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Public Consultation: Revision of the EU's electricity market design

Fields marked with * are mandatory.

Electricity Market Design

The consultation document with the questions can also be downloaded here:

EMD_Consultation_document.pdf

Introduction

Background

Over the last year, electricity prices have been significantly higher than before. Prices started rising rapidly in summer of 2021 when Russia reduced its gas supplies to Europe while global demand picked up as COVID-19 restrictions were eased. Subsequently, Russia's invasion of Ukraine and its weaponisation of energy sources have led to substantially lower levels of gas delivery to the EU and increased disruptions of gas supply, further driving up the price. This has had a severe impact on EU households and the economy. High gas prices influence the price of electricity from gas fired power plants, often needed to satisfy electricity demand.

In the immediate reaction to global dynamics, the EU provided an energy prices toolbox with measures to address high prices (including income support, tax breaks, gas saving and storage measures). The subsequent weaponisation of gas supply and Russia's manipulation of the markets through intentional disruptions of gas flows have led not only to skyrocketing energy prices, but also to endangering security of supply. To address it, the EU had to act to diversify gas supplies and to accelerate energy efficiency and the deployment of renewable energy.

Following the Russian invasion of Ukraine in February 2022, the EU responded with REPowerEU - a plan for the Union to rapidly end its dependence on Russian energy supplies by strengthening the European resilience and security, reducing energy consumption, accelerating the roll-out of renewables and energy efficiency, and securing alternative energy supplies. The EU also established a temporary State Aid regime to allow certain subsidies to soften the impact of high prices. Further, to address the price crisis and security concerns, the EU has agreed and implemented a strong gas storage regime, effective demand reduction measures for gas and electricity, and price limiting regimes to avoid windfall profits in both gas and electricity markets.

The EU Electricity Market Design

The current electricity market design has delivered a well-integrated market, allowing Europe to reap the economic benefits of a single energy market in the normal market circumstances, ensuring security of supply and sustaining the decarbonisation process. Cross-border interconnectivity also ensures safer, more reliable and efficient operation of the power system.

Market design has also helped the emergence of new and innovative products and measures on retail electricity markets – supporting energy efficiency and renewable uptake and helping consumers reduce their energy bills also through emerging services for providing demand response. Building on and seizing the potential of the digitalisation of the energy system, such as active participation by consumers, will be a key element of our future electricity markets and systems.

In the context of the energy crisis, the current electricity market design has however also demonstrated a number of shortcomings. The reforms the Commission will undertake will address those shortcomings and ensure stable and well-integrated energy markets, which continue to attract private investments at a sufficient scale as an essential enabler of the European Green Deal objectives and the transition to a climate neutral economy by 2050.

In addition to these shortcomings, the European electricity sector is facing a number of more long-term challenges triggered by the rising shares of variable renewable energy and the progressive drive towards full decarbonisation by 2050. This includes ensuring investments, not just as regards renewables but also as regards weather independent low-carbon technologies until large scale storage and other flexibility tools become available. Stronger locational price signals in the system may be needed to ensure that the investments take place where they are needed, reflecting the physical reality of the electricity grid whilst at the same time ensuring incentives for cross-border long-term contracting. Some of these challenges will require ongoing policy reflections going beyond the scope of the current reform.

Making Electricity Bills More Independent from the Short-Term Cost of Fossil Fuels

The strong focus of the current market design on short-term markets, still very often determined by volatile fossil fuel prices, has exposed households and companies to significant price spikes with effects on their electricity bills. Many consumers found they had no option but to pay higher electricity prices driven by wholesale gas prices – either because they had no access to electricity cheaper electricity from renewable sources or could not install solar panels themselves.

The current regulatory framework regarding long-term instruments has proven insufficient to protect large industrial consumers, SMEs and households from excessive volatility and higher energy bills.

The gas price increase together with the strong role that short-term markets play in today's electricity market design have also boosted the revenues and profits well beyond the expectations of many generators with lower marginal costs such as renewables and nuclear ("inframarginal generators"), while receiving – in some cases - public support as well.

Short-term markets remain essential for the integration of renewable energy sources in the electricity system, to ensure that the cheapest form of electricity is used at all times, and to ensure that electricity flows smoothly between Member States. Whilst short-term price spikes can in general incentivize consumers to reduce or shift their demand, sustained high prices over a longer period translate into

unaffordable bills for many consumers and companies.

This is why there is a need to complement the regulatory framework governing these short-term markets with additional instruments and tools that incentivise the use of long-term contracts to ensure that the energy bills of European consumers and companies - and the revenues of inframarginal generators - become more independent from the fluctuation of prices in short-term markets (often driven by fossil fuel costs) and thus more stable over longer periods of time. The reforms should create a buffer between consumers and short-term markets, ensuring that they will be better protected from extreme prices and that electricity bills better reflect the overall electricity mix and the lower cost of generating electricity from renewables. Electricity bills across Europe should depend less on the short-term markets, with an increasing share of consumers shifting into more stable and affordable longer-term pricing arrangements.

There are two main types of long-terms contracts which allow to pass on the benefits of renewables to all consumers. One is power purchase agreements (PPAs) between private parties which ensure that electricity is sold on a long-term basis at an agreed price, therefore not determined by short-term markets. Power purchase agreements bring multiple benefits. For consumers, they provide cost competitive electricity and hedge against electricity price volatility. For renewable projects developers, they provide a source of stable long-term income. For governments, they provide an alternative avenue to the deployment of renewables without the need for public funding. Although power purchase agreements are becoming more widespread in the EU and the Renewable Energy Directive obliges the Member States to remove unjustified barriers to their development, the overall market share of power purchase agreements remains limited. The growth of power purchase agreements is concentrated in some Member States only and confined to large companies.

The Commission will suggest ways in which the share of PPAs in the overall electricity market can be increased and their roll-out incentivised through the market design. The uptake of power purchase agreements, in particular by small and medium companies, can, for example, be more widely promoted by public tendering for renewable energy in which a share of a project could be contracted through power purchase agreements. Credit guarantees to power purchase agreements backed by public actors could be considered as a form of support that could efficiently drive the emergence of a power purchase agreement market. Potentially, measures could be considered to ensure that industrial consumers use the full potential of power purchase agreements to lower their exposure to short-term markets and that energy suppliers more actively enter into the power purchase agreement market.

The other type of long-term contracts applies where public support is needed to trigger investments, so-called two-way contracts for difference (“two-way CfDs”). These contracts ensure that the income of the generators in question (and the corresponding cost for consumers) provides an adequate incentive to invest and is less dependent on short-term markets. These contracts for difference are typically established by a competitive tender process, allowing support to be channelled to the projects with the lowest expected production costs. In situations of very high prices two-way CfDs would provide Member States with additional funds for reducing the impact of high electricity prices on consumers.

The upcoming reform offers an opportunity to present ways in which two-way CfDs can be integrated into the electricity market design. A number of issues need to be considered in this context, notably as to the extent to which the use of CfDs becomes mandatory for investments involving public support and whether the use of such contracts should only cover new generation assets entering the market or also certain types of existing generation assets.

In any case, given the multiple benefits of the power purchase agreements, the actions of the reform concerning the CfDs should not affect the development of the power purchase agreement market across the EU. Both instruments are necessary complements to achieve the necessary deployment of renewables.

- The simplest way to introduce two-way CfDs would be to complement the existing principles for support schemes with the specific ones to govern such contracts in the regulatory framework, with Member States deciding whether or not to use these instruments to drive new investments in inframarginal generation.
- A more binding way to anchor these contracts in the regulatory framework would be to require that all investments involving the use of public support rely on such contract structures. This would need to be carefully calibrated to ensure that CfDs provide the necessary incentives at the least cost for consumers.
- Another option would be to not only envisage the use of CfDs for new generation but also to allow Member States to offer contracts on certain types of existing inframarginal generators (e.g., for specific types of technologies). These contracts could be awarded to existing generation, where possible, on the basis of competitive bidding.
- A more far-reaching approach would be to not only envisage the use of CfDs for new generation but also to allow Member States to impose these contracts on certain types of existing inframarginal generators (e.g., for specific types of technologies). Contrary to the situation for new generation, the contracts for these types of existing generators would typically not result from market-based tendering but would result from ex-post price regulation. Whilst this would accelerate the uptake of contracts for difference, it would also create significant uncertainty for investors in renewables. This could risk the necessary investments in this type of generation, increase the costs of those investments and as a result be counterproductive.

