

To address these barriers, Member States can consider ways of supporting the conclusion of PPAs in line with State Aid rules. The Commission has described in detail the additional measures that could help the development of renewable PPAs in the Commission Staff Working document accompanying the REPowerEU Communication[1]. This could be achieved, inter alia, by pooling demand in order to give access to smaller final customers, by providing State guarantees in line with the State Aid Guarantee Notice [2] and by supporting the harmonization of contracts in order to aggregate a larger volume of demand and enable cross-border contracts.

[1] Commission Staff Working Document Guidance to Member States on good practices to speed up permit-granting procedures for renewable energy projects and on facilitating Power Purchase Agreements Accompanying the document Commission Recommendation on speeding up permit-granting procedures for renewable energy projects and facilitating Power Purchase Agreements SWD/2022/0149 final

[2] <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52008XC0620%2802%29>

Do you consider the use of PPAs as an efficient way to mitigate the impact of short-term markets on the price of electricity paid by the consumer, including industrial consumers?

- ☐ Yes
- ☐ No

Please describe the barriers that currently prevent the conclusion of PPAs.

2000 character(s) maximum

Some of barriers are: the increased number of RES under State Support Schemes, the high volatility of prices and the increased default risk of a counterparty. However, the main obstacle to conclude new and continue the existing PPAs is the price cap imposed on electricity producers market revenues. Even before EU Regul. 2022/1854, some Member States, also Greece, have introduced such a cap. As long as this measure is in force, RES producers -that do not receive public support and are not contracted under two-way CfD- cannot collect the full market price and thus, they are not able to return to their counterpart the full difference between the market price and the PPA's strike price, as in Greece it is mandatory for PPAs to be cleared through the spot market. This new reality prevents the conclusion of any new PPA, moreover it results in annulling or freezing existing PPA. Therefore, the immediate amendment of the EU Regulation and the respective national legislation is essential, in order to exclude any spot market revenue cap on electricity production sold through a PPA. Furthermore, smartly designed and targeted schemes should also be considered to tackle the barriers to PPAs for specific categories of consumers, pursuant to Art. 6 of the proposal for RED III.

Longer term transfer capacity products, with a duration of at least five years, could also be introduced at interconnectors, in order to facilitate cross-border PPAs. Currently, the longest term product offered at interconnectors is just one year, which is much shorter than the typical duration of a PPA. This makes it impossible to sign a physical cross-border PPA. Finally, the Member States should develop a uniform framework regarding the regulation and treatment of PPAs. Regulatory variation and uncertainty, as it was recently monitored in the emergency measures of Reg. 2022/1854, constitutes a serious impediment to the enhancement of investments, as well as a risk to the integrity of the internal market.

Do you consider that the following measures would be effective in strengthening the roll-out of PPAs?

at most 6 choice(s)

- ☐ a) Pooling demand in order to give access to smaller final customers
- ☐ b) Providing insurance against risk(s) either market driven or through publicly supported guarantees schemes (please identify such risks)
- ☐ c) Promoting State-supported schemes that can be combined with PPAs
- ☐ d) Supporting the standardisation of contracts
- ☐ e) Requiring suppliers to procure a predefined share of their consumers' energy through PPAs
- ☐ f) Facilitating cross-border PPAs

In addition to the measures proposed in the question above, do you see other ways in which the use of PPA for new private investments can be strengthened via a revision of the current electricity market framework?

- ☐ Yes
- ☐ No

Do you see a possibility to provide stronger incentives to existing generators to enter into PPAs for a share of their capacity?

- ☐ Yes
- ☒ No

Please explain

2000 character(s) maximum

Any generator should be allowed to freely form its commercial strategy. This freedom includes the decision to pursue a regulated contract (e.g. FiP) or to enter into a PPA agreement or not, for any share of its capacity.

Retroactively imposing ex-post obligations either to suppliers to lower their bills on a temporary basis or to existing generators to enter into PPAs must be legally ensured to be duly and fully refunded in due time for lost revenue and is considered to have an extremely damaging effect on investor confidence.

Investing in new generation capacity is a complicated process, which can take many years to reach a final investment decision for a project with a CAPEX that often amounts to hundreds of millions - sometimes even billions- of Euros. These decisions are made based on calculations and estimations of future market revenues, and retroactively imposing a different operating regime on existing generation capacity may jeopardize the economics of the project. This also risks jeopardizing the future investments we will need in order to ensure security of supply.

Do you consider that stronger obligations on suppliers and/or large final customers, including the industrial ones, to hedge their portfolio using long term contracts can contribute to a better uptake of PPAs?

- ☐ Yes

☐ No

Do you consider that increasing the uptake of PPAs would entail risks as regards

	Yes	No
(a) Liquidity in short-term markets	☐	☐
(b) Level playing field between undertakings of different sizes	☐	☐
(c) Level playing field between undertakings located in different Member States	☐	☐
(d) Increased electricity generation based on fossil fuels	☐	☐
(e) Increased costs for consumers	☐	☐

Subtopic: Forward Markets

Organised forward markets are a useful tool for suppliers and large consumers such as energy intensive undertakings to protect themselves against the risk of future increases in electricity prices and to decouple their energy bills from fluctuations of fossil fuel prices in the medium to long-term. However, it has been argued that liquidity in many organised forward markets across the EU is insufficient and that the time horizon for such hedging seems too short (usually up to one year). One possibility to increase the liquidity in forward markets would be to establish virtual trading hubs for forward contracts, as already exist in certain regions.

Such hubs would need to be complemented with liquid and accessible transmission rights to hedge the remaining risk between the hub and each zone.

While hedging up to approximately three years could be improved with better organization of the market, additional measures might be needed to incentivise forward hedging beyond this timeframe (see for example the section above on PPAs).

Do you consider forward hedging as an efficient way to mitigate exposure to short-term volatility for consumers and to support investment in new capacity?

☐ Yes

☐ No

Do you consider that the liquidity in forward markets is currently sufficient to meet this objective?

☐ Yes

☒ No

Do you have additional comments?

Nevertheless, the liquidity in forward markets has been affected by the prolonged high energy prices, as well as the emergency measures adopted by various Member States.

