ACER
European Union Agency for the Cooperation of Energy Regulators

Evaluation report

Public consultation on the impact of developing peak-shaving products on the EU electricity market under normal market circumstances

PC_2025_E_02

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1. Introduction

On 17 March 2025, the EU Agency for the Cooperation of Energy Regulators (ACER) initiated a Public Consultation on the impact of developing peak-shaving products on the EU electricity market under normal market circumstances. This effort was designed to allow a wide range of stakeholders to voice their opinions and identify the market's needs. Over a period of four weeks, the consultation was conducted through a survey that included both closed and open-ended questions, providing respondents the opportunity to offer detailed feedback.

ACER received 43 submissions from diverse stakeholders, capturing a broad range of perspectives and feedback.

The responses received constituted a fundamental input for the assessment.

ACER takes the opportunity to thank stakeholders for taking the time to participate in the consultation process and for the valuable contribution provided.

2. Process

This chapter aims at presenting the data collected from the public consultation and the data handling process.

2.1 Responses received

Overall, ACER received 43 responses. The full list of respondents, who participated in the public consultation, is available in Appendix I together with table of responses received by country. The full dataset is available in the excel attachment "Responses – PC_2025_E_02".

2.2 Data handling and statistics

ACER welcomed and appreciated receiving different points of view and valued the experience of responding experts.

ACER processed responses and created qualitative and quantitative outputs, such as tables and statistics. ACER is committed to deliver high-quality results; thus, double counting must be avoided. For this reason, ACER applied the following rules:

- If multiple individuals, working at the same organisation, submitted more than one response highlighting different points of view, ACER considered all their responses valid for statistical purposes.
- If one individual submitted the same response on behalf of more than one organisation, ACER considered all the responses valid for statistical purposes.
- If one individual submitted more than one response on behalf of the same organisation, ACER considered only the latest response received valid for statistical purposes.

2.3 Questions for the public consultation

ACER created 17 questions for the public consultation, as presented in Table 1 below. Please note that these questions are intended to provide ACER an overall understanding of the view of stakeholders regarding the impact of developing peak-shaving products on the EU electricity market under normal market circumstances.

Table 1 – Questions for the public consultation

Questions for the public consultation
1. Policy objectives
1.1. Impact on wholesale prices
1.1.1 The first policy objective of a peak-shaving product is to lower wholesale electricity prices. The decrease of the wholesale electricity price would reduce potential “excessive” windfall profits of producers and reduce costs for consumers. This concept is illustrated in Figure 1. The idea behind a peak-shaving product is to activate demand response based on another price signal than the day-ahead price, thereby reducing the volume of demand participating in the market as buy orders (shift from the right demand curve to the left demand curve*). This reduction in market-participating demand would, in turn, lead to a decrease in wholesale electricity prices compared to a scenario without a peak-shaving product. Do you agree that the introduction of a peak-shaving product would lead to a reduction of the wholesale electricity prices? *The peak-shaving framework can also be implemented by having demand response participating to the peak-shaving product to submit supply bids at a predefined price, thereby shifting the supply curve to the right. Conceptually, this approach is equivalent to shifting the demand curve to the left, and both options remain open for potential implementation. However, for clarity throughout this document, we will use the interpretation of reducing the demand participating in the wholesale market. as described in the legislative framework.
1.1.2 In an integrated electricity market, the price in a bidding zone depends on supply and demand across all Member States, as well as the available cross-zonal capacities. For a small, well-connected Member State, the price may be largely influenced by demand in larger neighbouring Member States. As a result, due to the different size of the System Operator (SO) and national systems, the ability of individual SOs to influence their national price might be different (due to national demand, level of cross-zonal capacities and national characteristics) compared to neighbouring Member States. Do you agree that the SO of a small Member State may have a limited impact on market prices when using a peak-shaving product?

1.1.3

ACER understands that while the introduction of a peak-shaving product could reduce wholesale electricity prices, it may not guarantee lower costs for consumers. This is because a peak-shaving product also entails additional costs for SOs.

First, there is the cost of procuring the peak-shaving product in order to ensure it is available (i.e. reservation costs). Second, there is the cost of activating it. As illustrated in Figure 1, the price at which demand reduction is compensated through the peak-shaving product is higher than the day-ahead market price. This is because the reduced demand would have otherwise been cleared in the day-ahead market.

What is your view on the potential impact of a peak-shaving product on consumer costs, considering both its potential to lower wholesale electricity prices and the associated costs for SOs?

1.1.4

For assets receiving state support, such as renewable energy subsidies, capacity mechanisms, or Contracts for Difference (CfDs), ACER considers it more efficient to address potential "excessive" windfall profits through these support mechanisms rather than by introducing a peak-shaving product to lower wholesale electricity prices.

For example, the use of a two-sided Contract for Difference or the implementation of a reliability option within a capacity mechanism could ensure that producer revenues exceeding a certain threshold are recovered.

Do you agree with ACER's view?

1.1.5

For assets that are not under state support schemes, ACER understands that limiting the infra-marginal rents of producers in normal market circumstances might prevent producers to recover their investment costs.

