

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 outbreak of the coronavirus pandemic has changed the economic outlook for the years to come in the European Union. Investments and reforms are needed more than ever to ensure 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 create jobs and sustainable growth, while modernising our economies, and allow the Union to recover in a balanced, forward-looking and sustained manner.
2. The Recovery and Resilience Facility ("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.
3. 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 rules¹.
4. With this guiding template, DG Competition aims at assisting Member States upfront with the design and preparation of the State aid elements of their recovery plans, and to provide guidance on the State aid-related aspects of those investments which are expected to be most common.
5. The investments covered by this guiding template have been chosen in line with the European flagships of the Commission's Annual Sustainable Growth Strategy 2021². These flagships, which will result in tangible benefits for the economy and citizens across the EU, aim at strengthening economic and social resilience, addressing issues that are common to all Member States, need significant investments, create jobs and growth and are needed for the digital-green twin transition. Pursuing these flagships will contribute to the success of the recovery of Europe.
6. The guiding template follows a uniform structure, providing sector-specific guidance as to when:

¹ Commission staff working document - Guidance to Member States Recovery and Resilience Plans - Part 1. Also the relevant public procurement rules must be respected, where applicable.

² 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.

- 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.
7. 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,³ 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

8. This guiding template refers to investments in *energy network 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 enable transport, distribution, storage and dispatching of RES electricity and hydrogen.
9. The infrastructure investments covered by this guiding template relate in particular to electricity networks, and would consist of smart electricity (including smart metering⁴) and offshore grids, interconnectors and electricity storage. With regard to gas networks, they consist on all equipment/upgrading or retrofitting works of the natural gas infrastructure to enable integration of renewable and low-carbon gases (including biomethane, hydrogen or synthetic methane) into the natural gas network.
10. The guiding template also covers *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 two⁵.
11. For both *energy and hydrogen infrastructure*, support would cover costs of construction of new networks/infrastructure or upgrade of existing one or a combination of the two.
12. The network infrastructure investments covered by this guiding template are geared at integrating renewable energy and hydrogen and facilitate their transport and

³ Available at https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#example-of-component-of-reforms-and-investments.

⁴ Point 19(31)(a)(v) of the Environmental and Energy Aid Guidelines (EEAG) defines smart grids as “any equipment, line, cable or installation, both at transmission and low and medium voltage distribution level, aiming at two-way digital communication, real-time or close to real-time, interactive and intelligent monitoring and management of electricity generation, transmission, distribution and consumption within an electricity network in view of developing a network efficiently integrating the behaviour and actions of all users connected to it — generators, consumers and those that do both — in order to ensure an economically efficient, sustainable electricity system with low losses and high quality and security of supply and safety”.

⁵ 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*”.

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*”.

13. 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 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

14. 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

15. Support for activities which are not of an economic nature, i.e. are not used for offering goods or services on the market, are not considered State aid.
16. Energy infrastructure, notably concerning gas, electricity and hydrogen transmission or distribution, are operated on the market by energy operators, in exchange for remuneration through tariffs⁶. For this reason, the investments covered by this guiding template concern in all likelihood an economic activity.

B. No State resources

17. Measures that do not involve the transfer of public resources⁷ exclude the existence of State aid.⁸
18. 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

⁶ 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.

⁷ 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.

⁸ Note that funds under the Facility constitute State resources for the purposes of Article 107(1) TFEU.

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 control⁹. In such a case, the presence of State aid would be excluded.

C. No selectivity

19. 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.
20. 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

21. 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

22. 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 situation¹⁰; 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 expectations¹¹.
23. 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 investor¹².

b. No advantage at the level of the operator

24. 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

⁹ Judgment of the Court of Justice of 28 March 2019, *Germany v Commission*, C-405/16 P, ECLI:EU:C:2019:268.

¹⁰ For more details, see paragraphs 86 to 88 of the Notice on the notion of State aid.

¹¹ For more information, see the Notice on the notion of State aid, chapter 4.2, and in particular paragraphs 101 to 105.

¹² Paragraph 81 of the Notice on the notion of State aid.

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

25. 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 and unconditional tender¹³ in line with the principles of the TFEU on public procurement¹⁴, 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).
26. 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 situations¹⁵, or (ii) on the basis of a generally-accepted standard assessment methodology¹⁶.