Driving Renewable Investments – Europe's Way Out of the Crisis

Increasing renewable energy deployment as well as electrification in general, is critical for Europe's security of supply, the affordability of energy and achieving climate neutrality by 2050. The accelerated deployment of renewables and energy efficiency measures will structurally reduce demand for fossil fuels in the power, heating and cooling, industry and transport sectors. Thanks to their low operational costs, renewables can lower energy prices across the EU. Furthermore, faster deployment of renewable energy will contribute to EU's security of energy supply.

Any regulatory intervention in the electricity market design therefore needs to preserve and enhance the incentives for investments and provide investors with certainty and predictability, while addressing the economic and social concerns related to high energy prices.

Alternatives to Gas to Keep the Electricity System in Balance

The consultation also covers ways to improve the conditions under which flexibility solutions such as demand response, energy storage and other weather independent renewable and low carbon sources, compete in the markets. These include measures aimed at incentivising the development of such flexibility solutions in the market (such as adapting the tariff design of system operators to ensure that they fully consider all flexibility solutions and use the existing network as efficiently as possible, allowing for access to more detailed data from electricity consumers through the installation of submeters or developing products

to reduce demand or shift energy consumption in periods of high demand or prices) and targeted measures to improve the efficiency of the short-term markets, with particular focus on the intraday market (such as allowing trading across Member States closer to the delivery of electricity and further increasing the liquidity in this market). In addition, the consultation seeks input on how to safeguard security of supply and adequacy also in situations of unforeseen crisis to ensure timely investments in capacity.

Combined with renewable generation and enhanced investments in grid capacity and inter-connectivity, this should contribute to reducing the role that natural gas-fired generation plays as a flexible source of generation and will, over time, replace, and thereby, phase out natural gas-fired power generation in line with the EU's decarbonisation targets.

Lessons Learned from Short Term Market Interventions

During the crisis, a number of emergency and temporary market interventions have been introduced to mitigate the impact of high energy prices on consumers and companies. In the electricity market, the measure introduced at EU level is the so-called inframarginal cap, which softened the impact of high prices whilst requiring mandatory demand reduction.

The consultation seeks stakeholders' views on whether certain aspects of these emergency interventions could be turned into more structural features of the electricity market design, for example activated in future crisis situations, and if so, under what conditions.

Any such potential element of the reform would depend on the success of these measures in terms of limiting the impact of high electricity prices and on whether they can be introduced without harming the investment incentives required to achieve the decarbonisation of the power sector.

Better Consumer Empowerment and Protection

The energy crisis has exposed consumers across the internal market to higher energy costs – resulting in a real lowering of their standard of living. In some cases, customers face a choice between paying for their energy and buying other essential goods[1][2]. The crisis has also hit industry and service sectors increasing energy costs, particularly for energy intensive industry. This has given rise to cuts in production capacity, temporarily or permanent closures and lay-offs.

The Electricity Directive has not yet been fully implemented. Better implementation, and enforcement of consumer rights, would have helped mitigate the impact of the crisis for consumers. However, targeted improvements are also needed. This consultation covers different options for creating a buffer between consumers and short-term energy markets.

By giving consumers who want to actively participate in energy markets more opportunities do so, including by sharing energy to control their costs[3]. We can also better use digitalisation tools to make it easier for consumers with renewable heating or electromobility to manage their costs through avoiding the most expensive times of the day to use grid electricity. Even without being active on the market consumers need to be able to access longer term contracts for electricity, notably based on renewable power purchase agreements between suppliers and renewable producers. This will allow them to manage their costs and support new investments in renewable energy.

The crisis has also shown that often consumers pick up the costs when suppliers fail. This could be mitigated by requiring suppliers to be adequately hedged, combined with an effective Supplier of Last Resort Regime to ensure continuity of supply.

Finally, in cases of crisis it may be worthwhile enabling Member States to guarantee households and SMEs access to a minimum necessary amount of electricity at an affordable price, as was done in the Council Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices.

Stronger Protection against Market Manipulation

Regulation 1227/2011 on wholesale market integrity and transparency (REMIT) ensures that consumers and other market participants can have confidence in the integrity of electricity and natural 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 very high price volatility, external actors' interference, reduced supplies, and new trading behaviours, there is a risk that entities engage in illegal wholesale trading practices. There is therefore a need to ensure that the REMIT framework is up to date and robust. Further improvements would increase transparency, monitoring capacities and ensure more effective investigation and enforcement of cross-border cases in the EU to support new electricity market design.

Next Steps

The aim of the present public consultation is to give the opportunity to all stakeholders and other interested parties to provide feedback on a series of policy objectives to be pursued by the reform proposal and possible concrete legislative and non-legislative measures resulting from them.

The Commission intends to present a proposal for amendments to the electricity market design in March 2023. The replies to the present consultation should be provided by 13 February 2023 at the latest.

[1] See European Pillar of Social Rights, principle 20, and also the upcoming first EU Report on Access to Essential Services.

[2] See notably the Eurobarometer on "Fairness perceptions of the green transition", 10 October 2022

[3] Examples include allowing families to share energy among the different members located in different parts of the country; farmers installing renewable generation on one part of their farm and using the energy in their main buildings even if located a distance away; municipalities and housing associations including off-site energy as part of social housing, directly addressing energy poverty. Electricity production and consumption would need to take place at the same time which can be ensured by the use of smart metering.

About you

* Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
-

- Dutch
- (•) English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- (•) Public authority
- Trade union
- Other

* First name

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* Surname

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* Email (this won't be published)

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* Scope

- ( ) International
- ( ) Local
- (•) National
- ( ) Regional

* Level of governance

- ( ) Parliament
- (•) Authority
- ( ) Agency

* Organisation name

255 character(s) maximum

Commission de régulation de l'énergie

* Organisation size

- ( ) Micro (1 to 9 employees)
- ( ) Small (10 to 49 employees)
- (•) Medium (50 to 249 employees)
- ( ) Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the transparency register. It's a voluntary database for organisations seeking to influence EU decision-making.

* Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

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- Åland Islands
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
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- Dominica
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Libya
- Liechtenstein
- Lithuania
- Luxembourg
- Macau
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
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- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Saint Martin
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan

Bermuda	Greece	Mozambique	Suriname
Bhutan	Greenland	Myanmar/Burma	Svalbard and Jan Mayen
Bolivia	Grenada	Namibia	Sweden
Bonaire Saint Eustatius and Saba	Guadeloupe	Nauru	Switzerland
Bosnia and Herzegovina	Guam	Nepal	Syria
Botswana	Guatemala	Netherlands	Taiwan
Bouvet Island	Guernsey	New Caledonia	Tajikistan
Brazil	Guinea	New Zealand	Tanzania
British Indian Ocean Territory	Guinea-Bissau	Nicaragua	Thailand
British Virgin Islands	Guyana	Niger	The Gambia
Brunei	Haiti	Nigeria	Timor-Leste
Bulgaria	Heard Island and McDonald Islands	Niue	Togo
Burkina Faso	Honduras	Norfolk Island	Tokelau
Burundi	Hong Kong	Northern Mariana Islands	Tonga
Cambodia	Hungary	North Korea	Trinidad and Tobago
Cameroon	Iceland	North Macedonia	Tunisia
Canada	India	Norway	Türkiye
Cape Verde	Indonesia	Oman	Turkmenistan
Cayman Islands	Iran	Pakistan	Turks and Caicos Islands
Central African Republic	Iraq	Palau	Tuvalu
Chad	Ireland	Palestine	Uganda
Chile	Isle of Man	Panama	Ukraine
China	Israel	Papua New Guinea	United Arab Emirates

- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

To which category of stakeholder do you belong?

