



**Energia Response to SEM Committee
Consultation SEM-21-042**

***Discussion Paper and Call for Evidence on Scarcity
Pricing and Demand Response in the SEM***

21 July 2021

Executive Summary

Energia welcomes the opportunity to respond to this Discussion Paper (SEM-21-042) on scarcity pricing and demand response in the SEM.

The RAs have proposed an intervention linking Administered Scarcity Pricing (ASP) to Amber Alerts for winter 21/22, in the hope that this will strengthen signals for generator availability / demand response where tight margins are expected.

Energia does not support this ex post intervention (i.e. changing ASP after the relevant capacity auction), which we believe will be ineffective and counterproductive, and will be damaging to investor confidence at a time when significant investment in capacity is required.

This response makes the following key points:

Problems linking ASP to System (Amber) Alerts¹

There is a key assumption in the Discussion Paper that market prices should be higher (to the extent that they should be at scarcity pricing levels) when a System Alert occurs. The absence of a strong correlation between System Alerts and high SEM prices is identified as a failure to be corrected by directly linking ASP to System Alerts. However, this premise is clearly flawed, as evidenced by an examination of the 11 Amber Alerts experienced in 2020/21. If there is a SEM-wide capacity issue, there should be SEM-wide Alerts, when in fact:

- 9 of 11 Amber Alerts were localised (7 NI, 2 IE);
- A reasonable balance of supply over demand was maintained in all cases (with SOR in region of 500MW), and even exports to GB in some cases;

Based on the evidence, there is clearly a very poor correlation between System Alerts and All Island capacity shortfalls. Therefore, linking ASP to System Alerts seems illogical and would not achieve the stated objectives. Rather:

- It would tend to generate scarcity prices triggered by localised events which would be entirely inappropriate in the unconstrained market of the SEM, and which are not reflected in capacity auction clearing prices.
- In addition, linking ASP to Amber Alerts could trigger higher prices even when there is large capacity surplus, and removing Replacement Reserve from the calculation could give rise to ASP pricing caused by TSO scheduling and operational decisions.

Purpose of System Alerts

System Alerts are a "tool" to be used by the TSO and occur for a number of reasons which are not all related to generation capacity and as highlighted in the Discussion Paper e.g. transmission problems, weather conditions or weather forecasts etc.

It should also be recognised that the capacity market is designed to meet an 8-hour security standard (not to prevent System Alerts), and that the SEM is an unconstrained

¹ 'System Alerts' and 'Amber Alerts' are used interchangeably throughout this response.

energy market designed to efficiently allocate risk and provide the necessary price signals to invest in grid and system operations where required.

For the past several years there has been a surplus of capacity on the system. As the capacity levels and supply/demand balance adjusts to the design levels, there will be a greater occurrence of periods of tighter margins than was experienced before the current CRM arrangements, and accordingly an increase in the number of System Alerts is to be expected. However, using the System Alerts as a basis for triggering ASP is not appropriate as the alerts can be called for multiple reasons and the evidence shows that there is very little correlation between System Alerts and capacity shortfall.

Linking ASP to System Alerts will not improve Generator Availability or Demand Response

- It will not increase generator availability this winter as required units are already highly incentivised to be available;
- The lack of a functioning secondary trading market prevents risk management of outages, the proposal just retrospectively adds risk and cost;
- Available capacity in the SEM is not currently being scheduled or dispatched during System Alerts, in fact SEM is still exporting to GB in many cases;
- There have also been a number of instances of RO events where the strike price was breached and generators that were available but not dispatched were subject to punitive difference payments. Increased invocation of the ASP threatens to punitively penalise generators that are, at no fault of their own, not dispatched during such instances. This again will add risk and cost, with no commensurate benefits.
- Neither will the proposal be effective in mobilising additional demand response this winter, because:
 - A significant volume of price responsive demand is already contracted with DSU operators in the SEM, the appetite among remaining demand for spot price exposure is low
 - The potential for further demand response is also extremely limited as the vast majority of customers are already insulated from exposure to Balancing Market (BM) prices this winter through contractual arrangements with their suppliers, and suppliers attempt to mitigate the risk of high BM prices by forward hedging and trading their demand volumes in the ex-ante markets.
 - Exposing suppliers to higher BM prices for imbalances will only feed through into higher customer bills, without invoking demand side response.
- The ex post nature of the proposed intervention (changing ASP after the relevant capacity auction) undermines investor confidence, deters future investment and raises the cost of capital, as further discussed below.

