Important Project of Common European Interest (IPCEI) on Microelectronics

Non paper on necessity & proportionality of aid

Disclaimer: this non-paper has been drafted for the sole purpose of facilitating discussions within the Microelectronic IPCEI Working Group. Statements and opinions given in this paper are tentative and do not necessarily represent the only possible interpretation of current EU legislation. This non-paper does not bind the Commission services and does not prejudge any future Commission assessment.

Main IPCEI Communication requirements

IPCEI Communication (relevant paragraphs)

3. IPCEIs make it possible to bring together knowledge, expertise, financial resources and economic actors throughout the Union, **so as to overcome important market or systemic failures and societal challenges which could not otherwise be addressed**. They are designed to bring together public and private sectors to undertake large-scale projects that provide significant benefits to the Union and its citizens.

27. In view of the nature of the project, the Commission may consider that **the presence of a market failure or other important systemic failures, as well as the contribution to a common European interest, is presumed** where the project fulfils the eligibility criteria set out in Section 3 above.

28. **The aid must not subsidise the costs of a project that an undertaking would anyhow incur and must not compensate for the normal business risk of an economic activity**. Without the aid the project's realisation should be impossible, or it should be realised in a smaller size or scope or in a different manner that would significantly restrict its expected benefits. Aid will only be considered proportionate if the same result could not be achieved with less aid.

29. The Member State must provide the Commission with adequate information concerning the aided project as well as a **comprehensive description of the counterfactual scenario** which corresponds to the situation where no aid is awarded by any Member State. The counterfactual scenario may consist in the absence of an alternative project or in a clearly defined and sufficiently predictable alternative project considered by the beneficiary in its internal decision-making, and may relate to an alternative project that is wholly or partly carried out outside the Union.

30. In the absence of an alternative project, the Commission will verify that the aid amount does not exceed the minimum necessary for the aided project to be sufficiently profitable, for example by making possible to achieve an IRR corresponding to the sector or firm specific benchmark or hurdle rate. Normal rates of return required by the beneficiary in other investment projects of a similar kind, its cost of capital as a whole or returns commonly observed in the industry concerned may also be used for this purpose. All relevant expected costs and benefits must be considered over the lifetime of the project.

31. The maximum aid level will be determined with regard to the identified funding gap in relation to the eligible costs**. If justified by the funding gap analysis, the aid intensity could reach up to 100 % of the eligible costs.** The funding gap refers to the difference between the positive and negative cash flows over the lifetime of the investment, discounted to their current value on the basis of an appropriate discount factor reflecting the rate of return necessary for the beneficiary to carry out the project notably in view of the risks involved. The eligible costs are those laid down in Annex.

32. Where it is shown, for example by means of internal company documents, that the aid beneficiary faces a clear choice between carrying out either an aided project or an alternative one without aid, the Commission will compare the expected net present values of the investment in the aided project and the counterfactual project, account being taken of the probabilities of the different business scenarios occurring.

33. In its analysis, the Commission will take into consideration the following elements:

(a) specification of intended change: the change in behaviour which is expected to result from the State aid, that is to say whether a new project is triggered, or the size, scope or speed of a project is enhanced, has to be well specified by the Member State. The change of behaviour has to be identified by comparing what would be the expected outcome and level of intended activity with and without aid. The difference between the two scenarios shows the impact of the aid measure and its incentive effect;

(b) level of profitability: where a project would not in itself be sufficiently profitable for a private undertaking to undertake, but would generate important benefits for the society, it is more likely that the aid has an incentive effect.

36. **The choice of the aid instrument must be made with a view to the market failure or other important systemic failures which it seeks to address. For instance, where the underlying problem is lack of access to finance, Member States should normally resort to aid in the form of liquidity support, such as a loan or guarantee. Where it is also necessary to provide the undertaking with a certain degree of risk-sharing, a repayable advance should normally be the aid instrument of choice. Repayable aid instruments will generally be considered as a positive indicator.**

38. The Commission will consider more favourably projects that include a significant own contribution by the beneficiaries or by independent private investors. Contribution of tangible and intangible assets, as well as land, shall be accounted at market price.

39. **The selection of beneficiaries through a competitive, transparent and non-discriminatory tender will be considered as a positive indicator.**

Clarification on the IPCEI Communication

Market failure:

In case a project fulfils the eligibility conditions and qualifies as an IPCEI, for the compatibility assessment, the presence of a market failure affecting the achievement of a common objective may be presumed by the Commission, in which case it does not need to be demonstrated by Member States.

