

RECOVERY AND RESILIENCE FACILITY – STATE AID

Guiding template: Innovative processors and semiconductors technologies

Link to European Flagship: Scale 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 2021.² 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 a 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 investments

8. The objective of the investments will be to strengthen Europe’s innovative performance in developing and deploying semiconductor technologies that deliver digital components, with special focus on processors.
9. These investments should directly contribute to the *Scale Up* flagship and to the EU digital transition, with applications for artificial intelligence, software, communications networks, digital infrastructures and supercomputing, and should also help achieving EU sustainability objectives, notably by facilitating the development and deployment of considerably more energy-efficient processors. These investments should also facilitate a rapid take up of connected cars and an increase of the share of EU companies using advanced cloud services and big data.
10. In principle, State aid supporting these investments could take different forms, in particular grants, repayable advances or risk finance measures. Less likely, although it cannot be excluded, is aid in the form of tax measures.

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

11. 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

12. Aid for activities that are not of an economic nature, i.e. that are not used for offering goods or services on the market, would not be considered State aid.
13. Given the type of investment at stake (i.e. the development and commercial deployment of semiconductor technologies), it seems likely that these activities will be economic in nature.

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.

B. No State resources

14. Measures that do not involve the transfer of public resources⁴ exclude the existence of State aid.⁵

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

Reform A.1 – Alignment of national procurement policies towards common standards and certification for trusted semiconductor building-blocks and common requirements for procurement of secure components: *To the extent that the reform amounts to changes in legislation and identification of common requirements, no State aid concerns should arise where there is no transfer of State resources for the benefit of certain undertakings.*

C. No selectivity

15. 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.
16. Given the investments assessed in this guiding template, it is very unlikely that support measures specifically directed at investments in innovative processors and semiconductor technologies would be deemed non-selective.

D. No advantage

17. An economic benefit would not amount to State aid when the State acts under normal market conditions, i.e. under the same terms and conditions as a private operator in a comparable situation (so-called Market Economy Operator test).
18. 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 necessary funding for investments like the ones covered by this template, 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 situation⁶; 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 risk⁷.

⁴ 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.

⁵ See Notice on the notion of State aid, paragraph 51. Note that funds under the Facility constitute State resources for the purposes of Article 107(1) TFEU.

⁶ For more information, see Notice on the notion of State aid, paragraphs 86 to 88.

⁷ For more information, see Notice on the notion of State aid, chapter 4.2 and in particular paragraphs 101 to 105.

19. This rationale also applies to R&D-interactions between undertakings and publicly-funded research organisations. Where the latter perform research on behalf of undertakings, those undertakings do not receive any advantage if they pay a market-conform remuneration for the service. Likewise, in effective R&D-collaboration with research organisations, undertakings do not receive any advantage if they compensate the research organisation equivalently to the market price, for IPR that the research organisation has created.

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

20. 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. 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 respected⁸.

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

22. 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)

23. 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.
24. 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 approval⁹.

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 L352, 24.12.2013, p. 1. Notably, the aid must be transparent within the meaning of Article 4 of the 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 Regulation must be complied with.

⁹ 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.

25. 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 Facility¹⁰ should be ensured (see in particular Article 17(2)).

B. General Block Exemption Regulation (GBER)¹¹

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

27. Certain State aid measures may be exempted from notification if they are granted in compliance with the conditions of the GBER. In particular, the investments covered by this guiding template, aimed at developing and deploying semiconductor technologies that deliver digital components with special focus on processors, may be supported under Articles 14 (regional investment aid), 17 (investment aid to SMEs), 21 (risk finance aid), 22 (aid for start-ups), 25 (aid for research and development projects), 25a (aid for SMEs for R&D projects and feasibility studies awarded a Seal of Excellence label under Horizon 2020 or Horizon Europe), 25b (aid for Marie Skłodowska-Curie actions and European Research Council Proof of Concept actions awarded a Seal of Excellence label), 25c (aid for R&D projects and feasibility studies co-funded by Horizon 2020 or Horizon Europe), 25d (co-funding for teaming actions selected under Horizon 2020 or Horizon Europe) and 28 (innovation aid for SMEs) GBER. Note that the provisions of Chapter I of the GBER must also be complied with.