Regulatory Intervention / Investor Confidence

The ex-post nature of the proposed regulatory intervention (i.e. changing ASP mechanism after the capacity auction for that capacity year has taken place) would undermine investor confidence, deter future investment and raise the cost of capital.

There is already a shortfall of procured capacity for CY 2024/25 which highlights the need for participation of both existing and new capacity in the CRM mechanism, for

CY2024/25 and beyond. This in turn requires sufficient confidence in the mechanism. If participants (and potential participants considering investing) perceive that RAs will meddle with the arrangements affecting their commercial risk position post-contracting, it is not conducive to inspiring the necessary (investor) confidence for them to enter CRM arrangements in the future and reduces the likelihood of procuring sufficient capacity moving forward and resolving future shortfalls.

Other key concerns with proposals

Additional concerns relating to the proposals include:

- It will feed into higher customer bills as the RO design provides no hedge up to the strike price and beyond that there is a so-called 'hole in the hedge' that the RAs have consistently raised concerns about.
- Lack of a functioning secondary trading capacity market prevents risk management of outages, so that the proposal retrospectively adds risk and cost.

Winter Outlook / Targeted Approach

The proposals are based on the publicly communicated concerns over the forecast tight capacity margins for the upcoming winter period of 2021/22. We are aware that c. 200MW of temporary generation is to be procured for this period. However, the proposals discussed above, which are described as an interim basis measure, appear to be a knee-jerk reaction to the problem which will have market wide impacts without solving the underlying concern. Targeted solutions to directly address the concern, including procurement of further temporary generation if the RAs and TSO believe more is required, should instead be employed.

1. Introduction

Energia welcomes the opportunity to respond to the SEM Committee Paper titled “Discussion Paper and Call for Evidence on Scarcity Pricing and Demand Response in the SEM” (the “Discussion Paper”). Energia are a member of Electricity Association of Ireland (EAI) and Wind Energy Ireland (WEI) and endorse both the EAI and WEI response to this Discussion Paper.

The Discussion Paper is rooted in a concern over forecast tight capacity margins for the upcoming Winter period of 2021/22 and the RA's have sought comments on a proposed intervention by amending the trigger for Scarcity Pricing mechanism and the corresponding price curve (as an interim measure). This intervention would see the ASP mechanism more closely aligned with System Alerts with the intention that the resulting higher prices arising from this will strengthen signals for generator availability / demand response where tight margins are expected. Energia strongly disagree with the proposal on the basis that:

- it is flawed to align ASP to System Alerts as there is very poor correlation between System Alerts and All Island capacity shortfalls;
- it will not solve the underlying concern by improving generator availability or demand response; and
- it will instead have negative impacts on the market at large by undermining investor confidence, deters future investment and raises the cost of capital.

The remainder of the response is structured as follows. Section 2 contains our overarching comments on why the proposal to amend the scarcity pricing mechanism is flawed and will not have the intended impact that is desired. Section 3 contains our specific comments in relation to the questions presented in the Discussion Paper.

2. Overarching Comments

Prior to addressing the specific questions posed in the discussion paper, we wish to provide comments on other concepts raised in the discussion paper, some of which do not appear directly within the questions, and our general concerns over the proposals.

Problems linking ASP to System (Amber) Alerts

There is a key assumption in the Discussion Paper that market prices should be higher (to the extent that they should be at scarcity pricing levels) when a System Alert occurs. The absence of a strong correlation between System Alerts and high SEM prices is indicated as a failure of sorts potentially to be corrected by directly linking ASP to System Alerts.

However as per the evidence presented for the 11 System Alerts over the period covering 2020 and 2021 to date this premise is clearly flawed. High energy prices should ideally correlate with system-wide supply scarcities. However, for the eleven System Alerts listed, only two related to system-wide capacity issues, the remaining nine relating to localised capacity issues (seven in Northern Ireland, two in Ireland).

Therefore, for all but two System Alerts, a SEM price response could not be expected as they did not relate to supply scarcities at SEM level.

Further, based on the information in Appendix 1 of the discussion paper, it appears that reasonably significant surpluses of capacity were maintained in all cases. SOR levels were generally well in excess of target levels, and in many cases exports from SEM to GB were maintained (including in the two cases which are indicated to be All-Island capacity scarcities on 09/12/20 and 06/01/21). As supply remained significantly in excess of demand, the rise in market energy prices should be limited. Indeed if energy prices were excessive while reasonable supply margins are maintained, it could be indicative of an unreasonable market outcome.

