DO YOU KNOW YOUR FUNDING GAP?

New guidelines open for more state aid to green investments, but applicants should expect more focus on the economic need for aid

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Aligning the EU state aid guidelines with the EU legislation and objectives of the European Green Deal

The guidelines for state aid to green investments in the EU have been updated with the aim aligning EU state aid policy and the objectives of the European Green Deal.[1]

This note summarises Copenhagen Economics' main observations from the updated guidelines, Climate, Energy and Environmental Aid Guidelines (CEEAG), which were officially adopted in January 2022.

Better opportunities for aid but also more control

In comparison to the previous Energy and Environmental Aid Guidelines (EEAG) from 2014, these new guidelines contain two major changes.

First and foremost, an updated scope has improved the opportunities for aid. In the updated guidelines the scope for aid has been expanded to include new technologies, for example hydrogen and Carbon Capture and Storage. Additionally, the guidelines have also been broadened to allow for the use of new aid instruments (e.g. Carbon Contracts for Difference).

Higher permitted aid intensities will also improve the opportunities for aid. Under the previous guidelines, aid was primarily granted up to a project specific aid intensity, which only covered a percentage of the funding gap. Now, when awarded through a competitive bidding procedure, the new guidelines now allow for aid up to 100% of the so-called funding gap (i.e. the extra cost of a green investment compared to the less green alternative), see also Box 1. This change increases the potential aid opportunities for eligible projects.

However, the economic efficiency safeguards to avoid unnecessary aid have also been strengthened. In particular, safeguards to avoid overcompensation are emphasised to a greater extent in the new guidelines.[2]

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[1] European Commission (21 December 2021) Press release, [Link].
[2] Under state aid guidelines, aid should be limited to the minimum amount necessary to avoid unnecessary use of resources and potential distortions to competition and trade. Overcompensation occurs when aid exceeds the funding gap. Guidelines on State aid for climate, environmental protection, and energy 2022, §48.

As a result, applicants for aid must be prepared for more control not only ex-ante, but also ex-post with, for example, claw-back or cost monitoring mechanisms. This additional control further increases the importance of documenting the size of the funding gap in future applications.

Box 1: The funding gap for green investments[3]

The funding gap is equivalent to the net extra costs that the investor will incur by investing in line with a defined objective of common EU interest compared to the optimal investment without aid.

In cases regarding state aid to climate, energy and environment projects, the typical situation is that the investor has the choice between a green investment project and less green alternative project. The green project is typically the most expensive and the least profitable. Due to this discrepancy in project attractiveness there is a need to promote green investment projects with state aid to incentivise their uptake.

Calculating the net extra costs of the green investment project seen over the whole lifetime of the investment, i.e. the funding gap, ensures that the aid amount is limited to the amount necessary to incentivise the project without overcompensating the aid recipient.

Source: Copenhagen Economics

Why is a detailed funding gap analysis important?

The Commission's focus on overcompensation is not new. In the previous guidelines, some predefined maximum aid intensities were part of the solution to avoiding overcompensation. Now, under the new guidelines, we expect that the funding gap analysis will play a more important role in ensuring that the size of the aid granted is appropriate, whether it is indirectly applied in competitive bidding processes or directly applied in a formal documented funding gap analysis.

A competitive bidding process appears as the Commission's main tool to avoid overcompensation.[4] Among other things, a competitive bidding process requires that two or more bidders (aid applicants) compete. In state aid cases regarding green investments, such a bidding process would require that bidders bid the amount of state aid they would need to make the green investment instead of the less green alternative.

Although the Commission states that a funding gap analysis is not required when aid is granted through a competitive bidding process, it still requires firms to bid based on a reliably estimated funding gap. A well-estimated funding gap defines how low a bidder can bid before the green investment becomes unprofitable. Without a funding gap analysis, the bidder risks bidding too low and winning an unprofitable investment.

In state aid cases regarding energy infrastructure[5] and district heating or cooling[6], the guidelines state that the Commission will always require a detailed funding gap analysis to be conducted and presented ex ante if a competitive bidding process cannot be established. Typically, this will occur in new or concentrated markets with only one or few bidders. In these situations, we expect that a funding gap analysis will serve as the Commission's primary assessment to avoid overcompensation. Therefore, all applicants should be prepared to present a well-evidenced and detailed funding gap analysis.

In addition to the funding gap analysis ex ante, the Commission may also ask for an ex-post control mechanism particularly when the future market conditions are uncertain. This is to ensure that unexpectedly good market conditions do not lead to overcompensation.

[3] Ibid, §48

[4] To ensure that a tender is competitive, the Commission requires it to be open, transparent, and non-discriminatory, and based on objective criteria. This process allows for transparency and equal opportunity among bidders.

[5] Ibid, §381

[6] Ibid, §394

How do you conduct a funding gap analysis?

The new prominent role of the funding gap understandably leads to questions about how the funding gap should be calculated.

As already mentioned, the funding gap represents the investor's additional costs required by a green investment compared to the less green alternative investment. Since the funding gap must be assessed ex ante over the whole lifetime of the investment, it requires a forward-looking approach to calculate the funding gap.