Do you agree with ACER's understanding?

1.1.6

ACER considers that lowering wholesale electricity prices through subsidised demand response such as peak shaving is not an efficient approach to supporting consumers, as the subsidy provides the same level of support to all consumers, regardless of their actual needs. Instead, ACER recommends targeted measures for vulnerable consumers rather than broad mechanisms that benefit all consumers equally (see 2023 CEER/ACER retail report).

Do you agree with ACER's assessment?

1.2 Security of Supply

1.2.1

The second policy objective of a peak-shaving product is to ensure security of supply. The premise is that demand reduction from the activation of the peak-shaving product could help avoid situations where there is a loss of load (when production and imports cannot meet demand).

Capacity mechanisms and strategic reserves are introduced and sized to address adequacy concerns (Article 21.1 and 22.1(c) of Regulation 2019/943). For this reason, ACER is of the opinion that in Member States that already have a capacity mechanism or a strategic reserve in place, there is less need to introduce an additional peak-shaving product for ensuring security of supply, as these mechanisms already ensure the necessary level of security of supply.

Do you agree with ACER's understanding? Do you see any advantages in the design of a peak-shaving product compared to a strategic reserve or a capacity mechanism?

1.2.2

For countries without capacity mechanisms or strategic reserves, ACER is concerned that by lowering wholesale electricity prices, the peak-shaving product could weaken investment incentives in new capacities, potentially affecting long-term security of supply.

Do you agree with ACER's concerns?

1.3 Demand response development

1.3.1
The third policy objective of a peak-shaving product is to enable the participation of additional demand response that cannot currently participate in existing wholesale electricity markets.

Do you consider that, even after the implementation of the demand response network code, some demand response will still be unable to participate in the market? If so, what barriers prevents their participation?

1.3.2

ACER understands that the technical requirements for participating in a peak-shaving product would not be lower than those for participating in day-ahead and intraday markets. This is because mechanisms like peak-shaving products, which provide remuneration for capacity (e.g., balancing capacity, capacity mechanisms), typically involve more stringent control processes (such as prequalification) than wholesale market participation.

Do you agree with ACER's understanding?

1.3.3

ACER understands that by providing remuneration for capacity, a peak-shaving product could enhance the business case for demand response developers and, in turn, support the development of additional demand response.

Do you agree with ACER’s understanding? Do you see any modifications to the characteristics (e.g., time of procurement, time of activation) of the peak-shaving product that would make it more attractive for demand response?
1.3.4 When demand response is activated through the peak-shaving product, its remuneration is higher than if it had been activated through the market. This is because a demand response asset participating in the peak-shaving product receives both a capacity payment and an activation price, which exceeds the wholesale market price (see Figure 1). As a result, there is a risk that the introduction of a peak-shaving product could lead to a shift of demand response away from wholesale markets toward the peak-shaving product. Do you agree with this?
1.3.5 As a peak-shaving product reduces wholesale electricity prices, this might reduce the business case for the development of demand response projects to participate in wholesale electricity markets. Do you agree with this?
2. Interaction of peak-shaving products with the electricity markets
2.1 ACER understands that by remunerating demand reduction at a price different from the wholesale electricity price, the introduction of a peak-shaving product could result in an inefficient dispatch and therefore a loss of socio-economic surplus. Specifically, demand response participating in the peak-shaving product may be activated and therefore not consume, even though its valuation is higher than the day-ahead price (see Figure 1). As a result, the economic surplus would have been increased if this demand had been allowed to consume instead. Do you agree with ACER’s understanding?
2.2 In an integrated market, ACER understands that by reducing national demand, a System Operator would also lower electricity prices in other Member States. This price reduction could, in turn, impact the incentives for demand response development in those markets or affect their security of supply. Do you agree with ACER's understanding regarding the cross-border impact of activating a peak-shaving product?

2.3 Do you have any other comments on the interaction between a peak shaving product and existing mechanisms and markets (capacity mechanism, balancing products, wholesale markets)?
3. You are kindly invited to share your general view on the topic of peak-shaving products. Feel free to provide any other benefit or disadvantage of the introduction of peak-shaving products under normal market circumstances, as well as any other comments.

3. Stakeholder Answers

The responses to the public consultation highlighted meaningful insights regarding stakeholders view on the the impact of developing peak-shaving products on the EU electricity market under normal market circumstances.

3.1 Policy objectives

3.1.1 Impact on wholesale prices

Stakeholders generally express scepticism about the effectiveness of peak-shaving products (PSPs) in sustainably reducing wholesale electricity prices. While PSPs might provide short-term relief by avoiding the use of expensive marginal generation units, many argue this effect is temporary and comes with significant trade-offs. Artificially suppressing prices can distort market signals, undermine investment in flexibility and renewable assets, and worsen the "missing money" problem, which is already affecting the ability of assets to recover fixed costs due to increasing periods of zero or negative prices. A major concern across responses is that PSPs introduce distortions to price formation by removing or shifting bids outside the normal merit order. This could negatively affect the functioning of day-ahead, intraday, and forward markets, and ultimately lead to higher costs being passed on to consumers through reservation and activation charges. In addition, PSPs risk displacing existing demand-side response rather than creating new flexibility, especially if not carefully designed. There is also apprehension that giving TSOs more control through PSPs could interfere with competitive market mechanisms and create regulatory overlaps.

