CONSULTATION RESPONSE

EFET
European Federation of Energy Traders

Ofgem's discussion paper "Net Zero Britain: developing an energy system fit for the future"

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The European Federation of Energy Traders (EFET) promotes and facilitates European energy trading in open, transparent and liquid wholesale markets. We build trust in power and gas markets across Europe, so that they can underpin the sustainable and secure supply of energy and enable the transition to a carbon-neutral economy. EFET currently represents more than 120 energy trading companies, active in over 28 European countries. For more information, visit our website at www.efet.org.

We appreciate the opportunity to comment on Ofgem's Net Zero Britain discussion paper. We understand that the high prices experienced over the past year, the significant level of constraint costs in the GB market, and the changes in the capacity mix as we transition to net-zero may lead to questions about the design and regulation of the electricity market in GB. We fully support the objective of ensuring market arrangements that deliver a resilient, low-cost, low-carbon power sector and look forward to working with policymakers, regulators, and other market participants to improve the electricity market design. We firmly believe this needs to happen via an inclusive process that analyses the alternative choices and trade-offs available, based on a clear problem definition.

We were therefore somewhat surprised by some of the statements in the document – particularly given that relatively little supporting analysis was presented.

- Ofgem states: "This paper sets out Ofgem's view on key aspects of Great Britain's energy system where <u>we consider significant reform is required</u> to deliver a resilient, low cost, low carbon power sector." It contains policy proposals which would have significant consequences, without providing an analysis of how Ofgem has reached the view that this approach would be the best way to target the identified problems.
- Equally it discusses market design options which, to our knowledge, have not been implemented anywhere in the world. Again, it provides no information on how it would see these models working in a GB context and does not appear to consider the implementation challenges.
- It does not consider how incremental changes to the existing system might target some of the identified concerns – either alongside (recognising that market design changes take very long time periods) or instead of more fundamental reform options.
- It comes at the same time as the Government's Review of Electricity Market Arrangements (REMA), creating a potential risk of overlap and confusion. The current REMA consultation is badged as a first step and sets out BEIS' objectives

for electricity market design, the case for change, and an initial assessment of options for reform. Ofgem's document, therefore, appears to go further and faster.

Key messages

In summary, EFET considers that:

- It is imperative that a clear case for change is made. Any process to consider market design reform needs to be inclusive, comprehensive, and involve BEIS, Ofgem, the Future System Operator (FSO), representatives of Distribution System Operators (DSOs), and a broad range of stakeholders, including market participants.
- The successes of the British Electricity Transmission and Trading Arrangements (BETTA) market design and of marginal pricing in delivering huge volumes of renewable energy, competition, and security of supply should not be dismissed or underestimated. Ofgem itself states: "Over the last few decades, GB's energy system has been more reliable than ever before, while becoming more efficient and driving down costs".
- A focus on relatively easy-to-implement enhancements to the GB wholesale market may be a no-regrets starting point.
- Retail market reform is a priority and outlining a vision for the retail market is likely to have a bearing on which wholesale market design is appropriate.
- A more thorough and systematic dialogue with stakeholders is needed around wholesale market design. Any design needs to balance: 1) facilitating investment, 2) ensuring system operability at reasonable costs, and 3) fostering competition and liquidity in wholesale markets. Any design choice involves trade-offs between these aspects that require careful consideration. It is probable that change is required. It is however unlikely that there is an off-the-shelf solution available.
- The challenges of implementing any reform – learning the lessons of NETA, BETTA and EMR – need to be fully considered, recognising the inherently political nature of change.
- Ofgem needs to ensure that it is adequately resourced to tackle what would be a fundamental set of changes.

Detailed comments

While we try to cover most of the themes addressed in the Ofgem consultation document, given our expertise, the majority of our comments focus on wholesale market design.

A. Infrastructure and governance

In our view, a lack of clarity about roles, responsibilities and governance within the sector is a contributing factor to the concerns which Ofgem raises. We would like to see:

- Very clear commitments to legally binding decarbonisation targets.