- [ ] a) National or local administration
- [x] b) National regulator
- [ ] c) Transmission System Operator
- [ ] d) Distribution System Operator
- [ ] e) Market operator
- [ ] f) Energy company with generation assets
- [ ] g) Independent energy supplier with no generation assets
- [ ] h) Company conducting business in the energy sector no included in f) or g)
- [ ] i) Industrial consumer and associations
- [ ] j) Energy community
- [ ]

k) Academia or think tank

- [ ] l) Citizen or association of citizens
- [ ] m) Non-governmental organisations
- [ ] n) Other

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Please provide feedback only on the questions that are relevant for you. Questions can be left blank.

Making Electricity Bills Independent of Short-Term Markets

Subtopic: Power Purchase Agreements (PPAs)

The conclusion of PPAs between electricity generators and final customers (including large industrial customers, SMEs and suppliers), is a way of supporting long-term investment by providing both parties with certainty regarding the price level over a longer time horizon (typically, 5 to 20 years) compared to other alternatives. In particular, PPAs contribute to reduce the uncertainty of final customers concerning electricity prices and their exposure to price variations, allowing to make consumers' bills independent from the fluctuation of fossil fuels prices. However, as PPAs are contracts signed over a long period of time, they bear considerable risks and costs for smaller market participants. Hence, their accessibility is currently limited to a few large final customers (e.g. energy intensive undertakings), creating a risk that access to decarbonised generation is limited to a subset of consumers.

Whilst the uptake of renewable PPAs is growing year-on-year, the market share of projects marketed under renewable power purchase contracts covers still only 15-20% of the annual deployment. Furthermore, renewable PPAs are limited to certain Member States and large undertakings, such as energy intensive undertakings.

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

In 2022, CRE published a study conducted with the French consultant E-Cube on the growth dynamic of PPAs in several countries in Europe. It was the opportunity to highlight several key features that directly impact the development of PPAs.

- Risk aversion of generators leads to a reservation of PPAs for counterparties with very good credit ratings.
- The long contract durations required by lenders prevent small consumers from accessing PPAs
- The lack of long-term wholesale markets prevents buyers from hedging their positions on the market.
- Calibration of support schemes for RES development may discourage the signature of PPAs when too generous.

In France, the development of greenfield PPAs is only in its early stages. Yet, it remains quite difficult to follow these dynamics as there is currently no global monitoring of the signature of PPAs and more generally of bilateral contracts by the national authorities: such a monitoring should be implemented to support the development of PPAs.

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

at most 6 choice(s)

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

Do you have additional comments?

2000 character(s) maximum

(a) Yes, to some extent. Pooling demand could help small consumers to contract PPAs. Nothing prevents such pooling and some private initiatives have already emerged in France.
(b) Yes, it could be effective. Credit rating of the buyer is indeed key for renewable producers and their lenders. In the current crisis context, requirements can even be higher. In France, it leads to difficulties for big industrial companies to sign PPAs (PPAs that have been announced in France generally concern state-owned or BtoC companies). A public guarantee fund for PPAs was announced at the end of 22.
(c) Yes, very effective especially for offshore wind. There is a real opportunity to foster the development of PPAs for renewable technologies that are now mature (in terms of costs) and for which the generation profile /loading rate might be interesting for consumers. CRE is thus in favour of the development of hybrid tenders for offshore wind for instance, with a potential combination of PPA and CFD.
(d) Yes, to some extent. Standardisation would be helpful for newcomers, yet, in this type of bilateral relations with competition between potential counterparties, contractual adaptability is key to make the difference.
(e) Yes, but with side effects. Such an obligation would foster the development of PPA, yet it might also lead to a concentration of the retail market as all suppliers do not have the same ability to sign such long-term contracts, depending on their size in particular. Overall, CRE could support such a proposal if PPAs make up one option among others for retailers to satisfy this kind of long-term hedging requirement. Mitigation measures might have to be implemented to ensure that the concentration on the retail market is not significantly harmed.
(f) Maybe, but probably not a game-changer. The development of cross-border PPAs is highly dependent on the possibility to reserve cross-border capacity on the very long term, which raises a lot of difficulties.

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

If yes, please explain which rules should be revised and the reasons.

2000 character(s) maximum

Most of all, developing liquidity on futures and forward markets, including longer-term products, is essential to the development of PPAs, as it will give producers and PPA-buyers the required hedging opportunities; think of a baseload PPA, where the producer needs to hedge the purchases and sales that will complement its intermittent production. Public intervention for instance tenders for designation of market makers, should be allowed in order to foster liquidity on long-term futures.

It could be beneficial to require Member States to regularly publish reference observation reports giving a benchmark of PPAs that have been signed and the contractual features on which they are based, in order to give some transparency and market references without breaching confidentiality rules

Furthermore, the current electricity market framework, especially Directive 2019/944 in its article 5, allows State interventions on prices in only few and very specific cases, for instance state interventions aiming at protecting vulnerable household consumers. The requirements for such public interventions could be broadened to help promote those risk and economic value sharing contracts between various market players.

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

- (●) Yes
- ( ) No

If yes, under which conditions? What would be the benefits and challenges?

2000 character(s) maximum

Yes, but only to a certain extend.

In France, the RES acceleration law that is currently in the final stages of adoption will make the combination of PPA and support scheme possible.

Price remains the main driver: whereas support schemes are theoretically designed to cover the full cost of RES, PPAs' price also aim at covering these costs but are also depending on long-term market prices' expectations of both counterparties. Therefore, mature technologies are the best candidates for a hybrid valuation of the generated electricity.

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	○	●

If yes, how can these risks be mitigated?

2000 character(s) maximum

In parallel to PPAs, it is essential to take measures to develop liquidity on forward and futures markets, including on longer-term products than today, so as to ensure liquid sourcing opportunities for suppliers of smaller consumers.

An alternative would be to encourage suppliers to procure a predefined share of their consumers' energy through PPAs; such obligations would need to be carefully calibrated in order not to seriously undermine competition on the retail market.

Please explain

2000 character(s) maximum

(a) Yes, to a limited extent. Depending on their detailed design, some of the PPA volumes go through short-term markets or lead to balancing requirements that are settled on short-term markets.

(b) Yes, to a limited extent: smaller consumers (SMEs for instance) will have more difficulties to sign long-term contracts all the more so as they might not be able to absorb a full generation profile. However, aggregation is always possible.

(c) No

(d) No

(e) No, except in periods of low wholesale prices : the development of PPA contracts will protect the consumers against price volatility on the long-term ; of course that means benefits / market prices in periods of high prices, and the opposite in periods of low prices.

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?

2000 character(s) maximum

Liquidity is generally good up to one year ahead, weaker for 2-3 years ahead, and inexistant beyond.

This hinders the practical possibility of hedging over longer term maturities. This is particularly true for generators willing to hedge for a time horizon matching the duration of new investments in electricity generation.

Due to several factors outlined in the next question, liquidity in unevenly developed among the different EU markets. As opposed to short-term maturities, long-term markets do not benefit directly from European integration through the interconnections, as cross-border capacities are sold no longer than a year in advance. Worse, yearly long-term transmission rights are sold in one auction and only a few weeks in advance for most Europe borders (except with the UK border). Therefore, liquidity remains fragmented. If cross-border capacities were to be sold earlier, their owners would be able to buy and sell power in the corresponding maturities depending on the price differentials, thus “coupling” the long-term markets, which would likely improve liquidity in areas close to the most active markets (Germany).

Currently, trading locational spreads without owning the cross-border capacity as a hedge is a speculative activity, with high risks when the spreads are high and volatile. CRE has conducted a survey regarding the forward market in France for the winter of 2022-2023. Many market players point to the lack of interconnexion capacity as a factor for the very high risks premia.

