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PROPOSAL

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Delegations will find attached document COM(2020) 824 final Annexes 1 to 6.

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ANNEXES 1 to 6

ANNEXES

to the

**Proposal for a
REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**on guidelines for trans-European energy infrastructure and repealing Regulation (EU)
No 347/2013**

{SEC(2020) 431 final} - {SWD(2020) 346 final} - {SWD(2020) 347 final}

ANNEX I

ENERGY INFRASTRUCTURE PRIORITY CORRIDORS AND AREAS

1. PRIORITY ELECTRICITY CORRIDORS

(1) North-South electricity interconnections in Western Europe ('NSI West Electricity'): interconnections between Member States of the region and with the Mediterranean area including the Iberian peninsula, notably to integrate electricity from renewable energy sources and reinforce internal grid infrastructures to foster market integration in the region.

Member States concerned: Austria, Belgium, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Malta, Portugal and Spain;

(2) North-South electricity interconnections in Central Eastern and South Eastern Europe ('NSI East Electricity'): interconnections and internal lines in North-South and East-West directions to complete the internal market and integrate generation from renewable energy sources.

Member States concerned: Austria, Bulgaria, Croatia, Czech Republic, Cyprus, Germany, Greece, Hungary, Italy, Poland, Romania, Slovakia and Slovenia;

(3) Baltic Energy Market Interconnection Plan in electricity ('BEMIP Electricity'): interconnections between Member States and internal lines in the Baltic region, to foster market integration while integrating growing shares of renewable energy in the region.

Member States concerned: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden.

2. PRIORITY OFFSHORE GRID CORRIDORS

(4) Northern Seas offshore grid ('NSOG'): integrated offshore electricity grid development and the related interconnectors in the North Sea, the Irish Sea, the English Channel and neighbouring waters to transport electricity from renewable offshore energy sources to centres of consumption and storage and to increase cross-border electricity exchange.

Member States concerned: Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands and Sweden;

(5) Baltic Energy Market Interconnection Plan offshore grid ('BEMIP offshore'): integrated offshore electricity grid development and the related interconnectors in the Baltic Sea and neighbouring waters to transport electricity from renewable offshore energy sources to centres of consumption and storage and to increase cross-border electricity exchange.

Member States concerned: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden;

(6) South and East offshore grid: integrated offshore electricity grid development and the related interconnectors in the Mediterranean Sea, Black Sea and neighbouring waters to transport electricity from renewable offshore energy sources to centres of consumption and storage and to increase cross-border electricity exchange.

Member States concerned: Bulgaria, Cyprus, Croatia, France, Greece, Italy, Malta, Romania, Slovenia, and Spain;

(7) South Western Europe offshore grid: integrated offshore electricity grid development and the related interconnectors in the North Atlantic Ocean waters to transport electricity from renewable offshore energy sources to centres of consumption and storage and to increase cross-border electricity exchange.

Member States concerned: France, Ireland, Portugal and Spain.

3. PRIORITY CORRIDORS FOR HYDROGEN AND ELECTROLYSERS

(8) Hydrogen interconnections in Western Europe ('HI West'): hydrogen infrastructure enabling the emergence of an integrated hydrogen backbone connecting the countries of the region and addressing their specific infrastructure needs for hydrogen supporting the emergence of an EU-wide network for hydrogen transport.

Electrolysers: supporting the deployment of power-to-gas applications aiming to enable greenhouse gas reductions and contributing to secure, efficient and reliable system operation and smart energy system integration. Member States concerned: Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, and Spain;

(9) Hydrogen interconnections in Central Eastern and South Eastern Europe ('HI East'): hydrogen infrastructure enabling the emergence of an integrated hydrogen backbone connecting the countries of the region and addressing their specific infrastructure needs for hydrogen supporting the emergence of an EU-wide network for hydrogen transport.