The objective should be consumers enjoying the least possible costs for electricity. Such objective might not necessarily be served by increased quantities being traded forward and especially if there is lack of price correlation between the forward market and the short-term markets. Special attention should be given also to markets with high concentration, as the Greek market, where the dominant player can severely damage the liquidity of the Day Ahead Market and the transparency of the price signals this market provides in case specific mitigation tools are not in place.

So prior to introducing measures to increase the liquidity in the forward markets, an impact analysis on how those measures will affect (a) the price signals provided by the short-term markets and (b) the competition should take place. One should not forget that short-term markets should primarily deliver relevant price signals reflecting locational, time-related and scarcity aspects to support investment decisions.

In certain bidding zones of the EU internal market, i.e., Greece, the forward markets lack the necessary liquidity in terms of volumes traded. This reality is very well depicted in ACER's annual report on the wholesale electricity market.

In your view, what prevents participants from entering into forward contracts?

2000 character(s) maximum

One important factor is the absence of regulatory certainty. The Clean Energy Package (incl. EMR, EMD and RED) was finalised only 4 years ago, following extensive consultation and analysis. The EMD has hardly been incorporated in the national laws of Member-States and yet the ongoing discussion is around a "reform" of the market design.

Since Nov. 2020, when the new electricity markets were introduced in Greece, there have been repeated and considerable changes in the market design, significantly altering the fundamentals of market functioning. This approach produced a profound lack of predictability for the outcome of spot markets, seriously affecting forward markets which develop liquidity as a result of the desire and need of stakeholders to effectively hedge against projected spot prices. Moreover, during the crisis, unprecedented measures have been introduced, which have further damaged the visibility for future price signals, against which the participants would seek to hedge in the forward market. Trust and stability are the way to develop liquidity in forward markets. On the contrary, constant changes, which entail a massive transition risk, including panicked reactions, is hardly an optimal way to enhance long-term commitment in energy markets. The fact that during the last decades the consumers have demonstrated a strong preference for quantities being traded in the spot market, is not related to the design of the EU internal market. It was because this approach seemed to be the optimal one for them, as forward contract prices were linked to spot prices expectation or linked to higher prices, compared to the expectation for better opportunities in the spot markets, as they were incorporating relevant risk premiums. Forward contracts are also prevented by technical barriers, related to the realisation of cross border contracts. Finally, the extended state aid support schemes for certain generators in the past e.g. RES, did not advance the forward markets.

In your view, would requiring electricity suppliers to hedge for a share of their supply be beneficial for consumers and for retail competition?

- ☐ Yes
- ☐ No

Do you consider that the creation of virtual hubs for forward contracts complemented with liquid transmission rights would improve liquidity in forward markets?

- ☐ Yes
 - ☐ No
-

Do you have experience with the existing virtual hubs in the Nordic countries?

- ☐ Yes
 - ☐ No
-

In your view, what would be the possible ways of supporting the development of forward markets that could be implemented through changes of the electricity market framework?

3000 character(s) maximum

The current market design already foresees hedging through forward contracts. Depending on the generation technology linked with the corresponding forward contract, participants may mitigate, to some extent, their exposure to short-term markets volatility. However, forward contracts may not be considered as the “solution” that resolves everything.

First, long term forward contracts need consumers willing to accept entering into such long-term agreements and obligations, namely it requires consumers willing to write 10 or 15 years obligations to buy electricity at given terms and prices. Experience has demonstrated that apart from few large consumers with specific characteristics, most consumers are either unwilling or unfit to undertake such obligations.

Second, forward contracts in electricity when linked to gas or coal technologies usually carry clauses which index the contract price to the fuel and CO₂ prices.

In other words, electricity forward contracts, especially those of longer term, either shift the risk towards:

- a) consumers who will need to write multi-year electricity purchase obligations or
- b) gas and CO₂ markets volatility or both.

The way the market has been designed at the European level, which foresees the operation of spot markets in parallel to the forward market operation, provides the most efficient signals for participants to analyze the above pros and cons and decide when, how and for how long they should hedge to achieve the optimum result for their business.

To efficiently support investments in new capacity, forward contracts need to be sufficiently long term and stable. However, due to the reasons explained above, forward contracts may not - and should not - be the sole means for safeguarding investments. PPAs should be complementary to the spot market to allow better optimization for consumers. It is for this exact reason that the market design needs to incorporate, by default, appropriate Capacity Remuneration Mechanisms. These capacity mechanisms, and not the forward contracts, are the ones to create appropriate investments environment.

Subtopic: Contracts for Difference (CfDs)

Two-way CfDs and similar arrangements have been used in some Member States to support publicly financed investments in new inframarginal generation (in particular, renewables) to cater for situations where the necessary investments are not made on a market basis. Similarly to PPAs, they ensure a greater certainty to investors and consumers, and they cater for situations where the necessary investments require public support.

Public support for new inframarginal generation granted in the form of two-way CfDs could ensure that the beneficiaries receive a certain minimum level of remuneration for the electricity produced, while preventing disproportionate revenues. Typically, the beneficiary receives a guaranteed payment equal to the difference between a fixed 'strike' price and a reference price and the revenues above the strike price need to be returned to the CfD counterpart (i.e. Member State).

At the same time, two-way CfDs require the generation supported by the CfDs to pay back the difference between the market reference price and a maximum strike price whenever the reference price exceeds the strike price. If these paybacks are then channelled back to the consumers, suppliers or taxpayers, two-way CfDs also provide them with some protection against excessive prices and volatility, if they are passed on proportionally and objectively.

As it may be difficult for regulators to estimate the actual investment costs, the possibility to determine the remuneration of supported generators through a competitive bidding process is an important instrument to avoid long-lasting excessive costs.

Do you consider the use of two-way contracts for difference or similar arrangements as an efficient way to mitigate the impact of short-term markets on the price of electricity and to support investments in new capacity (where investments are not forthcoming on a market basis)?

- ☐ Yes
- ☒ No

Do you have additional comments?

2000 character(s) maximum

Two-way CfDs have already been applied in many Member States for a long time, including Greece. Their objective has been to support investments in new RES generation, prior to it achieving market parity, but they have minimal impact, or even no impact whatsoever compared to PPAs, on electricity prices. CfDs may be a suitable instrument for investors with limited risk-mitigation-capabilities, but not as a general instrument for all market participants. Stakeholders should have a free choice on that kind of contracts, and they should not be the only way to invest in low-carbon production.

