of abatement, including carbon capture or use of renewable or low-carbon gases, that abatement activity complies with the relevant Sections of this Annex, where applicable. Where the CO_2 emitted from the electricity generation is captured, the CO_2 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 CO_2 and storage of CO_2 set out in Sections 5.11 and 5.12, respectively of this Annex.

(b) facilities for which the construction permit is granted by 31 December 2030 comply with all of the following:

(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;

(ii) the direct GHG emissions of the activity are lower than 270 g CO2e/kWh of the output energy;

(iii) the heat/cool to be replaced cannot be generated from renewable energy sources, based on a comparative assessment with the most cost-effective and technically feasible renewable alternative for the same capacity identified; the result of this comparative assessment is published and is subject to a stakeholder consultation;

(iv) the activity replaces an existing high emitting heating/cooling activity using solid or liquid fossil fuel;

(v) the newly installed production capacity does not exceed the capacity of the replaced facility;

(vi) the facility is designed and constructed to use renewable and/or low-carbon gaseous fuels and the switch to full use of renewable and/or low-carbon gaseous fuels takes place by 31 December 2035, with a commitment and verifiable plan approved by the management body of the undertaking;

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

(viii) the refurbishment of the facility does not increase production capacity of the facility;

(ix) where the activity takes place on the territory of a Member State in which coal is used for energy generation, that Member State 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 criteria referred to in point 1(b) is verified by an independent third party. The independent third-party verifier has the necessary resources and expertise to perform such verification. The independent third party verifier does not have any conflict of interest with the owner or the funder, and is not be involved in the development or operation of the activity. The independent third party verifier carries out diligently the verification of compliance with the technical screening criteria. In particular, every year the independent third party publishes and transmits to the Commission a report:

(a) certifying the level of direct GHG emissions referred to in point 1(b)(ii);
(b) assessing whether the activity is on a credible trajectory to comply with point 1(b)(vi).

On the basis of the reports transmitted to it, the Commission may address an opinion to the operators concerned. 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 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. Emissions are within or lower than the emission levels associated with 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. No significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW 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.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

(*1) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18).
(*2) Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ L 199, 2.8.2011, p. 48).
(*3) Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (OJ L 13, 17.1.2014, p. 1).
(*4) Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (OJ L 26, 28.1.2012, p. 1).
(*5) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).
(*6) 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).
(*7) 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).
(*8) Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 328, 21.12.2018, p. 1)'.

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 to produce energy from nuclear processes 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.

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 ([1]) 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 ([2]), scientific peer-reviewed publications and open source ([3]) 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;

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

([2]) 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/.

([3]) Such as Copernicus services managed by the European Commission.

(b) favour nature-based solutions ([4]) or rely on blue or green infrastructure ([5]) 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, Directive 2013/59/Euratom, Directive 2009/71/Euratom, and Directive 2011/70/Euratom as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU and Directive 2000/60/EC.
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 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 nuclear power plant (Article 8c(a) of Directive 2009/71/Euratom).

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

Do no significant harm ('DNSH')

(1) 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. 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 stakeholders concerned. 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: (a) the maximum temperature of the recipient freshwater body after mixing, and (b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body.

([4]) 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/).

([5]) 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.

	The temperature control is implemented in accordance with the individual licence conditions for the specific operations, where applicable, or threshold values in line with the EU regulatory framework. The activity complies with the Industry Foundation Classes (IFC) standards. Nuclear activities are operated in compliance with requirements on water intended for human consumption of Directive 2000/60/EC and of Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.
(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. 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, and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom. 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 and Recommendation 2006/851/Euratom. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. The relevant elements in this Section are covered by Member States' reports to the Commission in accordance with Article 14(1) of Directive 2011/70/Euratom.
(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. 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. 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 2013/51/Euratom and Directive 2013/59/Euratom. Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom and Directive 2013/59/Euratom. An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimise the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom 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. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. For sites/operations located in or near biodiversity sensitive areas likely to have a significant effect on biodiversity sensitive areas (including the Natura 2000 network of protected areas, Unesco World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. The sites/operations shall not be detrimental to the conservation status of any of the habitats or species present in protected areas.

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 or process heat, including for the purposes of district heating or industrial processes such as hydrogen production (new nuclear installations), 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.

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 ([6]) consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

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

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 ([7]), scientific peer-reviewed publications and open source ([8]) 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 ([9]) or rely on blue or green infrastructure ([10]) 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, Directive 2013/59/Euratom, Directive 2009/71/Euratom, and Directive 2011/70/Euratom as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU and Directive 2000/60/EC.
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 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 nuclear power plant (Article 8c(a) of Directive 2009/71/Euratom).

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

Do no significant harm ('DNSH')	
(1) 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.

([7]) 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/.

([8]) Such as Copernicus services managed by the European Commission.

([9]) 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/).

([10]) 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.

	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 stakeholders concerned. 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: (a) the maximum temperature of the recipient freshwater body after mixing, and (b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body. The temperature control is implemented in accordance with the individual licence conditions for the specific operations, where applicable, and/or threshold values in line with the EU regulatory framework. The activity complies with the Industry Foundation Classes (IFC) standards. Nuclear activities are operated in compliance with requirements on water intended for human consumption of Directive 2000/60/EC and of Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.
(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. 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, and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom. 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 and Recommendation 2006/851/Euratom. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. The relevant elements in this Section are covered by Member States' reports to the Commission in accordance with Article 14(1) of Directive 2011/70/Euratom.
(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.