In that case, it suffices to describe the market failures.

In the case of projects of major innovative nature and constituting important added value in terms of R&D&I, potential market failures are likely to be related to positive externalities and knowledge spillovers, imperfect and asymmetric information and coordination and network failures (RDI Framework, section 4.2.1 and 4.2.2, points 48 to 55 incl.). Should there be other important systemic failures, these should be described.

<u>Choice of the aid instrument</u>:

In order to minimise distortions of competition and trade, the choice of the aid instrument must be made with a view to the market failure or other important systemic failures which it seeks to address. For instance, where the underlying problem is lack of access to finance, Member States should normally resort to aid in the form of liquidity support, such as a loan or guarantee. Where aid is awarded for activities that are close to the market and the objective is to provide the undertaking with a certain degree of risk-sharing, a repayable advance should normally be the aid instrument of choice[1]. Repayable aid instruments will generally be considered as a positive indicator compared to grants of the same nominal amount.

Therefore, in particular where aid is provided for FID activities that may result in significant future revenues, it should be considered whether the use of financial instruments (e.g. repayable advances) is more appropriate.

<u>Proportionality of aid amount per beneficiary company in the IPCEI Communication</u>:

1) Identify the eligible costs: The possible eligible costs are listed in the Annex of the IPCEI Communication. The aid amount for any beneficiary can in no case exceed 100% of the eligible costs;

2) Identify the funding gap. The aid cannot be higher than the funding gap (and, at the same time cannot be more than 100% of eligible costs).

   The maximum aid amount corresponds to the funding gap, provided it does not exceed the eligible costs established in Step 1.

<u>Eligible costs for First Industrial Deployment (FID)</u>:

<u>CAPEX under letter g) Annex IPCEI Communication</u>:

- Cannot go beyond date on which mass production or commercial activities start;

[1] See for example the recent decisions on cases SA.45183 and SA.45185 regarding repayable advances provided by DE and FR for the Airbus X6 helicopter project. These were based on the RDI Framework where the same logic applies.

- For cost items that are depreciated during several years, this means that only depreciation costs until the date on which mass production or commercial activities start should be included in the eligible costs;
- Buildings or equipment used during FID may still have a value once they start being used for mass production or commercial activities, hence this value needs to be excluded from the eligible costs, either by only including depreciation during the actual FID phase from the start (as mentioned above) or by being calculated (as terminal/residual value) and deducted from the costs.

<u>OPEX under letter g) Annex IPCEI Communication</u>:

- Only operating expenses related to the R&D component of the FID; hence costs are limited both in scope and in time to the R&D that the first industrial deployment entails and only until mass production or commercial activities start

Documents submitted on proportionality

In the case of an integrated project that is composed of underlying individual components / single projects, the funding gap and proportionality of aid should be assessed at the level of each clearly identifiable underlying individual component / single project (See non-paper integrated project). In the IPCEI Microelectronics, the funding gap and proportionality of aid is assessed at company level.

<u>Template Excel sheet</u>:

The coordinating Member State has developed a template Excel sheet that can be used by each of the companies in this particular IPCEI.

Such a template is useful to speed up the proportionality assessment of the IPCEI. The template provides a common format for presenting data, but the data that each beneficiary inserts should represent the calculations and projected cash flows that it has used internally to assess the profitability of the activities for which support is sought under the IPCEI. The use of a template is optional, but strongly encouraged.

In the case the aid instrument is different from a grant, information on this aid instrument should be provided and the template Excel sheet may need to be adapted.

The entries in the template should reflect real company specific data used internally in its business plan and decision making process. It is acceptable to rely on reasonable estimates for information to be provided in the template that is non-standard in internal accounting. Such estimates however should be explained in sufficient detail to be traceable.

Where real company specific data used internally in its business plan and decision making process is available, this should be used rather than formulas or assumptions.

Each company should also modify the assumptions and formulas embedded in the Excel sheets to reflect its real company specific data used internally in its business plan and decision making process.

Member states should check that data and calculations are credible and reasonable.