High level considerations
Starting from a high-level perspective, we see that the funding gap calculation consists of a ***three-step process***.

The ***first step*** includes an estimation of the future net income.[7] The estimation must be done for both the green investment and the less green alternative investment(s) and must cover the whole lifetime of the relevant investments.

The ***second step*** includes discounting all future net income into present values. Again, the focus must be on both investments over the whole lifetime of the investments. The discounting should be calculated using a discount rate that reflects the applicant's cost of capital for the specific investment. The sum of the discounted net income for each investment is the net present value (NPV) of each investment.

The ***third and final step*** is to calculate the funding gap as the difference in the NPV between the green and the less green alternative investment(s). Without aid the expectation is that the NPV will be highest for the less green investment. State aid equivalent to the funding gap will secure that the green alternative is preferred and chosen by a rational investor.

Our experience is that the first and second steps are where the most resources are spent when conducting a funding gap analysis since a forward-looking analysis often requires a detailed assessment if the future activities that goes beyond a normal business case.

Some specific considerations
When formally calculating the funding gap, we recommend departing from the instructions laid out in the CEEAG. For example, the guidelines state that a funding gap analysis must include all of the main revenues and costs for the relevant investment scenarios.

A detailed explanation of the applied discount rate is also required and that it should be estimated using the weighted average cost of capital (WACC) method.[8]

The guidelines also state that aid applicants should describe and substantiate all assumptions used for the quantification. If the assumptions rely on any methods, these should also be explained and justified.[9]

These requirements mirror the Commission's approach for Important Projects of Common European Interest (IPCEI),[10] where the Commission also requires detailed funding gap analyses, substantiated by reliable data and assumptions.

Supporting the funding gap analysis with credible evidence

To further understand the funding gap calculation, we recommend breaking the calculation down it into four key components:

- future revenues
- future costs
- discount rate
- a (credible) counterfactual scenario

A key observation is that all four of these components refer to the future and involve uncertainty. Thus, estimating them requires assumptions, for example market development and commodity prices, which must be based on 'credible evidence'.

So, what is credible evidence? We have identified a few a few guiding principles:

- **Data should be sufficiently detailed**
  Marketing documents and aggregated data have value but are often not sufficient. Aid applicants should be ready to provide detailed internal data to

[7] Net incomes are defined as the gross incomes minus expenses.
[8] Ibid, §51.
[9] Ibid, §51.
[10] IPCEI = Important Projects of Common European Interest

support the forecast of revenues and costs. However, data may also be too detailed to make sense. The chosen level must be substantiated throughout the analysis.

- **Assumptions should be cross-checked against well-established sources and benchmarks**
  The applicants' internal forecasts or assumptions may be sufficient, but they should be cross-checked. The point of departure should be official reports and well-established benchmarks. Any differences between the two should be clarified. For instance, the Commission often uses Professor Aswath Damodaran's cost of capital database[11] to benchmark the credibility of the WACC (discount rates). Applicants should be prepared to explain significant deviations from this database.

- **Recent market, policy, and political developments should be addressed**
  Developments that can influence the funding gap should be addressed as far into the future as possible. An example is the proposal of reducing the emission cap for ETS allowances presented in '*Fit for 55 Package*', which is the Commission's work programme for achieving the goal of reducing net greenhouse gas emissions by at least 55% by 2030.[12] Not considering the future impacts of such policy changes could result in an analysis being discredited.

- **Sensitivity analyses should be presented**
  With its forward-looking nature, even the most solid funding gap analysis will include uncertainty. In case of new technologies, the funding gap analysis may be no more than an educated look into the future. To address this uncertainty, the Commission will likely require a sensitivity analysis of key assumptions and a scenario analysis of potential outcomes. They should cover various possible outcomes of the investment and its underlying parameters.

Concluding remarks

We must acknowledge that the benefit of greater opportunities for aid, resulting from the CEEAG, comes at the price of more control. The Commission has clearly geared up its focus on avoiding overcompensation in state aid. As a result, applicants should generally know their funding gap before they enter the application process. In some cases, the Commission will explicitly demand such an analysis before approving the aid, but even when a funding gap analysis is not explicitly required, it is still informative for applicants, for example when defining bids in a competitive bidding process.

If applicants can evidence their funding gap the new updated guidelines on Climate, Energy and Environmental Aid will provide greater opportunities for aid in green investments. In particular, opportunities are now available for some new technologies which have been added to the scope of the guidelines. We look forward to following the new opportunities for green investments resulting from the CEEAG in the coming years.

Feedback welcome

The views expressed in this note reflects the authors' own opinions on the significance of state aid for investments in climate, energy, and environmental. At CE, we advise European companies faced with state aid challenges, including calculating the funding gap of green investments.

Want to continue the discussion? Get in touch with our experts!

[11] https://pages.stern.nyu.edu/~adamodar/

[12] See https://www.europarl.europa.eu/legislative-train/theme-a-european-green-deal/package-fit-for-55