28. **Article 14 GBER** allows granting State aid for productive investments of undertakings of all sizes, provided the investments take place in an assisted area¹². The maximum aid intensities applicable in the assisted areas are established for each Member State in the regional aid maps and can vary across the assisted areas. The eligible costs¹³ are investment costs in tangible and intangible assets, estimated wage costs arising from the job creation as a result of the eligible investment or a combination thereof. The investment shall be maintained in the recipient area for at least 5 years (3 years if the beneficiary is an SME). Additional bonuses apply for investments by small enterprises (20%) and medium-sized enterprises (10%). Aid for relocation purposes is not allowed under the GBER and State aid rules in general.

29. Large investment projects (with eligible costs exceeding EUR 50 million) can also be supported under Article 14 GBER, provided that the aid does not exceed the adjusted aid amount (based on the so-called “scale down mechanism”¹⁴).

30. **Article 17 GBER** allows granting investment State aid to SMEs with a notification threshold of EUR 7.5 million per undertaking per investment project¹⁵. The maximum

¹⁰ OJ L 57, 18.2.2021, p. 17.

¹¹ 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.

¹² ‘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.

¹³ 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.

¹⁴ See Article 2(20) GBER.

¹⁵ Eligible investments are i) setting up a new establishment; ii) extension of an existing establishment iii) diversification of output of existing establishment into new additional products, iii) fundamental change in

aid intensity is 20 % of eligible costs for small enterprises and 10 % for medium-sized enterprises.

31. **Article 21 GBER** allows granting State aid to support SMEs' access to finance. The beneficiaries have to be unlisted SMEs, that are typically operating on the market for less than seven years or need substantial risk finance investment to enter a new product or geographical market; independent private investors provide at least 40% of the total investment. The notification threshold is EUR 15 million per undertaking.

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

Investment A.6 – Establish a venture capital fund and incentive programmes for SMEs and start-ups in the design of digital components and creation of IP: *The envisaged investment may entail State aid for SMEs and potentially financial intermediaries depending on the specific structure and purpose of the project. A compatible structure could be established in compliance with Article 21 of the General Block Exemption Regulation (GBER), without prior notification to the Commission. Compatibility on this basis is subject to certain restrictions on the eligibility of beneficiaries as well as the set-up of the fund. In particular, a certain amount of additional finance from independent private investors needs to be mobilised. Schemes beyond the limits provided in GBER need to be designed in line with the Risk Finance Guidelines and can be declared compatible following notification.*

32. **Article 22 GBER** allows granting State aid for small enterprises that are start-ups. Beneficiaries have to be unlisted up to five years following their registration, and fulfil the following conditions: (a) they have not taken over the activity of another enterprise; (b) they have not yet distributed profits; (c) they have not been formed through a merger. If the enterprise is both small and innovative, it can benefit from increased aid ceilings. The notification thresholds depend on the type of aid instruments (loans, guarantees or grants).
33. **Article 25 GBER** allows granting State aid for R&D projects with high notification thresholds (EUR 40, 20 or 15 million per undertaking per project depending on the research category) and generous aid intensities. For example, when a project is predominantly experimental development, aid of up to EUR 15 million can be granted without notification to the Commission with an aid intensity of 25 % of eligible costs. These include personnel costs, costs of instruments, equipment, buildings and land to the extent and for the period used for the project, costs of contractual research. The aid intensity of 25 % applies to undertakings of all sizes and can be increased when the project is carried out by an SME, when the project involves collaboration or when the results are widely disseminated. Nowadays, the vast majority of aid for R&D is granted under the GBER.