- A clear division of responsibility between BEIS, Ofgem and the FSO.
- Close working with TSOs and regulators in neighbouring countries.
- A rapid decision on distribution governance arrangements and a genuinely 'whole system' approach, which focuses on transmission and distribution (without arbitrary differences in arrangements), and looks across electricity, gas, hydrogen and industrial and planning policy.

For the purposes of considering the design of wholesale markets, we think it is vital that the FSO, Ofgem and BEIS are working together.

B. Reforming wholesale markets to reduce bills

We have structured our comments in this section as follows: i) the objectives of a wholesale energy market; ii) the rationale for marginal pricing; iii) initial thoughts on some of the approaches mentioned in Ofgem's document; iv) some comments on short and medium-term approaches which might be beneficial.

We think it is important to point out that the GB electricity market is more than the day-ahead market – which appears to be Ofgem's focus. Circa 88% of electricity (representing the volume of transactions, not their value) is traded forward in Europe (pre-Covid period), via markets in which trade is bilateral, and intraday and balancing markets also play a role. Marginal pricing is used only in the day-ahead market, for an average of 10% of electricity trades in Europe. When considering wholesale market design, one must consider wholesale trading rules, government policies and the supporting frameworks within licences, industry codes and charging arrangements.

i. The objectives of a wholesale energy market

A wholesale market is typically designed to meet a number of objectives. These include:

- ***Facilitating competition* –** Sending signals for parties to bid at their true cost, putting downward pressure on prices, which are ultimately passed on to customers.
- ***Allowing parties to manage risk*** – Hedging is essential for sound risk management and for reducing the impact of price volatility. Hedging becomes less costly when forward markets are liquid, with the resulting cost-savings benefitting consumers.
- ***Ensuring efficient dispatch* –** Making sure that the least-cost provider serves demand.
- ***Incentivising balancing and aiding operability* –** Giving incentives for market participants to remain in balance (or help total system balance) to minimise congestion costs.
- ***Sending investment signals* –** By signalling what and where it would be profitable to invest, whether that investment is in electricity generation, consumption, transmission and distribution, storage, or cross-sectoral optimisations (recognising that wholesale markets may not always send an

investment signal on their own – hence the various other EMR mechanisms in GB).

- ***Driving innovation –*** In operations and in investment.

Market design options inevitably involve a trade-off between these objectives. Different participants will also always tend to value the objectives differently (e,g. system operators focusing on constraint costs). Therefore, what is required is a considered assessment in the round.

ii. The BETTA market design and marginal pricing

The BETTA were essentially the extension of the New Electricity Trading Arrangements (NETA), introduced in 2001 because of concerns about the previous Electricity Pool, to Scotland. BETTA involves a single price area, with the ESO charged with keeping the system in balance. A locational signal of sorts is sent by transmission charges. The day-ahead market uses marginal pricing.

It is worth mentioning why marginal pricing is the approach used in the vast majority of power markets around the world, and why it has been successful in the GB market. Marginal pricing:

a) Provides a strong incentive to reflect operating costs in bid prices;
b) Means that electricity will be produced from the cheapest generation sources;
c) Means carbon-emitting generation will only generate electricity when necessary to meet demand, even more so when combined with a market to price carbon emissions;
d) Allows part of the capital costs of investments to be recovered through inframarginal rent (which would otherwise have to come from subsidies);
e) For renewables in particular, contributes to their financing and reduces the need for public budgets to support renewable energy investors via subsidies;
f) Sends a signal about when and where new investment would be required;
g) Creates a transparent reference price which builds confidence in the market;
h) Gives a signal for consumption adaptation; and
i) Promotes innovation with a clear economic signal for investment in new technologies (peak generation plants, electricity storage, or conversion).

There are clearly concerns about the fact that gas is most often the marginal plant at present. In this context, a high wholesale gas price leads to a high electricity price and relatively high inframarginal rent for other technologies (depending on how they have hedged and the form of renewable support they receive – those with CfDs will pay back when prices rise). It is important to note that high wholesale electricity prices in the UK are being driven by a range of factors which include: (1) high gas prices due to the reduction in gas supplies from Russian; (2) concerns regarding the availability of nuclear power generation in France this winter; and (3) drought and high-water temperatures in certain rivers in Europe. These costs are passed on to consumers in the short term and we support helping those consumers that need it via targeted support measures which do not distort wholesale markets.