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

2000 character(s) maximum

Depending on circumstances, several factors may hinder participation in the forward market:
- Generators may have low incentives to look to forward hedging, when attractive CfDs are already available.
- Consumers may expect State intervention in case of high price volatility.
- Suppliers are exposed to volume risk linked to consumer churning, lowering their delivery to a few quarters.
- Collateral availability and costs may reduce the willingness and capability to hedge.
- Products availability and diversity is limited.
- Liquidity is insufficient and uncertain beyond one or two years deliveries.
- Some industrial consumers may prefer long-term bilateral contracts with physical delivery instead of financial contracts.

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 have additional comments?

2000 character(s) maximum

Requiring suppliers to hedge for the share of their retail portfolio that correspond to fixed-price contracts is necessary for consumer protection and fair competition (addressed later cf. “prudential regulation”).
Beyond that, a broader long-term hedging obligation on suppliers on the market, especially on the mass market, would be beneficial for the electricity sector as a whole, and in particular for retail competition and consumers.
- Long-term adequacy would be strengthened, reducing the risk of physical shortages and price spikes.
- Long-term market prices tend naturally to align on costs, due to of the possibility of entry in the market; therefore consumers would benefit from the expected costs low-carbon generation and be protected against scenarios of sustained high prices.
- The hedging obligation would create a level playing field between vertically integrated suppliers and stand-alone suppliers, who are otherwise favoured one after the other depending on the short-term price level. Retail competition could be hampered if the hedge value were not properly processed when a customer changes supplier. This risk must be addressed.
- Two remedies may be proposed to counter this risk: the hedging obligation could be asymmetric (cap) leading to call options being the preferred instruments; a lump sum value of the hedging obligation could be transferred between suppliers.

Moreover, generators with long-term arrangements at fixed price would benefit from stable revenue and would lower risk premium of financial resources lowering electricity costs thus retail prices.

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 additional comments?

2000 character(s) maximum

The creation of virtual hubs for forward contracts to improve liquidity in forward markets still needs additional analyses and developments and does not offer obvious benefits compared to an improvement of existing long-term arrangements.
As a concept, virtual hubs could bring potential benefits (they could for instance be useful for some small bidding zones located far from Germany in case of few cross-border congestions between them). However, this is a complex model whose design raises several technical challenges, including determining the hub price formulas, designing the geographical coverage of the hubs, the type of transmission rights associated, and the risk of low liquidity in case of poor price correlation between the hub and bidding zones. Moreover, the added value of this model compared to the current system is uncertain. The experience in Nordic model shows that the hub model has pros and cons that need to be carefully weighed. In Western Europe, the introduction of hubs could even fragment liquidity.
Instead of introducing sophisticated and untested models, CRE supports a pragmatic approach that consists of improving the accessibility of existing long-term transmission rights, in the form of options (either Financial Transmission Rights or Physical Transmission Rights) to increase their liquidity (organising more frequent auctions for the existing products and earlier in the year, introducing products with longer maturities (Y+2 and Y+3), organising a secondary market). Such measures would be rather easy to achieve in the actual perimeter of FCA Guideline.

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

In our opinion, improving the efficiency of forward markets should provide the following benefits at the national and European level:
- higher liquidity,
- more efficient price discovery,
- lower risk premia.

These improvements could be implemented in three complementing ways:
- Market making: the first step to develop a liquid forward market is to organise a market making scheme. Such scheme introduces dedicated market makers to guarantee the possibility of buying and selling long-

term contracts in a permanent, transparent, and non-discriminatory manner. These contracts are standard futures and/or options. Two methods are usually considered: a call for tenders; or a mandatory market making obligation on the players with the largest market shares.
- Improved allocation of long-term transmission rights in the form of options (FTR and PTR) and introducing a secondary market for long-term transmission rights, within the current electricity market framework and in accordance with the needs expressed by market players:
> Introducing long-term transmission rights with longer maturity (calendar products offered two or three years before the physical delivery, namely Y+2 and Y+3 products), as well as seasonal and quarterly products;
> Organizing more auctions for the existing products (yearly and monthly), earlier in the year, and with different closing days depending on the borders;
> Continuing to issue long-term transmission rights in a form of options (FTR or PTR, which are financially equivalent), due to the flexibility and valorisation associated with the optionality, the absence of negative price risk and associated high levels of collaterals and the overall positive impact on liquidity due to their attractivity;
> Introducing an organised secondary market of long-term transmission rights would require JAO/TSOs to fall under financial market regulation (MiFiD II limitations). An alternative would be to set up a secondary market by a power exchange for continuous allocation between market participants. Another alternative is to implement more auctions for long-term transmission rights products to replicate a kind of "secondary market". This latter change does not require changes in the electricity forward market.
- Long-term hedging obligation on suppliers (see Q4). Such regulation aims at resolving the long-term adequacy externality and create a natural demand for forward and/or call options.

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

Yes, but the suitability of these schemes depends on the share of production under CfD in a given market /Member State

State-granted two-way contracts for difference for new generation capacities have proven to be a rather efficient way to support investments, in particular for new low-carbon generation technologies which are not competitive or require long-term earnings visibility. Such mechanisms help providing financial security to projects through a guaranteed revenue level, and in theory reduce the cost of capital invested in such projects. Moreover, they allow Member States to steer investments according to their national objectives in terms of generation technologies mix. In France, the revenues from two-way CFDs during the crisis of wholesale prices has been used to finance exceptional consumer protection measures by the French government.

However, CfDs risk making the producer immune to all wholesale price developments. This becomes a major issue when extending CfDs to a significant share of production in a given country.

With a major share of production under CfDs, there would be a significant risk of undermining the quality of price formation on short-term and/or forward wholesale markets (depending on the contracts' specifics). Smart design features (e.g. CfD reference market price) might help preserving incentives to operate production in response to very short-term market signals (for instance if the reference price is not considered on an hourly basis or at the level of a specific installation). It is however unclear at this stage whether they are sufficient.

Anyway, a producer engaged in a CfD with the State has no incentive anymore to hedge and therefore will probably not participate in the future market (except if the CfD is based on a long-term reference price). Impacts of CfDs on price formation is a major point to be thoroughly investigated before mass deployment.

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

Imposing systematic CfD schemes on new publicly financed inframarginal generation might run the risk of putting, on the long term, a large part of the production mix under CfDs. This would impede the functioning of wholesale markets. As such, these schemes should not be systematically generalized.

New publicly financed investments in inframarginal electricity generation will essentially be based on renewable and nuclear capital-intensive capacities. Those which are able to develop without public support must be let free to do so. Publicly financed CfD or equivalents must be reserved to technologies not able to compete without support because of their costs (new renewable technologies, hydrogen …) or the risks and time to market (nuclear).

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

2000 character(s) maximum

In a well-functioning market with high liquidity of long-term maturities, investments in competitive technologies would be assured.

However, Member States governments may wish to favour some technologies, in specific cases such as:

- Non-competitive but promising technologies
- Capital-intensive decarbonised technologies with high construction risks, heavy overnight costs and therefore high financing cost
- Small-scale decentralised generation

This should not lead to a dominant share of production under CFDs. In this case, the preferred tool would be a financing and regulation scheme, which could, but not necessarily must, include a CfD or a similar arrangement, in addition to normal contracts (PPAs and standard contracts such as futures and options) and designed in such a way as not to impair the proper functioning of the market.

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

2000 character(s) maximum

This should not lead to a dominant share of production under CFDs. In this case, the preferred tool would be a financing and regulation scheme, which could, but not necessarily must, include a CfD or a similar arrangement, in addition to normal contracts (PPAs and standard contracts such as futures and options) and designed in such a way as not to impair the proper functioning of the market.

What technologies should be excluded and why?