	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. 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 2013/51/Euratom and Directive 2013/59/Euratom. Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom and Directive 2013/59/Euratom. An adequate capacity of interim storage is available for the project, while national plans for disposal are in place to minimise the duration of interim storage, in compliance with the provision of Directive 2011/70/Euratom 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. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. For sites/operations located in or near biodiversity sensitive areas likely to have a significant effect on biodiversity sensitive areas (including the Natura 2000 network of protected areas, Unesco World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. The sites/operations shall not be detrimental to the conservation status of any of the habitats or species present in protected areas.

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 nuclear installations that produce electricity or heat from nuclear energy ('nuclear power plants').

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.

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 ([11]) 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 ([12]), scientific peer-reviewed publications and open source ([13]) 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 ([14]) or rely on blue or green infrastructure ([15]) 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, Directive 2013/59/Euratom, Directive 2009/71/Euratom, and Directive 2011/70/Euratom as well as applicable Union environmental law adopted under Article 192 TFEU, in particular Directive 2011/92/EU and Directive 2000/60/EC.

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);

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

([12]) 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/.

([13]) Such as Copernicus services managed by the European Commission.

([14]) 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/).

([15]) 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.

(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 nuclear power plant (Article 8c(a) of Directive 2009/71/Euratom).

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

Do no significant harm ('DNSH')

(1) 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. 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 stakeholders concerned. 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: (a) the maximum temperature of the recipient freshwater body after mixing, and (b) the maximum temperature difference between the discharged cooling water and the recipient freshwater body. The temperature control is implemented in accordance with the individual licence conditions for the specific operations, where applicable, or threshold values in line with the Union law. The activity complies with the Industry Foundation Classes (IFC) standards. Nuclear activities are operated in compliance with requirements on water intended for human consumption of Directive 2000/60/EC and of Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption.
(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. 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, and in compliance with the radiation protection requirements laid down in Directive 2013/59/Euratom. 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 and Recommendation 2006/851/Euratom.

	An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. The relevant elements in this Section are covered by Member States' reports to the Commission in accordance with Article 14(1) of Directive 2011/70/Euratom.
(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. 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. 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 2013/51/Euratom and Directive 2013/59/Euratom). Spent fuel and radioactive waste is safely and responsibly managed in accordance with Directive 2011/70/Euratom and Directive 2013/59/Euratom. 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 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. An Environmental Impact Assessment is completed prior to the construction of a nuclear power plant, in accordance with Directive 2011/92/EU. The required mitigation and compensatory measures are implemented. For sites/operations located in or near biodiversity sensitive areas likely to have a significant effect on biodiversity sensitive areas (including the Natura 2000 network of protected areas, Unesco World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. The sites/operations shall not be detrimental to the conservation status of any of the habitats or species present in protected areas.

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.

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 ([16]) 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 ([17]), scientific peer-reviewed publications and open source ([18]) 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 ([19]) or rely on blue or green infrastructure ([20]) 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.

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

([17]) 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/.

([18]) Such as Copernicus services managed by the European Commission.

([19]) 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/).

([20]) 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.

Do no significant harm ('DNSH')	
(1) 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. Emissions are within or lower than the emission levels associated with 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. No significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW 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.
(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 fossil 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.

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 ([21]) 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 ([22]), scientific peer-reviewed publications and open source ([23]) 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 ([24]) or rely on blue or green infrastructure ([25]) 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')

(1) 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. Emissions are within or lower than the emission levels associated with 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. No significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW 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.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.

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

([22]) 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/.

([23]) Such as Copernicus services managed by the European Commission.

([24]) 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/).

([25]) 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.

4.31. **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 fossil gaseous fuels connected to efficient district heating and cooling within the meaning of Article 2(41) of Directive 2012/27/EUthat 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.

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 ([26]) 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 ([27]), scientific peer-reviewed publications and open source ([28]) 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 ([29]) or rely on blue or green infrastructure ([30]) 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.

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

([27]) 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/.

([28]) Such as Copernicus services managed by the European Commission.

([29]) 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/).

([30]) 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.

Do no significant harm ('DNSH')	
(1) 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. Emissions are within or lower than the emission levels associated with 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. No significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW 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.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex."

ANNEX III

'ANNEX XII

Standard templates for the disclosure referred to in Article 8(6) and (7)

The information referred to in Article 8(6) and (7) shall be presented as follows, for each applicable key performance indicator (KPI).

Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	YES/NO
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	YES/NO
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	YES/NO
	Fossil gas related activities	
4.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	YES/NO
5.	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	YES/NO
6.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	YES/NO

Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI						

2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**			
8.	**Total applicable KPI**			

Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		(CCM+CCA)		Climate change mitigation		Climate change adaptation	
		Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI						

2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI				
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI				
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI				
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI				
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI				
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**				
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**		**100 %**		

Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities

Row	Economic activities	Proportion (the information is to be presented in monetary amounts and as percentages)					
		(CCM+CCA)		Climate change mitigation		Climate change adaptation	
		Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI						
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI						

3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI			
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**			
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**			

Template 5 Taxonomy non-eligible economic activities

Row	Economic activities	Amount	Percentage
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI		
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI		
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI		
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI		
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI		
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI		
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**		
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI'**		