Electrolysers: supporting the deployment of power-to-gas applications aiming to enable greenhouse gas reductions and contributing to secure, efficient and reliable system operation and smart energy system integration. Member States concerned: Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Germany, Greece, Hungary, Italy, Poland, Romania, Slovakia and Slovenia;

(10) Baltic Energy Market Interconnection Plan in hydrogen ('BEMIP Hydrogen'): hydrogen infrastructure enabling the emergence of an integrated hydrogen backbone connecting the countries of the region and addressing their specific infrastructure needs for hydrogen supporting the emergence of an EU-wide network for hydrogen transport.

Electrolysers: supporting the deployment of power-to-gas applications aiming to enable greenhouse gas reductions and contributing to secure, efficient and reliable system operation and smart energy system integration. Member States concerned: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden.

4. PRIORITY THEMATIC AREAS

(11) Smart electricity grids deployment: adoption of smart grid technologies across the Union to efficiently integrate the behaviour and actions of all users connected to the electricity network, in particular the generation of large amounts of electricity from renewable or distributed energy sources and demand response by consumers.

Member States concerned: all;

(12) Cross-border carbon dioxide network: development of carbon dioxide transport infrastructure between Member States and with neighbouring third countries in view of the deployment of carbon dioxide capture and storage.

Member States concerned: all;

(13) Smart gas grids: Adoption of smart gas grid technologies across the Union to efficiently integrate a plurality of renewable and low-carbon gas sources into the gas network, support the uptake of innovative solutions for network management and facilitating smart energy sector integration and demand response.

Member States concerned: all.

ANNEX II

ENERGY INFRASTRUCTURE CATEGORIES

The energy infrastructure categories to be developed in order to implement the energy infrastructure priorities listed in Annex I are the following:

(1) concerning electricity:

(a) high-voltage overhead transmission lines, if they have been designed for a voltage of 220 kV or more, and underground and submarine transmission cables, if they have been designed for a voltage of 150 kV or more;

(b) electricity storage facilities used for storing electricity on a permanent or temporary basis in above-ground or underground infrastructure or geological sites, provided they are directly connected to high-voltage transmission lines designed for a voltage of 110 kV or more;

(c) any equipment or installation essential for the systems referred to in points (a) and (b) to operate safely, securely and efficiently, including protection, monitoring and control systems at all voltage levels and substations;

(d) systems and components integrating ICT, through operational digital platforms, control systems and sensor technologies both at transmission and medium voltage distribution level, aiming at a more efficient and intelligent electricity transmission and distribution network, increased capacity to integrate new forms of generation, storage and consumption and facilitating new business models and market structures;

(e) any equipment or installation falling under category referred to in point (a) having dual functionality: interconnection and transmission of offshore renewable electricity from the offshore generation sites to two or more countries, as well as any offshore adjacent equipment or installation essential to operate safely, securely and efficiently, including protection, monitoring and control systems, and necessary substations if they also ensure technology interoperability inter alia interface compatibility between different technologies, ('offshore grids for renewable energy').

(2) concerning smart gas grids:

(a) any of the following equipment or installation aiming at enabling and facilitating the integration of renewable and low-carbon gases (including biomethane or hydrogen) into the network: digital systems and components integrating ICT, control systems and sensor technologies to enable the interactive and intelligent monitoring, metering, quality control and management of gas production, transmission, distribution and consumption within a gas network. Furthermore, such projects may also include equipment to enable reverse flows from the distribution to the transmission level and related necessary upgrades to the existing network.

(3) concerning hydrogen:

(a) transmission pipelines for the transport of hydrogen, giving access to multiple network users on a transparent and non-discriminatory basis, which

mainly contains high-pressure hydrogen pipelines, excluding pipelines for the local distribution of hydrogen;

(b) underground storage facilities connected to the high-pressure hydrogen pipelines referred to in point (a);

(c) reception, storage and regasification or decompression facilities for liquefied hydrogen or hydrogen embedded in other chemical substances with the objective of injecting the hydrogen into the grid;

(d) any equipment or installation essential for the hydrogen system to operate safely, securely and efficiently or to enable bi-directional capacity, including compressor stations.

Any of the assets listed in points (a), (b), (c), and (d) may be newly constructed assets or assets converted from natural gas dedicated to hydrogen, or a combination of the two.

