

RECOVERY AND RESILIENCE FACILITY – STATE AID

Guiding template: Energy and hydrogen infrastructure

Link to European Flagship: Power Up

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I. Objective of the guiding template

1. The coronavirus pandemic has changed the economic outlook for the years to come in the European Union. Investments and reforms in the context of the Recovery and Resilience Facility (the “Facility”) are contributing to convergence and a sustainable economic recovery. Carrying out reforms and investing in the EU’s common priorities, notably green, digital and social resilience will help creating jobs and sustainable growth, while modernising our economies, and allowing the EU to recover in a balanced, forward-looking and sustained manner.
2. The Facility aims at mitigating the economic and social impact of the coronavirus pandemic and at making the EU economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the twin green and digital transitions. The Facility is also at the heart of the implementation of the REPowerEU Plan,¹ the Commission’s response to the socio-economic hardships and global energy market disruption caused by Russia's invasion of Ukraine. Therefore, if Member States want to obtain additional financing for key investments and reforms that will help achieve the REPowerEU objectives, they must add a REPowerEU chapter to their national recovery and resilience plans.²
3. The objectives of REPowerEU are, amongst others, to increase the resilience, security and sustainability of the EU’s energy system through the needed decrease of dependence on fossil fuels and diversification of energy supplies at EU level, including by increasing the uptake of renewables, energy efficiency and energy storage capacity.

¹ Commission staff working document, REPowerEU Plan, COM(2022) 230 final, 18.5.2022

² See Regulation (EU) 2023/435 of the European Parliament and of the Council of 27 February 2023 amending Regulation (EU) 2021/241 as regards REPowerEU chapters in recovery and resilience plans and amending Regulations (EU) No 1303/2013, (EU) 2021/1060 and (EU) 2021/1755, and Directive 2003/87/EC, OJ L 63, 28.2.2023, p. 1.

4. State aid rules apply in the framework of the Facility. Member States should therefore ensure that all investments comply with EU State aid rules and follow all regular procedures and rules³.
5. With this guiding template, DG Competition aims at assisting Member States with the State aid elements of their recovery plans and the dedicated REPowerEU chapters, and providing guidance on the State aid-related aspects of those investments which are expected to be most common.
6. The investments covered by this guiding template have been chosen in line with the European flagships of the Commission's Annual Sustainable Growth Strategy 2021⁴. The template has been updated because of its relevance for investments and reforms contributing to REPowerEU objectives.
7. The guiding template follows a uniform structure, providing sector-specific guidance as to when:
 - i. Instances in which the existence of State aid may be excluded, and therefore prior notification to the Commission is not necessary.
 - ii. State aid would be involved but no notification is necessary, and specific rules may apply (in case of aid exempted from the notification obligation); and
 - iii. State aid would be involved and a notification is necessary, with reference to the main applicable State aid rules.
8. The guiding template also contains 'boxes' with examples of the State aid assessment of the investments and reforms contained in the components published by the Commission,⁵ per flagship. The aim is merely illustrative, to provide additional clarifications to Member States on the State aid assessment contained in those components.

II. Description of the investment

9. This guiding template refers to investments in *energy infrastructure*, linked to the *Power Up* flagship, and notably to investments enabling the energy system transition and energy system integration, in particular through infrastructure needed to enhance system stability, resource adequacy, integration of different energy sources and energy supply in under-developed networks.
10. The infrastructure investments covered by this guiding template relate, among others, to electricity networks, and may include digitalisation, smartening of energy infrastructure

³ See Commission staff working document - Guidance to Member States Recovery and Resilience Plans - Part 1, SWD(2021) 12 final, published 22.1.2021 (https://commission.europa.eu/document/7c55aadf-6b8d-4d9c-a930-bc7ef8656de1_en) and Commission Notice- Guidance on Recovery and Resilience Plans in the context of REPowerEU, 2023/C 80/01 published 3.3.2023 ([https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023XC0303\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023XC0303(01)&from=EN)). Also, the relevant public procurement rules must be respected, where applicable.

⁴ Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank — Annual Sustainable Growth Strategy 2021, COM/2020/575 final.

⁵ Available at https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#example-of-component-of-reforms-and-investments.

(including smart metering⁶), offshore grids, interconnectors and electricity storage, as well as upgrades on grounds of climate resilience. Energy infrastructure investments also include investments in gas networks (natural gas, biogas – including biomethane – and/or renewable gas of non-biological origin) or infrastructure for carbon dioxide and for the transmission or distribution of thermal energy.

11. Other infrastructure categories can also be supported, concerning infrastructure that enables physical or wireless connection of renewable or carbon-free energy between producers and users from multiple access and exit points and which are open to access by third parties not belonging to the infrastructure owner/manager undertakings.
12. Energy infrastructure also includes *hydrogen infrastructure*, as a system of hydrogen pipelines connecting production and users (both at high-pressure/transmission and local distribution level), including hydrogen storage, consisting of newly constructed assets or assets converted from natural gas dedicated to hydrogen, or the combination of the two⁷.
13. Furthermore, projects of common interest as defined in Article 2, point (4) of Regulation (EU) No 347/2013 of the European Parliament and of the Council and projects of mutual interest referred to in Article 171 of the Treaty, can be supported.
14. For *energy infrastructure*, support would cover costs of construction of new infrastructure or upgrade of existing one or a combination of the two. In exceptional circumstances where a Member State demonstrates that operating costs cannot be recovered from network users, and where the operating aid is unrelated to sunk costs but leads to a change in behaviour that enables the delivery of security of supply or environmental protection objectives, operating aid for infrastructure may be found compatible.
15. The network infrastructure investments covered by this guiding template are geared at integrating renewable energy and hydrogen and facilitate their transport and distribution, also for the mobility sector. However, this guiding template does not cover charging or re-fuelling electric and hydrogen infrastructures, which are covered by a distinct guiding template “*Electric recharging stations and hydrogen stations for road vehicles*”.
16. Under the *Power Up* flagship, the development of future-proof modern energy infrastructure (e.g. smart electricity grids/RES off-shore grids, electricity storage) and hydrogen transmission and distribution networks, starting from the upgrade/retrofitting of existing energy infrastructure is crucial to the integration of the RES energy, in particular electricity, into the networks, and renewable hydrogen in view of the climate neutrality objective by 2050 and of the proposed increase of the EU’s greenhouse gas (GHG) emissions reduction target by 2030, in line with EU Green Deal Objectives. At

⁶ Point 19(36)(a)(iv) of the Guidelines on State aid for Climate, Environmental protection and Energy (CEEAG) defines smart electricity grids as “*systems and components integrating information and communication technologies, through operational digital platforms, control systems and sensor technologies both at transmission and distribution level, aiming at a more secure, 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*”.

