

**Power NI Energy Limited
Power Procurement Business (PPB)**

**Integrated Single Electricity Market
(I-SEM)**

**Energy Trading Arrangements (ETA)
Markets Consultation Paper**

SEM-15-026

Response by Power NI Energy (PPB)

5 June 2015



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1. GENERAL COMMENTS

1.1 RESPONDENT DETAILS

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MAIN INTEREST IN CONSULTATION	Market Participant

1.2 INTRODUCTION

PPB welcomes the Regulatory Authorities engagement with market participants in the development of the I-SEM. PPB has actively participated in the five RLG working groups and provided feedback in March 2015 following those meetings. We welcome the opportunity to respond to the SEM Committee’s consultation paper on the detailed design of the I-SEM Energy Trading Arrangements.

1.3 HIGH LEVEL COMMENTS ON THE DETAILED DESIGN

1.3.1 Designing a Coherent Market

1.3.1.1 Substantive issues remain to be addressed

The feedback PPB provided on 4 March 2015 following the RLG meetings highlighted a number of concerns that we considered needed to be addressed in the consultation paper. We are disappointed that many of these concerns have not been addressed in the consultation paper and as a result there remain many issues that require substantively greater investigation, assessment and consideration before final decisions could be made on the detailed design of the Energy Trading Arrangements. Critical examples include (i) the objective function of the TSOs in the balancing market, (ii) the extent and scope of early TSO actions, and (iii) qualitative and where possible quantitative analysis of the dynamics across the DAM, IDM and BM, including in relation to the different options proposed for the BM and the impacts these could have on BM pricing and how this could influence how participants choose to trade.

The failure of the consultation paper to address areas such as these make it very difficult to opine on the appropriateness of the alternative design options proposed and on whether the potential design will be coherent and sustainable for participants and customers.

The absence of such rigour increases the risk of unintended consequences. The experience from the implementation of what was a relatively small change to introduce the IDM into the SEM and the unintended consequences that have arisen should highlight the risks of

failing to properly assess the risks and dynamics in the I-SEM markets. The I-SEM project represents a substantially greater change than the addition of Intraday trading into the SEM and hence the I-SEM risks are substantially greater.

1.3.1.2 The markets must be internally consistent to be sustainable

The markets must be internally consistent such that pricing is not fundamentally different across the timeframes, albeit Balancing Market prices are likely to be more volatile. It would be perverse if pricing in the BM was less volatile or generally lower than in the earlier markets because of the pricing formulation such that it were to incentivise participants to trade in the BM rather than in the DAM and/or IDM. The BM is the only timeframe where there is any substantive design choice in the I-SEM and therefore it is important that pricing in the BM reflects the true cost of balancing actions.

Few of the design decisions stand in isolation and most create different dynamics and consequences for other aspects of the market design or on how participants are incentivised to trade. The consultation paper has not evaluated these dynamics which makes it very difficult to properly evaluate the design options when there is no analysis to inform on the consequences of different options, to help identify the most material decisions and to seek to understand the consequences for the market dynamics across each of the market timeframes. We consider that qualitative and, where possible, quantitative modelling is required to help inform the debate before final decision on the detailed design is made. This should also take account of the outcomes from the Euphemia modelling to ensure the market, across all time horizons, will be fit for purpose.

1.3.1.3 The ex-ante markets may no longer be unconstrained – how will this affect revenue distribution?

It will also be important to understand the extent to which the DAM and IDM markets are no longer unconstrained markets, the extent of which is likely to depend on design decisions made, the impact of early TSO actions on the markets, and the impact of DS3 on how participants trade. These features will likely result in a more constrained market schedule in the ex-ante markets and the effect on the redistribution of revenues could have a significant impact on the market signals provided to generators which could also result in unintended or unexpected consequences.

1.3.1.4 Minimising complexity where possible

Significant sections of the consultation paper are devoted to seeking to counteract the impact of TSO actions on the parallel operation of the IDM. However we consider a lot of the complexity introduced is nugatory as it seeks to address TSO actions that are not required prior to IDM gate closure. The only early TSO actions required are start actions to ensure the TSOs have sufficient flexibility to manage the system once the IDM market has

closed and they have exclusive access to generators and demand side participants to manage the system in real time. Hence much of the complexity proposed is unnecessary and the design should avoid trying to over-complicate the market. Greater simplicity should also result in greater transparency.

Similarly, it is essential that unnecessary operational risks for participants are avoided given the inherently increased proliferation and complexity of markets in the I-SEM. A key principle must be to maintain common formats where possible, for example ensuring all trading occurs at the same point (the initial indication was that DAM and IDM trades would be conducted at the trading point but that bids into the BM to be at the station gate). Similarly the form of bids should be kept as similar as possible, particularly in the IDM and BM which are operating in parallel.

1.3.2 System Operation in the I-SEM

We recognise the TSOs' obligations to operate the system safely and securely but we are concerned that the focus of the consultation on the Energy Trading Arrangements is on the market failing to reach a feasible position and therefore it concentrates on enabling early TSO actions. Such focus risks becoming self-fulfilling and actually creating the outcomes that the market is seeking to avoid. We are concerned that the TSOs continue to see their role as being to minimise production costs whereas under the HLD, their role is to accommodate the market outcomes to the extent possible and to minimise the cost of deviation / re-dispatch to balance the energy imbalances and to obtain the other services they require to operate the system safely and securely.

