



smartEn
Smart Energy Europe

A revised State Aid supporting the cost effective decarbonisation of Europe's energy system

smartEn reply to the CEEAG public consultation

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INTRODUCTION

smartEn welcomes the opportunity given by DG COMP to provide feedback to the revised draft Climate, Energy and Environmental Aid Guidelines (CEEAG). We support the general objective to achieve climate neutrality, contributing to making the clean energy transition a success for the environment, economy and society, in line with the Green Deal objectives.

Well-functioning and competitive energy markets are key to achieve this objective. To avoid any negative effects on the functioning of the European internal energy market, smartEn supports the general principle of prohibition of state aid, as outlined in the Treaty on the Functioning of the European Union (Art. 107 (1)). In the exceptional cases where state aid is needed, support mechanisms shall be: as least distortive as possible, clearly limited in time, market-based, and harmonised at European level.

Overall, smartEn welcomes the provisions of the draft guidelines aiming at securing the well-functioning of the energy market. Yet, we see the need for some improvements to minimize distortions of competition and trade.

As we move on from traditional energy systems, new, smart, decentralised solutions will be required to manage the increasingly variable generation mix, whilst maintaining affordability and ensuring security of supply.

The Commission's Energy System Integration Strategy acknowledges the role of distributed flexibility sources as the bridging solution to support clean electrification and the penetration of renewable energy in all end-use sectors (building, transport, industries) as well as a more efficient energy system. Demand-side flexibility is provided by decentralised energy resources such as demand response, distributed energy storage and distributed variable generation which will be crucial assets of the future energy system to meet the new requirements of the decarbonisation challenge.

However, we are deeply concerned of the incomplete approach reflected in the revised draft State Aid Guidelines which focus only on the clean electrification of end-use sectors and their efficiency improvement at individual level without considering their contribution to the whole energy system. This is not coherent with the Energy System Integration Strategy.

To remedy this current shortfall, smartEn's reply to the public consultation on the draft revised State Aid Guidelines for climate, environmental protection and energy 2022 provides specific recommendations for improvement on both:

- the general rules for the compatibility assessment, and
- five specific categories of aid

The business community we represent urges the Commission to ensure that, whenever applied, the revised State Aid Guidelines foster system efficiency through the empowerment and active participation of all European energy end-users, by unleashing demand-side flexibility potential.

1. COMPATIBILITY ASSESSMENT: SUPPORT SYSTEM EFFICIENCY TO ACHIEVE CLIMATE NEUTRALITY IN THE MOST COST-EFFECTIVE WAY

smartEn welcomes the intention of the revised State Aid Guidelines to streamline the existing rules by setting a simplified compatibility assessment that applies as a general rule to all categories of aid. This shift from the current silo approach to a more horizontal one is key to support energy system integration and the EU's climate neutrality objective.

Key is to shape a future-looking State aid regime inclusive for innovative and sustainable solutions while taking into account their contribution to the achievement of climate neutrality in the most cost-effective way. To do so, smartEn recommends applying the following principles to the compatibility assessment:

- **Prioritise the non-discriminatory market-based approach before granting State aid**

smartEn welcomes that in the revised Guidelines a technology inclusive and non-discriminatory market-based approach should come first to State aid.

It is indeed key to design State aid in a way that does not undermine the efficiency of the market-based approach: *appropriateness* and *necessity of the aid* are key conditions of the revised State Aid Guidelines that need to be consistently applied in the compatibility assessment.

In particular, priority should be given to the implementation of the Electricity Market Design to set national regulatory frameworks enabling the activation of demand-side flexibility and the non-discriminatory participation of demand-side resources to all electricity markets and mechanisms.

State Aid must be applied only to remedy residual market failures that cannot be addressed by other policies and measures. This will help kick-start the uptake of all distributed flexibility resources, support prosumer business models and reward participating end-users for their contribution to an increased efficiency and security of the energy system as they still face barriers¹.

An example of a coherent, possible application of State aid with the implementation of the Electricity Market Design is the support to renewable electricity produced as a result of storage systems. The current CEEAG excludes it (definition 34) and smartEn recommends revising this approach as it contradicts the Electricity Directive: storage is an independent activity which consists out of the timely deferral of the use of electricity. If renewable energy, which is temporarily stored to match demand and react to market signals, cannot be considered and sold as renewable electricity anymore, business models based on flexibility will be at a significant disadvantage. When appropriate and necessary, State aid should support this business model, in a coherent way with article 15 of the Electricity Directive on active consumers owning an energy storage facility.