2000 character(s) maximum

Provided that market failures have been addressed, that electricity and carbon markets are well-functioning and long-term adequacy issues have been resolved, economically mature technologies should in principle not receive additional subsidies.

In any case, in the current market environment, we should already consider excluding two kinds of generation from CfD or similar arrangements:

- Fossil fuel generation should not be granted CfD, in line with the climate policy.
- Dispatchable peak load generation and flexibility means (demand response, storage including hydro…) should not be granted contracts that have undesirable incentive properties regarding their availability and participation in the market.

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

Requiring all new capacity to be developed under CfDs would have several adverse effects:

- The forward market would become dysfunctional because of the reduction in the hedging needs of producers, suppliers and large consumers.
- Loss of quality of markets signals, which are essential to the development of flexibilities. Therefore, the flexibility needed tor a decarbonized electricity system would have to be planned by the State.
- Limitation of the PPA market to existing capacities.
- Distortion of competition between technologies leading to a non-optimal mix and therefore a high electricity price.
- If CfDs are Pay as Produced, which is generally the case, the volume risk and the associated costs are borne by consumers or by the State.
- These costs may increase significantly in a low-carbon mix dominated by non-dispatchable generation.
- Increased complexity for market players to manage their price and volume risks.
- Generators would be exposed to an unquantifiable risk of price revision (if the CfDs are not proper commercial contracts).

Furthermore, it should be noted that CfDs using a forward reference price ("forward CfD") instead of a day-ahead reference price would preserve or even improve the apparent liquidity of the forward market. However, producers (and suppliers and consumers exposed to the other side of the CfD) would only participate in the forward market in order to reproduce the reference price. They would use market orders, selling (or buying) at any price, replicating the reference price formula. This selling by producers (and buying by suppliers and consumers exposed to the other side of the CfD) at any price on the futures market would undermine price formation and market integrity. This effect would be exacerbated by the fact that “forward CfDs” would represent a large part of the wholesale market.

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

Some risks could be mitigated by better designs.

Some CfDs guarantee an hourly price. This reduces the exposure of generators to spot prices, creating

unwanted behaviours. Exposure to hourly spot prices can be preserved by contract for difference using periodic variable reference price (e.g. on a monthly basis), calculated ex post as the average of profiled spot price, as is already the case in some Member States.

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

There is no easy way to answer this question. A default approach might be the simplest way to address the issue of channelling back economic value to consumers ; however, it would probably not convey efficient price signals to consumers regarding energy sobriety. Moreover, the diversity of vectors used by Member states to implement emergency support schemes for consumers (and the difficulties faced in France regarding some categories of consumers) have shown that the complex issue of efficient allocation of the pay-outs to different categories of consumers probably has no default global solution.

One way to channel back costs and pay-out generated by two-way CfDs could be a specific tax on electricity consumption, which would become negative in periods of high prices. However, the legal EU framework related to taxation of electricity would have to be adapted since its current terms seem to limit the efficiency of such a tool for consumer protection.

Another solution could be a mandatory contractual engagement between retailers and Member States, implementing a positive or negative contribution on their portfolio’s electricity consumption.

In any case, the transfer of the pay-out of the CfDs to consumers is greatly restricted in the current EU legal framework. An evolution of the legal framework, especially regarding State aids and energy taxation, would therefore be a prerequisite to an effective transfer of the value of the CfDs to all categories of consumers.

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

One possible approach is to define the duration of the CfD in accordance with the lifespan of the installation (depending on the technology). A CfD duration covering the whole life of the asset limits the market risk for the generator and prevent undue revenues in case of high market prices at the end of the contract (whereas the asset would be generally totally financed at that stage) without having to implement specific measures as a tax on undue revenues of inframarginal generators.

On the other hand, States might be reluctant to bear the price risk on the long-term. and there might be a willingness to make these capacities more exposed to market signals at certain stage.

Generally speaking, public support should be limited to what is needed to foster the development of new decarbonized capacity, which would plead for contract durations shorter than the lifespans.

Regarding RES capacities, the issue of the good level of incentives for re-powering should also be addressed.

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

Yes. New generation should be free to earn full market revenues after the CfD expires. Most probably, they will enter into PPAs or hedge on the wholesale market. Imposing a lifetime payout obligation will only increase the price of the CFDs.

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

If such possible use of regulated CfDs for existing generation is deemed appropriate, should the obligation apply to all types of existing inframarginal generation or be limited to certain types of generation (and if so, which types)?

2000 character(s) maximum

Yes. Generally speaking, Member States should have some leeway regarding the means to ensure an adequate protection for consumers against very high prices, provided they are not in breach with other European policies.

Under what terms and conditions could regulated two-way CfDs on existing generation capacity be imposed?

2000 character(s) maximum

There might be a case for allowing Member States, for some technologies, to keep existing infra-marginal capacities regulated by schemes like two-way CfDs. The main purpose of such mechanisms would be to ensure part of the value of these competitive capacities continues to be transferred to the consumers, protecting them from high price periods.

However, attention should be paid:

- To keeping strong incentives to optimize production according to the needs of the system, reflected by short-term market prices.
- Not to penalise liquidity on forward markets.

The valuation of the strike price of these CfDs should either be set through a market process (tenders) or be subject to strong oversight by the regulator, and in all cases should at minimum reflect the full cost of the capacities.

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	○	○	○	○	○

How would you address those potential risks as regards the imposition of contracts for difference on existing generation capacity?

2000 character(s) maximum

(a) legitimate expectations/legal risks;

High risks (retroactivity)

(b) ability of national regulators/governments to accurately define the level of the price levels envisaged in these contracts;

Low risk : in the case of the French nuclear fleet for example, CRE has defined in 2020 a methodological framework to compute the cost of nuclear generation, which has been rather positively received by the Commission.

Strong regulatory oversight is essential to address this concern.

(c) locking in existing capacity at excessively high price levels determined by the current crisis situation;

Low (if prices are purely set based on the cost of the capacities) to medium (if some market revenue expectancy is included in the strike price) risks

To mitigate this risk in the latter case, periodic reevaluation of the strike price (every 5 years for example) could be considered, although this solution comes with drawbacks as well. This solution is specially adapted to existing generation capacity requiring a strike price under the control / oversight of the regulator

(d) impact on the efficient short-term dispatch.

The level of risk depends highly on the relative amount of generation under CfD in the mix (see Q1) As said before, the specifics of the CfD should be designed to preserve the incentives of generators to place their production as optimally as possible. However, beyond short-term dispatch, there is also the risk to dry liquidity up on forward markets.

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

This would address the objective of transferring to consumers the value of existing infra-marginal capacities.

However, the loss of opportunities for generators implied by such schemes could entail either higher ceiling prices, or a large transfer of risk to the generators.

To mitigate these drawbacks, additional tools could be considered in the CfD, such as carry-forward and carry-back losses mechanisms. Alternatively, other options outside of the CfD are possible: (possibility to hedge on long-term markets, creating demand by obligation on retailers, allowing bilateral long-term contracts with risk sharing, …) The pros and cons of each must be further investigated.

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

These broad objectives would be better achieved with (in this order):

Liquid and efficient forward hedging. Forward markets, where standard contracts are exchanged, are currently insufficiently liquid in most Member States. This low liquidity undermines the possibility to provide adequate hedging, effective price formation and low risk premium. Forward hedging is in principle the most competitive tool because it is transparent and non-discriminatory. However, forward markets only develop when there is a demand for hedging from consumers and a confidence that markets will continue to function as intended far into the future.

PPAs. Freely contracted PPAs are needed as complements to standard contracts. Some market players have specific needs that can only be satisfied by PPAs. It should be noted that PPAs are not in competition with forward hedging. On the contrary, PPAs need liquid and efficient (low risk premia) forward markets to be easily priced, aggregated and arbitraged away. Therefore development of PPAs will also increase hedging demand on forward market.

CfDs are not seen as generalized tool to develop new capacities but could be used to meet certain energy policy targets for technologies not able to develop only in the market, or to protect consumers against high prices.