In summary, a SEM price response reflecting scarcity pricing could not be expected as these alerts did not relate to supply scarcities at SEM level. This is especially true when system alerts, and therefore scarcity pricing under the proposals, could potentially last for hours at a time. Therefore, it is clear that it is inappropriate and flawed to seek to align the trigger for ASP to System Alerts when the System Alerts themselves are shown not to be scarcity events. The absence of excessive prices in SEM is not indicative of a failure, rather only that the conditions did not support high prices.

Purpose of System Alerts

System Alerts are a "tool" to be used by the TSO and occur for a number of reasons which are not all related to generation capacity and as highlighted in the Discussion Paper e.g. transmission problems, weather conditions or weather forecasts etc.

It should also be recognised that the capacity market is designed to meet an 8-hour security standard, not to prevent system alerts, and that the SEM is an unconstrained energy market designed to efficiently allocate risk and provide the necessary price signals to invest in grid and system operations where required.

For various reasons the system has experienced an excess of capacity for several years. As the capacity levels and supply/demand balance adjusts to the design levels, there will be a greater occurrence of periods of tighter margins than was experienced pre the current CRM arrangements, and accordingly an increase in the number of System Alerts. However, using the System Alerts as a basis for triggering ASP is not appropriate as the alerts can be called for multiple reasons and the evidence shows that there is very little correlation between System Alerts and SEM-wide capacity shortfalls.

The TSO(s) has some latitude in when to issue a System Alert, and this is appropriate. It would not be appropriate to unduly fetter the TSOs' operational judgement as in when to issue a System Alert, as this would restrict the usefulness and effectiveness of the tool. However, the consequence is that the Amber Alert is influenced by the TSOs' judgement and is not adequately defined or structured to make it appropriate as a trigger for commercial consequences. We cannot therefore conclude that an increase in the occurrence of System Alerts is a problem (when it is in fact an inevitability given

the removal – as intended - of the capacity surplus) or that it is appropriate to tie the triggering of the scarcity pricing mechanism to a System Alert.

Linking ASP to System Alerts will not improve Generator Availability or Demand Response

The proposal to align ASP with system alerts will not have the intended impact as desired by SEMC in respect of either generation availability or demand response. Generators are already highly incentivised to be available at all times. Regulatory intervention to create higher prices during System Alerts will not result in any more generation becoming available than would already be available without the proposed change.

Regarding implicit demand price responsiveness, much of the demand which might be likely to be “price responsive” is already captured under DSUs. As such its potential demand reduction is already available to the TSOs under the DSU arrangements. Of remaining demand there is insufficient flexibility in the SEM customer base to respond to pricing signals with customers insulated from short term price events and suppliers attempt to mitigate the risk of high BM prices through trading the majority of volumes in the ex-ante markets. The price increases will however be reflected into higher future contract rates and also customer bills. Although observed system alerts haven’t generally resulted in prices in excess of the RO strike prices, they have generally resulted in higher prices that hasn’t been matched with changing customer behaviour. A parallel can also be drawn to the observed level of negative prices in the market from go-live that in general demand has not been able to respond to. Even if there were customers who could adapt consumption behaviour at short notice, the timing of notifications and the liquidity in the intra-day timeframe to facilitate any changing positions.

In respect of explicit demand response, over 450MW of DSU capacity have received contracts for CY 21/22 which the TSO can dispatch as required. The proposal to create higher prices in the market and thus sharpening the penalty for being unavailable after contracts with underlying customers have been struck will not create additional response.

Regulatory Intervention / Investor Confidence

The ex-post nature of the proposed regulatory intervention (i.e. changing ASP mechanism after the capacity auction for that capacity year has taken place) would undermine investor confidence, deter future investment and raise the cost of capital. Details of ASP are included in the Final Auction Information Pack (FAIP) in advance of capacity auctions and as such the risk profile of this mechanism is included in bidding behaviour in that auction from market participants. A change to ASP after the capacity auction has taken place and capacity contracts have been entered into results in regulatory intervention that undermines both market and investor confidence in the CRM.

There is already a shortfall of procured capacity for CY 2024/25 which highlights the need for participation of both existing and new capacity in the CRM mechanism for CY24/25 and later years. This in turn requires sufficient confidence in the mechanism.

If participants (and potential participants considering investing) perceive that RAs will meddle with the arrangements affecting their commercial risk position post-contracting, it is not conducive to inspiring the necessary (investor) confidence for them to enter CRM arrangements in the future and reduces the likelihood of procuring sufficient capacity to resolve future shortfalls. This is especially true when System Alerts, and therefore scarcity pricing under the proposals, can last for hours at a time.