(4) concerning electrolyser facilities:

(a) electrolysers that: (i) have at least 100 MW capacity, (ii) the production complies with the life cycle greenhouse gas emissions savings requirement of 70 % relative to a fossil fuel comparator of 94g CO₂e/MJ as set out in Article 25(2) and Annex V of Directive (EU) 2018/2001 of the European Parliament and of the Council.¹ Life cycle greenhouse gas emissions savings are calculated using the methodology referred to in Article 28(5) of Directive (EU) 2018/2001 or, alternatively, using ISO 14067 or ISO 14064-1. Quantified life-cycle GHG emission savings are verified in line with Article 30 of Directive (EU) 2018/2001 where applicable, or by an independent third party, and (iii) have also a network-related function;

(b) related equipment.

(5) concerning carbon dioxide:

(a) dedicated pipelines, other than upstream pipeline network, used to transport carbon dioxide from more than one source, i.e. industrial installations (including power plants) that produce carbon dioxide gas from combustion or other chemical reactions involving fossil or non-fossil carbon-containing compounds, for the purpose of permanent geological storage of carbon dioxide pursuant to Directive 2009/31/EC of the European Parliament and of the Council²;

(b) facilities for liquefaction and buffer storage of carbon dioxide in view of its further transportation. This does not include infrastructure within a geological formation used for the permanent geological storage of carbon dioxide pursuant to Directive 2009/31/EC and associated surface and injection facilities;

¹ OJ L 328, 21.12.2018, p. 82.

² OJ L 140, 5.6.2009, p. 114.

(c) any equipment or installation essential for the system in question to operate properly, securely and efficiently, including protection, monitoring and control systems.

ANNEX III

REGIONAL LISTS OF PROJECTS OF COMMON INTEREST

1. RULES FOR GROUPS

(1) with regard to energy infrastructure falling under the competency of national regulatory authorities, each Group shall be composed of representatives of the Member States, national regulatory authorities, TSOs, as well as the Commission, the Agency and the ENTSO for Electricity or the ENTSO for Gas, as relevant.

For the other energy infrastructure categories, each Group shall be composed of the representatives of the Member States, project promoters concerned by each of the relevant priorities designated in Annex I and the Commission.

(2) depending on the number of candidate projects for the Union list, regional infrastructure gaps and market developments, the Groups and the decision-making bodies of the Groups may split, merge or meet in different configurations, as necessary, to discuss matters common to all Groups or pertaining solely to particular regions. Such matters may include issues relevant to cross-regional consistency or the number of proposed projects included on the draft regional lists at risk of becoming unmanageable.

(3) each Group shall organise its work in line with regional cooperation efforts pursuant Article 61 of Directive (EU) 2019/944, Article 7 of Directive 2009/73/EC, Article 34 of Regulation (EU) 2019/943, and Article 12 of Regulation (EC) No 715/2009 and other existing regional cooperation structures.

(4) each Group shall invite, as appropriate for the purpose of implementing the relevant priority designated in Annex I, promoters of a project potentially eligible for selection as a project of common interest as well as representatives of national administrations, of regulatory authorities, and TSOs from third countries. The decision to invite third country-representatives shall be based on consensus.

(5) each Group shall invite, as appropriate, the organisations representing relevant stakeholders — and, where deemed appropriate, directly the stakeholders— including producers, distribution system operators, suppliers, consumers and organisations for environmental protection. The Group may organise hearings or consultations, where relevant for the accomplishments of its tasks.

(6) as regards the meetings of the Groups, the Commission shall publish, on a platform accessible to stakeholders, the internal rules, an updated list of member organisations, regularly updated information on the progress of work, meeting agendas, as well as meeting minutes, where available. The deliberations of the decision-making bodies of the Groups and the project ranking in accordance with Article 4(5) are confidential.

(7) the Commission, the Agency and the Groups shall strive for consistency between the different Groups. For that purpose, the Commission and the Agency shall ensure, when relevant, the exchange of information on all work representing an interregional interest between the Groups concerned.