Instead of introducing a separate product, many stakeholders recommend improving existing market mechanisms to better support flexible demand. This includes enhanced access to day-ahead and balancing markets, more effective capacity remuneration mechanisms, and stronger incentives for consumer-side flexibility investments. Overall, the consensus is that while PSPs may offer some benefits in extreme cases (e.g., during crises), they are not a cost-effective or structurally sound solution for managing peak demand under normal market conditions.

PSPs, though national in implementation, can significantly influence regional electricity markets, especially within the interconnected framework of the EU Internal Electricity Market. Several stakeholders highlight that the impact of PSPs is not determined merely by the size of the Member State, but rather by the characteristics of its bidding zone and level of interconnection. Even small Member States can exert notable influence if they are highly integrated into the broader European market or possess industrial consumers with substantial demand response capacity. Price sensitivity during peak demand periods, driven by marginal pricing mechanisms, means that even modest demand reductions can cause substantial price shifts within and across borders.

However, this influence comes with considerable risks. Many stakeholders emphasize that PSPs act as indirect price caps, distorting market signals that are essential for investment in flexibility resources such as storage and dispatchable generation. By artificially suppressing prices, PSPs may discourage the very market-based solutions the EU market design seeks to promote. There are additional concerns around market transparency, REMIT compliance, and regulatory arbitrage, particularly if PSPs are applied inconsistently across Member States. This fragmented approach could lead to cross-border distortions, reduced efficiency of market coupling, and misaligned incentives among TSOs.

Ultimately, the consensus is that the use of PSPs should not be justified solely by the size or autonomy of a national market, but rather assessed based on market conditions, interconnection capacity, and system needs. When applied in a poorly coordinated or non-transparent way, PSPs risk undermining trust in cross-border market integration and creating perverse incentives for TSOs to protect national interests at the expense of the internal market. Stakeholders call for PSPs to be reserved for emergency scenarios and implemented with clear, harmonized rules to minimize market distortion, preserve fair competition, and protect long-term market functioning.

Proponents of PSPs argue that these products can help reduce wholesale electricity prices during periods of peak demand by preventing the use of expensive, often fossil-fuelled power plants. This reduction in price volatility could improve affordability, especially during system stress, and offer relief to consumers through more stable retail pricing. PSPs are also seen as a potential enabler of demand-side flexibility, particularly for large industrial consumers who require predictability and structured incentives to participate in load shifting. When designed well and activated only under high-stress conditions, PSPs could complement existing mechanisms and contribute to overall system efficiency.

However, the majority of stakeholders caution that the benefits of PSPs may be outweighed by their direct and indirect costs. The need to reserve and activate flexible demand at a premium price often means that PSPs end up being more expensive than the price reductions they generate. These costs are typically passed on to consumers via increased grid tariffs or levies, leading to a net increase in electricity bills. Furthermore, by interfering with wholesale market price signals, PSPs risk distorting market-based investment incentives, deterring the development of new flexible generation or storage. They also may shift demand response (DR) away from competitive markets into out-of-market arrangements, reducing the efficiency of demand-side responses. Finally, stakeholders emphasize that any introduction of PSPs must be justified by a rigorous cost-benefit analysis and should only be deployed in markets where existing mechanisms fail to provide sufficient flexibility. In regions with well-functioning wholesale markets and active demand response, PSPs are often seen as redundant, potentially undermining current DR participation by rewarding higher-cost or less-efficient resources. Equity concerns are also raised, as PSPs tend to benefit a small subset of large consumers or aggregators, while the broader consumer base bears the associated costs. Overall, while PSPs can play a role in extreme scenarios, the consensus is that they should not replace or duplicate existing market-based solutions.

Stakeholders widely agree that PSPs are not the appropriate tools to address excessive windfall profits, a concept many find vaguely defined and somewhat misapplied in this context. While the suppression of high wholesale prices might incidentally reduce producer revenues, PSPs are primarily demand-side crisis tools, not revenue regulation instruments. In contrast, well-established mechanisms like two-way CfDs and reliability options within capacity remuneration mechanisms (CRMs) are explicitly designed to ensure fair compensation while preventing windfall gains. These tools offer predictability, transparency, and investor certainty, especially when embedded within broader market frameworks.

Moreover, stakeholders express concern that deploying PSPs alongside existing support mechanisms could lead to market distortions, double payments for flexibility, and regulatory complexity. For example, PSPs can distort day-ahead prices, which may undermine the efficiency of CfDs and CRMs that reference these price signals. This could lead to misaligned incentives, reduced efficiency in capacity markets, and potential overlapping or redundant compensation structures. Many warn that this layering of interventions could create inefficiencies, hinder investment, and obscure clear price signals needed for effective decarbonization and flexible resource deployment.