Moreover, since renewables have finally become more competitive after decades of public support, deterring the development of market-based renewables would be a step backwards and paradoxically could lead to a lack of investment in those technologies.

Additionally, the existence of CfDs, or other forms of RES support, also disincentivises PPAs, since CfDs allow generators to receive a guaranteed revenue that is backed by the state. However, this is starting to cause problems in the market, since CfDs mute the market signals that should normally be seen by generators and RES developers. This leads to inefficient investments into generation capacity, often with a suboptimal production profile, or in the wrong locations. PPAs are inherently more market-based and should

be prioritised when supporting investments in new capacity. CfDs should be phased out as quickly as possible.

Should new publicly financed investments in inframarginal electricity generation be supported by way of two-way contracts for differences or similar arrangements, as a means to mitigate electricity price spikes of consumers while ensuring a minimum revenue?

- ☐ Yes
☒ No

Do you have additional comments?

2000 character(s) maximum

Two-way CfDs, compared to PPAs, do not decrease prices for consumers. This decrease in prices was only the case due to the direct redistribution of funds that was decided by some Member States, including Greece, through targeted social policies by public authorities, to fund the cost of energy of the consumers. Two-way CfDs have already been applied in many Member States, including Greece, for many years, and were primarily used as a tool for subsidizing new RES capacity in the past, when RES costs were much higher. Now that solar and wind have reached market parity, RES support schemes, including two-way CfDs, are rightly being phased out, in favour of a market-driven participation of RES in the system. This shift to a more market-based approach is crucial in order to ensure the better and more efficient operation of the system, and to provide the correct investment signals for new generation capacity (e.g. type of technology and location). Returning to state-backed two-way CfDs, apart from defying the very principles of market participation for all technologies envisaged in the EMR, seems like a counter-intuitive approach, which would harm the proper functioning of the market, including PPAs.

The economic signal provided by this switch back to CfDs is also problematic. Banks were just getting accustomed to moving away from state CfDs and providing financing for private PPA-backed RES projects, which is why we are still seeing state guarantee schemes for PPAs. It would be detrimental to the market to turn back to the solutions of the past.

In cases where Member States still decide to go ahead with a CfD scheme, it would be critical to prohibit allocation to the state CfD of a share higher than the majority, gradually decreasing to zero, of the capacity to be installed.

What power generation technologies should be subject to two-way contracts for difference or similar arrangements?

2000 character(s) maximum

Why should those technologies be subject to two-way contracts for differences or similar arrangements?

2000 character(s) maximum

What technologies should be excluded and why?

2000 character(s) maximum

What are the main risks of requiring new publicly supported inframarginal capacity to be procured on the basis of two-way contracts for difference or similar arrangements, for example as regards of the impact in the short-term markets, competition between different technologies, or the development of market based PPAs?

2000 character(s) maximum

What design principles could help mitigate the risks identified in your reply to the question above, in particular, in terms of procurement principles and pay out design? Should these principles depend on the technology procured?

2000 character(s) maximum

How can it be ensured that any costs or pay-out generated by two-way CfDs in high-price periods are channelled back to electricity consumers? Should a default approach apply, for example, should these revenues or costs be allocated to consumers proportionally to their electricity consumption?

2000 character(s) maximum

What should be the duration of a two-way CfD for new generation and why? Should this differ depending on the technology type?

2000 character(s) maximum

Should generation be free to earn full market revenues after the CfD expires, or should new generation be subject to a lifetime pay-out obligation?

2000 character(s) maximum

Without prejudice to Article 6 of Directive (EU)2018/2001[1], should it be possible for Member States to impose two-way CfDs by regulatory means on existing

generation capacity?

[1]

Article 6 (1): Without prejudice to adaptations necessary to comply with Articles 107 and 108 TFEU, Member States shall ensure that the level of, and the conditions attached to, the support granted to renewable energy projects are not revised in a way that negatively affects the rights conferred thereunder and undermines the economic viability of projects that already benefit from support.

Article 6(2): Member States may adjust the level of support in accordance with objective criteria, provided that such criteria are established in the original design of the support scheme.

- ☐ Yes
☐ No

How would you rate the following potential risks as regards the imposition of regulated CfDs on existing generation capacity?

	Negligible risks	Low risks	Medium risks	High risks	Very high risks
Legitimate expectations/legal risks	☐	☐	☐	☐	☐
Ability of national regulators/governments to accurately define the level of the price levels envisaged in these contracts	☐	☐	☐	☐	☐
Locking in existing capacity at excessively high price levels determined by the current crisis situation	☐	☐	☐	☐	☐
Impact on the efficient short-term dispatch	☐	☐	☐	☐	☐

Would it be enough for existing generation to be subject only to a simple revenue ceiling instead of a revenue guarantee?

- ☐ Yes
☒ No

Do you have additional comments?

2000 character(s) maximum

It is strongly suggested that two-way CfDs are not imposed on existing generation capacity. It would significantly impact the economics of existing investments in generation capacity, causing extensive damage to investors' confidence and further exacerbating the current regulatory uncertainty. This would drive away investors, who would have to factor in the risk of such radical regulatory intervention (with implications on economics of investments) in the market operation of their (future) assets in Europe. Importantly, introducing any type of such overregulation (e.g. capping revenues) would steer more investment away from Europe, at a point in time when the EU is desperately trying to attract unprecedented investment in new RES capacity, even "outbidding" trade partners like the US. For example, 2022 was a

record low in Europe for new investments in wind energy. On the other hand, for certain (flexibility providing) technologies it would be advisable to establish well-designed capacity markets, based on reliability options (as per ACER's proposal), which would not only limit the energy cost for end consumers but efficiently contribute to security of supply.

Imposing CfDs on existing generators would also be a significant step away from market liberalisation and towards a more centralised approach, with no benefit on power prices.

What are the relative merits of PPAs, CfDs and forward hedging to mitigate exposure to short-term volatility for consumers, to support investment in new capacity and to allow customers to access electricity from renewable energy at a price reflecting long run cost?