Given this apparent TSO mindset, we would be concerned that TSO led consultations, for example in relation to establishing principles for early TSO action, will be skewed and it would be better that any such consultations are led by the RAs. Similarly, any TSO incentive arrangements need to be carefully devised to ensure they incentivise appropriate behaviour without any unintended consequences.

The HLD clearly identifies the objective function for the TSOs, when operating the Balancing Market, to be minimising the cost of deviating from PNs. However over the course of the RLG workshops and in the design proposals presented in the consultation paper, there is some confusion over whether this objective has or should morph to be to "Minimise the Cost of Dispatch". Minimising the cost of dispatch is a very different objective as it is more akin to the current objective of minimising production costs in the SEM which is a very different starting point than what the HLD proposes. The correct objective function to align with the HLD is therefore to "Minimise the Cost of Re-dispatch" which captures the concept of deviating from notified production levels.

The objective function of the TSO in the Balancing Market is a critical issue that requires further discussion as this sets the context for most of the other design decisions over which the SEMC has full control.

The other key issue is the volume of early actions the TSOs take and what influence such actions have on trading and liquidity in the IDM and whether such actions influence pricing in the IDM and affect the distribution of Inframarginal Rents. Our major concern is that large parts of the consultation paper are devoted to seeking solutions to problems (for example in relation to how to stop participants trading in the opposite direction, or in relation to system services) that are based on a misunderstanding of what actions the TSOs may need to take before the closure of the Intraday Market.

The proposals in the consultation paper assume early TSO actions are facilitated by the TSOs' acceptance of Bids/Offers and that these acceptances are initiated by dispatch instructions. The only dispatch instructions that are issued outside of the 1-2 hour window between IDM gate closure and realtime (and within which the TSOs have full control with no commercial bid changes allowed) relate to start-up of generating units. A simple review of dispatch instructions in the SEM confirms this and all instructions to change to a new loadpoint are issued 1-2 minutes prior to the effective time. This confirms that the only early actions the TSOs need to take are to issue start instructions with loading to the Minimum Stable Generation level. Notwithstanding that the only early TSO actions required are generators start-ups, these will still influence the operation of the market and could result in a redistribution of revenues compared to fully unconstrained ex-ante markets, the impact of which is not assessed in the consultation paper.

This impact must be assessed although clearly it remains important that early TSO actions are minimised and that there is full transparency of the TSO decisions.

1.3.3 Ex-Ante Markets

1.3.3.1 The DAM

As the DAM is to rely on Euphemia to determine the DAM outcomes in the I-SEM, there are limited design options open for consideration. However there are key matters in relation to what influence I-SEM can have on the PCR algorithm and on the overall Governance options in this area. Once the NEMO has been designated it will be important that there is consultation on the options available (associate through to full membership with full operational capability) and the costs and benefits for the I-SEM under the different options.

It has also been highlighted that the existing PCR members will determine whether any limitations are imposed on I-SEM bid structures, e.g. in terms of the types of bids permitted, the number of bids allowed, etc. and this could be a critical determinant on the risks for

participants in the DAM and on the schedules that result from the DAM. This has the potential to affect not only the pricing in the DAM but could also have a very material impact on Reliability Options under the CRM. This requires further consideration and must be assessed not just in the DAM context but also on the knock-on effects for the other Energy Markets (Forward, IDM and BM) and on the CRM.

1.3.3.2 Euphemia Testing

Consideration of the overall energy trading arrangements highlights the criticality of Euphemia Testing. The ability to obtain feasible and coherent schedules and prices is critical for risk management by market participants, being critical for generators seeking to achieve a feasible dispatch and for suppliers seeking to deliver viable products to their customers. It remains concerning that certain of the bid forms appear to be causing unexpected pricing profiles possibly caused by certain bid types being excluded from price setting. It is vital that the impacts identified through the Euphemia testing are fully assessed and the consequences taken into account before any final decisions are taken on the final design of the overall energy trading arrangements.

It must also be recognised that the impact is not limited solely to the DAM but will reflect and impact across all the market timeframes from the forward market through to the BM. It is disappointing and concerning that this “dynamic” has not yet been considered and this must be assessed to ensure there is a clear understanding of impacts on the market in its totality and to minimise the risk of unintended outcomes.

1.3.3.3 DAM Fallback procedures

Fallback procedures are an obligation under the CACM but will be even more critical in the I-SEM as, unlike the other EU markets, bilateral trading is not allowed in the I-SEM. As a result the fallback procedures will need to resolve the market from a zero starting point as there will be no bilaterally agreed ex-ante contracts to form a base. The timelines are also very tight and the process of moving from Full Coupling to Partial Regional Decoupling to Full Decoupling must be tightly defined. There is also a risk that the Fully decoupled run could also fail in which case a further fallback arrangement will be required.

One proposition for the final fallback in relation to interconnector capacity was for this to slide into the IDM. However given the continuing uncertainty on the functional capability of XBID, it may not be appropriate to rely on the IDM as a fallback in the circumstance where the DAM has been unable to determine any schedule and pricing, unless the fallback IDM procedures are themselves extremely robust.