- **Valorise the contribution of demand-side resources in national baseline quantifications**

Methodologies for the national baseline quantification used to determine the funding gap (paragraph 47) and the incentive effect (section 3.1.2) must be defined to prove the cost-effectiveness of State aid investment in achieving the objectives that the planned State aid measure wants to meet. This requires a technology inclusive approach, taking into account efficiency at system level to support the Green Deal objectives, rather than focusing on a specific technology or project.

In this light, these methodologies should duly valorise all decentralised energy resources and their contribution to a smart, efficient, and integrated energy system in order to provide an accurate representation of the demand-side flexibility potential and of the benefits from an increased consumer engagement, both to the system and to all end-users. This will ensure that the Aid induces the most cost-effective change of behaviour and solution while supporting climate neutrality.

¹ For more details, smartEn monitoring of the implementation of the Electricity Market Design (November 2020) https://smarten.eu/wp-content/uploads/2020/11/FINAL_smartEn-EMD-implementation-monitoring-report.pdf

For example, the contribution of smart buildings, electric vehicles and industries that respond to external signals from the system should be recognised and supported.

smartEn strongly calls for such technology-inclusive approach in the national baseline quantification which will eventually support in a transparent way activities that contribute to the cost-effective decarbonisation, while providing a level-playing field and clear signals towards the activation of demand-side flexibility.

- **Set competitive bidding processes and strengthen the cost-effectiveness criteria for State aid allocation**

smartEn supports competitive bidding processes that are open, clear, transparent, non-discriminatory and defined in accordance with the objective of the measure as set in paragraph 48, provided that they truly allow for the participation of all resources on a level-playing field.

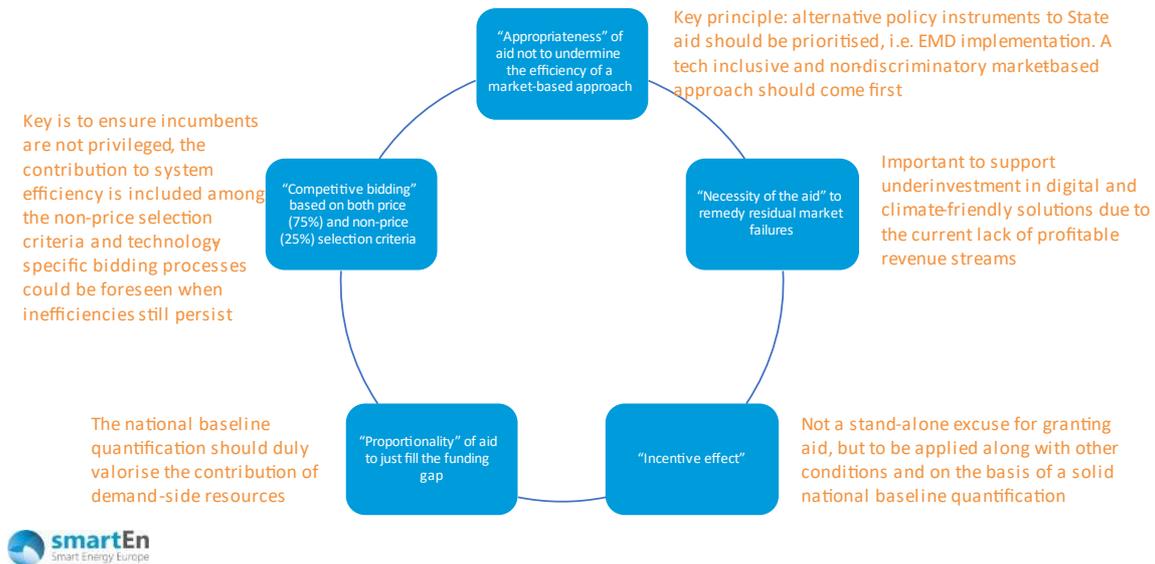
Key is to ensure that incumbents are not privileged and that demand-side flexibility is not discriminated against. This is particularly relevant for competitive bidding processes in nascent markets where a player with a strong market position prevents significant new entry. Such barriers should be taken into account when designing fair bidding processes to allow innovative and maturing climate neutral solutions to compete equally with other technologies. This is the case notably for schemes targeting resource adequacy where decentralised energy resources still suffer from unequal market access (no level-playing field).