2000 character(s) maximum

Subtopic: Accelerating the deployment of renewables

The shortage in gas and electricity supply as well as the relatively inelastic energy demand have led to significant increases in prices and volatility of gas and electricity prices in the EU. As stated above, a faster deployment of renewables constitutes the most sustainable way of addressing the current energy crisis and of structurally reducing the demand for fossil fuels for electricity generation and for direct consumption through electrification and energy system integration. Thanks to their low operational costs, renewables can positively impact electricity prices across the EU and reduce direct consumption of fossil fuels.

Through the REPowerEU plan, the European Commission has put forward a range of initiatives to support the accelerated deployment of renewable energy and to advance energy system integration. These include the proposal to increase the renewable energy target by 2030 to 45% in the Renewable Energy Directive, legislative changes to accelerate and simplify permitting for renewable energy projects or the obligation to install solar energy in buildings.

These efforts should be accompanied by appropriate regulatory and administrative action at national level and by the implementation and enforcement of the current EU legislation.

Within the framework of the Electricity Market legislation, accelerating the deployment and facilitating the uptake of renewables is one of the guiding principles of the Clean Energy Package and of this consultation paper. For example, a transmission access guarantee could be envisaged to secure market access for offshore renewable energy assets interconnected via hybrid projects, where the relevant TSO(s) would compensate the renewable operator for any hours in which the actions of the TSO led to not enough transmission capacity being accessible to the offshore wind farm to offer their export capabilities to the electricity markets[1].

Also, removing the barriers for the uptake of renewable PPAs or generalising two-way CfDs, enhancing consumer empowerment and protection, and increasing demand response, flexibility and storage should contribute to the accelerated deployment of renewables.

Do you consider that a transmission access guarantee could be appropriate to support offshore renewables?

- ☐ Yes
- ☐ No

Do you see any other short-term measures to accelerate the deployment of renewables?

	Yes	No
At national regulatory or administrative level	☐	☐
In the implementation of the current EU legislation, including by developing network codes and guidelines	☐	☐
Via changes to the current electricity market design	☐	☐
Other	☐	☐

How should the necessary investments in network infrastructure be ensured? Are changes to the current network tariffs or other regulatory instruments necessary to further ensure that the grid expansion required will take place?

4000 character(s) maximum

A main tool to boost investments in EU's electricity networks is the use of relevant European funds e.g., the RRF. The national governments should be encouraged to make a broader use of the RRF funds for transmission expansion purposes.

Moreover, EU should demand from the national governments to dedicate a certain percentage from their EUA-auctions' revenues for the expansion and modernization of the electricity networks (the additionality condition to be applied).

Furthermore, it is of utmost importance to develop an efficient and incentive-based network regulation framework, not by increasing network tariffs, which would ultimately burden end users but by incentivising effective utilisation of network capacity.

Subtopic: Limiting revenues of inframarginal generators

During the current energy crisis, temporary emergency measures have been put in place under Council Regulation 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices. One of these measures is the so-called inframarginal revenue cap which limits the realised revenues of

inframarginal generators to a maximum of 180 Euros per MWh. The aim of introducing this inframarginal cap was to limit the impact of the natural gas prices on the revenues of all inframarginal generators (new and existing) and to generate revenues allowing Member States to mitigate the impact of high electricity prices on consumers.

The question to be addressed in the context of the reform of the electricity market rules is whether, in addition to relying on long-term pricing mechanisms such as forward markets, CfDs and PPAs, such revenue limitations for inframarginal generators should be maintained.

Do you consider that some form of revenue limitation of inframarginal generators should be maintained?

- ☐ Yes
☒ No

How do you rate a possible prolongation of the inframarginal revenue cap according to the following criteria:

(a) the effectiveness of the measure in terms of mitigating electricity price impacts for consumers

(b) its impact on decarbonisation

(c) security of supply

(d) investment signals

(e) legitimate expectations/legal risks

(f) fossil fuel consumption

(g) cross border trade intra and extra EU

(h) distortion of competition in the markets

0

(i) implementation challenges

0

Do you have additional comments?

3000 character(s) maximum

We do not support an approach where some form of revenue limitation of inframarginal generators are maintained.

The inframarginal caps have had an extremely negative effect in the electricity market and should be removed as soon as possible, and certainly no later than June 2023, as it is originally planned, based on the emergency Regulation. Such revenue caps on inframarginal technologies must not become a structural feature of the EU electricity market design.

Firstly, the caps do not directly lower electricity prices for consumers, since the wholesale price remains unchanged. Consumers may only benefit from a lower 'price' to the extent that the Government uses the revenues to compensate the final electricity price, but many consumers do not qualify for such compensation, and therefore see no benefit from the cap.

Most importantly, the caps have had an extremely distortive effect in the electricity market. Such caps have not been implemented in a uniform way across different Member States, a fact which distorts normal electricity flows and discourages cross-border PPAs. In particular, the introduction of the cap in Greece, whereas it's even applied on marginal technologies, effectively leads to a 100% regulated "market". The cap has also had a harmful effect on producers, by retroactively changing the operating conditions for generation capacity, whereas in certain cases the cap has also clawed back revenues that the producer has not even received.

All of this combines to make it more difficult and riskier (and therefore more expensive) to proceed with the new investments that will be needed in the future, jeopardizing both the security of supply and the energy transition.

Should the modalities of such revenue limitation be open to Member States or be introduced in a uniform manner across the EU?

- ☒ Member States
- ☐ EU

How can it be ensured that any revenues from such limitations on inframarginal revenues are channelled back to electricity consumers? Should a default approach apply, for example, should these revenues be allocated to consumers proportionally to their electricity consumption?

3000 character(s) maximum

Alternatives to Gas to Keep the Electricity System in Balance

Short-term markets enable trading electricity close to the time of delivery, covering day-ahead, intraday and balancing timeframes. Well-functioning short-term electricity markets guarantee that the different assets are used in the most efficient manner – this is key to deliver the lowest possible electricity prices to consumers. Short-term markets should therefore deliver relevant price signals reflecting locational, time-related and scarcity aspects: this will ensure the adequate reaction of generation and demand. Even if an increasing share of generation were covered by long term contracts such as PPAs or CfDs (cf. the sections above), the short-term markets would remain key to ensure efficient dispatch. The short-term markets also ensure efficient exchanges of electricity across borders.