⁷ Investments consisting of distinct hydrogen pipelines that connect renewable energy source (RES) hydrogen producers to identified user(s) are covered by the guiding template “*Investment/operating aid for energy from renewable sources, including renewably sourced hydrogen production*”.

the same time, the renewable energy and hydrogen component will create new jobs and stimulate investments in capacity, infrastructure and research and development (R&D).

III. Instances in which the existence of State aid may be excluded

17. The following sections present a comprehensive, but not exhaustive, number of separate instances in which the application of State aid rules or the existence of State aid may be excluded. Given the cumulative nature of the criteria of Article 107(1) TFEU, if one of the following criteria is not met, the presence of State aid can be excluded and therefore there is no need to notify the measure to the Commission prior to its implementation.

A. No economic activity

18. Support for activities which are not of an economic nature, i.e. are not used for offering goods or services on the market, is not considered State aid.
19. Energy infrastructure, notably concerning gas, electricity and hydrogen transmission or distribution, are operated on the market by energy operators, in exchange for remuneration through tariffs⁸. For this reason, the investments covered by this guiding template concern in all likelihood an economic activity.

B. No State resources

20. Measures that do not involve the transfer of public resources⁹ exclude the existence of State aid.¹⁰
21. When infrastructure investments are undertaken by Transmission System Operators (TSOs) or Distribution System Operators (DSOs), notably into electricity and gas networks, these investments are normally covered by users' tariffs. According to case-law, under certain conditions, the use of revenues from users' tariffs does not constitute a transfer of State resources when the revenues are not part of a compulsory levy (i.e. a levy that the TSOs/DSOs would be legally obliged to charge on energy suppliers or final consumers) and the TSO/DSO is not under State control¹¹. In such a case, the presence of State aid would be excluded.

C. No selectivity

22. Measures that are of general application and do not favour certain undertakings, or the production of certain goods, are not selective and do not constitute State aid. This can be the case, for example, of a general reform of a tax or of the social security contributions under certain conditions.

⁸ See paragraph 217 of the Commission Notice on the Notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union ("Notice on the notion of State aid"), OJ C 262, 19.7.2016, p. 1.

⁹ The concept of 'transfer of public resources' covers many forms, such as direct grants, loans, guarantees, direct investment in the capital of companies and benefits in kind. A positive transfer of funds does not have to occur; foregoing State revenue is sufficient. In addition, the measure must be imputable to the State. See Notice on the notion of State aid, section 3.

¹⁰ Note that funds under the Facility constitute State resources for the purposes of Article 107(1) TFEU.

¹¹ Judgment of the Court of Justice of 28 March 2019, *Germany v Commission*, C-405/16 P, ECLI:EU:C:2019:268.

23. Support to energy and hydrogen infrastructure, as covered by this guiding template, would in all likelihood target selected operators (infrastructure owners/operators) and selected activities (operation of energy/hydrogen infrastructure), so it *prima facie* appears difficult to consider that measures targeted to those infrastructures would not be selective.

D. No advantage

24. Measures that do not entail an economic advantage exclude the existence of State aid. The presence of advantage needs to be examined at the level of the owner/developer of the infrastructure, as well as at the level of the operator and the end-user.

a. No advantage at the level of the owner/developer of the infrastructure

25. If it is proven that the State acted under the same terms and conditions as a private investor in a comparable situation when providing the funding necessary for the development/upgrade of an energy/hydrogen infrastructure, then State aid is not involved. This can be assessed on the basis of: (i) significant *pari passu* investments of private operators, i.e. investments made on the same terms and conditions (and therefore with the same level of risks and rewards) as the public authorities who are in a comparable situation¹²; and/or (ii) an *ex ante* sound business plan, preferably validated by external experts, demonstrating that the investment provides an adequate return for the investor(s), in line with the normal market return that would be reasonably expected by operators on similar projects taking into account the level of risk and future expectations¹³.
26. Note, however, that the existence of consecutive State interventions concerning the same energy infrastructure project might invalidate the conclusion that a similar measure would also have been undertaken by a market economy investor¹⁴.

b. No advantage at the level of the operator

27. Undertakings operating the aided infrastructure to provide services to end-users receive an advantage if the operation of the infrastructure provides them with an economic benefit that they would not have obtained under normal market conditions. This normally applies if they pay less for the right to exploit the energy infrastructure than what they would have had to pay for a comparable infrastructure under normal market conditions. For instance, in cases where, under normal market conditions, infrastructure operators would have to increase their tariffs/remuneration to a level not covered by demand, or would simply not enter the market in the first place, it is considered that the aid confers an advantage on operators by allowing them to offer their services.

i. Selection of operator through a tender or fees that are otherwise in compliance with the Market Economy Operator Principle

28. Where the operation of the energy infrastructure is assigned **for a positive price** to an operator/concessionaire on the basis of a competitive, transparent, non-discriminatory

¹² For more details, see paragraphs 86 to 88 of the Notice on the notion of State aid.

¹³ For more information, see the Notice on the notion of State aid, chapter 4.2, and in particular paragraphs 101 to 105.

¹⁴ Paragraph 81 of the Notice on the notion of State aid.

and unconditional tender¹⁵ in line with the principles of the TFEU on public procurement¹⁶, an advantage can be excluded at the level of the operator. In such a case, it can be presumed that the fee the operator pays for the right to exploit the energy infrastructure is in line with market conditions. This conclusion does **not apply** when the competitive bidding process only aims at allocating support to the operator and determining the level of support (negative price).

29. If the operator/concessionaire has not been selected through a tender in line with the above conditions, it may also be possible to establish that the fees paid by the operator/concessionaire are in line with normal market conditions through (i) benchmarking with comparable situations¹⁷, or (ii) on the basis of a generally-accepted standard assessment methodology¹⁸.

ii. The operation of the infrastructure entrusted as a service of general economic interest (SGEI) in line with the Altmark criteria

30. In very exceptional circumstances where the market cannot deliver the service in a satisfactory manner and under conditions (such as price, objective quality characteristics, continuity and access to the service) that are consistent with the public interest, the Member State may decide to compensate the service provider within the framework of a clearly defined and entrusted, genuine SGEI. This could for instance be particularly relevant in situations where there is difficulty in providing access to the energy infrastructure against affordable prices for end-users.