It may be worth reflecting on the signal that marginal pricing in the day-ahead market is sending. It is saying that any technology that is cheaper than the current wholesale electricity price can cover a proportion of its fixed costs via the wholesale market. The consequence of this is that: i) the incentive to invest is strong; ii) the amount of capital cost recovered via the market relative to subsidy schemes will be greater (meaning one might expect future renewable support auctions to clear at a lower price), iii) the incentives to innovate are very high. One might expect this to encourage demand response, storage and renewables – precisely the technologies which the GB system needs if it is to meet net zero, become more flexible, and be less dependent on gas. Hence, we think it is particularly important for Ofgem to lay out why it considers that an alternative pricing method for the day-ahead market may be more appropriate and how that would be better able to deliver the benefits outlined above.

We note that the Agency for the Cooperation of Energy Regulators (ACER) recently undertook a comprehensive assessment of the European electricity market because of concerns similar to those set out by Ofgem, and concluded that the market design was broadly fit-for-purpose (identifying 13 recommendations for short-term improvement). We would recommend that Ofgem engages with ACER colleagues.

iii. Alternative approaches

Ofgem's document mentions various alternative market designs. As we said in part i), all designs involve trade-offs and need careful analysis of costs and benefits. We do not have a preference for any particular model and we include some initial comments here.

Locational pricing (general)

We understand that the high and rising levels of congestion costs, coupled with concerns about, for example, inefficient interconnector flows, lead to discussions about the need for clearer locational signals in the GB market. We note it is important to distinguish between signals for the location of new facilities (or closure of existing facilities) and signals which may enhance the efficiency of operation. Locational signals could come through a variety of routes – with varying degrees of complexity.

- At its simplest, connection policies could specify where new generators could connect and state the lead time – pushing investment towards the best locations.
- Connection charges could also be used to send a signal about the requirement for network reinforcement, though this would require a change in the depth of the connection boundary.
- Transmission Network Use of System (TNUoS) – and to some extent Distribution Use of System (DUoS) charges – already aim to send a signal, though how effective that is is a matter of debate. One could also theoretically consider the way access to the network is granted.
- The Balancing and Settlement Code (BSC) did contain provisions for locational loss factors – which may not be an option now that Balancing Services Use of System (BSUoS) charges have been removed from generation.
- A locational element could be built into the capacity market (although the risk is this would split liquidity).

- Ofgem could investigate the pros and cons of ancillary services or the balancing market having more locational characteristics, while ensuring a clear link to the zonal imbalance price.

Perhaps the question is to work out which of these would be most effective and easiest to implement – taking into account expected timescales for network reinforcement.

Splitting the GB bidding zone

Splitting the GB bidding zone would essentially limit the right of access to the GB market to a defined geographic area. Prices would therefore reflect congestion between the zones and one might expect that zones are defined based on structural congestion.

Re-delineating bidding zones is a complex exercise where the efficiency of network management and that of markets must be balanced. A positive impact on constraint costs – seeing plants in the 'right' area used more often – may be counterbalanced by a negative impact on liquidity and competition – by splitting the market and creating uncertainty about when and how zones might change (limiting incentives to hedge forward). The impact on investment signals is unclear and may be a function of the way existing subsidy mechanisms are revised. Any proposed change in the configuration of the GB bidding zone should consider the overall social welfare impact over a sufficiently long time horizon of at least 7 to 10 years.

It would also be important to take into account the political considerations that may need to be managed in case of a split of the GB bidding zone. Previous considerations in this area have been seen as politically unacceptable – particularly because the England-Scotland border is a frequent candidate for a division between bidding zones.

Nodal Pricing

Nodal pricing would represent an even more fundamental change in market design. The existing self-dispatch arrangements would change and central dispatch (something not allowed in Continental Europe unless as a legacy arrangement – as in the Irish Single Electricity Market) would need to be introduced. This would require a large IT infrastructure investment. Prices would be produced for each point on the system, with the price reflecting congestion.