(8) the participation of national regulatory authorities and the Agency in the Groups shall not jeopardise the fulfilment of their objectives and duties under this Regulation or under Articles 58, 59 and 60 of Directive (EU) 2019/944 and Articles 40 and 41 of Directive 2009/73/EC, or under Regulation (EU) 2019/942.

2. PROCESS FOR ESTABLISHING REGIONAL LISTS

(1) promoters of a project potentially eligible for selection as a project of common interest wanting to obtain the status of projects of common interest shall submit an application for selection as project of common interest to the Group that includes:

- (a) an assessment of their projects with regard to the contribution to implementing the priorities set out in Annex I;
- (b) an analysis of the fulfilment of the relevant criteria defined in Article 4;
- (c) for projects having reached a sufficient degree of maturity, a project-specific cost-benefit analysis based on the methodologies developed by the ENTSO for electricity or the ENTSO for gas pursuant to Article 11;
- (d) any other relevant information for the evaluation of the project.

(2) all recipients shall preserve the confidentiality of commercially sensitive information.

(3) the proposed electricity transmission and storage projects of common interest falling under the categories set out in points (1)(a), (b), (c) and (e) of Annex II are projects that are part of the latest available Union-wide ten-year network development plan for electricity, developed by the ENTSO for Electricity pursuant Article 30 of Regulation (EU) 2019/943. The proposed electricity transmission and storage projects of common interest falling under the categories set out in point (1)(e) of Annex II are projects that derive from and are consistent with the integrated offshore network development plan referred to in Article 14 (2).

(4) as of 1 January 2024, the proposed hydrogen projects of common interest falling under the categories set out in point (3) of Annex II are projects that are part of the latest available Union-wide ten-year network development plan for gas, developed by the ENTSO for Gas pursuant Article 8 of Regulation (EC) No 715/2009.

(5) by 30 June 2022 and, subsequently, for every Union-wide ten-year network development plans, the ENTSO for Electricity and ENTSO for Gas shall issue updated guidelines for inclusion of projects in their respective Union-wide ten-year network development plans, referred to in points (3) and (4), in order to ensure equal treatment and transparency of the process. For all the projects included in the Union list of projects of common interest in force at the time, the guidelines shall define a simplified process of inclusion in the Union-wide ten-year network development plans by automatic inclusion taking into account the documentation and data already submitted during the previous Union-wide ten-year network development plan processes as long as the information therein remains valid.

The ENTSO for Electricity and ENTSO for Gas shall consult with the Commission and the Agency about their respective draft guidelines for inclusion of projects in the Union-wide ten-year network development plans and take due account of the Commission's and the Agency's recommendations before the publication of the final guidelines.

(6) proposed carbon dioxide transport projects falling under the category set out in point (5) of Annex II shall be presented as part of a plan, developed by at least two Member States, for the development of cross-border carbon dioxide transport and storage infrastructure, to be presented by the Member States concerned or entities designated by those Member States to the Commission.

(7) for proposed projects falling under the competency of national regulatory authorities, the national regulatory authorities, and where necessary the Agency, shall, where possible in the context of regional cooperation pursuant to Article 61 of Directive (EU) 2019/944 and Article 7 of Directive 2009/73/EC, check the consistent application of the criteria and of the cost-

benefit analysis methodology and evaluate their cross-border relevance. They shall present their assessment to the Group.

(8) for all other proposed projects, the Commission shall evaluate the application of the criteria set out in Article 4. The Commission shall also take into account the potential for future extension to include additional Member States. The Commission shall present its assessment to the Group.

(9) each Member State to whose territory a proposed project does not relate, but on which the proposed project may have a potential net positive impact or a potential significant effect, such as on the environment or on the operation of the energy infrastructure on its territory, may present an opinion to the Group specifying its concerns.

(10) the decision-making body of the Group shall examine, at the request of a Member State of the Group, the substantiated reasons presented by a State pursuant to Article 3(3) for not approving a project of common interest or a project of mutual interest related to its territory.

(11) the Group shall meet to examine and rank the proposed projects taking into account the assessment of the regulators, or the assessment of the Commission for projects not falling within the competency of national regulatory authorities.