31. In such cases, the existence of an economic advantage at the level of the operator (concessionaire) may be excluded, if: (i) the infrastructure project is necessary for the provision of services that can be considered as a genuine SGEI for which the public service obligations have been clearly defined; (ii) the parameters of compensation have been established in advance in an objective and transparent manner; (iii) there is no compensation paid beyond the net costs of providing the public service and a reasonable profit; and (iv) the SGEI has been either assigned through a public procurement procedure that ensures the provision of the service at the least cost to the community or the compensation does not exceed what an efficient company would require¹⁹.

c. No advantage at the level of the end-user

32. If the operator of the energy infrastructure has received State aid or if its resources constitute State resources, an economic advantage can be passed by the operator to the user(s) of the infrastructure. If these users are undertakings, they are subject to State aid rules.²⁰

¹⁵ As described in paragraphs 89-94 of the Notice on the notion of State aid.

¹⁶ Provided that the appropriate selection criteria as set out in the Notice on the notion of State aid, paragraphs 95 and 96, have been used.

¹⁷ Paragraphs 97 to 100 of the Notice on the notion of State aid.

¹⁸ Paragraphs 101 to 105 of the Notice on the notion of State aid.

¹⁹ See Case C-280/00 *Altmark Trans and Regierungspräsidium Magdeburg* EU:C:2003:415 and the Communication from the Commission on the application of the European Union State aid rules to compensation granted for the provision of services of general economic, OJ C 8, 11.1.2012, p. 4.

²⁰ Paragraph 225 of the Notice on the notion of State aid.

33. An economic advantage at the level of the user(s) can be excluded if (i) the energy infrastructure is not dedicated to the use of a specific user, (ii) all users enjoy equal and non-discriminatory access to the infrastructure, and (iii) the infrastructure pricing policy for users is established on market terms.²¹

E. No effect on trade between Member States and no distortion of competition

34. Where an aid measure strengthens the competitive position of the benefitting undertakings compared to that of actual or potential competitors that are not eligible for the aid, it is considered to have potentially distorting effects on competition.²²
35. Support for the construction or upgrade of energy infrastructure in principle threatens to distort competition with the European Union, given the competitive and liberalized context of energy markets across the EU.
36. Aid measures are considered capable of affecting trade between Member States where the aid strengthens the position of an undertaking as compared with other undertakings competing in intra-Union trade.²³ In principle, aid for the construction or upgrade of energy infrastructure is capable of affecting trade between Member States, as it concerns a sector where undertakings from any Member State can operate.
37. However, in very specific circumstances described below, the Commission may find that an aid measure is unlikely to distort competition or affect trade between Member States, in particular in light of the limited amounts of aid. That said, the relatively small amount of aid or the relatively small size of the undertaking which receives it does not as such exclude the possibility that trade between Member States might be affected.²⁴

a. De minimis aid

38. The distortion of competition and effect on trade can be excluded in cases of very limited amounts of aid (“*de minimis* aid”). *De minimis* aid is not considered State aid. Therefore, there is no need for prior approval from the Commission and Member States do not even have to inform the Commission of such aid.

²¹ See the Notice on the notion of State aid, section 4.2. Paragraphs 226 to 228 present three scenarios in which an advantage to users can be excluded. First, users do not receive an advantage where the fees for use of the infrastructure have been set through a tender that meets all the relevant conditions set out in paragraphs 90 to 96. Second, where such specific evidence is not available, aid to users can be excluded where the terms and condition for use of the infrastructure are in line with those under which the use of comparable infrastructure is granted by comparable private operators in comparable situations (benchmarking), provided such a comparison is possible. Third, if none of the above assessment criteria can be applied, the fact that a transaction is in line with market conditions can be established on the basis of a generally accepted, standard assessment methodology. The Commission considers that the market economy operator test can be satisfied for public funding of open infrastructures not dedicated to any specific user(s) where their users incrementally contribute, from an *ex ante* viewpoint, to the profitability of the project/operator. This is the case where the operator of the infrastructure establishes commercial arrangements with individual users that allow covering all costs stemming from such arrangements, including a reasonable profit margin on the basis of sound medium-term prospect. This assessment should take into account all incremental revenues and expected incremental costs incurred by the operator in relation to the activity of the specific user.

²² Notice on the notion of State aid, paragraph 187.

²³ Notice on the notion of State aid, paragraph 190.

²⁴ Notice on the notion of State aid, paragraph 192.

39. Aid is considered to be *de minimis* if the total amount of aid granted per Member State to a single undertaking does not exceed EUR 200,000 over any period of three fiscal years and the other conditions laid down in the *de minimis* Regulation are respected²⁵. Notably, the aid must be “transparent” within the meaning of Article 4 of the *de minimis* Regulation (i.e. it must be possible to calculate precisely the gross grant equivalent of the aid *ex ante* without a risk assessment), the EUR 200,000 threshold must be respected in case of cumulation with any other public support granted to the same beneficiaries under the *de minimis* Regulation, and the cumulation rules set out in the *de minimis* Regulation must be complied with.

b. No potential effect on trade: purely local impact

40. There may be in principle instances of support measures which have a purely local impact and consequently have no effect on trade between Member States.

41. This could be the case if the support is granted directly to an energy infrastructure in a very limited area within a Member State and is unlikely to attract customers from other Member States. Effect on trade could be excluded only if it cannot be foreseen that the measure will have more than a marginal effect on the conditions of cross-border investments or establishments (i.e. if it is unlikely to have a material bearing on the decision of investors to establish an outlet in the relevant region/Member State). Evidence to demonstrate that there is no effect on trade could include data showing that there is only limited use of the infrastructure from outside the Member State and that cross-border investments in the relevant market are minimal or unlikely to be adversely affected.²⁶ However, this last circumstance seems difficult to show in cases of the investments at stake, which typically involve modern digital energy infrastructure, based on complex technological solutions capable of attracting participation of investors specialized in the energy sector.

c. No potential effect on trade: legal or natural monopoly²⁷

42. Since energy markets are liberalised, public financing for infrastructure projects in the energy sector in principle affects competition.

43. However, as clarified in the Notice on the notion of State aid, infrastructure investments which are made within the framework of a legal monopoly are not subject to State aid rules, provided a number of requirements are met²⁸. In the energy sector, this is particularly relevant for those Member States where the construction and operation of certain infrastructures – typically in the fields of electricity and gas – is legally exclusively reserved for the TSO or the DSO.

44. In order to exclude a distortion of competition in such situation, the following cumulative conditions must be met:

- a) the construction and operation of the infrastructure is subject to a legal monopoly (established in compliance with EU law, and in particular with the

²⁵ Commission Regulation (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to *de minimis* aid, OJ L352, 24.12.2013, p. 1.

²⁶ Paragraph 197 of the Notice on the notion of State aid.