Well-functioning short-term markets require healthy competition between market participants so that they are incentivised to bid at their true cost and regulators have the necessary tools to detect any kind of abusive or manipulative behaviour. Demand response, storage and other sources of flexibility must be put in a situation where they can compete effectively so that the role of natural gas in the short-term market to provide flexibility is progressively reduced, which will bring multiple benefits including lower electricity prices for consumers. To ensure this, targeted changes to the functioning of short-term markets could be envisaged, which could include:

Incentivising the development of flexibility assets

The Commission together with ACER has started the work on new rules to further support the development of demand response, including rules on aggregation, energy storage and demand curtailment, and address remaining regulatory barriers.

Adapt incentives in the System operators tariff design: The Electricity Regulation and Directive already give the possibility for system operators to procure flexibility services including demand response. However, in most Member States, the current regulatory framework treats capital expenditures (CAPEX) of system operators different from operational expenditures (OPEX), resulting in a bias in detriment of investments by system operators concerning the operation of their network. An alternative to this approach is a regulatory framework based on overall total expenditure (TOTEX), including capital expenditures and operational expenditures, which would allow the system operators to choose between operational expenditures and capital expenditures, or an efficient mix of both, to operate their system efficiently without bias for a certain type of expenditure. This would incentivise system operators to procure further flexibility services, and in particular demand response, which should be a key enabler for greater renewable integration.

Using sub-meter data for settlement and observability: The deployment of smart meters as envisaged in the Electricity Directive is delayed in several Member States. In addition, smart meters do not always provide the level of granularity required for demand response and energy storage. In these situations, it should thus be possible for system operators to use sub-meter data (incl. from private sub-meters) for settlement and observability processes of demand response and energy storage, to facilitate active participation in electricity markets (see also section “*Adapting metering to facilitate demand response from flexible appliances*” in the section on “**Better consumer empowerment and protection**”). The use of sub-meter data should be accompanied by requirements for the sub-meter data validation process to check and ensure the quality of the sub-meter data. Access to dynamic data of electricity consumed (and injected

back to the grid) notably from renewable energy sources helps increasing awareness amongst the consumers and allows shifting demand towards renewable electricity.

Developing new products to foster demand reduction and shift energy at peak times: To foster demand reduction and energy shifting (through demand response, storage and other flexibility solutions) at peak times, a peak shaving product could be defined and considered as an ancillary service that could be bought by system operators. Such a product could be auctioned a few weeks/months ahead (with a capacity payment) and activated at peak load (with an energy payment), considering renewables generation, therefore contributing to phasing out gas plants from the merit order, and contributing to lowering the price. Demand reduced could also be shifted to another point in time, outside of peak times. This would incentivize flexibility when fossil fuel capacity is needed the most in the system. It would be important to ensure such a product is cost effective if implemented over the long term.

Coordinating demand response in periods of crisis: In periods of crisis, it would also be possible to combine the limitations of inframarginal revenues described in the section above with market-based coordinated demand response (reduction and/or shifting) in times of peak prices or peak load. The aim would be to reduce the market clearing price and fossil fuel consumption.

Improving the efficiency of intraday markets

Shifting the cross-border intraday gate closure time closer to real time: Intraday trade is a key tool to integrate renewable energy sources and balance their variability with flexibility sources up to real time. Wind and solar producers see their forecasts strongly improving close to delivery, and it should be possible to trade shortages and surpluses as close as possible to real time. Setting the cross-border intraday gate closure time closer to real time therefore appears as a meaningful improvement, in combination with maximising the cross-border trade capacity.

Mandating the sharing of the liquidity at all timeframes until the time of delivery: EU day-ahead and intraday electricity markets are geographically coupled, meaning that trades can take place anywhere across Europe if the grid cross-border capabilities are sufficient. This considerably increases the liquidity and therefore the efficiency of the markets. The Commission considers extending these benefits also to intra-border trade between different market operators. This would support competition development and facilitate market participants to balance their positions - a key aspect for integrating further variable renewables.

Do you consider the short-term markets are functioning well in terms of:

	Yes	No
(a) accurately reflecting underlying supply/demand fundamentals	☒	☐
(b) encompassing sufficiently liquidity	☒	☐
(c) ensuring a level playing field	☒	☐
(d) efficient dispatch of generation assets	☒	☐
(e) minimising costs for consumers	☒	☐
(f) efficiently allocating electricity cross-border	☒	☐

Do you see alternatives to marginal pricing as regards the functioning of short-term markets in terms of ensuring efficient dispatch and as regards the determination of cross border flows?

- ☐ Yes
- ☒ No

Do you have additional comments?

2000 character(s) maximum

The marginal pricing has a decades-long proved track-record in day-ahead power markets worldwide. Currently, all the day-ahead markets operate using the marginal pricing principle. The reason why this happens is that marginal pricing provides the electricity producers with correct short-run price signals. In addition, the marginal pricing motivates the consumers' decisions in a way that does not result in excessive expenditures for the overall economy. If a consumer faces the average electricity production cost instead of the marginal cost, then this consumer may decide to increase his electricity consumption if his benefit is higher than the average electricity production cost. But if the consumer's benefit is lower than the cost of the marginal technology that will be called to cover the increased consumption, then the overall economy's utility will be decreased because the cost to produce this extra quantity of energy will be less than the benefit derived from consuming this extra quantity of energy. This advantage of the marginal pricing has been emphatically proved to be true during the ongoing energy crisis in Europe. Extremely high gas prices resulted in very high marginal prices in the European electricity markets. That caused both lower electricity consumption and lower use of gas for electricity production. These two developments ensured the EU's security of supply in electricity and gas and helped EU to limit, during the energy crisis, the total energy expenses. Actually, there is a single example in the European continent where a government chose to shift from marginal pricing to pay-as-bid. This example refers to UK that made this change back in 1998. However, some years later the British power market moved back to the marginal pricing system due to the inefficiencies of the pay-as-bid system. Such inefficiencies result to decreased competition between the electricity producers and difficulty of the regulator to identify the exercise of market power.