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.

[1] See the recommendations of the Study “Support on the use of congestion revenues for Offshore Renewable Energy Projects connected to more than one market” https://energy.ec.europa.eu/system/files/2022-09/Congestion%20offshore%20BZ.ENGIE%20Impact.FinalReport_topublish.pdf

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	○	◉

If yes, please specify

2000 character(s) maximum

(a) CRE has recently contributed to the implementation of costs' (including interest rates) indexations in RES support schemes (symmetric indexation), which helps to de-risk RES projects in a very uncertain context.

(b) in the short-term, derogations from the NC RfG could be granted to remove the voltage criteria (>=110 kV) for defining the requirements for small generators connected to mixed customer sites; otherwise, disproportionate requirements would apply to these generators.

Do you have additional comments?

2000 character(s) maximum

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

CRE does not consider that network tariffs are a barrier to ensure the necessary investment in networks.

The approval by regulators of network dimensioning rules and network investment plans ensure the necessary and optimal investment in network infrastructure. Incentive regulation is used to make sure TSOs and DSOs are efficient in terms of delays and costs. If required, those can be adapted by the regulators to better suits the need of investment.

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

6

(b) its impact on decarbonisation

0

(c) security of supply

1

(d) investment signals

1

(e) legitimate expectations/legal risks

1

(f) fossil fuel consumption

3

(g) cross border trade intra and extra EU

2

(h) distortion of competition in the markets

4

(i) implementation challenges

Do you have additional comments?

3000 character(s) maximum

(a) Effective in the short term but will lead to increased complexity and uncertainty for generators, market participants. It may increase capital costs in the long run, or even deter new investment in low-carbon capacity, as it has been seen recently.

(c) Will increase shortage risk in the long run.

(d) Will lead to investment shortfall.

(f) May increase consumption during high-carbon generation periods.

(g) Will distort price formation in and between price zones.

(h) May decrease price efficiency, transparency, and fair competition on wholesale markets.

******

In case you consider maintaining such a revenue limitation warranted, in what situations should it apply? How should the level of the cap be defined?

It should apply only to existing generation not engaged in PPAs or CFDs.

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

Do you have additional comments?

2000 character(s) maximum

If such measures are to be implemented on a long-term basis, they should ideally be in a uniform manner across the EU, as not to distort incentives to invest in capacities in a locationally optimal way.

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

see response to the question 7 of the section "Contract for Difference"

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

Marginal pricing is the natural functioning of commodity markets, even though there is not always organised pay—as-clear auction. For instance, gas and intra-day electricity markets are based on the same principle, as well as oil, coal, metals, cereals, etc.

In electricity, the SPOT market is based on an organised auction with a clearing price in each bidding zone. This optimizes the dispatch and cross-border flows of the European system with very little “gaming” possibilities for the market participants. Switching the day-ahead auctions to pay-as-bid would not provide any benefits as market participants would try to guess the equilibrium price leading in the best case to the very same results but with the risks of adverse effects (asymmetrical information, gaming…). In addition, a pay-as-clear auction is very easy to participate to and enables a level playing field among market participants regardless of their size.

Hence, we do not see a better alternative for the SPOT auction system. However, considering the recent events and discussions regarding the HMMCP methodology, CRE sees a clear value to allow a decrease of the maximum clearing price and therefore calls for an adjustment of the regulation.

OTC markets, forward markets and intraday continuous markets are working with the same fundamentals but are not organised through explicit pay-as-clear auctions. Auction based trading alone, may not be the solution for all timeframes and purposes.

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

3000 character(s) maximum

The EU ETS is the principal tool for implementing the climate policy. It ensures that emission volumes are limited to a predefined cap at the EU level. In this framework, the ETS incentivises the efficient decrease of emission, with the most cost-effective ones selected through market-base incentives.

However, the ETS futures market is currently limited to 3 years deliveries. Long term incentives to invest in low carbon flexibility and storage are thus inadequate and do not reflect the EU climate policy. One solution would be to increase the visibility of the EU's cap-and-trade policy at least 10 years in advance.

Moreover, a liquid and well-functioning long term forward market would be an efficient way to finance the development of low carbon projects. One of the possible remedies to be considered could be to remunerate the provision of liquidity on long-term hedging products. Tenders for the provision of liquidity on organised carbon futures markets would be organised so that at any given time, bids and offers are available on long-term maturities.

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 have additional comments?

2000 character(s) maximum

First, it is important to highlight that the current EU legislation already allows intraday gate closure time to be moved closer to real time if NRAs agree on.

Hence, the current EU legislation is perfectly fitted for this highly sensitive subject as it allows to modify it if it is assessed to be beneficial while imposing any intraday gate closure time closer to real time would only endanger the security of the system by bypassing the existing technical concerns.

Indeed, on a technical level, although if the reduction of intraday gate closure time (IDGCT) can make sense to take into account the latest previsions of renewables productions, this possibility should be put in balance with its costs in terms of system operation. Moving the gate closure closer to real time may impose that TSOs perform balancing and real-time congestion management in parallel to intraday markets which would mean for some TSOs a clear shift in system operation paradigm. In addition, for several countries, this new paradigm can induce significant investment requirements to cope with the new characteristics of the balancing market. Cost-benefit analysis shall be done and properly discussed in technical task forces including TSOs, NRAs and stakeholders, in order to base our views on facts rather than assumptions.

Finally, as this is a highly technical issue with very little direct implications on the matter of prices and investments that this public consultation targets, we think that this topic should not be addressed here.

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

Currently, the trades between NEMOs orders books that belong to the same bidding zones are not possible after cross-zonal gate closure time.

Sharing order books should indeed provide benefits both in terms of liquidity for market participants and a level playing field for competitive NEMOs. We do not identify specific drawbacks at this stage.

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

A mandatory participation in the day-ahead market, including generation under CfDs and PPAs, does not seem useful nor necessary. It should be noted that most balancing systems impose mandatory participation of available resources, which provide incentives to participate in the day-ahead market.

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

The European market design is a self-dispatch model with large bidding zones (in general). A significant part of generation goes directly from producers to consumers and not through the market: market participants exchange only the net volume required to balance their perimeter and align their internal marginal cost with market prices. Thus, it is not directly possible to link a bid on the market with the underlying asset. Switching to unit-based bidding would require generators to bid all generation units on the market and not only the net volume they need to balance their portfolio, thus would likely require implementing a mandatory market pool for all generation. Moreover, enforcing strictly the link between the bids and the final dispatch would require significant changes:

- the market products would need to be more complex to allow generators to offer the full flexibility of their assets (with explicit start-up costs, maximum daily generation constraints, etc.)
- the intraday trading arrangement (which is portfolio-based) should also be adapted, otherwise the strict link between bids and each unit would be lost.

As a consequence, CRE is not in favor of such a change which would have heavy consequences on the market.

However, technology-based bidding on the day ahead auction would be a simpler change and could deliver more transparency and ease market monitoring by regulators, even if the link between the bidding and the actual generation cannot be strictly enforced.

Finally, CRE considers that it would be more efficient to require generators to provides NRA with data on the variable cost they use internally for their optimization, for every generation unit and at the time resolution

used in their internal processes (most likely daily), in the scope of REMIT data reporting. This would yield a full transparency for NRAs to assess whether all in-the-money generation units are actually running.

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

To develop to their full potential, EV smart charging, consumption management and distributed storage need two things: 1. market signals reflecting the true value of their flexibility, 2. Market arrangements allowing them to participate in every segment. Therefore, the reform of the market design should pay attention not to distort the price signal of the marginal costs. Retail tariffs reflecting the wholesale prices differences should be competitive. Accordingly, potential redistribution or mitigation schemes on retail prices should avoid mechanisms proportional to consumption that would flatten the incentive. Hybrid contracts combining long term products and dynamic pricing are a way to conciliate flexibility incentive and consumer protection.