²⁷ See paragraphs 211-212 of the Notice on the notion of State aid. See also the Analytical grids for energy, sections II.1 and II.2.

²⁸ Paragraph 188 of the Notice on the notion of State aid

Treaty rules on competition). This is the case where the TSO/DSO is legally the only entity entitled to make a certain type of investment and no other entity can operate an alternative network;

- b) the legal monopoly not only excludes competition on the market, but also for the market, in that it excludes any possible competitor to become the exclusive operator of the infrastructure in question;²⁹
- c) the service is not in competition with other services; and
- d) if the operator of the energy infrastructure is active in another (geographical or product) market that is open to competition, cross-subsidization has to be excluded. This requires that separate accounts are used, costs and revenues are allocated in an appropriate way and public funding provided for the service subject to the legal monopoly cannot benefit other activities. Regarding electricity and gas infrastructure, as the 2009 Electricity and Gas Directives³⁰ require vertically integrated entities to keep separate accounts for each of their activities, this requirement would in all likelihood be satisfied.

45. A similar scenario would occur in case the energy infrastructure is run in a situation of “natural monopoly” (typically the case of electricity and gas networks in several Member States), in presence of the following cumulative requirements:

- a) an infrastructure typically faces no direct competition, which would be the case where the energy infrastructure cannot be replicated for economic reasons and hence where no operators other than the TSO/DSO are involved;
- b) alternative financing in the network infrastructure, in addition to the network financing is insignificant in the sector and Member State concerned; and
- c) the infrastructure is not designed to selectively favour a specific undertaking or sector but provides benefits for society at large, which is normally the case for gas and electricity infrastructure.

46. Also in the scenario of a natural monopoly, in order for the entire public funding of a given infrastructure project to fall outside State aid rules, Member States have to ensure that the funding provided for the construction of the energy network infrastructure cannot be used to cross-subsidise or indirectly subsidise other economic activities, including the operation of the infrastructure. As already explained in point ~~44 above~~⁴¹, the 2009 Electricity and Gas Directives require the TSO/DSO to keep separate accounts for each activity; thus, this requirement would be satisfied for electricity and gas infrastructure.

47. In conclusion, for all cases of electricity and gas infrastructure, in Member States where TSOs and DSOs enjoy a legal or natural monopoly (also within distinct areas of the Member State), support to electricity smart grids, or for investments to upgrade/retrofit gas networks to render them fit for low carbon gases/hydrogen use, would not have an effect on trade and the presence of State aid would be excluded.

²⁹ In that regard, see also Case C-385/18, *Arriva Italia and Others*, EU:C:2019:1121, paras 57–58; Case C-659/17, *Azienda Napoletana Mobilità*, EU:C:2019:633, para. 38.

³⁰ Internal market legislation in the field of energy in particular includes Directive 2009/72/EC of 13 July 2009 concerning common rules for the internal market in electricity, OJ L 211, 14.8.2009, p. 55, and Directive 2009/73/EC of 13 July 2009 concerning common rules for the internal market in natural gas; OJ L 211, 14.8.2009, p. 94.

48. The same conclusion would also apply to electricity storage infrastructure investments whenever this type of projects would fall under the TSO and DSO remit, notably – wherever storage equipment would constitute a “fully integrated network component” – in line with the 2019 Electricity Directive (Articles 36 and 54)³¹.
49. For hydrogen infrastructure, in order to exclude the presence of State aid, the conditions above (points [4441](#) and [4542](#)) would need to be fulfilled, i.e. investments into a new network of hydrogen pipelines or on the conversion of existing gas pipelines into hydrogen-only network would not entail State aid when undertaken by an entity enjoying a legal or natural monopoly. Furthermore, in the absence of EU internal market rules for hydrogen (currently object of forthcoming legislative initiatives³²), Member States shall have a regulatory framework in place in line with the abovementioned principles, particularly on the measures to prevent cross-subsidisation of other activities.

See the State aid assessment of the additional examples of investments and reforms contained in the [component – Power Up](#)

Investment 2: Supporting the development of electrolysers and their connection to upstream renewable electricity production facilities to supply renewable hydrogen to industry: *This measure will aim to support, in a cost-effective way, the financing gap for investments in the production of renewable hydrogen. For example, upfront investment aid will also help invest to resolve any infrastructure constraints necessary to transport, distribute, store, and dispatch the renewable electricity, renewable hydrogen, including the development of grid planning for local DSOs. Some of these activities would not fall under State aid rules (for instance, upgrades of transmission and distribution networks for investments undertaken by TSOs and DSOs, as the relevant conditions are met, namely the legal or natural monopoly status of TSOs and DSOs).*

IV. Instances in which there is no need to notify for State aid clearance, but other requirements may apply

50. If a given investment meets the cumulative conditions of Article 107(1) TFEU and thus entails State aid, it may be considered compatible with the internal market and can be granted without notification in the following instances:
- A. Aid covered by an existing State aid scheme (conditions for no notification)*
51. If a Member State plans to grant State aid under an aid scheme already approved by Commission decision, it does not need to notify again the scheme to the Commission for approval and can directly provide the support to the beneficiary, as long as the conditions of the authorisation decision are complied with.
52. Moreover, any increase of up to 20% of the original budget of an aid scheme already approved by Commission decision is not considered an alteration to existing aid. If this

³¹ Directive (EU) 2019/944 of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU; OJ L 158, 14.6.2019, p. 125.

³² See Communication from the Commission “A hydrogen strategy for a climate-neutral Europe” COM(2020) 301 final.

is the only change to a scheme already authorised by the Commission, it does not need to be re-notified to the Commission for approval³³.

53. In any event, full compliance with Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility³⁴ should be ensured (see in particular Article 17(2)).