Again, this might be expected to benefit congestion management and have a less positive impact on competition. Hedging in a nodal market is complex and it is probable that a set of Financial Transmission Rights would have to be developed and implemented. Guaranteeing the liquidity of the node-to-hub hedging instruments has proved complex in regional US markets. A nodal system may also add complexity and create questions about how to transition from a self-dispatch to a central dispatched market (e.g. how would you hedge forward?). We note that evidence of the impact of nodal markets on investment is mixed and that it is likely that quite significant changes to renewable support and capacity markets would be required.

It is also unclear that a nodal design would be compatible with the zonal market design in the rest of Continental Europe. This could add complexity for interconnector operation and further reduce the likelihood of an offshore grid developing.

A split market

Ofgem cites the idea of a split market in its paper. We are not aware of anywhere where this has been implemented and would be interested in further details about how it might work. At first glance, we have a number of reservations:

- It would seem to remove the incentive for a category of generators to respond to market price signals. That would seem to limit forward liquidity and have potentially undesirable consequences such as producing when there is surplus renewable generation.
- If the expectation is that all low-carbon generation is financially backed by CfDs, it would essentially require the government to underwrite all capacity and remove the option to deploy low-carbon generation on a merchant basis. At a point when renewable energy costs have fallen significantly (in part thanks to support mechanisms), this seems like an inefficient outcome.
- If there was a price based on the average of the two markets, price signals would be blurred. This could mean that the signal to produce in times of scarcity would be insufficiently strong, impacting the demand side and flexibility providers.

Implementation

If a relatively fundamental market design change is chosen, it will be complex – from a technical, regulatory and political perspective – to implement. Market design changes typically take more than 5 years to implement. They also often create complex questions about how to transition from one regime to another – made more difficult in electricity markets by the fact that market participants hedge forward for 3+ years and support mechanisms are long-term contracts. This often means that concessions are needed to get reforms over the line. We must also avoid creating an investment hiatus which makes it harder to reach net zero.

Further analysis

We feel that a more structured assessment process is needed. EFET has tracked the various measures which have been developed across Europe over the past year. This includes the so-called 'Iberian price control' measure and energy market revenue clawbacks in countries such as Romania, Greece and Italy. We would be happy to share our observations and contribute in any way we can.

iv. Low-hanging fruit

Noting that an overhaul of wholesale market arrangements would be a long-term project, we think there would be value in considering whether there are short and/or medium term measures which may have positive impacts. These may include:

- Recoupling the UK exchanges in day-ahead (and extending this coupling to intraday) to provide a more robust price signal.
- Considering how the UK ETS, which lacks liquidity, could be linked to the EU ETS to provide a more reliable signal to drive decarbonisation.

- Focusing on the delivery of efficient cross-border trading arrangements with the rest of Europe.
- Investigating the reasons for falling liquidity in the UK wholesale market and considering whether policy options to foster liquidity are available.
- Considering shortening the market time unit (i.e. 30 minutes at present) and/or moving gate closure closer to real time – benefitting flexible capacity and demand response.
- Aligning market rules across transmission and distribution and facilitating market adaptation to local congestions.
- Consolidating the number of ancillary services markets, making information more clearly available and enabling participation by a broader range of market participants.

In summary

We support the launch of this important discussion on the potential need for changes to the electricity market design in Britain. This would help to reduce the costs of the transition to net zero and ensure that the future market design can meet the needs of a decarbonised electricity system.

In view of the simultaneous publication of the Government's REMA consultation, however, we would call for close coordination between Ofgem and BEIS, and extensive consultation with network operators and market participants to ensure consistency in our understanding of the challenges that need to be addressed and the potential implications of the different options to address them.

There may well be a need for change in the GB market. However, the implementation and transition aspects of such a change must be considered alongside the theoretical perspective, so as to fully consider the complexity of the potential reform.

While an overhaul of wholesale market arrangements may be a long-term project, in the short to medium term it would be important to make moderate improvements to existing mechanisms, as that would have an immediate positive impact on the functioning of markets and their ability to accelerate the decarbonisation of the sector at lower costs.

We are keen to engage further in this meaningful and timely conversation and we remain at your disposal to help support improvements to the functioning of the GB electricity market, and the energy market more broadly.