1.3.3.4 IDM

The requirement for Intra Day trading to be transacted exclusively through the XBID platform leaves little design choice for consideration. A key risk and concern is the Governance of XBID and what influence I-SEM can/will have over the ongoing development of the arrangements.

A further key consideration is that fallback arrangements must be developed given the slippage in the implementation date for XBID which is now aligned with the proposed commencement of the I-SEM but over which there is a high risk of further slippage. These arrangements could serve as both interim arrangements and fallback arrangements for the I-SEM.

A final concern relates to “losses” which are not part of the initial XBID development. This could create artificial arbitrage opportunities in the I-SEM, particularly on trades across the East-West Interconnector that has a 6% loss factor which will be reflected in the DAM but not in the IDM. This 6% differential could result in significant uneconomic trades in the IDM and this aspect must be considered very carefully.

1.3.4 **Physical Notifications**

PPB recognises the need for the TSOs to understand what generators are expecting to generate. However it is not at all clear that the information available to the TSOs from PNs that reflect a generator’s “ambition” of its final position will add much benefit. It would be equally perverse if the TSO were to be taking balancing actions based on prices relative to PNs that could bear no resemblance to the FPN submitted by a participant.

For example, based on the proposals and illustrations in the consultation paper, a 300MW generator could submit a PN of 250MW with INCs and DECS around this. In line with the examples in the consultation paper, the TSO could accept an offer for 50MW. However if the generator was unable to trade out to its earlier expectation, it could have an FPN of 100MW with a BOA for 50MW based off an assumption that the generator would have been generating 250MW. This could lead to perverse and unexpected outcomes. However, based on our comments on the early TSO actions, such an early TSO action should not occur while the IDM remains open as the TSO has sufficient time to make such generator repositioning decisions after IDM gate closure.

Participants must be able to update PNs and the prices of their Bid/Offer as and when they consider a change is required. Other than under fully linked PNs, the PN may have no relevance to underlying trades and hence it would be illogical to require updates following the conclusion of any trade. The only viable option is that participants have freedom to update their PNs as often as they choose.

Fully de-linking FPNs from ex-ante trades is effectively self-scheduling (since the INCs/DECs could give effective firmness). However this creates a new area where market power could be exploited and which would then require further intervention to mitigate against such market power (e.g. a large portfolio generator could re-allocate production across its portfolio of generating units to seek to obtain a benefit that could be detrimental to the wider market). The reason for considering such de-linking has been conveyed as seeking to ensure generators tell the TSO if they are planning to over or under generate. However, Grid Code already provides obligations to follow dispatch instructions and no evidence has been presented to indicate that this is a problem and that generators chose to ignore dispatch instructions in the SEM.

The BM is to settle imbalances relative to ex-ante traded positions. It would therefore seem rational that the BM pricing should reflect the cost of balancing relative to those traded positions and not relative to FPNs that are different to the traded positions. Determining the BM price relative to FPNs but then applying those prices to volumes relative to ex-ante trades would appear perverse and the outcome is uncertain. No analysis has been presented to contrast the impact on BM prices from different Objective Functions in the determination of BM prices, i.e. between (i) seeking to minimise the cost of deviating from FPNs based on ex-ante trades, compared to (ii) seeking to minimise the cost of deviating from FPNs that are not related to ex-ante traded positions. Such analysis would help inform the discussion and help participants to understand the relativity of the options on BM prices.

PPB does not see the need for Information Imbalance charges which may be more relevant in a fully self-dispatched market but which are not relevant in a Centrally Dispatched market. The threat of such charges only adds risk (and potentially overlap with GPIs) and will ultimately result in higher costs for customers.

Finally, notifications should not require multiple submission of information that is already provided under existing obligations. For example, generators are already required to declare the availability of their generators under Grid Code and that submission should suffice for the TSOs without requiring a further separate submission to the TSOs.

1.3.5 Form of Bids and Offers

PPB considers the form of Bids and Offers (BOs) should be consistent with the trading structure required in the IDM, particularly given participants will be participating in both markets at the same time and it would therefore be operationally sensible to have consistency. PPB therefore considers the BOs must be relative to prevailing PNs which would be consistent with IDM trading and which also reflect the form of BOs in the GB market.

It is worth noting that because the IDM and BM is operating contemporaneously in the I-SEM, the prices cannot relate to FPNs since those will only be known after IDM gate closure and hence must relate to the PN prevailing at the point in time where the TSO takes an early balancing action. This also raises a question as to how this interacts with de-linked PNs that may reflect a desired outturn position by a generator but which is not ultimately fulfilled through Intraday trading.

As a general principle, all costs should be in the market and out of market arrangements should be avoided since otherwise it is likely to distort the markets and how participants trade across those markets. The key issue is then how to ensure pricing in the BM reflects underlying fixed costs. Both Start-up contracts and Explicit start-up costs will require some form of “uplift” to be applied to the BM price and this is likely to be contentious and could be subject to arbitrary decisions and hence regulatory risk. It may therefore be more consistent with the ex-ante markets for the costs to be reflected by participants in their INC and DEC bids.

No restrictions can be imposed on participants amending the prices in their BOs since to do otherwise would result in a mismatch with the continuous evolution of pricing in the IDM. However, clearly if the TSO takes an early balancing action and accepts a BO, then that is a confirmed trade executed at the price prevailing at the time of the TSO’s acceptance.