Finally, there's a strong emphasis on maintaining market coherence and simplicity. Multiple overlapping instruments risk overcomplicating the regulatory environment, which could confuse market participants and impair informed decision-making. The general consensus favours targeted, structurally integrated mechanisms like CfDs and CRMs, which are seen as better suited for managing volatility, supporting renewable integration, and safeguarding consumer interests. PSPs, if used at all, should be confined to short-term emergency applications, not as systemic tools for controlling prices or redistributing profits.

Many stakeholders express strong concerns that introducing PSPs under normal market conditions would distort wholesale electricity prices, particularly by suppressing necessary price spikes. These spikes are critical for enabling investors and operators, especially those with merchant or unsubsidized assets, to recover their fixed and capital costs. Without them, essential investment signals could be lost, jeopardizing the economic viability of flexible and peaking assets, which play a crucial role in ensuring security of supply and enabling the energy transition.

There is a clear consensus that PSPs, when used as a regular market feature rather than an emergency tool, could undermine investor confidence and delay or reduce investment in new capacity. This risk is particularly pronounced in markets without CRMs, where price signals alone must incentivize flexibility. Stakeholders warn that PSPs could create “missing money” issues, discourage market entry, and increase long-term volatility due to underinvestment, ultimately compromising resource adequacy and system resilience.

Instead of relying on PSPs, many stakeholders advocate for the continued use and refinement of targeted investment support mechanisms such as CfDs, CRMs, and PPAs. These tools are seen as more effective in ensuring long-term revenue stability without interfering with market-based price formation. While some acknowledge PSPs might have a role in extreme crisis conditions, there is a strong preference for maintaining clear, stable, and predictable market rules that support both investor certainty and efficient market functioning.

The majority of respondents agree with ACER's position that targeted support for vulnerable consumers is more appropriate than broad market interventions like PSPs. They argue that PSPs, which aim to lower wholesale prices during times of high demand, are not suitable tools for directly supporting vulnerable consumers. These consumers, often on long-term contracts or subject to taxes and levies, would not benefit from immediate reductions in market prices. Instead, targeted social policies, subsidies, and measures tailored specifically for vulnerable groups, such as energy efficiency programs or direct financial assistance, are seen as more effective in providing relief without distorting the broader market.

There is also significant concern that PSPs could inadvertently create market distortions. While they may provide benefits to certain industrial demand-response resources, they risk imposing additional costs on other consumers, particularly vulnerable households. These products could undermine the price signals that drive demand reduction, disrupting the flexibility needed for efficient market functioning. Moreover, PSPs are seen as a form of public intervention in electricity price-setting, which contradicts EU regulations that aim to maintain free price formation and avoid market interference. As a result, many stakeholders advocate for targeted mechanisms, such as flexible tariffs and direct subsidies, that would help those most impacted by high energy prices, without undermining market signals or increasing system costs. Additionally, the effectiveness of PSPs is questioned when applied broadly. Stakeholders point out that industries and consumers face different circumstances; large industrial consumers may have the potential to engage in demand response, but not all sectors (e.g., steel or chemicals) have the technical capacity to participate. As a result, it is argued that targeted, sector-specific measures are more suitable for addressing the diverse needs of industrial consumers. Similarly, while some respondents see PSPs as a potential preventive tool during extreme crises to stabilize prices, they emphasize that their role should not extend to supporting vulnerable consumers, whose needs should be addressed through social policy rather than market interventions.

3.1.2 Security of Supply

Most stakeholders agree that in electricity markets where capacity mechanism or strategic reserves are already in place and open to demand-side participation, PSPs add limited value in enhancing security of supply. These existing mechanisms are considered sufficient for addressing long-term adequacy concerns and provide stable, forward-looking investment signals. Introducing PSPs in such markets is widely seen as potentially redundant and even counterproductive, as they could distort market signals, undermine cost recovery for existing resources, and lead to double remuneration for the same service.

Concerns are also raised about PSPs' potential to disrupt energy markets by interfering with price signals and affecting liquidity, particularly in day-ahead markets. Many argue that PSPs could blur adequacy assessments, complicate CRM pricing (especially for reliability options), and create regulatory inconsistencies. While some responses acknowledge PSPs could offer flexibility during exceptional circumstances, like extreme weather events or unforeseen outages, most stress that their design must avoid undermining the function of primary adequacy mechanisms. Moreover, PSPs are seen as ill-suited to support long-term investment in demand response due to their short-term nature.

A minority of views suggest that PSPs could complement existing mechanisms under certain conditions, especially where current capacity mechanisms are inaccessible to some demand-side resources or lack sufficient responsiveness. However, even these more favourable perspectives caution that PSPs should not replace structural market tools like CMs or SRs. Rather, they should be carefully integrated, used selectively for specific short-term or crisis situations, and justified based on clear added value without disrupting broader market efficiency or regulatory coherence.