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

Investment A.7 – Develop support programmes for companies active in the development of energy-efficient embedded components for devices at the edge of the

the overall production process of an existing establishment, or v) acquisition of assets belonging to an establishment on the condition that the establishment has closed down or would have closed down had it not been purchased, the assets are purchased from third parties unrelated to the buyer and the transaction takes place under market conditions.

network, notably edge AI chips, to be integrated in edge-cloud platforms: *The envisaged investment may include State aid depending on the specific structure and purposes of the financed projects. In particular, the existing R&D&I State aid rules (both the R&D&I Framework and the relevant GBER articles) already address the State aid support to: i) any R&D activity (for both industrial research and experimental development), related to any digital technology, product or service, including the ones for development of advanced computing devices for Edge AI applications as mentioned above; ii) the setting up and operation of Digital Innovation Hubs (DIHs), which could also be supported under the existing provisions for innovation clusters; iii) SMEs which would use the services provided by said DIHs could benefit from State aid support for innovation advisory services. The envisaged modification of the R&D&I State aid rules will ensure the conditions for State aid support to Technology Infrastructures, under which the aforementioned Testing and Experimentation Facilities would fall.*

Investment A.10 – Support companies engaged in the development of new products based on open-source hardware, notably open reference architectures for processors and other microelectronics components: *[...] Industrial research and experimental development activities enjoy more favourable conditions with aid measures under the GBER in terms of increased by 15% aid intensity when projects results are widely disseminated through free or open source software.*

34. **Articles 25a-25d GBER** allow for additional legal basis to support R&D projects by introducing alignments with conditions under the Horizon 2020 or the Horizon Europe programmes, to provide simplification and synergies by eliminating duplication in assessment and reducing administrative burden. These articles provide for aid for SMEs for R&D projects and feasibility studies awarded a Seal of Excellence quality label under the Horizon 2020 or the Horizon Europe programme (Article 25a GBER) as well as aid for Marie Skłodowska-Curie actions and European Research Council Proof of Concept actions (Article 25b GBER) awarded a Seal of Excellence quality label under the Horizon 2020 or the Horizon Europe programme¹⁶. For these aids the rules to determine eligible activities¹⁷, eligible costs and total public funding are the ones defined under the Horizon 2020 or the Horizon Europe programme¹⁸. The same applies to aid under Article 25c for R&D projects and feasibility studies co-funded and selected in line with Horizon 2020 or Horizon Europe programme rules and aid provided to co-funded Teaming actions under Article 25d.¹⁹
35. **Article 28 GBER** allows granting State aid for costs for innovation advisory and support services to SMEs with generous aid intensities. Such services include e.g. the implementation of digitalisation solutions. By default, aid of up to 50 % of the eligible costs can be granted. Aid can be increased up to 100 % of the eligible costs if the total amount of aid for innovation advisory and support services does not exceed EUR 200 000 per beneficiary within any three year period. Fees paid to access research infrastructures or for services provided by research and knowledge dissemination organisations, research infrastructures or innovation clusters can qualify as eligible costs for a research project if these services are exclusively used for such project or as costs for innovation advisory and support services incurred by SMEs. Where the

¹⁶ A Seal of Excellence is a quality label awarded to project proposals submitted under Horizon 2020 or Horizon Europe which were judged to deserve funding but did not receive iT due to budget limits.

¹⁷ Activities going beyond experimental development are not eligible under Articles 25a - 25d GBER.

¹⁸ The maximum aid amount under Article 25a shall not exceed EUR 2,5 million per SME per R&D project or feasibility study.

¹⁹ For further requirements and applicable safeguards, see Article 25a - 25d GBER.

default/regular aid intensity of 50% is applied, a maximum amount of aid of EUR 5 million per undertaking and per project can be granted under this GBER provision.

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

36. 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.

A. Procedure for pre-notification and notification

37. 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.

38. For measures that must be notified, 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.

39. The Commission aims to complete the assessment of notified State aid measures within six weeks of receiving complete notification from the Member State.