How can the EU emission trading system and carbon pricing incentivize the development of low carbon flexibility and storage?

3000 character(s) maximum

Do you consider that the cross-border intraday gate closure time should be moved closer to real time (e.g. 15 minutes before real time)?

- ☐ Yes
- ☐ No

Do you consider that market operators should share their liquidity also for local markets that close after the cross-border intraday market?

- ☐ Yes
- ☐ No

What would be the advantages and drawbacks of sharing liquidity in local markets after the closure of the cross-border intraday market?

2000 character(s) maximum

Would a mandatory participation in the day-ahead market (notably for generation under CfDs and/or PPA's) be an improvement compared to the current situation?

- ☐ Yes
- ☐ No

What would be the advantages and drawbacks of such an approach?

2000 character(s) maximum

What would be the advantages and drawbacks of having further locational and technology-based information in the bidding in the market (for example through information on the composition of portfolio, technology-portfolio bidding or unit-based bidding)?

2000 character(s) maximum

What further aspects of the market design could enhance the development of flexibility assets such as demand response and energy storage?

2000 character(s) maximum

In particular, do you think that a stronger role of OPEX in the system operator's remuneration will incentivize the use of demand response, energy storage and other flexibility assets?

- ☐ Yes
- ☐ No

Do you consider that enabling the use of sub-meter data, including private sub-meter data, for settlement/billing and observability of demand response and energy storage can support the development of demand response and energy storage?

- ☐ Yes
- ☐

No

Do you consider appropriate to enable a product to foster demand reduction and shift energy at peak times as an ancillary service, aiming at lowering fuel consumption and reducing the prices?

- ☐ Yes
- ☐ No

Do you consider that some form of demand response requirements that would apply in periods of crisis should be introduced into the Electricity Regulation?

- ☐ Yes
- ☐ No

Do you see any further measure that could be implemented in the shorter term to incentivize the use of demand response, energy storage and other flexibility assets?

- ☐ Yes
- ☐ No

Do you consider the current setup for capacity mechanisms adequate to respond to the investment needs as regards firm capacity, in particular to better support the uptake of storage and demand side response?

- ☐ Yes
- ☒ No

If not, what changes would you consider necessary in the market design to ensure the necessary investments to complement rising shares of renewables and to better align with the decarbonisation targets?

4000 character(s) maximum

The capacity markets should become a standard part of the EU's electricity market design, without requiring state aid approval. Capacity markets should not be seen as a "distortion" of the market, but rather a necessary part of its operation.

The same way the EU legislation sets obligatory rules for the electrical energy and reserves markets, it should also establish the obligation for the TSOs to safeguard the necessary firm and flexible resources through the development of both energy and capacity markets. The case of the US, where most of the regional power markets include some type of capacity market in their design, is a good example for the EU to follow. As the level of variable RES in the system increases, controllable units will be called on to operate for fewer and fewer hours, but will still be needed in order to ensure security of supply. This will make the remuneration of capacity more and more important as time goes on.

Do you have additional comments?

4000 character(s) maximum

Do you see a benefit in a long-term shift of the European electricity market to more granular locational pricing?

- ☐ Yes
- ☐ No

Better Consumer Empowerment and Protection

Union legislation recognizes that adequate heating, cooling and lighting, and energy to power appliances are essential services. The European Pillar of Social Rights includes energy among the essential services which everyone is entitled to access.

Union legislation also aims to deliver competitive and fair retail markets, as well as possibilities to reduce energy costs by investing in energy efficiency or in renewable generation thereby putting consumers at the heart of the energy system. The energy crisis has shown the importance of delivering on this ambition but also weaknesses in the existing system. For that reason, there is scope to further reinforce the Electricity Directive to deliver the needed consumer empowerment and protection, and avoid that consumers are powerless in the face of short-term energy market movements.

Increasing possibilities for collective self-consumption and electricity sharing

Digitalisation – particularly when applied to metering and billing – facilitates energy sharing and collective self-consumption. Collective self-consumption means customers are able to invest in offsite generation and become “prosumers” reducing their bills just as if the renewable energy production installation were installed on their own roof. Consumers can then avoid buying gas produced electricity which leads to real decoupling.

The practical uses are potentially very significant – for example, families can share energy among the different members located in different parts of the country and farmers can install renewable generation on one part of their farm and use the energy in their main buildings even if located a distance away. Another clear use case is municipalities and housing associations can include off-site energy as part of social housing, directly addressing energy poverty.

Member States such as Belgium[1], Austria, Lithuania[2] Luxembourg, Portugal and others[3] have shown that it is possible to implement this model in practice quickly and at reasonable cost for consumers to develop energy sharing and collective self-consumption.

Customers should be in a position to deduct the production of offsite renewable generation facilities they own, rent, share or lease from their metered consumption and billed energy. Specific provisions could allow energy poor and vulnerable customers to be given access to this shared energy, for example produced

within municipalities, or by investments of local governments.

Energy sharing should be treated in a non-discriminatory way compared to normal suppliers and producers. This means costs for other consumers are not unduly increased. Production and consumption has to happen at the same market time unit. Energy sharing be possible where there are no transmission constraints for wholesale trade – that is within price zones.

Adapting metering to facilitate demand response from flexible appliances

The roll out and uptake of demand response has been slower than desired. One of the reasons for this has been the very complex relationships between suppliers and aggregators. The greatest demand response possibilities often come from individual appliances – in particular behind-the-meter storage, heat pumps and electric vehicles. Enabling dedicated suppliers and aggregators to offer contracts covering just these appliances could help both speed the roll out of these appliances and increase the amount of demand response in the system. The Electricity Directive already provides that customers are entitled to more than one supplier, but this has been seen to require a separate connection point increasing costs for customers significantly.

Therefore, there is a case for adapting the current provisions of the Electricity Directive to clarify that customers who wish to have the right to have more than one meter (i.e. a sub-meter) installed in their premises and for such sub-metered consumption to be separately billed and deducted from the main metering and billing.

Better choice of contracts for consumers

In many Member States as the crisis unfolded, the availability and diversity of contracts became more limited, making it increasingly difficult for customers to obtain fixed price contracts in many Member States. This was also often insufficiently clear to customers who believed that they had entered into fixed price contracts, alongside a wider lack of understanding of consumer rights.