Peak-to-off-peak options in the day-ahead market would be the financial products most compatible with the underlying costs of demand response and energy storage. Power exchanges could investigate how to offer these products. The main obstacle would be that the inclusion of peak-to-off-peak options in the market coupling could complicate the resolution and increase the computing time beyond what would be acceptable.

Furthermore, all segments of markets should be equally accessible to all sources of flexibility. Regulators should continue to investigate for potential constraints or bias in aggregation or control rules.

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 have additional comments?

2000 character(s) maximum

TSOs have two main roles: assets owner and manager, system operator. One should clarify if the question concerns one or the other role, or both of them.

Regarding system operation (balancing markets, procurement of reserves, maximization of interconnexion capacity via congestion management), TSOs have very little room for incentives on remuneration. For instance, Commission Regulation (EU) 2017/2195 (EB-GL) states that balancing market shall be revenue neutral for TSOs.

Regarding asset management, development and exploitation, TSOs and DSOs may currently be incentivized to develop new infrastructure in order to grow the regulated asset base, rather than use flexibility sources when congestion occurs on the network. Proper incentives must be defined by regulators in order to foster the use of flexibility by TSOs and DSOs. Furthermore, TSOs and DSOs could integrate the use of flexibility assets in their investment and sizing doctrines.

However, CRE doesn't see any need for a European regulation on that topic.

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 have additional comments?

2000 character(s) maximum

The use of sub-meter data is necessary to support the development of demand response and energy storage. Their quality and precision have to be clearly assessed, especially if they are used for the billing process.

In France, metering is included in the perimeter of the monopoly of network operators. There is no reason to change that. However, it is perfectly fine to allow the use of private sub-meter data, provided that they are certified to make sure that their data can be used on the settlement processes managed by network operators.

This is especially true regarding electric mobility. The use of sub-meter data from EV or charging infrastructure should be made possible, in order to release the full potential of smart charging and vehicle to grid, without requiring a second meter installed by the DSO. This will require the proper certification of the sub-meters.

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 have additional comments?

2000 character(s) maximum

A further development of demand response is achievable through the current interaction between the wholesale market actors and retail customers (industrial or retail). In peak times, the price signal of the wholesale market should play its incentive role to reduce consumption via demand response market-based mechanisms, as recently proven in several European countries and notably in France. Efforts should thus be focused on facilitating the access to the current market-based mechanisms, rather than on developing a new dedicated ancillary service that could add complexity to an already challenging objective.

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 have additional comments?

2000 character(s) maximum

Demand response should be an integral part of the market itself and the high prices of the wholesale market should a sufficient signal to obtain lower consumption. Prior to introducing any further requirements, efforts should thus be focused on facilitating the participation to the current market-based demand response mechanisms. On a general matter, we would recommend not to put such requirement directly into the Regulation.

However, any mechanism to protect consumers against high prices could go with a requirement not to erase any demand response incentive.

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 have additional comments?

2000 character(s) maximum

Nothing more than a proper price signal, efficient connexion to the grid and easy market participation as developed in Q8 (What further aspects of the market design could enhance the development of flexibility assets such as demand response and energy storage?)

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 answer to this question is highly dependent on the designs of the capacity mechanisms, which are very diverse across the EU. But generally, no, the current setup for capacity mechanism is only partially adequate, because it did not lead yet to a strong development of DSR and storage capacities, and it seems unlikely it will by itself allow to reach the objectives set by decarbonization targets.

In France, introduction of specific tenders and of long-term contracts was necessary to promote the development of DSR and storage capacities. Nevertheless, the capacity mechanism currently in place was able to maintain in operation generation capacities necessary to ensure security of supply, and develop a small share of the needed DSR and storage capacities as well.

With a rising share of renewables, a capacity mechanism could constitute a relevant tool to develop flexible and decarbonized capacities to ensure the security of supply, provided it has the following properties :

- it should rely on multiple-year contracts for new generation to provide long-term visibility for generators. Current capacity mechanisms are limited to 10 years and mostly rely on one-year contracts : investments are limited due to a lack of visibility on future capacity earnings, as a new capacity could be selected for year N and not for year N+1.
- Margins regarding the reliability standard to take account of rare events could be integrated into the capacity mechanisms to incentivize investment in DSR and storage. Current capacity mechanisms base their capacity obligation strictly on the reliability standard. Moreover, they are suspended in case the reliability standard is met for a given year : this situation further reduces visibility for investors in DSR.
- It should be designed to encourage new flexible decarbonized capacities by introducing emission thresholds and flexibility criteria to participate to the capacity mechanism. Emission thresholds should be gradually introduced, as most Member States mostly rely on fossil generation to ensure the security of supply during system stress.
- A capacity auction close to the delivery year would incentivize the development of DSR and of other flexible decarbonized capacities, such as storage, within the capacity mechanism.
- The cost of the capacity mechanism should be fully passed on to consumers, to send a price signal to reduce their consumption during system stress and develop consumers flexibility.
- The effectiveness of a capacity mechanism as a main driver in the development of DSR and other flexibilities would however be reduced if competing and redundant mechanisms (such as public tenders for offer) for these technologies are maintained at the same time.

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

Do you have additional comments?

3000 character(s) maximum

In theory, there could be real advantages in moving towards finer bidding zones or even nodal pricing, especially in situations of congestion on the transport networks.

However, such a development requires a political consensus as well as long technical implementation times as the current market model has been built with different features.

Moreover, the price crisis of 2022 is not due to insufficient local price signals but to large and unexpected supply imbalances. The crisis also revealed insufficient long-term hedging.

Therefore, a more realistic approach would be:

- Firstly, to extend the maturity and liquidity of transmission capacity between existing bidding zones.

- Secondly, focus on the most congested bidding zones with dedicated solutions.

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

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Energy sharing and demand response

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

- ○ Yes
- ◉ No

Do you have additional comments?

2000 character(s) maximum

Such a general provision would erase any signal regarding congestion on the particular location of the consumer on the network.

In France, when a collective self-consumption's operation is developed with consumers and local RES producers involved, the DSO is responsible for measuring consumption and generation load curves and calculating the share of local generation to be assigned to each consumer.

The energy provided by collective self-consumption is still subject to network tariff payment. However, CRE has devised a special tariff network option for collective self-consumption, allowing to take into account the cost savings due to the non-utilisation of higher tension parts of the network when the local generation is used.

Such a mechanism should not be extended to more distant points of the network, as in this case there are no savings on network costs.

If such a right were introduced:

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

- ○ Yes
- ◉ No

Do you have additional comments?

2000 character(s) maximum

No, if not restricted to local areas.

(b) Should it be restricted to local areas?

- (•) Yes
- ( ) No

If yes, why?

2000 character(s) maximum

But no need for a European regulation, as it is already in place in France.

Do you have additional comments?

2000 character(s) maximum

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

- ( ) Yes
- (•) No

Do you have additional comments?

2000 character(s) maximum

It should apply only when local generation is used locally, thus generating savings on network costs.

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

If yes, what particular issues should be taken into account?

2000 character(s) maximum

In France, EV charge points can use a second meter behind the main meter, but for the moment it has to be a DSO's one. The use of non-DSO certified secondary meters should be allowed, especially for electric mobility.

Do you have additional comments?

2000 character(s) maximum

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

Do you have additional comments?

2000 character(s) maximum

CRE sees no reason to make it mandatory for all suppliers,

In general, we do not really see a market failure here. Such contracts were widely offered before the crisis.

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

Do you have additional comments?

2000 character(s) maximum

CRE considers that one year is the minimum duration to allow consumers to benefit from the stability of fixed price contract.

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 have additional comments?

2000 character(s) maximum

In France, termination costs are forbidden for residential customers. At the moment, this provision is very popular among consumers associations, as they see it as protecting customers from being stuck in unfavourable contracts.

CRE thinks that in reality, this is not favourable to consumers, as suppliers are obliged to take into account in the pricing of their offers the risk of early termination by the customers.