This flexibility will allow participants to largely manage their risks prior to IDM gate closure. However, after gate closure, a generator is in the same position as a BM participant in GB (except that in I-SEM participation is mandatory) and could be exposed to costs if the TSO were to accept a BO and then change their mind. The only way to enable participants to reflect these costs is to provide for UNDO prices.

A further issue relates to how such BOAs are treated. The proposal is that acceptance of BOs doesn’t change the PNs. However, while this may be appropriate in GB where BOs are only accepted after the IDM has closed, such treatment of early BOAs is likely to be confusing, particularly when such early TSO actions may have been based on a PN that is not the final PN. At its simplest, acceptance of the BO will change the expected physical output level of a generating unit. Commodity prices will vary, particularly where such actions occur well before closure of the IDM, and the generator will need to revise its BOs for movements away from the production level implied by acceptance of a BO. Under the existing proposals, if for example the generator had no ex-ante position and a PN of zero, and the TSO accepted an INC and starts up the unit, it is meaningless to continue to provide BO prices based on a PN of zero, particularly as the decremental price, should the TSO later decide it no longer requires the initial BO, will not be the same as what was previously offered due to both the incurrence of sunk costs following the initial acceptance and from

movements in the general cost of commodities, etc. We consider any BOAs accepted prior to IDM gate closure should be treated in the same way as other firm ex-ante trades and should be incorporated in the FPN which will then have appropriate INCs and DECAs available to the TSOs for further movements from this position should the TSO require it.

Finally, in relation to open and closed instructions, we consider this needs to be separated into how BOAs are commercially accepted with the energy trading teams and how dispatch is managed between the control rooms. Commercial acceptance of BOAs should be a closed acceptance, e.g. a start-up at 15:00hrs and a shutdown at 19:00hrs, which allows the generator to plan its fuelling requirements and manage its risks generally. However, the physical dispatch instruction could remain an open instruction which would allow EDIL to continue largely without modification as the communication tool between control rooms.

1.3.6 Interactions between the Balancing market and the Intraday market

The consultation paper confuses the issues to be considered by presenting examples that will not happen in practice. For example the TSO never gives more than a few minutes notice of a dispatch to move to a different load point to carry spinning reserve.

A primary issue that is ignored in the consultation is that early TSO actions (i.e. to start up units) shifts the balance from a fully unconstrained market to a potentially partially constrained market and this could have implications for the distribution of inframarginal rents. This is a consequence of the IDM being open at the same time as the BM and the decisions on whether further participant trades are additive or substitutive will further impact on the distribution of revenues and could also have consequences for the liquidity in the IDM and the volume of arbitrage trades concluded by TSOs in the BM after IDM gate closure.

We consider that the additive approach for subsequent participant trades is the more rational approach but as noted above, this does potentially have implications for the redistribution of revenues and would benefit from analysis and further consideration before any final decision could be made.

In relation to the sub-options under the substitutive approach, PPB does not see any additional value from adding further complication by seeking to identify and lock in premiums. The proposal that a generator would receive the higher of its bid or the BM price means that a generator will always be mindful of its expectation of the BM price when trading and hence the “premium” option could produce unexpected outcomes that may be best avoided.

A final topic that needs to be addressed is the treatment of losses in the BM. This may also be relevant to the trading point. The consultation paper is silent on the matter but we

consider all trades should be quoted and traded as the same point for consistency and to minimise, for participants, the scope for operational errors.

1.3.7 Treatment of System Services

The consultation paper erroneously works off the premise that system services will be dispatched while the IDM is trading. As noted earlier, other than start-ups, all such dispatch takes place with a few minutes notice. Hence nearly all system services will be secured after the closure of the IDM.

Where the TSO requires to start a unit whose start-up time is such that it requires notice before the generator has provided prices for the day, we consider the TSOs should just use the INCs provided to the TSO at that time which should reflect the relevant costs.

1.3.8 Imbalance pricing

The HLD of the I-SEM states that participants are to be Balance Responsible. However, there will inevitably be imbalances and the extent of such imbalances will be influenced by forecasting accuracy (wind and demand), and inaccurate loss factors. It will also be influenced by how participants choose to trade in the ex-ante markets and it may also be influenced by the DAM outcomes (Euphemia testing and any PCR limitation on bids will be important inputs to this) and by IDM liquidity. Given the high degree of uncertainty over the outcomes and dynamics of the ex-ante markets, it is important that the Balancing Market pricing is consistent with earlier markets and with the conditions prevailing in the balancing market.

Pricing in the BM must therefore be reflective of the cost of meeting imbalances and must not skew prices such that the normal incentives for participants to trade in the ex-ante markets are distorted. The pricing must also not be polluted by early TSO actions. It is therefore vital that the pricing is cost reflective, and to achieve that, it is important that the correct balancing actions are identified to provide a coherent price reflective of the true underlying energy balancing actions.

The pricing approaches seem unlikely to isolate costs that correspond with the costs of the energy balancing actions taken by the TSOs which is the objective identified by the HLD. Tagging and Flagging may be difficult but is likely to be able to separate out the energy and non-energy actions. The concern has been that there may be few residual “energy” actions and hence pricing could be volatile. However there has been no analysis to inform this assertion or to help identify how material a risk this is. As a consequence it is impossible to provide definitive comments on what is the most appropriate approach.