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

27. 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.
28. 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

¹³ As described in paragraphs 89-94 of the Notice on the notion of State aid.

¹⁴ 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.

¹⁵ Paragraphs 97 to 100 of the Notice on the notion of State aid.

¹⁶ Paragraphs 101 to 105 of the Notice on the notion of State aid.

community or the compensation does not exceed what an efficient company would require¹⁷.

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

29. 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.¹⁸
30. An economic advantage at the level of the user(s) can be excluded if (i) the energy infrastructure is not dedicated for the use by 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.¹⁹

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

31. 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.²⁰
32. 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.
33. 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.²¹ 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.

¹⁷ 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.

¹⁸ Paragraph 225 of the Notice on the notion of State aid.

¹⁹ 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.

²⁰ Notice on the notion of State aid, paragraph 187.

²¹ Notice on the notion of State aid, paragraph 190.

34. 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.²²

a. De minimis aid

35. 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.

36. 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 respected²³. 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

37. 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.

38. 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.²⁴ 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.

²² Notice on the notion of State aid, paragraph 192.

²³ 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.

²⁴ Paragraph 197 of the Notice on the notion of State aid.

c. No potential effect on trade: legal or natural monopoly²⁵

39. Since energy markets are liberalised, public financing for infrastructure projects in the energy sector in principle affects competition.
40. 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 met²⁶. 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.
41. 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 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 competition to become the exclusive operator of the infrastructure in question;²⁷
 - 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 Directives²⁸ require vertically integrated entities to keep separate accounts for each of their activities, this requirement would in all likelihood be satisfied.
42. 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;

²⁵ 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.

²⁶ Paragraph 188 of the Notice on the notion of State aid

²⁷ 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.

²⁸ 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.

- 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.
43. 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 41 above, 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.
44. 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.
45. 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)²⁹.
46. For hydrogen infrastructure, in order to exclude the presence of State aid, the conditions above (points 41 and 42) 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 initiatives³⁰), 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 electrolyzers 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).*

²⁹ 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.

³⁰ See Communication from the Commission “A hydrogen strategy for a climate-neutral Europe” COM(2020) 301 final.

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

47. 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)

48. 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.

49. 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 is the only change to a scheme already authorised by the Commission, it does not need to be re-notified to the Commission for approval³¹.

50. 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 Facility³² should be ensured (see in particular Article 17(2)).

B. General Block Exemption Regulation (GBER)³³

51. In cases where the Commission has gained sufficient experience with a given kind of State aid, it may block exempt them, i.e. the Member States do not have to notify such State aids. They only have to inform the Commission thereof.

52. 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 and gas. 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.

53. 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 50 million per undertaking, per investment project.

54. **Article 48 GBER (“Investment aid for energy infrastructure”)** applies only to infrastructure located in “assisted areas”³⁴, and subject to “full tariff and access

³¹ 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.

³² OJ L 57, 18.2.2021, p. 17.

³³ 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.

³⁴ “Assisted areas” means areas designated in an approved regional aid map valid at the time of award of the aid in application of Articles 107(3)(a) and (c) TFEU.

regulation according to internal market legislation”³⁵. As for the eligible costs³⁶, these would be the investment costs. The aid amount for the infrastructure shall not exceed the difference between the eligible costs and the operating profit. The operating profit shall be deducted from the eligible costs *ex ante* or through a claw-back mechanism. 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.