(12) the draft regional lists of proposed projects falling under the competency of national regulatory authorities drawn up by the Groups, together with any opinions as specified in point (9), shall be submitted to the Agency six months before the adoption date of the Union list. The draft regional lists and the accompanying opinions shall be assessed by the Agency within three months of the date of receipt. The Agency shall provide an opinion on the draft regional lists, in particular on the consistent application of the criteria and the cost-benefit analysis across regions. The opinion of the Agency shall be adopted in accordance with the procedure referred to in Article 22 (5) of Regulation (EU) 2019/942.

(13) within one month of the date of receipt of the Agency's opinion, the decision-making body of each Group shall adopt its final regional list, respecting the provisions set out in Article 3(3), on the basis of the Groups' proposal and taking into account the opinion of the Agency and the assessment of the national regulatory authorities submitted in accordance with point (7), or the assessment of the Commission for projects not falling within the competency of national regulatory authorities proposed in accordance with point (8). The Groups shall submit the final regional lists to the Commission, together with any opinions as specified in point (9).

(14) where, on the basis of the regional lists received, and after having taken into account the Agency opinion, the total number of proposed projects of common interest on the Union list would exceed a manageable number, the Commission shall consider, after having consulted each Group concerned, not to include in the Union list projects that were ranked lowest by the Group concerned in accordance with the ranking established pursuant to Article 4(5).

ANNEX IV

RULES AND INDICATORS CONCERNING CRITERIA FOR PROJECTS OF COMMON INTEREST AND FOR PROJECTS OF MUTUAL INTEREST

(1) a project with significant cross-border impact is a project on the territory of a Member State, which fulfils the following conditions:

(a) for electricity transmission, the project increases the grid transfer capacity, or the capacity available for commercial flows, at the border of that Member State with one or several other Member States, having the effect of increasing the cross-border grid transfer capacity at the border of that Member State with one or several other Member States, by at least 500 Megawatt compared to the situation without commissioning of the project;

(b) for electricity storage, the project provides at least 225 MW installed capacity and has a storage capacity that allows a net annual electricity generation of 250 Gigawatt-hours/year;

(c) for smart electricity grids, the project is designed for equipment and installations at high-voltage and medium-voltage level. It involves transmission system operators, transmission and distribution system operators or distribution system operators from at least two Member States. Distribution system operators can be involved only with the support of the transmission system operators, of at least two Member States, that are closely associated to the project and ensure interoperability. A project covers at least 50000 users, generators, consumers or prosumers of electricity, in a consumption area of at least 300 Gigawatthours/year, of which at least 20 % originate from variable renewable resources;

(d) for hydrogen transmission, the project enables the transmission of hydrogen across the borders of the Member States concerned, or increases existing cross-border hydrogen transport capacity at a border between two Member States by at least 10 % compared to the situation prior to the commissioning of the project, and the project sufficiently demonstrates that it is an essential part of a planned cross-border hydrogen network and provides sufficient proof of existing plans and cooperation with neighbouring countries and network operators;

(e) for hydrogen storage or hydrogen reception facilities referred to in point (3) of Annex II, the project aims at supplying directly or indirectly at least two Member States;

(f) for electrolysers, the project provides at least 100 MW installed capacity and the brings benefits directly or indirectly to at least two Member States;

(g) for smart gas grids, a project involves transmission system operators, transmission and distribution system operators or distribution system operators from at least two Member States. Distribution system operators can be involved only with the support of the transmission system operators, of at least two Member States, that are closely associated to the project and ensure interoperability.