B. Relevant legal bases for compatibility with the Treaty

40. In case the notification thresholds provided by the GBER are exceeded, Member States must notify the aid measures to the Commission for approval. In such cases, the Commission will assess these measures on the basis of Article 107(3) TFEU, taking into account the relevant guidelines, namely the Framework for State aid for research and development and innovation²⁰ (“the R&D&I Framework”), the Guidelines on regional State aid for 2014-2020²¹ or the newly adopted Guidelines on regional State aid²² that will enter into force on 1 January 2022 (“the Regional Aid Guidelines”), the IPCEI Communication²³ and the Guidelines on State aid to promote risk finance investments (“Risk Finance Guidelines”)²⁴.

41. In particular, under 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.

²⁰ Communication from the Commission – Framework for State aid for research and development and innovation, OJ C 198, 27.6.2014, p. 1.

²¹ Guidelines on regional State aid for 2014-2020, OJ C209, 23.7.2013, p. 1, as prolonged until 2021.

²² Guidelines on regional State aid, OJ C 153, 29.4.2021, p. 1.

²³ OJ C 188, 20.6.2014, p. 4.

²⁴ OJ C 19, 22.1.2014, p. 4.

42. To assess whether State aid for processors and semiconductor technologies 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).
43. In its compatibility assessment, the Commission will check whether the conditions of Article 107(3)(c) TFEU 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 of the Union. 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. R&D&I Framework²⁵

44. Under the R&D&I Framework, large R&D projects will be assessed in detail in order to establish whether all the relevant compatibility criteria are met, notably necessity, appropriateness and proportionality of the aid. If that is the case, higher aid intensities than under the GBER can potentially be allowed based on the so-called detailed assessment to make sure that the aid amount is necessary, has an incentive effect on the beneficiary and is limited to the minimum needed for carrying out the aided activity by the beneficiary.
45. To this end, Member States must explain in detail the supported RDI activity, technical and commercial risks involved for the beneficiary, as well as how the minimum aid amount has been established (amongst others, based on internal company documents, business plans also explaining the counterfactual in the absence of aid). The Member State must also provide market information on the impact of aid on competition and trade within the relevant market. In cases where there are multiple potential candidates

²⁵ Cases that were subject to a detailed assessment under the R&D&I Framework: SA. 37178 (2013/N) - Aide de l'ANR au projet de R&D « SuperGrid » dans le cadre du programme d'investissements d'avenir; SA. 39457 (2015/N) - Reaction Engines Ltd, SABRE design project ; SA. 37137 (2013/N) - Avance récupérable pour le programme de recherche et développement TS 3000 ; SA. 45183 (2017/N) and SA. 45185 (2017/N) - Avance remboursable pour le programme de recherche et développement de l'hélicoptère X6 (Airbus Helicopters).

for carrying out the aided activity, the proportionality requirement is more likely to be met if the aid is awarded on the basis of transparent, objective and non-discriminatory criteria as defined in the call for the selection of candidates and used by the granting authorities to evaluate and select the candidates.

46. Apart from the above-mentioned assessment criteria, the R&D&I Framework provides guidance on the presence of indirect State aid to industry, in R&D-interactions with publicly funded research organisations, in particular as regards contract research, effective collaboration and research services on behalf of industry, as well as knowledge transfer in R&D-collaboration with industry²⁶.

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

Investment A.7 – Develop support programmes for companies active in the development of energy-efficient embedded components for devices at the edge of the network, notably edge AI chips, to be integrated in edge-cloud platforms: *The envisaged investment may include State aid depending on the specific structure and purposes of the financed projects. In particular, the existing R&D&I State aid rules (both the R&D&I Framework and the relevant GBER articles) already address the State aid support to: i) any R&D activity (for both industrial research and experimental development), related to any digital technology, product or service, including the ones for development of advanced computing devices for Edge AI applications as mentioned above; ii) the setting up and operation of Digital Innovation Hubs (DIHs), which could also be supported under the existing provisions for innovation clusters; iii) SMEs which would use the services provided by said DIHs could benefit from State aid support for innovation advisory services. The envisaged modification of the R&D&I State aid rules will ensure the conditions for State aid support to Technology Infrastructures, under which the aforementioned Testing and Experimentation Facilities would fall.*