The selection criteria in the competitive bidding process referred to in paragraph 49 should be complemented by other non-price criteria such as the *contribution to system efficiency or cost-effective decarbonisation*. This will contribute to reinforce the cost-effectiveness criteria for the selection of projects: State aid in the energy sector should be placed under the overarching Energy Efficiency First principle applying a system efficiency approach.

By way of derogation, technology-specific bidding processes could still be foreseen when inefficiencies and barriers to the development of demand-side flexibility still persist. Dedicated support measures for innovative and maturing sustainable solutions should be introduced as a temporary measure to put them on equal footing with other solutions and trigger their market uptake. Such dedicated products for system services can be implemented fast until a level-playing field and non-discriminatory access to all markets are ensured.

Ex post evaluation as set out in chapter 5 shall be done systematically for all aid measures as they are a further mean to limit distortions of competition and trade caused by aid. The exemptions listed in paragraph 400 where ex-post evaluations will not be required, shall therefore be deleted or at least further limited.

Summary of recommendations on compatibility assessment by the Commission



2. CATEGORIES OF AID: CONSIDER THE WHOLE ENERGY SYSTEM BEYOND THE INDIVIDUAL LEVEL

smartEn welcomes the enlargement of the scope of the revised Guidelines to new areas and technologies that can deliver the Green Deal.

However, the supported activities tend to overlook the potential for demand-side flexibility from decentralised energy resources despite their contribution to system efficiency and climate neutrality in a cost-effective way.

We therefore urge the Commission to improve the current draft Guidelines by taking into account the following recommendations for the following five categories of aid:

- **Aid for the reduction of greenhouse gas emissions including through renewables: consider the cost-effective contribution of demand-side resources**

This aid category focuses mainly on the production of renewable energy but does little to support the integration of renewable energy into the energy system, thus limiting the impact of the intended objective of reducing greenhouse gas emissions.

smartEn recommends this aid category to ensure a technology inclusive approach: Demand response should be added both in the scope (paragraph 74) and eligible criteria (paragraph 83) as a solution able to support the integration of renewables and achievement of decarbonisation in a cost-effective way.

In this context, exemptions to the general competitive bidding process can prove beneficial to support small 'prosumers' who would otherwise fail to compete under fair conditions. Such exemptions should be maintained. However, the proposed thresholds in paragraph 92(b) for exempting electricity generation (with an installed capacity below 200kW) and electricity consumption small projects (below 400kW) are too low and should be increased. Projects above this threshold will still be considered small projects and may have difficulties competing with other solutions (e.g., energy communities).

- **Aid for improving the energy performance of buildings: support the flexible integration of buildings in the electricity system**

This aid category focuses on the energy efficiency improvement and CO2 reduction at building level, but fails to take into account the positive impact at system level of active buildings. State aid should also support the decarbonisation of the energy demand from buildings through the activation of their demand-side flexibility, enabling buildings to become flexible assets that are integral part of the increasingly electrified local system.

smartEn recommends expanding:

- the scope of activities (section 4.2.2) to cover a more decentralised energy system where buildings consume, store and produce energy in a flexible way, also in reaction to external signals from the system they are connected to, as this is essential to support system efficiency;
- the aid scope for storage (paragraph 116(b)) to include also energy stored from the grid in reaction to external signals since it contributes positively to CO2 reduction and system efficiency. The current formulation is too prescriptive as it contemplates, only in energy efficiency terms, energy generated by on-site renewable installation. Storage done by electric vehicles should also be covered;
- payback periods below 5 years. Contemplating only aid for measures with a payback period above 5 years creates barriers to some decentralised energy resources with a lower payback time. A short pay-back time should not limit the possibility for some solutions to benefit of State aid for their business models to flourish and provide system benefits. Paragraph 121 should be revised accordingly;
- from a default CAPEX-only to a TOTEX approach. Climate-neutral solutions that can provide flexibility services do not incur high upfront investment costs but rather operating costs. Such solutions would by default be excluded from a CAPEX-only approach to State aid. Both investment (CAPEX) and operating (OPEX) costs should therefore be eligible for State aid;
- From a mere focus to primary energy reduction, as stated in paragraph 127, to a more comprehensive approach covering also final energy reduction, carbon footprint and digitalisation enabling demand-side flexibility, in line with the minimum standards that should be set in the revision of the Energy Performance of Buildings Directive to support the integration of buildings in the energy system, its interaction with the grid and other end-use sectors such as transport (e.g. electric vehicles).