Accompanying text document:

The Excel template should be accompanied by a text document providing explanations for the specific company on the Excel data, such as:

- The eligible R&D and FID costs; Where eligible costs for FID are significant amounts (eg above EUR 300k EUR), a short description should be provided (what kind of equipment, building, production line, patents/intangible assets, etc.)
- Where depreciation is used, this must be based on the economic lifetime of the investment and in accordance with well established depreciation (accounting/fiscal) rules normally used by the company
- Explanation of the specific cut-off date of the FID phase, applying the common criterion agreed between all Member States and DG Connect per type of company
- Information on the counterfactual scenario (see below)
- Explanation and substantiation of each of the company specific assumptions used in the Excel sheet formulas (e.g. % of "indirect R&D", yield loss, idle share, and how they evolve over time; WACC; gross margin, etc) (how is it calculated; based on other projects done by company in recent past?) The provided documentary evidence should enable to trace how these values have been calculated and must be apt to demonstrate that the values entered into the template stem from the genuine internal calculations of the beneficiary, used in its business plans and internal decision making process to assess the profitability of investments.

Note: these documents would qualify as commercially sensitive (future & strategic) information which should not be exchanged between competing undertakings. An option would be to have the public authorities act as intermediaries receiving information, compiling it and sending it back to the Commission. For further information, please refer to the non-paper on Antitrust.

Useful elements in practice on proportionality of the aid amount

The following gives some useful elements that can help in determining the aid amount in a step by step manner.

1) Eligible costs:

- Eligible costs only cover costs made for the purpose and the time span of the IPCEI
- The following costs should be listed in a disaggregate manner:
  - costs for each of the R&D activities
  - costs for each of the FID activities
  - and, within the FID costs, the costs of R&D carried out in the FID phase should be mentioned; this could give an idea of the overall importance of the R&D

- The cut-off date of the R&D and FID phases should be provided explicitly by each company (The template Excel contains vertical lines, showing these cut-offs, these should be adapted per company)

- Eligible costs cover costs up to the end of the FID phase (even if the FID phase goes beyond the national granting period for some companies)

- The end result of this step should be one figure: the total amount of eligible costs at the end of the IPCEI, including the FID phase

Note: all costs mentioned in the Excel sheet are considered by the Member States as eligible costs under the IPCEI Communication.

<u>2) Funding gap calculation</u>:

Note that it would be helpful to explain in general in the Chapeau document the funding gap calculation approach, including the FID cut off approach, the assumptions and formulas used, why there is yield loss and idle share and how they evolve over time, etc. When a company wishes to diverge from this approach, justification should be given in the company level document that accompanies the Excel sheet.

- Each company should provide all costs and revenues associated with the investment as a whole and the boundaries of investment should be defined from the perspective of the business investor: the calculation should include all (positive and negative) cash-flows for what the investor regards as the investment project, at the time these cash-flows are to be incurred. It is not enough to only submit the eligible costs. For the purpose of calculating the funding gap, what matters are all the costs (eligible or not) associated with the investment project and all the revenues over the entire lifetime including the mass production phase.

- The funding gap calculation is to be done consistent with the usual methodologies applied in R&D&I cases[2].

- For the purposes of this IPCEI, it is sufficient to provide the Excel sheet calculations for one scenario, the basic scenario (no optimistic and pessimistic scenarios and respective probabilities needed), provided the company is able to justify in the accompanying text document why this basic scenario is the most probable one.

- The funding gap that must be calculated is the funding gap of the investment project (i.e. all investment costs and operating costs) to be made by the company for the purpose of the IPCEI.

- The investments made for the IPCEI in R&D and FID by a company will generate revenues.

- The funding gap is the difference between discounted positive and negative cash flows over the entire economic lifetime of the investment project, i.e. <u>covering the entire period during which the investments made generate revenues / the products that are produced thanks to</u>

[2] See for example grants and repayable advances provided by FR to STMicroelectronics for the Nano2017 programme (SA.37743) and the TOURS 2015 project (SA.36392).

the investments are sold on the market. Hence, the funding gap must not be calculated only for the duration of the IPCEI project, which is up to the end of the FID phase, but must also cover the ensuing commercial/mass production phase.