There are also few “hybrid” or “block” contracts available. Such contracts combine elements of fixed price and dynamic/variable prices giving consumers certainty for a minimum volume of consumption but allowing prices to vary above that amount.

Customers with variable price contracts can find budgeting more difficult, particularly consumers on low incomes or vulnerable consumers. The effect of such contracts is that the cost of managing the risk of wholesale price increases is faced exclusively by customers and not by suppliers. On the other hand, variable prices – at least for the energy where the customer is effectively able to control consumption - can incentivise a more efficient use of energy.

While suppliers above a certain size are obliged to offer dynamic price contracts, which were less in demand during the crisis, the legislation is silent on fixed price contracts. This should be rebalanced to allow consumers a choice between flexible or fixed price contracts. Fixed price contracts could still be based on time of use to maintain incentives to reduce demand at peak hours. Suppliers would remain free to determine the price themselves.

Suppliers often argue that it is difficult to offer attractive fixed price offers for two reasons - firstly if they do not have access to longer term markets which allow them to hedge their risks. These issues are addressed

in the sections on forward markets above. Secondly, suppliers argue that it is difficult to offer fixed price fixed term contracts because consumers are allowed to switch supplier (i.e. leave the fixed price fixed term contract) - leaving the supplier with additional costs. Currently, termination fees for fixed price fixed term contracts are allowed – but only if they are proportionate and if they reflect the direct economic loss to the supplier. Without abandoning these principles, it could be considered allowing regulators or another body to set indicative fees which would be presumed to comply with these obligations.

Strengthening consumer protection

A) Protecting customers from supplier failure

Increased supplier failure during the crisis, generally because of a lack of hedging, has been observed in several Member States. This has often resulted in all consumers facing higher bills because of socialisation of some of the failed suppliers' costs.[4] Customers of the failed suppliers are also faced with unexpected costs. Obliging suppliers to trade in a prudential way may involve some additional costs, but would reduce the risks that individual consumers face and also avoid socialisation of the costs of suppliers with poor business models. This is separate from, but complementary to, prudential rules applicable to energy companies on financial markets where the Commission has also taken action. At the same time, we recognise such obligations need to take account of the difficulties smaller suppliers face in hedging, particularly in smaller Member States (see also section on “*Forward Markets*” above).

All Member States have implemented a system of supplier of last resort, either de jure or de facto. However, the effectiveness of these systems varies and EU framework is very vague without clarifying the roles and responsibilities of the appointed supplier and the rights of consumers transferred to the supplier of last resort[5].

B) Access to necessary electricity at an affordable price during crises

The Electricity Directive includes specific provisions for energy poor and vulnerable customers, which are part of a broader policy framework to protect such consumers and help them overcome energy poverty.[6] However, the crisis has shown that affordability of energy can be a major issue not only for these groups, but also for wider sections of population. Member States can apply price regulation for energy poor and vulnerable households. Council Regulation (EU) 2022/1854 on an emergency intervention to address high energy prices allows for below cost regulated prices for all households and for SMEs on a temporary basis and subject to clear condition. In particular, such measures can only cover a limited amount of consumption and must retain an incentive for demand reduction. One of the lessons of the crisis is that the objective of reducing energy costs for consumer should not come at the expense of encouraging excess demand and fossil fuel lock-in, or fiscal sustainability. However, some form of safeguard to allow Member States to intervene in retail price setting might be needed for the future during a severe crisis, such as the current one. This could ensure that citizens have access to the energy they need, including ensuring that certain consumers have access to a minimum level of electricity at a reasonable price, regardless of the situation in the electricity markets, while avoiding subsidies for unnecessary consumption, such as heating of swimming pools[7]. This would also help ensure that when making large purchases, customers would take into account the full cost of energy. As the objective is to mitigate the impact of high prices during crisis periods, it would seem sensible to develop specific criteria to define a crisis in these terms. One alternative would be to link the Electricity Risk Preparedness Regulation, however this is focused on system adequacy, system security and fuel security, rather than mitigating the impacts of a crisis on users. Fossil fuel lock-in, however, needs to be avoided.

[1] Energiedelen en persoon-aan-persoonverkoop | VREG

[2] Lithuanian consumers to access solar parks under CLEAR-X project

[3] Spain, Croatia, Italy ,France.

[4] For example, network charges owed to TSOs and DSOs and potentially imbalance costs.

[5] In particular, we would consider confirming that customers transferred to Supplier of Last Resort retain the right to change supplier within normal switching times (i.e. customers cannot be required to stay with the supplier of last resort for a fixed period); clarifying that the supplier of last resort must be appointed based on an open and transparent procedure; right of consumers to remain with supplier of last resort for reasonable periods of time.

[6] The Energy and Climate Governance Regulation together with the 2020 recommendation on Energy poverty provide a more structural framework to address and prevent energy poverty. The Fit for 55 legislative package further reinforces this framework through other sectoral legislation, through the revision of the Energy Efficiency Directive and the Energy Performance of Buildings Directive and through setting up of the Social Climate Fund to address the impact of the ETS extension to buildings and transport.

[7] This is also in line with the Recommendation on the economic policy of the euro area which called for a two-tier energy pricing model, whereby consumers benefit from regulated prices up to a certain amount

Energy sharing and demand response

Would you support a provision giving customers the right to deduct offsite generation from their metered consumption?

- ☐ Yes
- ☐ No

If such a right were introduced:

(a) Would it affect the location of new renewable generation facilities?

- ☐ Yes
- ☐ No

(b) Should it be restricted to local areas?

- ☐ Yes
- ☐ No

(c) Should it apply across the Member State/control/zone?

- ☐ Yes
- ☐ No

Would you support establishing a right for customers to a second meter/sub-meter on their premises to distinguish the electricity consumed or produced by different devices?

☐

Yes

☐ No

Offers and contracts

Would you support provisions requiring suppliers to offer fixed price fixed term contracts (ie. which they cannot amend) for households?