The responses collectively express a strong concern that introducing PSPs could undermine investment signals in electricity markets, particularly in the context of flexible resources such as storage. Many stakeholders highlight that PSPs have the potential to distort the optimal dispatch of resources, reducing their economic viability and disrupting social welfare maximization. By artificially lowering wholesale prices, particularly during peak demand periods, PSPs may undermine the financial incentives for new investments in flexible generation and storage. In energy-only markets, where investments heavily rely on revenue from wholesale electricity sales, this price suppression could particularly harm the attractiveness of new projects, including those aimed at enhancing flexibility and long-term supply security.

In addition to these concerns, several responses argue that PSPs, if implemented under normal market conditions, could exacerbate existing uncertainties in energy markets, especially during the transition to a decarbonized electricity generation mix. The short-term nature of PSPs, such as being procured only one week in advance, further weakens their ability to provide long-term investment signals. This lack of certainty may discourage investment in new capacity and flexibility solutions, which are crucial for ensuring long-term system adequacy. Furthermore, many stakeholders stress that PSPs may create regulatory instability, as their effects could vary significantly across Member States, complicating the market environment for investors and undermining market efficiency. On the other hand, there is some support for the potential role of well-designed PSPs in managing periods of stress, particularly in extreme situations such as energy crises. However, these stakeholders caution that such products should not be used to intervene in normal market conditions, as doing so could distort investment incentives and hinder the development of necessary flexible resources. If PSPs are implemented, they should be limited in scope and frequency, focusing on exceptional circumstances without dampening long-term investment signals. This approach would ideally balance the need for system flexibility and security of supply without creating a structural cost burden or weakening the incentives for new investments in generation and demand-side flexibility.

3.1.3 Demand response development

The responses present a nuanced and largely critical view on the interaction between PSPs and DR, particularly regarding market access and integration. Most stakeholders agree that ensuring market access for all forms of demand response is essential for improving overall system efficiency. However, they argue that the introduction of PSPs could duplicate, compete with, or distort existing mechanisms aimed at integrating DR, especially as the Demand Response Network Code (NC DR) is expected to address many current barriers. Many respondents stress the need to prioritize the full implementation of the NC DR and Clean Energy Package provisions before creating new products, which might fragment the market or interfere with existing frameworks.

That said, some responses acknowledge that even with the NC DR in place, practical barriers will likely remain, especially for small consumers and distributed energy resources. These barriers include technical challenges (e.g., prequalification processes, metering requirements), economic limitations (e.g., high upfront costs, uncertain revenues), and structural factors (e.g., industrial processes not aligned with short activation windows). In this context, a few stakeholders argue that well-designed PSPs could temporarily help uncover latent demand-side flexibility or provide interim revenue streams until the full benefits of the NC DR materialize. Nonetheless, most warn against PSPs inadvertently crowding out participation in existing markets or diminishing price signals, especially for long-term investments and aggregation efforts.

A recurring concern is that PSPs may not effectively address the deeper, systemic issues that hinder DR participation, such as lack of smart meters, complex regulations, or insufficient dynamic pricing structures. There is also scepticism about PSPs' ability to support small-scale or industrial DR, due to incompatibility with operational constraints like workforce scheduling or production planning. The overarching message is that PSPs should be approached cautiously and only considered as complementary tools if they fill very specific gaps not already addressed by existing regulations or market instruments. Stakeholders advocate for regulatory coherence, market stability, and a focus on removing implementation and informational barriers rather than introducing parallel schemes that may further complicate the evolving energy landscape.

The analysis of the responses reveals a strong consensus that peak-shaving products would and should have more stringent technical requirements than those of standard wholesale market participation, such as day-ahead or intraday markets. These include prequalification, bidding, baseline calculation, activation, and validation procedures that are often likened to those already required in balancing or capacity mechanisms. While stakeholders generally accept the need for higher technical rigor, they also caution that such requirements must remain proportionate to the function of the product, i.e., as a last-resort, emergency measure, so as not to become an undue burden, especially on smaller or decentralized market participants.

Several respondents express concern that, rather than expanding participation, peak-shaving products may only replicate existing mechanisms and increase bureaucratic and operational costs without delivering additional benefits. A recurring theme is that these products risk diverting liquidity from balancing markets and undermining price signals, which could harm market efficiency and violate principles of technological neutrality. Additionally, there's scepticism that peak-shaving would significantly increase demand-side participation, as it involves many of the same challenges, such as verification complexity and short lead times, as existing balancing services. Some stakeholders suggest that if peak-shaving is not clearly differentiated or justified, it could create duplication and market distortion.

There is also an emphasis on implementation risks, particularly around proving the effectiveness of the response to a peak-shaving signal. Establishing reliable baselines and verifying that a genuine reduction in consumption occurred, as opposed to a shift in timing or a response driven by another market signal, remains a major technical challenge. This has implications not just for the design of the product, but also for fair participation rules and settlement accuracy. Ultimately, many responses caution that unless carefully designed, peak-shaving products could fail to attract new participants, create unintended consequences in market behaviour, and contribute little beyond what current tools already offer.