- **Aid for the deployment of recharging infrastructure: allow for a future-proof innovation path**

If State aid needs to be provided for charging infrastructure of electric vehicles, the smart charging capability should be the main focus to allow the electricity system to cope with the increased electrification in transports.

The recent Commission's proposals under the 'Fit for 55' package stress very clearly the importance of flexible and renewable based electrification in road transport. The revised State Aid Guidelines should be aligned with the AFIR and RED proposals supporting the uptake and deployment of smart charging.

In other words, State aid should not lead to a lock-in effect to charging capabilities that hinder full energy system integration: they should enable the activation of their demand-side flexibility potential to increase both efficiency of the overall energy system and consumer empowerment, contributing to climate neutrality in the most cost-effective way. smartEn recommends revising provisions in paragraph 170 and 184 to support smart charging.

As EVs should be decentralised energy resources integrated in the energy system, smart charging should not be limited to the on-site production of electricity from renewable sources with physical

connection to the charger, but should also include smart charging from the grid in reaction to external signals.

According to industry estimations, a smart charging station in a single-family home with a 10 kW capacity installation could provide over one year the equivalent of a capacity gain of 500 kW. A shift from traditional subsidy mechanisms is needed towards support mechanisms linked with the flexible activity of prosumers. This could take the form of rebate payments for the use of flexibility that are equivalent to the already existing generation capacity payments, and linked to the increased flexibility provided by these prosumers. Since charging capabilities also depend on the vehicles (e.g. their on-board charger), State aid should be allowed to support EVs in enabling them to smart charge or exchange bidirectional flows of electricity with the grid.

In addition, the foreseen derogation to the competitive bidding process (paragraph 180) should be carefully assessed to ensure that market participants retain priority over system operators in the competitive bidding process in line with the electricity market design which guarantees the neutral market facilitator role of system operators regarding the development, management and operation of recharging points for electric vehicles. In this light, any extension of the reach of a DSO network into a private building (for example to supply individual spaces in parking lots with electricity), financed on its regulated asset based by the network tariff, should be scrutinised as State aid if it comes in direct competition with a private infrastructure providers and hampers the activation and valorisation of distributed flexibilities.

- **Aid for the Security of supply: provide a level-playing field for all technologies**

Once again, the focus of this aid is very much generation-based while the State aid revision should be the opportunity to promote an energy end-user centric approach and the transition to a decentralised, interconnected energy system. This chapter should move from a generation adequacy to a truly technology inclusive resource adequacy assessment for State aid.

While the draft CEEAG includes dedicated products for interruptible loads (necessary in some cases, as in Germany, as the German intraday market does not incentivise flexibility from industry due to insufficient price signals and is incompatible in terms of time intervals), the overall proposed aid category for security of supply timidly recognises the contribution of demand response and storage. In particular, it does not specify that demand-side resources should be treated equally to generation and utility scale storage in the competitive bidding procedure – a key clarification needed to overcome the shortcomings of many capacity mechanisms and strategic reserves in Europe.

For instance, following Commission's investigation, the German capacity reserve (KapResV) allows industrial demand-response and storage to participate alongside generation technologies. However, technical requirements still prevent them from fully participating in a non-discriminatory manner. As the Commission's warning to include storage and industrial loads is still ignored and their participation not possible, special attention should be paid to requirement details as soon as possible, during re-notification at the latest.

In addition, smartEn urges the Commission to consider the following improvements:

- aid for security of supply should specifically stress that all distributed flexibility assets in all end-use sectors (including industries, building and transport) should be equally considered. This is key for moving towards a more technology-inclusive approach;
- eligibility criteria beyond the contribution to the security of supply objective (paragraphs 302-304) should also explicitly consider the cost-effectiveness of the measure and the CO2 emission reduction linked to it. Benefits to the whole energy system must be considered;

- the European Commission should provide a comprehensive list of parameters that should be considered in the development of new Resource Adequacy programmes, to guarantee the technology neutrality of these. This list should include, among others: the specific needs to be covered, duration of contracts, frequency of procurement, testing requirements and derating factors for different technologies; to support the competitive bidding process and encourage the use of demand-side flexibility new types of products should be considered in the context of State aid, such as reliability options. These products provide a guarantee for flexibility in the system, and help with Resource Adequacy, by providing a hedging product against price spikes. Such options represent a hybrid between a physical commitment and a commercial option: the physical commitment delivers security of supply to the consumer and a supplementary revenue stream to the provider of flexibility. Products like these are already viable, can be implemented and should be considered as a cost-effective and market-based alternative.