☐ Yes

☐ No

If such an obligation were implemented what should the minimum fixed term be?

at most 1 choice(s)

☐ (a) less than one year

☐ (b) one year

☐ (c) longer than one year

☐ (d) other

Cost reflective early termination fees are currently allowed for fixed price, fixed term contracts:

	Yes	No
(a) Should these provisions be clarified?	☐	☐
(b) If these provisions are clarified should national regulatory authorities establish ex ante approved termination fees?	☐	☐

Do you see scope for a clarification and possible stronger enforcement of consumer rights in relation to electricity?

☐ Yes

☐ No

Prudential supplier obligations

Would you support the establishment of prudential obligations on suppliers to ensure they are adequately hedged?

☐ Yes

☐ No

Would such supplier obligations need to be differentiated for small suppliers and energy communities?

- ☐ Yes
- ☐ No

Supplier of last resort

Should the responsibilities of a supplier of last resort be specified at EU level including to ensure that there are clear rules for consumers returning back to the market?

- ☐ Yes
- ☐ No

Would you support including an emergency framework for below cost regulated prices along the lines of the Council Regulation (EU) 2022/1854 on an emergency intervention to address high energy prices, i.e. for households and SMEs?

- ☐ Yes
- ☐ No

Do you have additional comments?

2000 character(s) maximum

Enhancing the Integrity and Transparency of the Energy Market

Never has there been as much of a need as today to enhance the public's trust in energy market functioning and to protect EU effectively against attempts of market manipulation.

Regulation (EU) 1227/2011 on wholesale market integrity and transparency (REMIT) was designed more than a decade ago to ensure that consumers and other market participants can have confidence in the integrity of electricity and gas markets, that prices reflect a fair and competitive interplay between supply and demand, and that no profits can be drawn from market abuse.

In times of extra volatility, external actors' interference, reduced supplies, and many new trading behaviours, there is a need to have a closer look as to whether our REMIT framework is robust enough. In addition, recent developments on the market and REMIT implementation over last decade have shown that REMIT and its implementing rules require an update to keep abreast. The wholesale energy market design

has evolved over the past years: new commodities, new products, new actors, new configurations and not all data is effectively reported. The existing REMIT framework is not fully updated to tackle all new challenges, including enforcement and investigation in the new market realities.

Current experience, including a decade of REMIT framework implementation (REMIT Regulation from 2011 and REMIT Implementing Regulation from 2014) and functioning show that REMIT framework may require improvements to further increase transparency, monitoring capacities and ensure more effective investigation and enforcement of potential market abuse cases in the EU to support new electricity market design. The following areas could be considered in this context:

- The alignment of the ACER powers under REMIT with relevant powers under the EU financial market legislation including relevant definitions, in particular the definitions of market abuse (insider trading and market manipulation);
- The adaptation of the scope of REMIT to current and evolving market circumstances (new products, commodities, market players);
- The harmonisation of the fines that are imposed under REMIT at national level and the strengthening of the enforcement regime of certain cases with cross-border elements under REMIT;
- Increasing the transparency of market surveillance actions by improved communication of the market-related data by ACER, regulators and market operators.

What improvements into the REMIT framework do you consider as most important to be addressed immediately?

4000 character(s) maximum

By virtue of the Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions (COM(2022) 236 final/ 18.05.2022, the European Commission included the matters of market surveillance and transparency into the series of subjects to be examined and respective measures to be taken, in order to optimise the functioning of the European electricity market. As it is provided therein, it is essential to review the REMIT framework - Regulation 1227/2011 on wholesale market integrity and transparency (so-called REMIT)- in order to explore the risks of market abuse and to ensure the protection from such abuse in periods of high prices and market volatility, that we have currently endured. It must be noted here that all reports by the ACER during the crisis essentially revealed that the root of the price crisis has not been market manipulation but a genuine or sometimes perceived scarcity of gas.

Moreover, there is a need to update the REMIT, as it was designed more than a decade ago and since then the markets and products are evolved and enhanced.

Especially when facing emergency situations, such as the current ones, during which electricity prices in Europe have rapidly risen to a level much higher than in recent decades, it is crucial to “ensure that consumers and other market participants can have confidence in the integrity of electricity and gas markets, that prices reflect a fair and competitive interplay between supply and demand, and that no profits can be drawn from market abuse”. It is however equally important that REMIT (and relevant guidance notes) provide sufficient certainty to market participants, to be in a position to creatively and efficiently participate in markets, without demonising legitimate profitability.

With regards to the harmonization and strengthening of the enforcement regime under REMIT: what shortcomings do you see in the existing REMIT framework and what elements could be improved and how?

4000 character(s) maximum

One of the most important aspects for the efficient and efficient application of the REMIT is to ensure consistency in monitoring and in the application of REMIT between the Member States.

In this respect, Under art. 16 of the REMIT, ACER has issued non-binding Guidance on the application of REMIT, directed to National Regulatory Authorities (NRAs), however it is important to enhance such coordination through regular and formal workgroups and exchange of information, especially on investigation and monitoring methods, to identify safe and standard criteria for suspicious transactions, as well as to distinguish them from unintentional behavior.

Moreover, NRAS should develop their monitoring and investigation tools and methods, especially regarding the surveillance software and to update and improve the fields and methods of data analysis.

Also, as REMIT is closely linked with the financial regulations, NRAs should follow closely the main policy developments on MIFID II, MAR and EMIR, and regularly liaise with the ESMA on cases or policy matters.

With regards to better REMIT data quality, reporting, transparency and monitoring, what shortcomings do you see in the existing REMIT framework and what elements could be improved and how?

4000 character(s) maximum

It is essential to update REMIT, in order to address current and future challenges.

As per the Communication of the EC (COM(2022) 236 final/ 18.05.2022, “the REMIT framework could be reviewed to explore the scope to more effectively mitigate the risks of market abuse by improved market transparency, enhanced market data quality and collection as well as better enforcement at EU level”.

Such updating could take into account that a growing number of applied trading techniques or services, derive from the financial sector, which leads to a differentiation of the products and an increased complexity in the energy markets, which was probably not taken into account at the period of the REMIT establishment.

Moreover, as the data collection, the monitoring and the enforcement is shared between several entities, enhanced communication and coordination is essential, in order to ensure consistency in monitoring and in the application of REMIT.

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ENER-MARKET-DESIGN@ec.europa.eu