(2) A project of mutual interest with significant cross-border impact is a project which fulfils the following conditions:

(h) for projects of mutual interest in the category set out in point (1)(a) and (e) of Annex II, the project increases the grid transfer capacity, or the capacity available for commercial flows, at the border of that Member State with one or more third countries and brings significant benefits, under the specific criteria listed in Article 4(3), to at least two Member States. The calculation of the benefits for the Member States shall be performed and published by the ENTSO for Electricity in the frame of Union-wide ten-year network development plan;

(i) for projects of mutual interest in the category set out in point (3) of Annex II, the hydrogen project enables the transmission of hydrogen across at the border of a Member State with one or more third countries and proves bringing significant benefits, under the specific criteria listed in Article 4(3), to at least two Member States. The calculation of the benefits for the Member States shall be performed and published by the ENTSO for Gas in the frame of Union-wide ten-year network development plan;

(j) for projects of mutual interest in the category set out in point (5) of Annex II, the project can be used to transport anthropogenic carbon dioxide by at least two Member States and a third country.

(3) Concerning projects falling under the categories set out in points (1)(a), (b), (c) and (e) of Annex II, the criteria listed in Article 4 shall be evaluated as follows:

(a) market integration, competition and system flexibility measured in line with the analysis made in the latest available Union-wide ten-year network development plan in electricity, in particular by:

(i) calculating, for cross-border projects, the impact on the grid transfer capability in both power flow directions, measured in terms of amount of power (in megawatt), and their contribution to reaching the minimum 15% interconnection target, for projects with significant cross-border impact, the impact on grid transfer capability at borders between relevant Member States, between relevant Member States and third countries or within relevant Member States and on demand-supply balancing and network operations in relevant Member States;

(ii) assessing the impact, for the area of analysis as defined in Annex V, in terms of energy system-wide generation and transmission costs and evolution and convergence of market prices provided by a project under different planning scenarios, notably taking into account the variations induced on the merit order;

(b) transmission of renewable energy generation to major consumption centres and storage sites measured in line with the analysis made in the latest available Union-wide ten-year network development plan in electricity, in particular by:

(i) for electricity transmission, estimating the amount of generation capacity from renewable energy sources (by technology, in megawatts), which is connected and transmitted due to the project, compared to the amount of planned total generation capacity from those types of renewable energy sources in the Member State concerned in 2030 according to the National Energy and

Climate Plans submitted by Member States in accordance with Regulation (EU) 2018/1999 of the European Parliament and of the Council³;

(ii) or electricity storage, comparing new capacity provided by the project with total existing capacity for the same storage technology in the area of analysis as defined in Annex V;

(c) security of supply, interoperability and secure system operation measured in line with the analysis made in the latest available Union-wide ten-year network development plan in electricity, notably by assessing the impact of the project on the loss of load expectation for the area of analysis as defined in Annex V in terms of generation and transmission adequacy for a set of characteristic load periods, taking into account expected changes in climate-related extreme weather events and their impact on infrastructure resilience. Where applicable, the impact of the project on independent and reliable control of system operation and services shall be measured.

(4) Concerning projects falling under the category set out in point (1)(d) of Annex II, the criteria listed in Article 4 shall be evaluated as follows:

- (a) Level of sustainability : This criterion shall be measured by assessing the extent of the grids' ability to connect and transport variable renewable energy.
- (b) Security of supply : This criterion shall be measured by the level of losses in distribution and /or transmission networks, the percentage utilisation (i.e. average loading) of electricity network components, the availability of network components (related to planned and unplanned maintenance) and its impact on network performances, the duration and frequency of interruptions, including climate related disruptions.
- (c) Market integration : This criterion shall be measured by assessing the innovative uptake in system operation and interconnection, as well as the level of integrating other sectors and facilitating new business models and market structures.
- (d) Network security, flexibility and quality of supply : This criterion shall be measured by assessing the innovative approach to system flexibility, cybersecurity, efficient operability between TSO and DSO level, the capacity to include demand response, storage, energy efficiency measures, the cost-efficient use of digital tools and ICT for monitoring and control purposes, the stability of the electricity system and the

³ 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

voltage quality performance.

(5) concerning hydrogen falling under the category set out in point (3) of Annex II, the criteria listed in Article 4 shall be evaluated as follows:

(a) Sustainability measured as the contribution of a project to: greenhouse gas emission reductions in different end-use applications, such as industry or transport; flexibility and seasonal storage options for renewable electricity generation; or the integration of renewable hydrogen.