Other key concerns with proposals

Further to the above Energia have additional concerns regarding other negative and unintended impacts of the proposals that will impact the market as a whole. These include the proposals feeding into higher customer bills as the RO design provides no hedge up to the strike price and beyond that there is a so-called 'hole in the hedge' that the RAs have consistently raised concerns about.

In addition, generators are already highly incentivised to be available and the proposal itself will not increase availability for the winter period. Instead, due to a lack of functioning secondary trading capacity market which prevents risk management of outages, the proposals simply retrospectively add risk and cost market participants.

Winter outlook / Targeted Approach

The proposals are based on the publicly communicated concerns over the forecast tight capacity margins for the upcoming winter period of 2020/21. We are aware that c. 200MW of temporary generation is to be procured in the Dublin area for this period. However, the proposals discussed above, which are described as an interim basis measure, appear to be a knee-jerk reaction to the problem which will have market wide impacts without contributing to resolving the underlying concern. Targeted solutions to directly address the concern, including procurement of further temporary generation if the RAs and TSO believe more is required, should instead be employed.

To the extent that the TSOs can provide further information and analysis on the extent and timing of anticipated reduced supply margins, this is to be welcomed so that industry as a whole can assess if any additional action can be taken to assist. However seeking to retrospectively intervene to create higher prices during System Alerts is not a targeted approach which will resolve the underlying issue.

3. Response to Specific Questions

Review of Administered Scarcity Pricing Implementation

1. Do you have any views on the way in which RSP has been implemented in the TSC and the potential issues discussed in Section 2.2?

Energia is of the view that there has been no identified problem with the way in which RSP has been implemented in the TSC. Scarcity Pricing has not yet been triggered in SEM as the underlying conditions required to trigger it have not yet been met. The issues highlighted in the Discussion Paper do not justify seeking to amend the current

implementation of RSP such that the trigger for it is aligned to System Alerts. The absence of a strong correlation of extremely high market prices with System Alerts is not indicative of a failure. Rather the absence of a correlation is due to:

- a) the fact that the majority of the System Alerts related to localised issues, rather than SEM-wide capacity shortages;
- b) in all cases (including in the 2 System Alerts linked to SEM-wide capacity), a reasonable supply margin was in fact maintained through the Alert.

Therefore, no justification has been provided for amending the current arrangements for RSP and certainly not for the upcoming winter period when the risk profile associated with the current arrangements was built into participants bidding behaviour in the corresponding capacity auction.

2. Section 2.2 has outlined a number of specific areas that could be considered further related to the trigger for RSP and the parameters that define the Reserve Scarcity Curve. The RAs are interested in respondents' view as to whether:

a) the trigger for RSP should be amended such that the qSTR would include only Tertiary Operating Reserve Band 2 and not Replacement Reserve, or whether another amendment could be made that would bring this trigger more into line with the triggers for System Alerts in the SEM.

Energia believes the proposed change is not appropriate. By removing Replacement Reserve from the triggering of RSP, it effectively creates a disconnect between RSP and available generation capacity. The proposed change would fundamentally change RSP from being about capacity, do being purely about short-term reserves.

Shortages of shorter time-scale reserves (i.e. POR, SOR, TOR1, TOR2) may have little to do with available generation capacity. Scarcity of short-term reserves may arise due to a range of operational issues, including (for example) forecast errors in demand or wind output, loss of generation, and (importantly) TSO scheduling decisions. Reserves are "used up" by these events and reserves are then "short" until more generation plant is brought on-line to rectify the shortfall.

Removing Replacement Reserve from the calculation of the trigger significantly increases the risk that RSP could be triggered as a direct result of TSO operational decisions, even in circumstances where there is a surplus of generation capacity available (but simply not available within 20 minutes).

In conclusion, if this change were made:

- RSP may be triggered even when there are no capacity problems at all;
- RSP is now about assisting in resolving short-term reserve issues, not capacity issues;
- If Capacity Providers were exposed to commercial consequences of RSP and RSP calculation does not include RR, they are now exposed to risk due to TSO scheduling operational decisions and non-optimal forecasts.

b) the RSP curve should begin at a point above or below the RO Strike Price.

Energia do not believe that any sufficient justification has been provided for moving the RSP curve away from its current starting point to a point either above or below the

RO strike price. As such the RSP curve should remain as is. To make short-term changes which affect the position of market participants in the absence of clear evidence, is unjustified and would serve to undermine confidence in the arrangements for the future.

c) the FASP value should be increased to a level closer to 100% of VoLL

As per our response to the above question, Energia do not believe that any sufficient justification has been provided increasing the current level of FASP to 100% VoLL and as such should remain as is.

3. Feedback is also sought in relation to alternative delivery incentives during times of system stress which have not been raised here, but which could be implemented in the short term.