55. Hydrogen transport infrastructures are not covered by the definition of “energy infrastructure” of Article 2(130) GBER whenever hydrogen infrastructure is distinct from the natural gas network (i.e. network of dedicated hydrogen pipelines, both new or converted from existing ones). Therefore, Article 48 GBER cannot be applied to hydrogen transport infrastructures. Instead, such projects need to be notified for State aid assessment. However, in certain cases hydrogen transport pipelines could be qualified as “local infrastructure” in the sense of Article 56 GBER (see below), whenever they have a more limited extension and purely local character. Article 56 GBER is applicable for infrastructure not covered by other provisions (thus infrastructure not covered by Article 2(130) GBER).
56. **Article 56 GBER (“Investment aid for local infrastructures”)** allows investment aid for local infrastructure up to EUR 10 million of aid and total costs not exceeding EUR 20 million. Where the aid is granted for a (local) network of hydrogen infrastructures, it is especially important to ensure that these thresholds are not circumvented by artificially splitting up the aid schemes or projects. The fact that a scheme applies to projects over the entire territory of a Member State does not automatically mean that individual aid granted under the scheme can never be covered by Article 56 GBER. Indeed, it cannot be excluded that a nation-wide scheme provides, for example, merely a financing facility for individual, local projects, each of which fulfils the conditions of Article 56 GBER. However, a scheme supporting the roll-out of a network of hydrogen transport/distribution infrastructure that covers the entire territory of a Member State or large parts thereof cannot fall under Article 56 GBER.
57. Article 56 GBER moreover applies to infrastructure which is made available to all users on an open, transparent and non-discriminatory basis. The price charged for the use or the sale of the infrastructure shall correspond to the market price. The eligible costs shall be the investment costs and the aid amount shall not exceed the difference between the eligible costs and the operating profit (which shall be deducted from the eligible costs *ex ante*, or through a claw-back mechanism). Finally, Article 56 GBER is not applicable to “dedicated infrastructure”, which is the one built for *ex ante* identifiable undertakings and tailored to their needs (Article 2(33) GBER).
58. The amendment to the GBER of July 2021³⁷ has introduced Article 56e providing 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 and electricity not exempted

³⁵ Infrastructure shall not be subject to full or partial exemption from internal market rules.

³⁶ 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.

³⁷ Commission Regulation (EU) No 2021/1237 of 23 July 2021 amending Regulation (EU) No 651/2014, OJ L 270, 29.7.2021, p. 39–75.

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) as regards electricity infrastructure, when the investments are: (i) smart grids, including investments in the development, smartening and modernization of electricity transmission and distribution infrastructure; or (ii) other projects, which fulfil any of the criteria laid down in Article 4(1)(c) of Regulation (EU) No 347/2013, or which are included in the prevailing Union list of Projects of Common Interest in Annex VII to Regulation (EU) No 347/2013³⁸; or other projects, with the exclusion of electricity storage, in assisted areas.
- (iii) as regards electricity storage projects, based on new and innovative technology, irrespective of the voltage level of the connection to the network.

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 Decision*³⁹

59. 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 entrustment⁴⁰), 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

60. 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. 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.

³⁸ Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 (OJ L 115, 25.4.2013, p. 39).

³⁹ 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.

⁴⁰ 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).

A. *Procedure for pre-notification and notification*

61. 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.
62. 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.
63. 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. [...] Whenever investments are not the upgrade of existing networks, but relate to a “new” network of hydrogen transport pipelines, a State aid notification will be required.*

B. *Relevant legal bases for compatibility*

64. For support to “energy infrastructure” (as defined in the GBER) exceeding EUR 50 million per undertaking, per investment project, prior notification to the Commission is necessary.
65. 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.
66. To assess whether State aid in the form of energy and hydrogen 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).
67. In its compatibility assessment, the Commission will check whether the conditions of Article 107(3)(c) TFEU in conjunction with Section 3.8 of the Environmental and Energy Aid Guidelines (EEAG)⁴¹ 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

⁴¹ Communication from the Commission — Guidelines on State aid for environmental protection and energy 2014-2020, OJ C 200, 28.6.2014, p. 1.

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.

a. Environmental and Energy Aid Guidelines (EEAG)

68. In principle, all electricity and gas infrastructure projects covered by this guiding template (i.e. smart electricity grids, off-shore grids, upgrade/retrofit of gas networks, interconnectors, electricity storage subject to specific conditions⁴²) would fall within the definition of “energy infrastructure” as per point 19(31) of the EEAG, except for hydrogen transport infrastructure.
69. Under section 3.8 of the EEAG, aid to energy infrastructure shall be based on the presence of market failures, which are presumed (and revenues from tariffs are considered insufficient) for cases of (i) Projects of Common Interest, as defined in the TEN-E legislation⁴³; (ii) smart grids and (iii) all infrastructure investments in assisted areas.
70. For the three infrastructure categories mentioned above – when partly or fully exempted from internal market rules on regulated tariffs, unbundling or third party-access⁴⁴ – and for all other cases, a case by case assessment of the need for State aid is required.
71. Whereas tariffs would be the appropriate primary means to fund energy infrastructure, State aid may be considered the appropriate instrument to finance partly or fully the

⁴² According to point 19(31)(a)(iii) of the EEAG, electricity storage is considered energy infrastructure when it consists of “*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*”. According to point 19(31)(b), gas storage is qualified as energy infrastructure when: (ii) underground storage facilities connected to the high-pressure gas pipelines mentioned in point (i); or part of (iii) reception, storage and regasification or decompression facilities for liquefied natural gas (‘LNG’) or compressed natural gas (‘CNG’).