Given the risk of volatile pricing, it might be sensible for a small market going through substantive change to seek to have options available to dampen volatility while the new systems and processes bed in. However this needs to be tempered with the downside that such dampening could influence the wider functioning of the markets by introducing distortions. This area needs further analysis to help identify the best approach to adopt.

1.3.9 Imbalance Settlement

The settlement algebra is secondary to the main objective of determining a coherent design for the Energy Trading Arrangements. The mathematics can follow to reflect the market design decisions taken.

We would however highlight that the formulae presented are not fully reflective of the different trades that will be conducted in the markets and hence will require substantial scrutiny at a later stage to verify they reflect the market design and before they are provided to vendors to develop the supporting systems. For example, the formulae treat ex-ante trades as having a single volume and a single price. This is expected to be the case for the DAM trades but IDM trades could be numerous, each at a different price and potentially including both buys and sells. Similarly, there may be multiple BOAs each at different prices and these could also be INCs and DEC. Hence there is substantive further work required to define the settlement algebra once the market design is agreed.

We are also alarmed that the consultation paper proposed a second imbalance price. The HLD is for a single imbalance price and energy imbalances inherently reflect that something has not materialised as expected. It is therefore unclear why the consultation paper seeks to introduce a second imbalance price for uninstructed imbalances since clearly all imbalances are uninstructed.

Settlement must also address the fact that traded products in the DAM and possibly the IDM could have a different duration than the duration of the settlement periods in the BM. Generators will have allocated their volumes when submitting FPNs and hence these could potentially be used as an allocation solution for them. Suppliers should equally be allowed to determine how to allocate their traded volumes where the trading period is longer. A supplier's FPN could be used to allow such allocation. A similar approach could be used for Wind generators who may not need to submit FPNs for dispatch purposes but who could use the submission to allocate their ex-ante trades into half-hourly trades.

1.3.10 **Other Issues**

Market power must be considered although the consultation paper makes no assessment of the impact on the potential for market power that could arise under each of the various options being consulted. This must be a consideration in the final design of the market such that the impact of the decisions on market power are identified and any mitigation measures are identified at the same time.

2. RESPONSE TO CONSULTATION QUESTIONS

2.1 SYSTEM OPERATION IN THE I-SEM (CHAPTER 2)

Question	Answer
<p>1. What are the impacts of early action by the TSOs on the Intraday Market?</p>	<p>We agree that the TSOs may, on occasions, need to take early actions.</p> <p>However, it is important that any such actions are as infrequent as possible to ensure the scope for distortion of trading in the IDM is minimised.</p> <p>As noted in more detail in our response to the next question, we consider that the only early TSO action that could be needed are to start up generating units (either to address locational constraints or if there is a significant energy balancing risk (e.g. concerns over timing of a significant weather front)). Contemplating or countenancing any TSO actions in excess of a simple generator start instruction creates scope for many conflicts during the parallel operation of the IDM and early BM actions, and large parts of the consultation paper seeks to devise methods to overcome such problems (e.g. substitutive/additive, PNs etc.). All early TSO actions will distort or influence the functioning of the IDM and hence must be avoided where possible. In addition if such actions have an effect on pricing in the BM, particularly in comparison to pricing in the IDM, then that could have un-expected and unintended consequences for the overall dynamics in the energy markets. It is therefore essential that pollution of the IDM and BM markets is minimised by imposing very strict limits on the scope of early TSO actions.</p>
<p>2. What measures can be taken to minimise early actions by the TSOs?</p>	<p>With the objective of minimising TSO actions, the key principles that need to be established are: (i) what actions do the TSOs need to take prior to IDM gate closure, and (ii) where there is a choice of possible actions, which should the TSO select.</p> <p>In relation to what actions the TSOs need to take, the priority should be to ensure the market is informed of any potential energy imbalance such that market participants can seek to</p>

	<p>address that imbalance in the IDM.</p> <p>In relation to physical actions by the TSOs, we consider the only dispatch actions that are relevant are instructions to Start and Synchronise a generating unit (that has a start-up time in excess of one hour), and that these instructions should be to synchronise the unit to its minimum stable generation level. With enough synchronised units at its disposal, the TSOs will then be able to dispatch generating units to the required output levels (or to shut down) to enable the safe and secure operation of the system after the IDM market has closed, thereby minimising the potential for competing trades within the IDM and Balancing markets.</p> <p>The other principle relates to what actions the TSO should select where it has a choice. Clearly where a generating unit is required for locational reasons, the choice is likely to be limited and as a clearly Non-Energy action, the TSOs should select the least cost option which may be a generator with a longer start-up time. However, where the TSO concern relates to having sufficient synchronised reserve to enable it to manage what it considers will be an energy imbalance, the TSO should not seek to interfere with or distort the proper functioning of the IDM (e.g. by expecting participants not to balance) and hence the principle should be to delay TSO intervention for as long as possible on the assumption that participants will manage their position in the IDM, thereby minimising any residual imbalance.</p> <p>Delaying the TSO actions (and therefore perhaps starting up flexible but more expensive generating units) may initially result in higher BM prices if participants do not balance their positions in the IDM. However, such an outcome will incentivise participants to manage their positions in the IDM to reduce their exposure to BM prices and it will also ensure flexible generating units that are needed to help manage the system, particularly as wind penetration increases, are rewarded for their flexibility (rather than the TSO starting up inflexible units early, and which could perversely reward their inflexibility).</p>
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	<p>Based on these principles, every early TSO action is a start-up and where that is to manage a particular locational constraint then that action is clearly a non-energy action and would be excluded from BM price setting.</p> <p>In addition to defining the specific principles identified above, PPB also considers that transparency is vital in relation to the TSO decision making process and therefore we consider that as well as specifying the principles, the TSOs must also be obligated to report on their decision making and actions. It would also be preferential for such reporting to be monthly rather than annual.</p>
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2.2 EX-ANTE MARKETS (SECTION 3)