B. General Block Exemption Regulation (GBER)³⁵

54. In cases where the Commission has gained sufficient experience with a given kind of State aid, it may block exempt such State aids, i.e. the Member States do not have to notify them. They only have to inform the Commission thereof.
55. The GBER provisions on aid in the field of climate, environmental protection and energy recently underwent a targeted revision aimed at further facilitating support for green projects, without the need for prior approval from the Commission. An amending GBER text was endorsed by the Commission on 9 March 2023.³⁶ The amended GBER will apply as of the day following its publication in the Official Journal. However, once the amended GBER provisions enter into force, they will apply retroactively to individual aid granted before their entry into force. For existing aid measures, Member States would need to adapt any schemes to comply with the amended GBER within 6 months following its entry into force. For a full picture of the transitional provisions, please see Article 58 GBER. Subsequent references to the GBER refer to the GBER as amended in the endorsed text.
56. Article 2(130) GBER defines the categories of assets and facilities to be qualified as “energy infrastructure” for the purposes of the GBER, notably for electricity, hydrogen, CO₂ and some categories of gas infrastructure. Smart electricity grids are explicitly defined in Article 2(130)(a)(v) GBER. Investments to upgrade or retrofit transmission or distribution gas infrastructure to integrate hydrogen/low carbon gases fall under the definitions of Article 2(130)(b)(i) and (iv) GBER.

a. Investment aid for energy infrastructure

57. Investment aid for energy infrastructure can be granted under the GBER if the conditions of Article 48 and Chapter I of GBER are complied with. In particular, in order to be covered by the GBER, the investment aid for energy infrastructure cannot exceed EUR 70 million per undertaking, per investment project.
58. **Article 48 GBER (“Investment aid for energy infrastructure”)** applies only to infrastructure subject to “full tariff and third-party access regulation according to

³³ In case of budget increases to already authorised schemes exceeding 20 % and/or their prolongation up to 6 years, the so-called simplified notification procedure under Article 4 of the Implementing Regulation (Commission Regulation (EC) No 794/2004 of 21 April 2004 implementing Council Regulation (EC) No 659/1999 laying down detailed rules for the application of Article 93 of the EC Treaty, OJ L 140, 30.4.2004, p. 1) can be used, whereby the Commission aims to complete the assessment of notified State aid measures within one month.

³⁴ OJ L 57, 18.2.2021, p. 17.

³⁵ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty, OJ L 187, 26.6.2014, p. 1.

³⁶ The full text endorsed by the Commission is available here: https://competition-policy.ec.europa.eu/document/8d68e6c3-763a-41db-9e34-42f90bc5e892_en.

internal market legislation”³⁷. As for the eligible costs³⁸, these would be the total investment costs. The aid intensity may reach up to 100 % of the funding gap. The aid needs to be limited to the minimum needed for carrying out the aided project or activity. This condition is fulfilled if the aid corresponds to the funding gap³⁹. A detailed assessment of the funding gap is not required if the aid amounts are determined through a competitive bidding process⁴⁰, because it provides a reliable estimate of the minimum aid required by potential beneficiaries.

59. Article 48 GBER is only applicable to gas infrastructure where the infrastructure in question is dedicated to the use for hydrogen and/or for renewable gases, or used for the transport of more than 50% hydrogen and renewable gases.

60. Finally, Article 48 GBER is not applicable to support for gas and electricity storage infrastructure. These projects would need to be notified for State aid assessment.

b. Investment aid for dedicated hydrogen, CO₂ and waste heat infrastructure under 36 GBER

61. **Article 36 GBER (“Investment aid for environmental protection, including decarbonisation”)** allows, under certain conditions, State aid for investments in the construction of dedicated infrastructure for hydrogen, waste heat or CO₂ up EUR 25 million of aid per project. The notion of ‘dedicated infrastructure’ for the purpose of this provision refers to assets for hydrogen, waste heat or CO₂ of the types listed in Article 2(130) GBER, which are built for one or a small group of *ex ante* identified users and tailored to their needs.

62. Article 36 GBER also covers aid for investments in the construction or upgrade of storage facilities for hydrogen; the construction or upgrade of other types of storage facilities are not eligible.

63. Article 36 GBER applies only if no specific rules are laid down in Articles 36a, 36b and 38 to 48 GBER.

64. For investments in dedicated infrastructure for hydrogen, waste heat or CO₂ to be eligible under Article 36, such investments must be necessary to enable the increase in the level of environmental protection in any of the following situations:

³⁷ Infrastructure shall not be subject to full or partial exemption from internal market rules.

³⁸ Please note that the references to ‘eligible costs’ in this guiding template are to be understood exclusively for the purposes of State aid. Therefore, they have no bearing on whether a particular measure and its associated cost can be financed or not by the Facility.

³⁹ ‘funding gap’ means the net extra cost determined by the difference between the economic revenues and costs (including the investment and operation) of the aided project and those of the alternative project which the aid beneficiary would credibly carry out in the absence of aid. To determine the funding gap, the Member State must quantify, for the factual scenario and a credible counterfactual scenario, all main costs and revenues, the estimated weighted average cost of capital (‘WACC’) of the beneficiaries to discount future cash flows, as well as the net present value (‘NPV’) for the factual and counterfactual scenarios, over the lifetime of the project. The typical net extra cost can be estimated as the difference between the NPV for the factual scenario and for the counterfactual scenario over the lifetime of the reference project. For infrastructure projects, the counterfactual scenario is assumed to be no alternative investment (NPV=0).

⁴⁰ Please see point 49c CEEAG for the conditions to ensure the bidding process is competitive. Please note that a bidding process will only be competitive if there are sufficient different project promoters which can effectively compete with each other. If, for instance, there is only one or a limited number of distribution system operators, this may be difficult to achieve.

- a. The project leads to an increase in the environmental protection of the activities of the beneficiary or of another entity involved in the infrastructure chain, beyond Union standards in force, irrespective of the presence of mandatory national standards that are more stringent than the Union standards; or
 - b. The project leads to an increase in the environmental protection of the activities of the beneficiary in the absence of Union standards or of another entity involved in the infrastructure chain; or
 - c. The project leads to an increase in the environmental protection of the activities of the beneficiary or of another entity involved in the infrastructure chain to comply with Union standards that have been adopted but are not yet in force. In such a case, the investment for which the aid is granted must be implemented and finalised at least 18 months before the date of entry into force of the standard concerned; -
65. Moreover, in case of investments in CO₂ capture and transport, the CO₂ capture and/or transport, including individual elements of the CCS or CCU chain, must be integrated into a complete CCS and/or CCU chain.
66. As regards investments in dedicated infrastructure for hydrogen⁴¹, including hydrogen storage facilities, it must be ensured, and Member States must obtain, a commitment from the beneficiary to that effect, that the hydrogen transported or stored is either renewable or it complies with the following conditions:
- a. It is produced from electricity;
 - b. It achieves life-cycle greenhouse gas emissions savings of at least 70% relative to a fossil fuel comparator of 94g CO₂eq/MJ (2.256 tCO₂eq/tH₂);
 - c. For the purpose of the calculation of life-cycle greenhouse gas emissions savings referred to in point (b), the greenhouse gas emissions linked to the production of electricity used to produce the hydrogen are determined by the marginal generation unit in the bidding zone where the electrolyser is located in the imbalance settlement periods when the electrolyser consumes electricity from the grid.
67. The aid amount may be established through different methods:
- a. The aid amount may reach 40% of the eligible costs. In case of investments relating to CCS and/or CCU (including CO₂ transport infrastructure), the aid intensity must not exceed 30% of the eligible costs. The aid intensity may be increased if: (i) the aid is granted to medium sized undertakings (by 10 percentage points) or (ii) the aid is granted to small undertakings (by 20 percentage points). The aid intensity may be increased by 15 percentage points for investments located in assisted areas (see Article 36(8) GBER). The aid intensity may be increased by 15 percentage points for investments located in assisted areas (see Article 36(8) GBER). Where aid supports the construction of dedicated infrastructure, the eligible costs shall be the total investment costs. As it is also the case for all other measures implemented under Article

⁴¹ As regards the conditions applicable to projects using or producing hydrogen, please see the guiding template on “*Investment/operating aid for the reduction and removal of greenhouse gas emissions including through support for renewable energy and energy efficiency*”.