⁴³ Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009, OJ L 115, 25.4.2013, p. 39.

⁴⁴ Internal market legislation in the field of energy in particular includes, for electricity, the Directive on common rules for the internal market for electricity (EU) 2019/944, which replaces Directive 2009/72/EC 13 July 2009 concerning common rules for the internal market in electricity (OJ L 211, 14.8.2009, p. 55); and the new Regulation on the internal market for electricity (EU) 2019/943; for gas 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) and Regulation (EC) No 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks (OJ L 211, 14.8.2009, p. 36).

infrastructure in cases of Projects of Common Interest, smart grids and infrastructure investment in assisted areas.

72. The presence of an incentive effect of the aid will be assessed, in line with general rules on environmental and energy aid (section 3.2.4. of EEAG).
73. The aid amount must be limited to the minimum needed to achieve the infrastructure objectives. For energy infrastructure, as the counterfactual scenario is presumed to be the situation in which the project would not take place, support can be granted to cover the ‘eligible costs’ which would consist in the funding gap (point 211 of the EEAG). The funding gap, based on point 19(32) of the EEAG, is to be calculated as the difference between the Net Present Value (NPV) of positive cash-flows/net discounted revenues and NPV of negative cash-flows/all costs (operating and investment). Support measures for energy infrastructure may go up to 100% of the funding gap. The Commission will also require Member States to clearly and separately identify any other aid measure which might affect the aid measures for infrastructure.
74. Finally, while infrastructure subject to Internal market Regulation is presumed not to have undue distortive effects⁴⁵, a case-by-case assessment of the potential distortions of competition is normally carried out for all infrastructure exempted from Internal market rules – and gas storage – taking into account, in particular, the degree of third party access to the aided infrastructure, access to alternative infrastructure and the market share of the beneficiary.
75. As regards **hydrogen infrastructure**, both newly built and converted from existing ones, State aid rules on “energy infrastructures” can in principle be applied by analogy, whenever it can be shown that the infrastructure is “open” to use by third parties and is not “dedicated”⁴⁶. The Commission’s assessment will in those cases focus on the assessment of the market failure, the appropriateness of the support measure, the incentive effect and verification that the aid remains limited to what is needed, using the “funding gap” approach as for other energy infrastructure. The assessment of the potential distortion of competition will be done on a case-by-case basis, taking into account, in particular, the degree of third party access to the aided infrastructure, access to alternative infrastructure and the market share of the beneficiary.
76. Finally, all energy and hydrogen infrastructure is excluded from the scope of application of the Regional Aid Guidelines⁴⁷.

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

77. 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)⁴⁸, depending on the specific structure and purposes of such projects.

⁴⁵ Point 214 of the EEAG.

⁴⁶ Paragraphs 220 and 228 of the Notice on the notion of State aid.

⁴⁷ Guidelines on regional State aid for 2014-2020, OJ C 209, 23.7.2013, p. 1. From January 2022, Guidelines on regional State aid, OJ C 153, 29.4.2021, p. 1. For the exclusion of energy infrastructure, see point 11.

⁴⁸ 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 188, 20.6.2014, p. 4.

78. 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.
79. 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.
80. 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.
81. 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 several Member States;
 - iii. involve private 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; the selection of individual projects through calls for the expression of interest constitute a means to ensure openness and transparency.
82. 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 state-of-the-art (point 21 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 22 of the IPCEI Communication). First industrial deployment refers to the upscaling of pilot facilities, including the testing phase, but excludes mass production and commercial activities.
 - iii. IPCEI aid may also cover for example infrastructure-related projects that fulfil the specific eligibility conditions of point 23 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.

83. An IPCEI in innovative hydrogen technologies and systems complying with points 21 and 22 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 23 of the IPCEI Communication provided they make a considerable contribution to the Union's hydrogen strategy for a climate-neutral Europe.

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 environmental protection and energy 2014-2020, OJ C 200, 28.6.2014.
- 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 188, 20.6.2014, p. 4.

- 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.