- One option is to include in the excel sheet the best estimate projections that the company has for this entire period.
- Alternatively, companies could provide data for the explicit forecast horizon of the company and give a residual/terminal value (i.e. net present value of expected cash flow beyond the explicit forecast horizon for the remaining years of the economic lifetime)), discounted to the current value. In that case, the number of years of mass production for which data are inserted should be realistic.
- Practically, in the Excel sheet, after the data for the FID phase and after the data for the reasonable number of years of mass production, a column should be inserted and contain the terminal value for the costs and for the revenues.
- Sales/revenues (positive cash flows): projected sales figures should be used by each company rather than a formula. These should be the figures actually used by the company in its business plan and decision making process. This can be best estimate figures. This data should overwrite the formula embedded in the Excel sheet which calculates sales/revenues as a function of costs, an assumption of idle share and an assumption of gross margin. Only if a company has no sales projections or any best estimate data, and only if it actually uses the formula embedded in the sheet (function of costs, idle share and gross margin) in its business plan and decision making process, should it apply the formula.
- Cash flows should normally be discounted using the weighted average cost of capital (WACC) of the company. The firm should provide evidence that the discount factor applied is the actual WACC used by the company (e.g. by internal documents showing the applied WACC for investment analysis). The reason to deviate from the WACC usually applied by the company should be explained in detail.
- The end result of this step should be one figure: the amount of the funding gap, labelled as such in the Excel sheet.

3) Counterfactual scenario:

Note: This non-paper does not focus on the requirement of incentive effect.

In the Chapeau document, there should also be a counterfactual scenario at the overall IPCEI level, in order to understand what happens if the IPCEI would not take place. A counterfactual at IPCEI level could consist in technology developments taking place slower than with the aided IPCEI.

If there is, in addition, a counterfactual at Technical Field level, this should also be described.

In any event, there will be also a counterfactual scenario at company level.

Description & substantiation of the counterfactual scenario at company level:

- The counterfactual scenario should be described in sufficient detail. E.g. a mere statement that "the company would not undertake the project as planned in its Member State without the aid" is not sufficient. It should be described in detail if it will not undertake the project at all, or will undertake it but in a different manner/extent, or will possibly undertake it somewhere else. As the IPCEI Communication requires, the intended change must be specified (the change in behaviour which is expected to result from the State aid, that is to say whether a new project is triggered, or the size, scope or speed of a project is enhanced; The change of behaviour has to be identified by comparing what would be the expected outcome and level of intended activity with and without aid).

- This description can be in the technological field documents, or, if confidential in nature, in the accompanying company level text document.

- It is vital to have sufficient substantiation of the counterfactual, eg via authentic internal company documents, showing that the company faces a clear choice and how the decision on whether to carry out the project is taken. This requirement is in line with the documentary evidence required in RDI State aid cases.

Excel sheet calculations:

a) In the absence of alternative project:

- If the counterfactual scenario is that there is no alternative project, there is no need for a counterfactual project tab with calculations in the Excel sheet. The Commission will only assess the eligible cost and funding gap calculations for the basic scenario.

- Proportionality of aid amount per beneficiary company: two step check of the IPCEI Communication in case there is no alternative project:

  1) Identify the eligible costs: The possible eligible costs are listed in the Annex of the IPCEI Communication. The aid amount for any beneficiary can in no case exceed 100% of the eligible costs;

  2) Identify the funding gap.

  In general, the aid amount corresponds to the funding gap. The aid amount can in no case exceed the eligible costs established in Step 1.

b) In case of a counterfactual alternative project:

- Where there is a counterfactual alternative project, there is a counterfactual tab in the Excel sheet with full calculation of the net present value of the positive and negative cash flows of the counterfactual project.

- Proportionality of aid amount per beneficiary company in the IPCEI Communication in case there is an alternative project:

1) Identify the eligible costs in the basic scenario: The possible eligible costs are listed in the Annex of the IPCEI Communication. The aid amount for any beneficiary can in no case exceed 100% of the eligible costs;

2) Identify the difference between the NPV of the alternative project and the NPV of the aided project in the basic scenario.

   In general, the aid amount corresponds to this difference. In the Excel sheet, it would be practical to insert this calculation at the bottom of the basic scenario tab.

   The aid amount can in no case exceed the eligible costs established in Step 1.

<u>4) Aid amount & aid intensity</u>:

The submitted proportionality calculations (the Excel sheet) should explicitly mention the aid amount the company expects to receive and the aid intensity calculated as percentage of eligible costs.

The expected aid amount cannot exceed 100% of the eligible costs and it can furthermore not exceed the expected funding gap.

The aid must have an incentive effect. If the funding gap is larger than the aid amount, it could be questionable why the company would go ahead. In such case, there could be doubts about the validity of the figures provided (it may be that the cash flow figures provided were incomplete and/or inaccurate) and clarification could be requested about why the project would go ahead anyway.