(b) market integration and interoperability measured by calculating the additional value of the project to the integration of market areas and price convergence, to the overall flexibility of the system.

(c) security of supply and flexibility measured by calculating the additional value of the project to the resilience, diversity and flexibility of hydrogen supply.

(d) competition measured by the project's contribution to supply diversification, including the facilitation of access to indigenous sources of hydrogen supply.

(6) concerning smart gas grid projects falling under the category set out in point (2) of Annex II, the criteria listed in Article 4 shall be evaluated as follows:

(a) level of sustainability measured by assessing the share of renewable and low-carbon gases integrated into the gas network, the related greenhouse gas emission savings towards total system decarbonisation and the adequate detection of leakage.

(b) quality and security of supply measured by assessing the ratio of reliably available gas supply and peak demand, the share of imports replaced by local renewable and low-carbon gases, the stability of system operation, the duration and frequency of interruptions per customer.

(c) facilitation of smart energy sector integration measured by assessing the cost savings enabled in connected energy sectors and systems, such as the heat and power system, transport and industry.

(7) concerning electrolyser projects falling under the category set out in point (4) of Annex II the criteria listed in Article 4 shall be evaluated as follows:

(a) sustainability measured by assessing the share of renewable hydrogen or hydrogen meeting the criteria defined in point (4) (a) (ii) of Annex II integrated into the network, and the related greenhouse gas emission savings;

(b) security of supply measured by assessing its contribution to the safety, stability and efficiency of network operation, including through the assessment of avoided curtailment of renewable electricity generation;

(c) the facilitation of smart energy sector integration measured by assessing the cost savings enabled in connected energy sectors and systems, such as the gas, hydrogen, power and heat networks, the transport and industry sectors, and the volume of demand response enabled.

ANNEX V

ENERGY SYSTEM-WIDE COST-BENEFIT ANALYSIS

The methodology for a harmonised energy system-wide cost-benefit analysis for projects of common interest shall satisfy the following principles.

(1) the area for the analysis of an individual project shall cover all Member States and third countries, on whose territory the project is located, all directly neighbouring Member States and all other Member States significantly impacted by the project. For this purpose, ENTSO for electricity and ENTSO for gas shall cooperate with all the relevant system operators in the relevant third countries.

(2) each cost-benefit analysis shall include sensitivity analyses concerning the input data set, the commissioning date of different projects in the same area of analysis and other relevant parameters.

(3) it shall define the analysis to be carried out, based on the relevant multi-sectorial input data set by determining the impacts with and without each project.

(4) it shall give guidance for the development and use of network and market modelling necessary for the cost-benefit analysis. The modelling shall allow for a full assessment of economic, including market integration, security of supply and competition, social and environmental and climate impacts, including the cross-sectorial impacts. The methodology shall include details on why, what and how each of the benefits and costs are calculated.

(5) it shall include and explain how the energy efficiency first principle is implemented in all the steps of the ten-Year Network Development Plans.

(6) it shall ensure that the Member States on which the project has net positive impacts, the beneficiaries, and the Member States on which the project has a net negative impact, the cost bearers, are identified.

(7) it shall, at least, take into account the capital expenditure, operational and maintenance expenditure costs over the assessment lifecycle of the project and decommissioning and waste management costs, where relevant. The methodology shall give guidance on discount rates, assessment lifetime and residual value to be used for the cost-benefit calculations.

(8) it shall ensure that the climate adaptation measures taken for each project are assessed and reflect the cost of greenhouse gas emissions in a consistent manner with other Union policies.