36 GBER, costs that are not directly linked to the achievement of a higher level of environmental protection are not eligible and cannot be supported;

- b. The aid intensity may reach 100% of the investment costs where aid is granted in a competitive bidding process, which fulfils all the conditions set out in Article 36(9) GBER⁴², in addition to those laid down in Article 2, point (38).
- c. Alternatively, the aid amount may reach the difference between the investment costs directly linked to the achievement of a higher level of environmental protection and the operating profit of the investment⁴³. This requires the Member State to conduct an analysis of the discounted revenues and the discounted operating costs over the economic lifetime of the investment. In such situations a claw-back mechanism has to be applied to verify these projections. In the absence of any operating profit, this methodology cannot be applied.

68. Article 56e GBER provides the possibility to support measures in the energy sector via financial products supported by the InvestEU Fund. These provisions may also apply when RRF funds are combined with the InvestEU Fund. With regard to energy infrastructure, Article 56e allows aid to be granted to investments in energy infrastructure in gas, CO₂, hydrogen and electricity not exempted from third party access, tariff regulation and unbundling, based on the internal energy market legislation, as follows:

- (i) as regards gas infrastructure, when the investments are selected as Projects of Common Interest;
- (ii) All projects with regards to electricity infrastructure, hydrogen infrastructure and carbon dioxide infrastructure.

For such investments, the nominal amount of total financing provided to any final beneficiary per project referred to above under the support of the InvestEU Fund shall not exceed EUR 150 million.

C. Service of general economic interest: SGEI Decision⁴⁴

⁴² Namely, i) the aid award is based on objective, clear, transparent and non-discriminatory eligibility and selection criteria published at least six weeks in advance of the deadline for submitting applications; ii) during the implementation of a scheme, in case of a bidding process where all bidders receive aid, the design of said process shall be corrected to restore effective competition in the subsequent bidding processes, for example, by reducing the budget or volume; iii) ex post adjustments to the bidding process are excluded; iv) at least 70% of the total selection criteria used for ranking bids and, ultimately, for allocating the aid in the competitive bidding process shall be defined in terms of aid in relation to the project's contribution to the environmental objectives of the measure, for example the aid requested per unit of environmental protection to be delivered.

⁴³ The notion of 'operating profit' is defined in Article 2(39), as 'the difference between the discounted revenues and the discounted operating costs over the economic lifetime of the investment, where this difference is positive. The operating costs include costs such as personnel costs, materials, contracted services, communications, energy, maintenance, rent, administration, but exclude depreciation charges and the costs of financing if these have been covered by investment aid. Discounting revenues and operating costs using an appropriate discount rate allows a reasonable profit to be made'.

⁴⁴ Commission Decision 2012/21/EU of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest, OJ L 7, 11.1.2012, p. 3.

69. To the extent the construction of energy infrastructure accompanies a clearly defined and entrusted genuine SGEI, State aid for the compensation of such an SGEI up to EUR 15 million per year (average over the whole duration of the entrustment⁴⁵), may be exempted from notification on the basis of SGEI Decision, provided that the criteria of that decision are met: definition and entrustment of SGEI, parameters of compensation established ex ante, amount of compensation not exceeding the costs for the provision of the SGEI and a reasonable profit, and a mechanism to ensure the absence of overcompensation.

V. Instances in which notifying for State aid clearance is necessary

70. If the measure constitutes State aid and does not meet the conditions allowing an exemption from notification, a notification to the Commission for State aid clearance is required under the Guidelines on State aid for climate, environmental protection and energy 2022⁴⁶ (“CEEAG”). The aim of the present section is to assist Member States in identifying and providing the necessary and relevant information to the Commission in the context of pre-notifications and notifications, bearing in mind that the Commission will assess all State aid notifications received from Member States in the context of the Facility as a matter of priority.

A. Procedure for pre-notification and notification

71. In case the planned investment entails State aid and is not exempt from notification, the Member State should, in compliance with Article 108(3) TFEU, proceed to notify the measure to the Commission for approval before implementation.
72. The Commission is committed to assess and treat those cases as a matter of priority and to engage with national authorities early on, in order to address problems in ‘real time’ in the context of the preparation of their Recovery and Resilience Plans. Therefore, informal contacts and pre-notifications are encouraged as soon as possible.
73. The Commission aims to complete the assessment of notified State aid measures within six weeks of receiving complete notification from Member States.

See the State aid assessment of the additional examples of investments and reforms contained in the [component – Power Up](#)

Investment 2: Supporting the development of electrolysers and their connection to upstream renewable electricity production facilities to supply renewable hydrogen to industry: *This measure will aim to support, in a cost-effective way, the financing gap for investments in the production of renewable hydrogen. For example, upfront investment aid will also help invest to resolve any infrastructure constraints necessary to transport, distribute, store, and dispatch the renewable electricity, renewable hydrogen, including the development of grid planning for local DSOs. [...].*

B. Relevant legal bases for compatibility with the Treaty

⁴⁵ Initial support for investment on necessary infrastructure may be averaged as (annual) compensation for the duration of the entrustment as SGEI compensation: normally 10 years, unless justified by the amortisation of investments (this infrastructure may be depreciated for more than 10 years).