Question	Answer
<p>1. Which of the three options put forward for interim IDM arrangements is most appropriate?</p>	<p>It seems clear even at the early stage of the Euphemia testing that the outcome from the DAM could result in infeasible generation schedules and hence the IDM will be vital to enable generators to trade to a feasible schedule.</p> <p>PPB considers that, whether or not XBID is operational by Q4 2017, arrangements must be developed to act as either interim and/or fallback arrangements for XBID. As a minimum therefore, coupling of the I-SEM with the GB market is essential (and any “I-SEM only” solution would be a retrograde step).</p>
<p>2. Should intraday auctions be implemented in I-SEM? Are there any advantages to those auctions not described in this paper?</p>	<p>Intraday auctions should be considered although as they supplement rather than replace continuous intraday trading, the proposition that they would increase liquidity needs to be tested.</p> <p>As auctions also require the agreement of the GB market operators and TSOs, there is a risk that seeking such consensus could be time consuming and difficult. Such negotiations should not compromise the primary need for coupling to be implemented.</p>

2.3 PHYSICAL NOTIFICATIONS (SECTION 4)

Question	Answer
<p>1. What are your views on the timing of PN submissions to the TSO</p>	<p>The issue of the timing of PN submissions is inherently entwined to the decision on how PNs relate to Ex-Ante trades.</p> <p>For example, where there is any delinking of PNs from concluded trades then the conclusion of a further trade may have no impact on the PN previously submitted. For example, a generator sells 100MW in the DAM and submits a PN for 250MW. The generator may then conduct numerous trades in the IDM that may not affect the original PN submission.</p> <p>It is therefore clear that except where PNs are fully linked, none of the options proposed add any value or new information. Hence where there is any degree of the de-linking of PNs from a participants ex-ante traded position then the only feasible option is for PNs to be updated by the participant at its discretion when it considers a change is needed to reflect a difference in its intent.</p> <p>For example, in relation to the above example, if it realised during the course of the IDM that it wasn't going to be able to sell as much in the IDM as it anticipated and it decides that 200MW rather than 250MW is a more likely outcome and PN.</p> <p>A further query in this section of the consultation paper relates to the granularity of bids, PPB agrees that it would be appropriate to procure a system that allows for a range of granularity. However, it should also be noted that while linear interpolation may be appropriate between PNs that have a granularity of a minute, linear interpolation would not be appropriate if the granularity were say 15 or 30 minutes.</p>
<p>2. What are your views on the removal of the requirement on wind generation and non-dispatchable demand to submit PNs</p>	<p>This issue clearly depends on whether the submission of PNs by wind generation and non-dispatchable demand adds value to the TSOs decision making in the balancing market.</p> <p>If the TSOs are not going to use or rely on the information, but are rather going to use their own forecasts, then it seems pointless to require these participants to submit PNs.</p> <p>If a wind generator were to decide to be “price making” in the</p>

	<p>BM then that generator would clearly need to submit PNs off which its Bids and Offers would be based.</p>
<p>3. What are your views on how PNs from participants should be linked to their ex-ante trades and what are your opinions on which of the three options outlined in this chapter is optimal for I-SEM.</p>	<p>Fully linked PNs (Option 1) are probably the closest to the original intent of the HLD which indicated the DAM would be the starting point for the balancing market. However, given the ongoing uncertainty over the potential schedules that will be produced by Euphemia which may not result in a feasible schedule, then it is clear some degree of delinking will be required and tolerance bands will be required to minimise the potential imbalance risk arising from technically infeasible schedules.</p> <p>Fully de-linked PNs (Option 3) do appear to provide the opportunity for self-scheduling and it is not clear why the SEMC considers this not to be the case. With de-linked PNs, a generator can nominate the output level it requires and can use its DEC bid to manage the risk that the TSO will turn the unit down. The TSOs will not know the Ex-Ante position of the generator and will be basing its dispatch decisions based solely on the FPNs provided and the associated INCs and DEC. This will provide the capability for self-scheduling (exercised economically) and increases market power risks.</p> <p>This leaves Option 2 where FPNs must be linked to the participant's ex-ante traded position as the most viable approach. This allows PNs provided prior to the closure of the IDM to reflect the participant's anticipated or hoped for position at IDM gate closure and caters for the situation that the DAM outcome may not be physically feasible. However, it could still be the case that a participant may not be able to trade to a position where their aggregate ex-ante trades give a feasible generation profile and there may need to be a further rule that the FPN should be the greater of their Ex-Ante traded position and the unit's Minimum Stable Generation level, when the FPN is greater than zero. Tolerances may also be needed to help manage potential imbalance exposures due to technically infeasible FPNs.</p> <p>The objective of the PNs is stated to be to provide useful information to the TSOs to enable them to operate the system.</p>