While some acknowledge that, in theory, PSPs could offer additional revenue streams or capacity remuneration, most stakeholders argue that this does not necessarily translate into increased or new DR capacity. A primary concern is that PSPs are too unpredictable and short-term in nature, weekly procurement cycles, undefined strike prices, and unclear activation frequency all hinder long-term investment in DR. Industrial actors, in particular, emphasize the need for longer lead times, operational visibility, and integration with production cycles, which PSPs do not currently offer.

Another prominent theme is that PSPs may distort or undermine existing market-based incentives for DR. Many stakeholders argue that DR should primarily respond to market price signals, especially in competitive, technologically neutral environments. The concern is that PSPs might suppress wholesale prices by artificially lowering demand during peaks, thereby eroding the financial case for price-responsive DR. There’s also apprehension that PSPs might merely shift existing DR participation from established mechanisms, such as balancing markets or capacity mechanisms, without creating any truly new capacity, thus reducing liquidity and efficiency in these markets. Some even describe the product as redundant or inefficient, especially if not well coordinated with current regulatory frameworks and system operator needs.

Nonetheless, a few stakeholders suggest that with careful design, PSPs could complement existing tools. Proposals include longer-term contracts, clearer activation signals, flexible and predictable activation windows, simplified entry requirements, and allowance for aggregation. These design tweaks might improve accessibility, especially for smaller or currently excluded resources. Others emphasize the importance of seamless TSO-DSO coordination and accurate baseline methodologies to ensure fair and effective implementation. However, even among the more optimistic voices, there's consensus that PSPs must be narrowly tailored to avoid distorting price signals or increasing system costs without proportional benefit. Overall, the feedback suggests that PSPs are unlikely to unlock substantial new DR potential unless their design significantly evolves to address visibility, predictability, and integration with existing market mechanisms.

The majority of responses express significant concern that introducing PSPs could unintentionally divert DR away from existing electricity markets, particularly the wholesale, balancing, and capacity mechanisms. If PSPs offer more attractive remuneration or simpler participation rules, DR providers are likely to prioritize these products over competitive markets. This reallocation could reduce market liquidity, weaken price signals, and ultimately raise system costs for consumers without necessarily delivering new flexibility. Stakeholders caution that this would not result in additional DR, but rather a shift of existing DR capacity, leading to inefficiencies.

Several responses emphasize the need for a market design that prevents distortion and maintains technological neutrality. Stakeholders warn that ring-fencing PSPs for specific technologies or market participants risks undermining competition and operational effectiveness. Additionally, system operators could face difficulties in identifying whether DR is genuinely new or simply repackaged under a different scheme, further complicating market oversight and cost-effectiveness. Therefore, clear eligibility rules, stacking guidelines, and integration with existing market mechanisms are seen as essential to ensure PSPs complement rather than replace or distort market-based DR participation. While the dominant view is cautious or critical, some stakeholders recognize that, if properly designed, PSPs could unlock latent DR potential in segments currently unable to participate in existing markets, particularly industrial users requiring more lead time and operational visibility. In these cases, PSPs could serve as a transitional tool to build up DR capacity where market mechanisms fall short. However, this benefit is seen as highly context-dependent and contingent on PSPs being used sparingly, with safeguards in place to avoid undermining broader market functioning. Many recommend regular reviews and limiting PSP use to exceptional system needs rather than routine operations.

A broad consensus emerges from these responses that the introduction of peak-shaving products (PSPs), particularly if activated in non-crisis situations, risks distorting price signals in wholesale electricity markets. Since a major financial incentive for demand response is derived from high wholesale market prices, PSPs that suppress these prices could undermine the viability of DR business models, particularly those reliant on energy arbitrage. Several stakeholders note that this could reduce investment in flexible assets and negatively impact long-term system efficiency and reliability. The risk is especially high if PSPs become routine rather than exceptional tools, or if they are not well integrated into existing market frameworks.

Another recurring concern is that PSPs, if not designed carefully, could create a fragmented market landscape where flexible resources are “split but not multiplied”, meaning the same DR capacity is reallocated to PSPs instead of adding new capacity. This could lead to a net loss in available flexibility for other critical system needs, such as balancing and congestion management. Stakeholders stress the importance of allowing DR to stack revenues across multiple markets rather than depend solely on PSPs, which are unlikely to offer stable or sufficient income streams on their own. Moreover, overly generous remuneration through PSPs could divert DR providers from competitive, market-based participation, eroding market discipline and transparency. Nonetheless, some respondents offer a more nuanced view. In underdeveloped DR markets, PSPs could act as an entry point, helping to stimulate DR capacity that might otherwise remain untapped. If carefully designed, targeted only at emergencies, activated infrequently, and harmonized with other mechanisms, PSPs could complement wholesale market participation rather than replace it. The key, according to many, lies in transparent activation, integration with broader system needs, and clear safeguards to avoid long-term market distortions. Overall, the call is for careful calibration and ongoing review to ensure PSPs support rather than undermine the evolving energy market.