Investment A.9 – Design support frameworks for investments in qualifying infrastructure for research and development of technologies for the fabrication, or the advanced packaging, of innovative energy-efficient microelectronic components: *To support the development of more energy efficient microelectronic components, R&D&I State aid rules could be invoked; the equipment for such R&D project, to the extent used for and for the duration of the project, could be an eligible cost.*

Investment A.10 – Support companies engaged in the development of new products based on open-source hardware, notably open reference architectures for processors and other microelectronics components: *The high upfront costs in licensing Intellectual Property represent a critical barrier to entry for small enterprises in hardware design and development. Such costs could be supported by State aid either for industrial research or experimental development projects, where they form part of the eligible costs, or through the provisions on Innovation State aid to SMEs. [...]*

b. Regional Aid Guidelines

47. Regional investment aid can be granted in almost all sectors of the economy to large companies as well as to SMEs in assisted areas (less developed ‘a’-areas and more developed ‘c’-areas), subject to the conditions of the Regional Aid Guidelines. Each Member State has a regional aid map in which the assisted areas are defined. All assisted areas constitute almost half of the EU.

²⁶ See section 2.2 of the RDI Framework on indirect State aid to undertakings through public funded research and knowledge dissemination organisations and research infrastructure.

48. In 'a'-areas, regional investment aid can be granted to large enterprises and SMEs not only for investments related to new establishments, but also for investments to extend and/or modernise existing establishments.²⁷
49. This is also possible for regional investment aid to SME's in 'c'-areas. Also large enterprises can benefit from regional investment aid in 'c'-areas for their investments relating to new establishments (greenfield investments) and new economic activities (in principle falling into a different class (four-digit numerical code) of the NACE Rev.2 statistical classification of economic activities).
50. Regional investment aid is expressed as a percentage of the total (eligible) cost of an initial investment ('regional aid intensity') and can be granted up to the maximum aid intensity applicable in the respective assisted area. In principle, the less developed the region is, the more regional aid can be granted. The Commission will verify whether the aid amount does not exceed the net extra costs of implementing the investment in the area concerned.
51. If Member States consider granting regional investment aid for the investments described, the aided project must:
 - (i) contribute to regional sustainable development (e.g. taking account of direct and indirect jobs created, sustainability (duration) of the investment in the region, spill-over effects on the regions;
 - (ii) have an incentive effect (i.e. the aid must change the behaviour of the undertaking concerned in such a way that it engages in additional activity which it would not carry out without the aid or it would carry out in a restricted or different manner or location);
 - (iii) be limited to the minimum necessary and in any event below the maximum aid intensity for the region; and
 - (iv) potential negative effects on competition and trade between Member States should remain limited (e.g. aid for manufacturing of innovative products for new growing markets would be less harmful than extension of capacities for existing products in declining markets, aid for an undertaking with lower market power is less harmful than for undertakings with significant market share).
52. In line with the provisions explained above, the Commission will first establish whether the notified investment project is eligible for regional aid. The Commission will then verify the compatibility of the notified aid in application of the conditions laid down in the Regional Aid Guidelines. To demonstrate how the aided project contributes to regional development, the notifying Member State can for instance develop how the project contributes to creation of new jobs in the region, technology and knowledge transfer into the regions, and ability of the region to contribute to development of new technologies through local innovation. Co-operation with local higher education institutions may also be considered positively in this respect.

²⁷ Eligible investments are i) setting up a new establishment; ii) extension of the capacity, iii) diversification of output of existing establishment into products not previously produced in the establishment or iv) a fundamental change in the production process of an existing establishment, v) acquisition of assets belonging to an establishment that has closed down or would have closed down had it not been purchased in the establishment and is bought by investor unrelated to the seller.