Clarification is also needed regarding paragraph 324 which foresees that the costs of a security of supply measure should be borne by the market participants who contribute to the need for the measure.

While this provision may constitute an incentive to demand response and to the uptake of all distributed flexibility resources (for instance electrified heating system with smart functions, storage or smart charging), it does not overcome barriers to valorise distributed flexibilities in all markets nor to reward participating end-users for their contribution to an increased efficiency of the energy system. Additional revenues streams for end-users are still required to unleash their flexibility potential.

In addition, smartEn recommends not to limit the application of this provision to the example given in the stated paragraph where the cost of a security of supply measure should be borne by electricity consumers in period of peak electricity demand. In fact, demand response can also contribute to the system and be activated when there is imbalance or local congestion which can happen outside periods of peak electricity demand. Besides, market participants bearing the costs of the security of supply measure should also include generators when contributing to the need for the measure (e.g. those that are not able to produce at peak time) and not just consumers.

- **Infrastructure: prioritise non-wire alternatives**

The aid category for energy infrastructure is based on the assumption that significant investment is needed to upgrade infrastructure. Grid expansion should not be the only solution to contemplate, as foreseen by the Electricity Market Design: non-wire alternatives such as the activation of demand-side flexibility should be prioritised to avoid unnecessary investments and use of resources from the market while guaranteeing security of supply.

As estimated by the European Commission, at EU level, the activation of demand-side flexibility at distribution level would save up to €5 billion per year up to 2030 due to avoided investments in unnecessary grid reinforcements, back-up generation and fuel costs.

With the current focus on the upfront grid infrastructure investment, the revised State Aid Guidelines are not taking into account flexibility nor incentivising the procurement of flexibility services which is considered as an operating cost.

smartEn recommends State aid for infrastructure to move to a TOTEX approach taking into account both capital and operating expenditures to contribute to valorise and reward flexibility, thus providing incentives towards non-wire alternatives.

Summary of recommendations on the Categories of aid

GHG reduction, incl. support to RES	<ul style="list-style-type: none"> • Ensure a tech inclusive approach and do not limit to RES • DR to be explicitly mentioned in the scope and eligibility criteria
Increase energy performance of buildings	<ul style="list-style-type: none"> • Expand the scope of activities to cover buildings as flexible assets, also in reaction to external signals from the system • Include energy stored from the grid in the aid scope for storage • Allow shorter pay-back time below 5 years to include some DERs/enabling DSF assets, covering also OPEX • Aid intensity to be linked also to final energy reduction, carbon footprint, digitalisation supporting DSF
Deployment of charging infrastructure	<ul style="list-style-type: none"> • Smart charging to be the main focus to support the clean & flexible electrification of road transport • Smart charging to cover both on-site RES with physical connection and from the grid in reaction to external signals. • Ensure market participants have priority over SO in competitive bidding, in line with EMD
Security of supply	<ul style="list-style-type: none"> • Consider all distributed flexibility assets and expand eligibility criteria to the benefits to the whole energy system (cost-effectiveness, CO2 reduction) • Guarantee technology neutrality of new Resource Adequacy Programmes by providing a comprehensive list of parameters • Allow new type of products such a reliability options to encourage the use of DSF and support competitive bidding process • Cost of a security of supply not to be borne solely by consumers in period of peak demand (line 324)
Energy infrastructure	<ul style="list-style-type: none"> • Adopt a TOTEX approach (both OPEX and CAPEX) to support non-wire alternatives



CONCLUSION

The Revised State Aid Guidelines should be geared toward one single objective: to support the achievement of the climate neutrality objective in the most cost-efficient way. Key is to leverage resources that can easily, quickly and cost-effectively support a more decarbonised and variable energy system.

Therefore, distributed flexibility will be essential to run a system that is increasingly based on variable renewable energy sources and should be supported through the revised State Aid Guidelines in a transparent and competitive way with other solutions.

About smartEn - Smart Energy Europe

smartEn is the European business association integrating the consumer-driven solutions of the clean energy transition. We create opportunities for every company, building and car to support an increasingly renewable energy system. Our membership consists of the following companies:



The positions expressed in this document represent the views of smartEn as an association, but not necessarily the opinion of each specific smartEn member.

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