3.2 Interaction of peak-shaving products with the electricity markets

The responses collectively reflect strong concern that poorly designed PSPs may lead to economically inefficient dispatch and a loss of socio-economic surplus, especially when they are activated under normal market conditions rather than during true system emergencies. Many stakeholders highlight that if the remuneration for demand reduction is higher than the day-ahead market price, the system is effectively paying to reduce demand that would have otherwise been willing to pay more for electricity, leading to a misallocation of resources and loss of overall welfare. This distortion of market-based price signals undermines the merit order principle, potentially preventing the most cost-effective and technically suitable solutions from being selected.

In addition to dispatch inefficiencies, there are broader concerns about market distortion and fragmentation. By ring-fencing PSPs exclusively for demand response and separating them from existing competitive mechanisms like the wholesale, balancing, or capacity markets, PSPs risk creating isolated incentives that conflict with the goal of integrated, technology-neutral market design. Respondents argue that this could erode the economic case for flexible investments, confuse price signals, and ultimately reduce system efficiency. Moreover, since the costs of activating PSPs would be socialized through network tariffs or grid fees, the end result could be higher system costs for consumers, even if spot prices temporarily drop.

However, a minority of stakeholders offer a more nuanced or conditional view, suggesting that if PSPs are designed with clear cost-efficiency criteria and limited to emergency situations, they might contribute to system stability and reduce infrastructure needs. Some also argue for a broader definition of ""efficiency"" that includes affordability and emissions reduction, not just economic surplus from a supply-side perspective. In this framing, PSPs could be useful as long as they are transparent, proportional, and complementary to existing markets. The overarching consensus, nonetheless, is that any PSP design must be carefully evaluated to ensure it doesn't crowd out market-based solutions or undermine long-term investment signals.

The responses overwhelmingly agree that PSPs, if implemented unilaterally or frequently, risk distorting cross-border electricity markets, particularly within the tightly integrated European power system. Many respondents emphasize that prices in any bidding zone are influenced by supply-demand conditions and available interconnection capacities across Member States. As such, suppressing prices through PSPs in one country can create spillover effects in neighbouring bidding zones, altering cross-border flows, skewing investment signals, and reducing the efficiency of market coupling. Concerns are especially high for smaller or highly interconnected countries like Austria, where even limited PSP activation could significantly impact adjacent markets. Beyond pricing, stakeholders highlight systemic risks to market integration and long-term investment signals. If PSPs become structural, activated routinely rather than in genuine emergencies, they may erode the market-based incentives for investment in flexible and firm capacity, both domestically and in neighbouring countries. This would weaken overall system adequacy, hinder cross-border participation in capacity mechanisms, and possibly trigger unintended consequences like counterintuitive power flows or congestion costs. Several actors caution that these distortions could undermine the European Energy Union's goals, reinforcing the need for a coordinated, EU-level approach to PSP design and deployment.

However, a few stakeholders introduce nuance, suggesting that occasional, well-designed PSPs targeted at system adequacy could have minimal cross-border impact, especially if they are integrated into the wholesale market and activated infrequently. They argue that under strict cost-efficiency criteria and with transparent coordination, PSPs could provide value by stabilizing prices and enhancing system resilience. Still, even these more moderate views echo the broader call for regionally coordinated frameworks to avoid unintentional fragmentation of the EU electricity market and ensure that PSPs complement, rather than cannibalize, existing market mechanisms.

Most stakeholders express strong opposition to the introduction of PSPs under normal market conditions, citing their potential to distort price signals, undermine market efficiency, and duplicate existing flexibility mechanisms such as balancing markets CRMs, or CfDs. PSPs are widely viewed as indirect price caps that interfere with the energy-only market model by suppressing scarcity signals that are essential for driving investment in flexibility resources. Many warn that implementing PSPs could increase system costs, reduce transparency, and discourage the development of market-based demand response by offering artificial remuneration during high-price periods rather than letting price signals naturally incentivize load reduction.

A recurring theme is that PSPs may only be appropriate as a last-resort or emergency tool, specifically during extreme system stress or in countries lacking mature capacity mechanisms. Even then, their design must include strict safeguards, activation only after the day-ahead market, competitive procurement, short contract durations, and full technology neutrality. Several respondents also recommend careful coordination between TSOs and DSOs to avoid unintended local grid issues and emphasize the need for a well-defined legal framework to prevent a patchwork of uncoordinated national schemes that risk market fragmentation. Some stakeholders suggest that, if PSPs are to exist, they should be focused on unmet needs, such as long-duration products to address prolonged periods of low renewable generation. Rather than introducing a new market layer through PSPs, many respondents advocate for removing existing barriers that prevent demand-side flexibility from fully participating in current markets. They argue that unlocking already available flexibility - particularly among industrial and small consumers- is a more sustainable and efficient solution. Others suggest alternative support models, such as supplier-led incentive schemes or investments in storage, which provide more durable benefits without disrupting wholesale market dynamics. Overall, the consensus is if PSPs are to be used at all, they should be highly targeted, limited in scope, and integrated within a coherent long-term market framework that strengthens, not substitutes, market-based demand response.