53. To show that the project is eligible for aid under the Regional Aid Guidelines, the Member State must demonstrate that i) the project will be located in an assisted region in the respective Member State and that ii) it qualifies as an initial investment project²⁸. It is for the notifying Member State to define the category of the initial investment project. In ‘a’-areas regional investment aid can be granted for initial investment projects of enterprises of all sizes. For large enterprises in ‘c’-areas regional aid can be granted only for initial investments that create new economic activities in these areas²⁹.
54. The assessment under the Regional Aid Guidelines then takes place in three steps:
55. In a first step, it is checked whether minimum requirements regarding the credibility³⁰ of the counterfactual scenario, appropriateness, incentive effect, and proportionality of the aid and its contribution to regional development are met. The Member State will be required to provide a detailed information on the counterfactual scenario (including the decision making process). There are two possible “counterfactual scenarios”: the investment decision scenario (the (additional) investment would not be sufficiently profitable) or location scenario (the project would be located elsewhere in the EEA or outside EEA)³¹. The Member States should explain the impact of the aid on the investment decision or location decision to demonstrate the need for State intervention (“incentive effect”). Alternative investment or location in absence of the aid should be indicated. For large investment projects (taking into account all sources of funding) the Member States should demonstrate that the aid is proportionate. In case of an investment decision, the aid amount should not exceed the minimum necessary to render the project sufficiently profitable, for example, to increase its internal rate of return beyond the normal rates of return applied by the undertaking concerned in other investment projects of a similar kind. In case of a location decision, the aid should not exceed the net-extra costs (differences in NPV between the alternative locations). In both cases, the aid should be below the maximum aid amount and maximum aid intensities for the respective region in the regional aid maps.
56. In the second step, it is verified, that the aid does not lead to manifest negative effects that would prohibit the granting of aid, e.g. aid exceeding the allowable maximum aid intensity ceiling for the region concerned by the investment, creating overcapacity in a

²⁸ Examples of initial investment projects: (i) the setting-up of a new establishment (SA. 45359 – Regional investment aid to Jaguar Landrover; (ii) the extension of the capacity of an existing establishment (SA.44574 – Aid to STMicroelectronics S.r.l), (iii) the diversification of the output of an establishment into products not previously produced in the establishment (SA.48382 – Regional investment aid to MOL Petrochemia), SA.49461-Regional investment aid to Navigator Tissue) or (iv) a fundamental change in the overall production process of an existing establishment (SA.49580 – Regional investment aid to BorsodChemZrt).

²⁹ In some exceptional cases, aid can be also granted for the diversification of existing establishment under strict conditions defined under the Regional Aid Guidelines 2014-2020 (diversification of existing establishment into new products or new process innovation) or under the Regional Aid Guidelines coming into force on 1 January 2022 (diversification of the output of an establishment into products not previously produced or for a fundamental change in the overall production process of the product(s) concerned, in certain Just Transition Fund areas).

³⁰ The counterfactual scenario is credible if it is genuine and relates to the decision-making factors prevalent at the time of the decision by the beneficiary regarding the investment.

³¹ See for instance: investment decision scenario (SA.49580 – Regional investment aid to BorsodChemZrt), or location decision scenario (SA.44574 – Aid to STMicroelectronics S.r.l), SA.48382 – Regional investment aid to MOL Petrochemia, SA.36754- Aid for Audi Hungaria Motor), SA.45359-Regional investment aid to Jaguar Landrover).

sector in decline, attracting an investment that would have gone without the aid to another region with a similar or worse off socio-economic situation, or causing the closure of activities elsewhere in the EEA.