	<p>However, it isn't obvious that any of these options will provide materially better information to the TSOs. A concern expressed about option 1 is that the required linkage to completed trades means the TSO has less useful information whereas allowing PNs to reflect an expected position will be better. However, if a number of generators are over-enthusiastic in their projections of the positions they expect to fill and then at the last minute some of those units trade themselves down or perhaps more critically off, then the TSO may be in a worse position, having considered there would be sufficient synchronised reserve only to find that rationalisation late in the IDM leaves them with significant problems to solve. Hence it may be equally as difficult for the TSOs to have too much "non-firm" information as having too little "firm" information.</p>
<p>4. What are your views on the potential for the inclusion of an information imbalance charge. In addition, comment is sought as to whether this issue is best addressed under the generator performance incentives.</p>	<p>PPB considers information imbalance charges are inappropriate for the I-SEM and agrees with the comment in the paper that the I-SEM is not a self-dispatch market and hence would be penalising outcomes over which a generator has little control.</p> <p>The intent outlined in the consultation paper is to ensure submitted PNs are as "accurate as possible". However, it is impossible to objectively determine what "accuracy" means in this context. A generator participating in the DAM will not have full visibility of how other generators are participating and particularly to what extent wind generators are committing to the DAM or are holding back for the IDM and BM. Similarly the participation of demand in the DAM and through the IDM is optional and again generators will not know how this may affect their scope to trade out positions during the course of the IDM. With this level of uncertainty, as well as the risk the generator itself may break down, any decision on the "accuracy" of PNs would be arbitrary and seeking to apply penalties in such circumstances will increase the risk on generators and will likely result in increased costs for customers.</p> <p>In addition any such charges also overlap with SND charges and result in a multiple charges applying to events such as a generator trip.</p>

	<p>In relation to whether information imbalance charges should be addressed through GPs, the problem is how to differentiate between inaccuracy that is a natural consequence of an uncertain market and inaccuracy that is used to exploit a position, including in relation to market power.</p> <p>PPB considers that a licence obligation may be the only feasible approach to obligate participants to provide their best information to the TSOs.</p>
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2.4 FORM OF OFFERS, BIDS AND ACCEPTANCES (SECTION 5)

Question	Answer
<p>1. Which of the proposed formats should be used for bids and offers for deviating from PNs?</p> <ul style="list-style-type: none"> • Simple MWh • Relative MWh • Absolute MWh 	<p>PPB is concerned that the proposals for Bids and Offers, as currently described, do not work.</p> <p>A key issue is that unlike in GB where BOAs are only applicable after IDM gate closure, the I-SEM proposal is for the BM to be operating throughout the course of the operation of the IDM. This is further compounded by the fact that the bids and offers may relate to PNs that are not the FPN (in GB they only apply to the FPN).</p> <p>With these additional complications, we do not see how any bids and offers accepted before IDM gate closure (setting aside that we consider any acceptances should be limited to a start and increment to a unit's MSG level) can be treated as an "addition" or "reduction" applied around the FPN applying at IDM gate closure. It would seem more appropriate for any BOAs accepted prior to IDM gate closure to be a firm trade with the TSO that is included in the FPN along with all other ex-ante trades and that the INCs/DECs that are submitted alongside the FPN are offers for any further movement by the TSOs in that window when the only change in a generator's output is through the TSO accepting Bids and Offers to get the final output reallocated as the TSO requires to provide the generation in the right location with the levels of reserve that the TSO needs to ensure the safe and secure operation of the system.</p> <p>In relation to the format of bids, PPB considers that Relative bids are the most appropriate form. These are closest to the form of bids participants will use in the IDM and hence should reduce the operational risk for participants. As noted earlier there is an issue of what the bids are relative to, particularly where the PNs are aspirational and are not based on any final position until they become an FPN.</p>
<p>2. How should fixed costs be represented within bids and offers?</p>	<p>Start-up costs will be a feature of the I-SEM, particularly as wind penetration increases. As a general principle, such costs must be included within the market rather than as side</p>