Having NRAs set termination fees methodology principles would possibly ease the worries of consumers associations.

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

- ○ Yes
- ◉ No

Do you have additional comments?

2000 character(s) maximum

Consumers' rights and protection framework in France already goes further than directive requirements.

Prudential supplier obligations

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

- ◉ Yes
- ○ No

Do you have additional comments?

2000 character(s) maximum

We support the principle of prudential obligations. Requiring suppliers to hedge for the share of their retail portfolio that correspond to fixed-price contracts is necessary for consumer protection and fair competition between suppliers.

Such hedging is standard practise among serious suppliers. In France, most of them have honoured their commitments towards customers during the crisis. However, a small number of them were not sufficiently hedged.

The cost of prudential obligations must be balanced against the risk of default and the costs of unfair competition which is ultimately borne by consumers. This cost should decrease if liquidity in the futures market is actively provided by market makers (cf. Forward Markets, Q7).

The first step is to mandate suppliers to submit the relevant information to the regulator: volume of fixed-price contracts at each maturity and corresponding hedging. The hedging satisfying the prudential obligation could take several forms: cash, standard hedging contracts (futures, forwards, options), PPAs, and if applicable for integrated suppliers, physical assets (generators, flexibility resources). To be accepted, physical assets should be duly certified as acceptable collateral, considering technical lifetime, expected availability and reasonable margin of safety.

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

- ○ Yes
- ◉ No

If not, why not?

2000 character(s) maximum

Prudential requirements for retail fixed-price contracts should be applied consistently across suppliers.

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

Do you have additional comments?

2000 character(s) maximum

It should be defined at national level which is already the case in France.

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

(a) If such a provision were established, should price regulation be limited in time and to essential energy needs only?

- ◉ Yes
- ○ No

(b)

	Yes	No

Would such provisions substitute on long term basis for direct access to renewable energy or for energy efficiency?	○	◉
Can this be mitigated?	○	◉

(c)

	Yes	No
Would such contracts reduce incentives to reduce consumption at peak times?	◉	○
Can this be mitigated?	◉	○

Do you have additional comments?

2000 character(s) maximum

(a) If such a provision were established, price regulation should be limited in time and to essential energy needs only?

Yes regarding time limit. However whether to cover essential energy needs should be determined at national level

(b) Would such provisions substitute on long term basis for direct access to renewable energy or for energy efficiency? Can this be mitigated?

No, these emergency measures are not related to direct access to renewable energy or energy efficiency

(c) Would such contracts reduce incentives to reduce consumption at peak times, can this be mitigated?

Yes. It can and must be mitigated otherwise it would have a negative effect on security of supply.

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

1.1. Review of articulation between REMIT and financial regulation

Current REMIT framework foresees following articulation between REMIT and financial regulation:

REMIT article 8(3) provides that persons subject to reporting obligation of transactions on financial instruments under the financial regulation should not be subject to double reporting obligations relating to those transaction under REMIT

Articles 3 and 5 of REMIT shall not apply to wholesale energy products which are financial instruments. However, Articles 4, 8 (except abovementioned point of double reporting) and 9 of REMIT continue to apply.

The current energy crisis showed the utmost importance to have a full picture of the market in order to better understand the price formation and interlinks between the behaviors of market participants of different nature (e.g. pure traders and market participants with physical assets). In this regard, the limits of financial regulators' competences pertaining to the energy sector have been spotted during last year, whereas ACER and NRAs have acquired a vast experience in the supervision of the wholesale energy markets, which is reflected by numerous sanctioning decisions. The current split between REMIT and financial regulation should therefore be reassessed, bearing in mind that current criticism regarding the adequate supervision of the wholesale energy markets is addressed to ACER and NRAs.

To complete this background, different frameworks and technical specifications for data collection exist under REMIT and financial regulation, which complexifies substantially the merge of data in a unique robust

data base. Besides, for some market participants, it is never certain whether their reporting is complete or not. As a result, both ACER and financial regulators suffer from an incomplete view of the wholesale energy markets. Besides, financial instruments and energy products can, under certain circumstances, be economically equivalent and therefore traded as equivalent products. As a result, not being able to monitor all transactions on energy markets including financial instruments hinders the NRAs' capacity to identify possible REMIT breaches to articles 3, 4 and 5. The exemption from double reporting should therefore be removed to allow ACER to collect all data related to the wholesale energy markets regardless their physical or financial delivery/settlement.

With regards to the second point, considering the existing interlinks in terms of market impact between spot and derivative wholesale energy products, NRAs should be competent to apply the prohibitions of insider trading and market manipulation to derivatives on energy commodities. The products should remain financial instruments covered, where applicable, by MiFID II, but the limits of REMIT scope currently included in its Article 1(3) should be removed in order to rectify the current strong mismatch between the heightened expectations towards ACER and NRAs in terms of markets understanding and monitoring, on one hand, and the means at our disposal to do so in an effective manner, on the other.

1.2. Granting investigation powers to ACER

Working discussions between ACER and NRAs suggests that ACER might have investigatory powers under REMIT. However, this could only be done when there is an explicit request from an NRA to get assistance from ACER, otherwise, it would interfere with the investigatory powers of the NRA and by extension with the subsidiarity principle. With regards to cross-border cases, ACER can already create and coordinate an investigatory group.

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

2.1. Harmonization and strengthening of the enforcement regime under REMIT

As far as it concerns the enforcement regime under REMIT, CRE doesn't see any shortcoming in the existing REMIT framework and therefore strongly supports it as (i) it relies on NRA competences (article 13 of REMIT) and (ii) the level of REMIT provisions in the existing framework is sufficient.

Indeed, the criteria that would help NRAs in sanctioning a market participant are already defined in recital 31 and article 18 of REMIT. Besides, the level of sanctions including the weighting of the sanctioning criteria must be assessed on a case-by-case basis. For instance, in France, administrative fines' thresholds are already provided by national law. CRE believes that a more restrictive approach established at the European level to determine the fine would narrow the appreciation margin / discretionary powers of the sanction committee when establishing the fine (article 18 of REMIT).

It is important that the powers of the sanction committee to determine the sanction remains at a national level.

2.2. Cooperation with 3rd countries

Article 17 of REMIT currently prevents any exchange of REMIT information with 3rd countries. A provision enabling ACER and NRAs to develop cooperation mechanisms with 3rd countries allowing REMIT

information exchange could be added under the following double condition: reciprocity and only where the members and agents of the concerned authority are held to the same level of professional secrecy than the one imposed on members and agents of the concerned NRA. The current lack of dedicated framework could be crucial for the effective investigation and in particular for the enforcement of cases with market participants located in 3rd countries.

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

3.1. Centralized inside information platforms

ACER has developed a framework to improve the transparency of inside information disclosure, promoting the centralized publication on Inside Information Platforms (IIP) approved by ACER. This framework, which is useful to the market, should gain from a better legal support, which could allow ACER to enforce stricter requirements for the certification as an IIP, regarding the harmonization of the publication and the availability of the platform, among others.

Should market participants be obliged to use a centralized platform for the publication of the inside information, the scope and the split of responsibility for the effective publication between the market participants and the entity operating the platform should be duly defined (in case of rightful transmission of the information by the market participant and publication issue from the platform, for instance).

3.2. Mandatory record keeping obligations

There are currently no obligations for market participants in terms of records and data keeping (transactions, orders, fundamental data, internal oral and written communications, others). This hinders NRAs' capacity to investigate potential breach cases of articles 3, 4 and 5 in an effective manner. REMIT would gain with a definition of the scope of concerned data, their format and the duration of their conservation.

3.3. Price indexes

Price indexes computed by several trading venues are not included into the REMIT data collection obligation while such information constitutes important market references and an important object of market monitoring. Currently, price indexes are publicly available on a daily basis, in general with a fee. It would be more rational if these price indexes would enter into the scope of mandatory and free of charge data reporting to ACER with NRA access to them.

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