57. In the third step, a balancing test is carried out to ensure that the contribution to regional development outweighs the negative effects on trade and competition.
58. The Commission has approved one individual regional aid in the semiconductor industry³² for an initial investment located in an 'a'-region. The objective of the investment was to increase the production capacity of innovative semiconductors production. With the investment, the beneficiary expected to contribute to the development of an important cluster in the power electronics sectors in the assisted region and to the incorporation of new materials devices/systems based on innovative silicium and composite materials into the production.

c. Important Project of Common European Interest (IPCEI)

59. Furthermore, several Member States could come together to design an Important Project of Common European Interest (IPCEI) for fundamentally innovative (going beyond the global state-of-the-art in the sector) microelectronics technologies. In this case, the Commission would assess the project with reference to the criteria set in the IPCEI Communication³³. In order to be deemed compatible under these rules, an eligible 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 potential distortions to competition, and
 - (v) be of a major innovative nature or constitute an important added value in terms of research and innovation in the light of the state-of-the-art in the sector concerned.
60. Under IPCEI rules, State aid may cover, in addition to R&D activities that go beyond the global state-of-the-art, also First Industrial Deployment activities allowing for the development of a new product or service with high research and innovation content or the deployment of a fundamentally innovative production process. First industrial deployment refers to the upscaling of pilot facilities, including the testing phase, but neither mass production nor commercial activities.
61. There is a precedent for an IPCEI in the microelectronics sector. In 2018, the Commission approved an IPCEI notified by four Member States³⁴. The integrated research and innovation project involves 29 direct participants. The project's overall

³² Commission decision of 3 October 2016 in case SA.44547 – Italy – LIP - Aid to STMicroelectronics S.r.l. (M9), OJ C 110, 7 April 2017.

³³ 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.

³⁴ See https://ec.europa.eu/commission/presscorner/detail/en/IP_18_6862.

objective is to enable research and develop innovative technologies and components (e.g. chips, integrated circuits, and sensors) that can be integrated in a large set of downstream applications. These include consumer devices, for example home appliances and automated vehicles, and commercial and industrial devices. The project participants and their partners will focus their work on five different technology areas:

- (i) Energy efficient chips: developing new solutions to improve the energy efficiency of chips;
- (ii) Power semiconductors: developing new technologies of components for smart appliances as well as for electric and hybrid vehicles, to increase the reliability of final semiconductor devices;
- (iii) Smart sensors: working on the development of new optical, motion or magnetic field sensors with improved performance and enhanced accuracy;
- (iv) Advanced optical equipment: developing more effective technologies for future high-end chips; and
- (v) Compound materials: developing new compound materials (instead of silicon) and devices suitable for more advanced chips.

62. Another IPCEI related to microelectronics is currently being designed³⁵.

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

Investment A.5 – Support large-scale innovative industrial project development in the form of an Important Project of Common European Interest (IPCEI): *The envisaged investment may include State aid depending on the specific structure and purposes of the project. The IPCEI Communication gives guidance on the assessment under State aid rules of public financing of such large cross border projects up to the first industrial deployment phase. Therefore, Member States can use RRF funding to support individual company projects for which aid is authorised by the Commission as part of an IPCEI.*

d. Risk Finance Guidelines

63. Finally, SMEs, small and innovative mid-caps in the value chain might need access to finance exceeding the possibilities of the GBER. Such aid might be notified under the Risk Finance Guidelines³⁶ with a justification that these companies suffer from a market failure in terms of general access to finance for this type of companies.

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

Investment A.6 – Establish a venture capital fund and incentive programmes for SMEs and start-ups in the design of digital components and creation of IP: *The envisaged investment may entail State aid for SMEs and potentially financial intermediaries depending on the specific structure and purpose of the project. A compatible structure could be established in compliance with Article 21 of the General Block Exemption Regulation (GBER), without prior notification to the Commission. Compatibility on this basis is subject to certain restrictions on*

³⁵ As mentioned in the Commission Communication ‘A New Industrial Strategy for Europe’, COM(2020)102 final of 10.3.2020.

³⁶ Communication from the Commission – Guidelines on State aid to promote risk finance investments, OJ C 19, 22.1.2014, p. 4.

the eligibility of beneficiaries as well as the set-up of the fund. In particular, a certain amount of additional finance from independent private investors needs to be mobilised. Schemes beyond the limits provided in GBER need to be designed in line with the Risk Finance Guidelines and can be declared compatible following notification.

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 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 – Framework for State aid for research and development and innovation, OJ C 198, 27.6.2014, p. 1.
- 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.
- 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.