4. Conclusion

ACER appreciates the feedback received from stakeholders and considers it as a fundamental input for the assessment.

Responses to the public consultation provided valuable insights and highlighted the outstanding issues related to the impact of developing peak-shaving products on the EU electricity market, and more broadly of the barriers for participation on demand response.

ACER acknowledges that there are different points of view among stakeholders on peak-shaving products and more specifically on its impact on the EU electricity market under normal market circumstances.

Responses to the public consultation highlighted numerous insights on peak-shaving products, related issues, and potential mitigation strategies.

It is important to note that most stakeholders pointed out that developing peak-shaving products under normal market circumstances are unnecessary, but also that it would have negative impact on the EU electricity market. Most stakeholders also highlighted the need for other actions aiming at supporting the participation of demand response.

The key findings from this consultation process were a valuable input for the assessment on the impact of developing peak-shaving products on the EU electricity market under normal market circumstances.

Appendix

Appendix 1 – General information on responses received

Table A.1 – List of respondents

No.	Company's name	Area of business	Country of origin
1.	Verso Energy	Power market	France
2.	Edison SpA	Developer (or association); Utility Company (or association)	Italy
3.	UFE	Electricity Trade Union	France
4.	Smartenergy	M&A and Financial Structuring of Green Assets	Switzerland
5.	RIVA Group	Steelmaking company (electric arc furnace production route)	Belgium
6.	EDF	Utility Company (or association)	France

7.	smartEn Smart Energy Europe	Association representing the Flexible Demand Management Industry	Belgium
8.	Eni S.p.a	Developer (or association); Utility Company (or association); Trader (or association); Off-taker (or association); Portfolio Manager (or association); Other (please specify)	Italy
9.	Europex	Energy exchanges association	Belgium
10.	Centrica	Trader (or association); Portfolio Manager (or association)	United Kingdom
11.	EUGINE - European Engine Power Plants Association	Association representing technology manufacturers	Belgium
12.	Nemo Link Limited	Transmission (or association)	United Kingdom
13.	EDP	Developer (or association); Utility Company (or association); Trader (or association); Distribution (or association)	Portugal
14.	Swedenergy	Utility Company (or association); Trader (or	Sweden

		association); Advisory (or association); Distribution (or association)	
15.	Energy Traders Europe	Trader (or association)	Belgium
16.	Aluminium Dunkerque	Electricity Consumer	France
17.	EUTurbines	Association representing technology manufacturers	Belgium
18.	Engie	Utility Company (or association); Trader (or association); Portfolio Manager (or association)	Belgium
19.	Oesterreichs Energie	Oesterreichs Energie, the Association of Austrian Electricity Companies, represents all parts of the sector's value chain (generation, trade and sales as well as grids).	Austria
20.	E.DSO	Distribution (or association)	Belgium
21.	Eurelectric	European federation of the electricity industry which includes different parts of the value chain (including	Belgium

		energy traders, suppliers, generators, utilities, DSOs)	
22.	Ifiec Europe	Industry	Belgium
23.	ÖBB (Austrian Federal Railways)	Portfolio Manager (or association)	Austria
24.	ENTSO-E	Transmission (or association)	Lithuania
25.	RWE Supply & Trading GmbH	Trader (or association)	Germany
26.	BDEW	Utility Company (or association)	Germany
27.	Austrian Federal Economic Chamber (WKO)	Business association	Austria
28.	Enel Spa	Developer (or association); Utility Company (or association); Distribution (or association)	Italy
29.	FORTIA ENERGIA	Supplier	Spain
30.	TransnetBW	Transmission (or association)	Germany
31.	Terna SpA	Transmission (or association)	Italy
32.	Asociación de Empresas con Gran Consumo de Energía	Off-taker (or association)	Spain
33.	Statkraft	Developer (or association)	Norway
34.	Green Power Denmark	The Danish Energy association	Denmark

35.	Thüga Aktiengesellsc haft	Utility Company (or association)	Germany
36.	Wiener Stadtwerke GmbH	Utility Company (or association)	Austria
37.	CEZ, a. s.	Utility Company (or association); Trader (or association)	Czechia
38.	Eneco Energy Trade	Utility Company (or association)	Netherlands
39.	Stadtwerke München GmbH	Utility Company (or association); Trader (or association); Distribution (or association)	Germany
40.	Essity Austria GmbH	Utility Company (or association)	Austria
41.	Wien Energie GmbH	Utility Company (or association)	Austria
42.	Eneco	Trader (or association)	Netherlands
43.	Vilnius University Faculty of Law	Legal Service (or association); Academia (or association)	Lithuania

Please note that the full dataset is available in an excel document.

Table A.2 – Responses by country

Country	Responses
Belgium	10
Austria	6
Germany	5
France	4

Italy	4
Lithuania	2
Netherlands	2
Spain	2
United Kingdom	2
Czechia	1
Denmark	1
Norway	1
Portugal	1
Sweden	1
Switzerland	1