ANNEX VI

GUIDELINES FOR TRANSPARENCY AND PUBLIC PARTICIPATION

(1) the manual of procedures referred to in Article 9(1) shall at least contain:

- (a) specifications of the relevant pieces of legislation upon which decisions and opinions are based for the different types of relevant projects of common interest, including environmental law;
- (b) the list of relevant decisions and opinions to be obtained;
- (c) the names and contact details of the Competent Authority, other authorities and major stakeholders concerned;
- (d) the work flow, outlining each stage in the process, including an indicative time frame and a concise overview of the decision-making process for the different types of relevant projects of common interest;
- (e) information about the scope, structure and level of detail of documents to be submitted with the application for decisions, including a checklist;
- (f) the stages and means for the general public to participate in the process;
- (g) modalities in which the competent authority, other authorities concerned and the project promoter shall demonstrate that the opinions expressed in the public consultation were taken into account, for example by showing what amendments were done in the location and design of the project or by justifying why such opinions have not been taken into account;
- (h) as much as possible, translations of its content in all languages of the neighbouring Member States to be realized in coordination with the respective neighbouring Member States;

(2) the detailed schedule referred to in Article 10(5)(b) shall at least specify the following:

- (a) the decisions and opinions to be obtained;
- (b) the authorities, stakeholders, and the public likely to be concerned;
- (c) the individual stages of the procedure and their duration;
- (d) major milestones to be accomplished and their deadlines in view of the comprehensive decision to be taken;
- (e) the resources planned by the authorities and possible additional resource needs;

(3) without any prejudice to the requirements for public consultations under environmental law, to increase public participation in the permit granting process and ensure in advance information and dialogue with the public, the following principles shall be applied:

- (a) the stakeholders affected by a project of common interest, including relevant national, regional and local authorities, landowners and citizens living in the vicinity of the project, the general public and their associations, organisations or groups, shall be extensively informed and consulted at an early stage, when potential concerns by the public can still be taken into account and in an open and transparent manner. Where relevant, the competent authority shall actively support the activities undertaken by the project promoter;

(b) competent authorities shall ensure that public consultation procedures for projects of common interest are grouped together where possible including public consultations already required under national law. Each public consultation shall cover all subject matters relevant to the particular stage of the procedure, and one subject matter relevant to the particular stage of the procedure shall not be addressed in more than one public consultation; however, one public consultation may take place in more than one geographical location. The subject matters addressed by a public consultation shall be clearly indicated in the notification of the public consultation;

(c) comments and objections shall be admissible from the beginning of the public consultation until the expiry of the deadline only;

(4) the concept for public participation shall at least include information about:

(a) the stakeholders concerned and addressed;

(b) the measures envisaged, including proposed general locations and dates of dedicated meetings;

(c) the timeline;

(d) the human resources allocated to the respective tasks;

(5) in the context of the public consultation to be carried out before submission of the application file, the relevant parties shall at least:

(a) publish an information leaflet of no more than 15 pages, giving, in a clear and concise manner, an overview of the description, purpose and preliminary timetable of the development steps of the project, the national grid development plan, alternative routes considered, types and characteristics of the potential impacts, including of cross-border or transboundary nature, and possible mitigation measures, which shall be published prior to the start of the consultation; The information leaflet shall furthermore list the web addresses of the website of the project of common interest referred to in Article 9(7), the transparency platform referred to in Article 23 and of the manual of procedures referred to in point (1);

(b) publish the information on the consultation on the website of the project of common interest referred to in Article 9(7), on the bulletin boards of the offices of local administrations, and, at least, in two local media outlets;

(c) invite in written form relevant affected stakeholders, associations, organisations and groups to dedicated meetings, during which concerns shall be discussed;

(6) the project website referred to in Article 9(7) shall at least publish the following information:

(a) the date when the project website was updated last;

(b) translations of its content in all languages of the Member States concerned by the project or on which the project has a significant cross-border impact in accordance with point (1) of Annex IV;

(c) the information leaflet referred to in point (5) updated with the latest data on the project;

(d) a non-technical and regularly updated summary reflecting the current status of the project, including geographic information, and clearly indicating, in case of updates, changes to previous versions;

- (e) the implementation plan as set out in Article 5(1) updated with the latest data on the project;
- (f) the funds allocated and disbursed by the Union for the project;
- (g) the project and public consultation planning, clearly indicating dates and locations for public consultations and hearings and the envisaged subject matters relevant for those hearings;
- (h) contact details in view of obtaining additional information or documents;
- (i) contact details in view of conveying comments and objections during public consultations.