⁴⁶ Communication from the Commission — Guidelines on State aid for climate, environmental protection and energy 2022, OJ C 80, 8.2.2022, p. 1

74. For support to “energy infrastructure” (as defined in the GBER) exceeding EUR 70 million per undertaking, per investment project, prior notification to the Commission is necessary.
75. On the basis of Article 107(3)(c) TFEU, the Commission may consider compatible with the internal market State aid to facilitate the development of certain economic activities within the European Union, where such aid does not adversely affect trading conditions to an extent contrary to the common interest.
76. To assess whether State aid in the form of energy infrastructure can be considered compatible with the internal market, the Commission analyses whether the design of the aid measure ensures that the positive effect of the aid on the development of the supported economic activity (positive condition) exceeds its potential negative effects on trade and competition (negative condition).
77. In its compatibility assessment, the Commission will check whether the conditions of Article 107(3)(c) TFEU in conjunction with Section 4.9 of the CEEAG are met. In particular:
- The aid measure needs to facilitate the development of economic activities and have an incentive effect without resulting in an infringement of relevant EU law affecting the compatibility test.
 - The aid measure must not unduly affect trading conditions to an extent contrary to the common interest. For those purposes the Commission will check whether the State intervention is needed, appropriate and proportionate and addresses a market failure to achieve the objectives pursued by the measure. The Commission will also verify that transparency of the aid is ensured. Together, these conditions ensure that the distortive effects of the aid are as far as possible limited.
 - The Commission will assess the negative effects of the aid measure in terms of distortions of competition and impact on trade between Member States against the common interest. In particular, the Commission will in this step not only consider the benefits of the aid for the beneficiary’s economic activity, but also take into account the positive effects of the aid for the community at large.
 - The Commission will finally balance the positive effects with the negative effects of the aid on competition and trade.
78. The CEEAG set out the principles for aid compatibility for energy infrastructure measures. In principle, all electricity and gas infrastructure projects covered by this guiding template (i.e. transmission and distribution systems, smart electricity grids, off-shore grids, upgrade/retrofit of gas networks, interconnectors, hydrogen transport infrastructures, electricity storage subject to specific conditions⁴⁷ etc.) would fall within the definition of “energy infrastructure” as per point 19(36) of the CEEAG. The

⁴⁷ Section 4.9 will also apply to energy storage facilities until 31 December 2023, connected to transmission or distribution lines (stand-alone electricity storage) irrespective of the voltage levels. Support to energy storage may also be assessed under Sections 4.1, 4.2, 4.3, and 4.8 where relevant. Storage assets selected as PCIs – in line with applicable TEN-E legislation – qualify as energy infrastructure under this section and support would be assessed under section 4.9. Support to storage assets which are “owned or controlled” by the TSOs or DSOs, in compliance with Articles 54 and/or 36 of Directive 944/2019, is also covered by the section 4.9.

following points provide a comprehensive, but not exhaustive description of the principles applicable to aid for energy infrastructure.

79. Under section 4.9 of the CEEAG, aid to energy infrastructure shall be based on the presence of market failures. As the energy infrastructure is typically financed through user tariffs, the granting of State aid is a way to overcome market failures which cannot be fully addressed by means of compulsory user tariffs. Therefore, to demonstrate the need for State aid, the following principles apply:
 - a. For projects of common interest as defined in Article 2, point (4), of Regulation (EU) No 347/2013 which are fully subjected to internal energy market legislation, the market failures in terms of coordination problems are such that financing by means of tariffs may not be sufficient and State aid may be granted;
 - b. For projects of common interest which are partially or fully exempted from internal energy market legislation, and for other infrastructure categories, the Commission will carry out a case-by-case assessment of the need for State aid;
 - c. For electricity storage facilities, the Commission may require the demonstration by the Member State of a specific market failure in the development of facilities to provide similar services.
80. The presence of an incentive effect of the aid will be assessed, in line with general rules on climate, environmental and energy aid (section 3.1.2 of CEEAG).
81. The aid amount must be limited to the minimum needed to achieve the infrastructure objectives. Support can be granted to cover the 'eligible costs' which would be computed using the funding gap principle as set out in points 48, 51, and 52 of the CEEAG. For energy infrastructure, as explained in point 52, the counterfactual scenario is presumed to be the situation in which the project would not take place. To determine the funding gap, the Member State must submit a quantification of all main costs and revenues, the estimated weighted average cost of capital (WACC) of the beneficiaries to discount future cash flows, as well as the net present value (NPV), over the lifetime of the project (reference project in case of schemes). The Member State must provide reasons for the assumptions used for each aspect of the quantification, and explain and justify any methodologies applied. Support measures for energy infrastructure may go up to 100% of the funding gap.
82. The introduction of monitoring and claw-back mechanisms may be necessary where there is a risk of windfall profits, e.g. when the aid is close to the maximum allowed, while keeping incentives for the beneficiaries to minimise their costs and develop their business in a more efficient manner over time.
83. In view of the existing requirements under the internal energy market legislation, which are aimed at strengthening competition, the Commission will generally consider that aid for energy infrastructure subject to full internal market regulation does not have undue distortive effects.
84. While aid for infrastructure subject to the full Internal market Regulation is presumed not to have undue distortive effects⁴⁸, a case-by-case assessment of the potential distortions of competition is normally carried out for all infrastructure exempted, in

⁴⁸ Point 382(a) of the CEEAG.

whole or in part, from Internal market rules, taking into account, in particular, the degree of third party access to the aided infrastructure, access to alternative infrastructure, crowding-out of private investment and the competitive position of the beneficiary.

85. For natural gas infrastructure investments, the Member states need to demonstrate the following positive effects capable of offsetting the negative effects on competition: (i) whether the infrastructure is ready for the use of hydrogen and leads to an increase of the use of renewable gases, or alternatively the reason why it is not possible to design the project so that it is ready for the use of hydrogen and how the project does not create a lock-in effect for the use of natural gas; and (ii) how the investment contributes to achieving the Union's 2030 climate target and 2050 climate neutrality target.
86. For support to electricity storage facilities, as well as of other PCIs and PMIs infrastructure not subject to internal market legislation, the Commission will in particular assess the risks of distortion of competition which may arise in related services markets as well as on other energy markets.
87. Aid for dedicated infrastructure (including for hydrogen, other low-carbon gases and CO₂ for storage/use) – which is excluded from the scope of Section 4.9, as well as projects encompassing a dedicated infrastructure or energy infrastructure, or both, combined with either production or consumption/use, may be declared compatible under Section 4.1 on “Aid for the reduction and removal of greenhouse gas emissions including through support for renewable energy and energy efficiency”.
88. For such an assessment, the Commission applies the relevant conditions of Section 3 of the CEEAG, as well as the specific requirements set out in Section 4.1, as explained in the guiding template on “Investment/operating aid for the reduction and removal of greenhouse gas emissions including through support for renewable energy and energy efficiency”.
89. It should be noted, however, that as required in point 124 CEEAG, for measures that include dedicated infrastructure projects⁴⁹ the Commission will carry out a case-by-case assessment of the distortions of competition brought about by the aid. In its assessment, the Commission will consider, among other, the size of the infrastructure in relation to the relevant market, the impact on the likelihood of additional market-based investments, the extent to which the infrastructure is initially intended for an individual user or group of users and whether a credible plan or firm commitment for connecting to a wider network exists, the duration of any derogations or exemptions from internal market legislation, the structure of the relevant market and the position of the beneficiaries in that market. For instance, the distortive effects of aid for an infrastructure which initially connects only a limited number of users can be mitigated where such infrastructure is part of a plan to develop a wider Union network and based on the following criteria:
 - a. the accounting for the infrastructure should be separated from any other activity and costs of access and usage made transparent;

⁴⁹ Infrastructure located entirely on the beneficiary's production site and connecting the beneficiary's hydrogen production facility to a production plant included on the beneficiary's production site might be considered as part of the production facility rather than as a dedicated infrastructure for the purpose of these requirements.