Generation is already highly incentivised to be available at all times. To the extent that the TSOs can provide further information and analysis on the extent and timing of anticipated reduced supply margins, this could potentially allow generation to better plan their short-term activities to maximise their contribution during times of system stress. However, for clarity, Energia does not regard the provision of such information to be sufficient justification to support the implementation of the proposals in the Discussion Paper.

Demand Response

The Regulatory Authorities are requesting feedback from relevant stakeholders on:

1. The response of large energy users to price signals in the wholesale market?

Large energy users which have the capability and flexibility to adjust demand will primarily be captured under the DSU market. In respect of remaining large energy users with standard supply contracts there is insufficient flexibility, which applies to the SEM customer base at large, to respond to pricing signals. Contracts are typically structured so that customers are insulated from short term price events. Without exposure to short term prices there is limited incentive for the customer to manage demand in periods of scarcity and suppliers attempt to mitigate the risk of high BM prices through trading the majority of volumes in the ex-ante markets. Exposing suppliers to higher BM prices for imbalances will only feed through into higher customer bills (as forecast of these events will likely be reflected in the contract rates), without invoking demand side response.

Although observed System Alerts haven't generally resulted in prices in excess of the RO strike prices, they have generally resulted in higher prices that hasn't been matched with changing customer behaviour. A parallel can also be drawn to the observed level of negative prices in the market from go-live that in general demand has not been able to respond to.

The Discussion Paper suggests that *“Suppliers can also benefit from reducing load and selling energy purchased in the ex-ante market back to the market if Imbalance Prices are high. Although Suppliers' risk is capped by the RO Strike Price if they need to purchase additional power, Suppliers can still get the full marginal benefit of selling back any load reduction relative to their ex-ante purchase volume via the Balancing*

Market, if prices rise to reflect scarcity. This should act as a demand response incentive in the energy market". However, this suggestion is flawed in that it would require demand volume procured in the ex-ante market and subsequent underlying customer actions to leave the supplier long in the balancing market. Contractual arrangements as outlined above are already in place will not support this happening in practice.

As such it is clear that the proposals to align scarcity pricing to System Alerts, especially for the upcoming winter period when contractual arrangements have already been entered into, will not have the desired effect in relation to alleviating the concerns over forecast tight capacity margins.

2. Supplier interaction with incentives for demand response in the wholesale market?

The same rationale as outlined above applies to suppliers in general. Namely that current contracting arrangements and insufficient flexibility in the SEM customer base to respond to pricing signals. As such the proposals will not have the desired effect of mitigating the concerns over tight capacity margins for the upcoming winter period, as they are intended to do.

3. The extent to which suppliers and customers can be incentivised to reduce demand by prices above the RO Strike Price, given that the supplier hedge applies above this price?

Again, as per the response above, this suggestion is flawed in that it would require demand volume procured in the ex-ante market and subsequent underlying customer actions to leave the supplier long in the balancing market. Contractual arrangements as outlined above are already in place will not support this happening in practice. Given that the proposals are intended for the upcoming winter period when supplier and customer contractual arrangements have already been entered into, the desired effect of reduced demand from higher prices will not be realised.

Explicit Demand Response

The RAs are requesting feedback from relevant stakeholders on:

1. The strength of the existing incentives for DSU availability and the effect of the potential changes to ASP proposed in Section 2.2 on these incentives?

Over 450MW of DSU capacity have received contracts for CY 21/22 which the TSO can dispatch as required. The proposal to create higher prices in the market and thus sharpening the penalty for being unavailable after contracts with underlying customers have been struck will not create additional response.

2. Additional short-term incentives which could encourage further DSU availability?

To the extent that the TSOs can provide further information and analysis on the extent and timing of anticipated reduced supply margins, this could potentially allow DSU to better plan their short-term activities and maximise their contribution and availability during times of system stress. Again, for clarity, Energia do not regard the provision of such information to be sufficient justification to support the implementation of the proposals in the Discussion Paper.

Advance Notification Prior to Amber Alerts

Feedback is requested from interested stakeholders on additional information that could be published to signal periods of scarcity in advance of alert notifications being issued by the Market Operator?

As a general principle, timely and transparent provision of information and the underlying analysis to support it is to be welcomed by market participants. To the extent that the TSOs can provide further information and underlying analysis on the extent and timing of anticipated reduced supply margins, this is to be welcomed so that industry as a whole can assess if any additional actions can be taken to assist. However, for clarity, Energia do not regard the provision of such information to be sufficient justification to support the implementation of the proposals in the Discussion Paper.