- b. unless this undermines the attainment of the objective of the aid, aid should be subject to commitments to open up the infrastructure to third parties at fair, reasonable and non-discriminatory terms (including public calls for connection requests at equivalent conditions);
- c. the advantage that the beneficiaries derive until such wider development occurs may need to be offset, for instance by way of contributing to the further extension of the network;
- d. the advantage derived by the dedicated users may need to be limited and/or shared with other players.

a. Communication on Important Projects of Common European Interest (IPCEI)

- 90. Cross-border integrated projects in relation to investments in hydrogen infrastructure may also be eligible for support under the Communication on Important Projects of Common European Interest (IPCEI Communication)⁵⁰, depending on the specific structure and purposes of such projects.
- 91. The IPCEI Communication sets out the rules for approving State aid for large cross-border projects up to the first industrial deployment phase when they entail significant research and innovation and/or for environmental, energy or transport projects of great importance in line with the Union's relevant strategies. Therefore, Member States can use funding under the Facility to support individual company projects for which aid is authorised by the Commission as part of an IPCEI.
- 92. The IPCEI State aid rules offer more flexibility than other State aid rules, in particular rules for aid to research projects. Given the high innovativeness requirement, the rules allow for higher aid intensities and also for aid for the first industrial development on the basis of the projects' funding gap. In exchange, aid beneficiaries have to fulfil certain eligibility and compatibility criteria, such as to commit to substantial spillovers benefitting European economy or society.
- 93. An IPCEI can be a single or an integrated project, i.e. a group of single projects inserted in a common structure, roadmap or programme, aiming at the same objective and based on a coherent systemic approach. Integration is decisive for an IPCEI and must be demonstrated. Each individual company project of an integrated IPCEI must demonstrate its value and contribution to achieve the IPCEI objectives and has to fulfil all eligibility and compatibility criteria. In the case of hydrogen projects, it is not sufficient that each project somehow relates to hydrogen or avoids a certain volume of carbon related emissions to demonstrate integration.
- 94. Also, in order to be deemed compatible under the IPCEI Communication, an IPCEI project must among others address a market failure or other important systemic failures and:
 - i. significantly contribute to strategic EU objectives;
 - ii. involve normally at least four Member States;

⁵⁰ Communication from the Commission – Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest, OJ C 528, 30.12.2021, p. 10

- iii. involve important private co-financing by the beneficiaries;
 - iv. generate positive spill over effects across the EU that limit distortions to competition;
 - v. openness and transparency need to guide the coordination of the IPCEI process; all Member States must be given an opportunity to participate; the selection of individual projects through calls for the expression of interest constitutes a mean to ensure openness and transparency.
 - vi. evidence as to whether the project complies with the principle of ‘do no significant harm’ within the meaning of Article 17 of Regulation (EU) 2020/852 need to be provided.
95. Depending on the type of project supported, additional specific conditions will need to be complied with:
- i. IPCEI aid may cover R&D activities of a major innovative nature or which constitute an important added value in terms of research and innovation and must go beyond the global state-of-the-art (point 22 of the IPCEI Communication).
 - ii. IPCEI aid may also cover first industrial deployment activities. These activities must then allow for the development of a new product or service with high research and innovation content or the deployment of a fundamentally innovative production process, excluding incremental development (point 23 of the IPCEI Communication). First industrial deployment refers to the upscaling of pilot facilities, demonstration plants or of the first-in-kind equipment and facilities covering the steps subsequent to the pilot line including the testing phase, but excludes mass production and commercial activities (point 24 of the IPCEI Communication).
 - iii. IPCEI aid may also cover infrastructure-related projects that fulfil the specific eligibility conditions of point 25 of the IPCEI Communication, i.e. they must either be of great importance for the environmental, energy, including security of energy supply, or transport strategy of the Union or contribute significantly to the internal market. In this case aid to cover supplies and materials is allowed only on a temporary basis, during the construction phase of the infrastructure or facility, but not during its commercial exploitation.
96. An IPCEI in innovative hydrogen technologies and systems complying with points 22, 23 and 24 of the IPCEI Communication can be well suited to promote the technological innovation needed to deploy an efficient low carbon/renewable hydrogen value chain (e.g. scaling-up innovative electrolyzers). In addition, as set out in the EU’s hydrogen strategy, the development of renewable hydrogen is a priority for the Union. Projects to coordinate cross-border cooperation for the production of renewable hydrogen or to establish the necessary infrastructure for hydrogen transmission and storage could be part of an IPCEI based on point 25 of the IPCEI Communication provided they qualify as infrastructure, make a considerable contribution to the Union’s hydrogen strategy for a climate-neutral Europe and are open.

VI. References

- Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union, OJ C 262, 19.7.2016, p. 1.

- Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty, OJ L 187, 26.6.2014, p. 1.
- Commission Decision 2012/21/EU of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest, OJ L 7, 11.1.2012, p. 3.
- Communication from the Commission on the application of the European Union State aid rules to compensation granted for the provision of services of general economic interest, OJ C 8, 11.1.2012, p. 4.
- Communication from the Commission, European Union framework for State aid in the form of public service compensation (2011), OJ C8, 11.1.2012, p. 15.
- Commission Regulation No 360/2012 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid granted to undertakings providing services of general economic interest, OJ L 114, 26.4.2012, p. 8.
- Commission Regulation (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid, OJ L 352, 24.12.2013, p. 1.
- Communication from the Commission — Guidelines on State aid for climate, environmental protection and energy 2022, OJ C 80, 18.2.2022, p.1.
- Communication from the Commission – Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest, OJ C 528, 30.12.2021, p. 10.
- Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union, OJ L 248, 24.9.2015, p. 9.
- Communication from the Commission - A hydrogen strategy for a climate-neutral Europe, COM(2020) 301 final.
- Guidelines on regional State aid for 2014-2020, OJ C209, 23.7.2013, p. 1.
- Guidelines on regional State aid, OJ C 153, 29.4.2021, p. 1.