<ul style="list-style-type: none"> • Explicit start up contracts • Block bids • Explicit start-up (and no load) costs 	<p>payments outside the market since otherwise there could be a distortion between costs and pricing in the IDM and the BM.</p> <p>On the assumption that start-up and no-load costs will be included in BM pricing (where they relate to energy actions), the issue is how best to achieve that. We see little difference in this regard between start-up contracts and explicit start-up bids as under either approach some form of “uplift algorithm” would need to be implemented to allocate such costs into the BM prices. This has a high potential to be arbitrary and to allocate costs in a very different manner to how they would be allocated in the IDM, creating a pricing disconnect. If this were the case then that could impact on liquidity in the IDM.</p> <p>On balance, it may be better to maintain consistency across all the market timeframes by retaining the HLD decision that all BM pricing is to be determined from INCs and DEC submitted by participants.</p>
<p>3. Should it be possible to rebid offer and bid prices following an acceptance? Three options are proposed:</p> <ul style="list-style-type: none"> • Fixing prices of accepted bids and offers • Undo prices • Freezing all prices 	<p>Notwithstanding our views on the types of early TSO actions that the TSOs require prior to IDM gate closure (i.e. only generator starts), it is clear that whatever bids or offers are accepted by the TSOs prior to IDM gate closure, the participant must be able to provide updates to their bids or offers.</p> <p>Even ignoring actions that the TSO could take prior to the conclusion of the DAM, initial BM bids and offers are to be submitted by 14:00hrs for the trading day commencing at 23:00hrs through to 23:00hrs the following day. In this theoretical example, the TSO could accept an offer at 14:00hrs for the following day at 22:00, which provides for acceptance of the bid/offer 32 hours ahead of delivery. Among other things, the commodity markets can move very significantly in a 32 hour period and the cost of cancelling the original Bid/Offer Acceptance (BOA) will have changed reflecting commodity cost movements, never mind that the original BOA may mean the participant has incurred costs that are sunk, for example by securing gas capacity to enable it to meet the BOA.</p> <p>This highlights that the only viable option is for the price of</p>

	<p>BOAs to be fixed at the price the TSOs based their decision on. However, as identified above, participants must also be able to provide new bids/offers throughout the course of the IDM.</p> <p>In addition to being able to update bids/offers, UNDO prices are also required. Where the TSOs accepts BOAs after IDM gate closure and then seek to cancel or amend that BOA, there may be a cost incurred by the participant that should be remunerated and the only way to address this is by the participant providing an UNDO price. This reflects the BM arrangements in GB (that apply after IDM gate closure). In addition there may also be a requirement for UNDO prices for BOAs accepted during the course of the IDM to protect participants against TSO acceptances and then cancellations before the participant has had the opportunity to update their INC/DEC prices.</p> <p>The final issue reflects previous comments relating to the fact that Bids/Offers are based off PNs which may be aspirational and not reflect the FPN the participant ultimately achieves and submits once its participation in the IDM has concluded. We consider any BOAs concluded by the TSOs prior to IDM gate closure should be treated as a firm ex-ante sale and should be reflected in the FPNs. This would mean that any BOAs subsequently concluded after gate closure are simply referenced off the FPN as is the case in GB.</p>
<p>4. Should open or closed instructions be used to move participants away from their PN?</p>	<p>The consultation paper works off the premise that bid/offer acceptances are implied from the dispatch instructions. If this were the case, then the instruction would need to be a closed instruction such that the participant knows exactly what is being accepted by the TSO and can manage resources to honour that BOA, for example by securing and nominating gas that has a lead time for delivery from GB to Ireland, or buying gas capacity. Closed instructions would also be essential for participants as they continue to trade in the IDM and this issue is also related to the question relating to “substitutive or additive” trades.</p> <p>PPB considers that the BOAs are commercial agreements,</p>

	<p>particularly where those are concluded prior to IDM gate closure and which could impact on the participant’s trading strategy.</p> <p>There is also the issue that EDIL currently works on the basis of “open” instructions and it is not clear if it can be modified to operate closed instructions. However, we see no reason why BOAs cannot be concluded on a “closed” basis commercially with the participants energy management centre but with EDIL used by the TSOs in the same way as it is currently utilised to dispatch generators using open instructions.</p>
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2.5 INTERACTIONS BETWEEN THE BALANCING MARKET AND INTRADAY MARKET (SECTION 6)

Question	Answer
<p>1. Which of the options put forward should apply to participation in the IDM in the event that the TSOs take a balancing action pre-gate closure:</p> <ul style="list-style-type: none"> • Freeze PNs • Additive PN Changes • Substitutive PN Changes 	<p>The discussion of these options in the consultation paper is overly confused by basing examples on situations where the TSO has taken early decisions to increase the output of a generator before the closure of the IDM. As previously described, we do not consider this to be a plausible scenario since all generators are required by Grid Code to have ramp rates that would enable the TSOs to take all such decisions after IDM gate closure and hence the only early actions initiated by the TSOs should be unit start instructions.</p> <p>This limits the occasions where a participant is trading in potentially substitution of, or in addition to, start-up BOAs. Our concern with Substitutive trading is that a generator would be trading in the IDM against at least the BOA price (or its estimate of the BM price if it thought this would be higher). This is likely to constrain its opportunity to trade which, although potentially correct in an unconstrained market, could end up resulting in the TSO conducting more arbitrage trades after IDM gate closure. For example, if the TSO accepts a start-up within which the average energy price is €150/MWh, but after which the Incremental cost is €50/MWh, under substitution the generator would in the first instance be trading against the €150/MWh price which it may not be able to achieve in the IDM. It may have been able to trade at its incremental price but is excluded because of substitution. However, after gate closure, the TSO may then be able to arbitrage trade using the €50/MWh incremental price. This has the effect of the TSO transacting more of the overall market trades which we consider should not be an outcome of the market.</p> <p>Under an additive approach, the generator may have been able to complete those incremental transactions directly in the IDM thereby increasing IDM liquidity and reducing the</p>

	<p>volume of TSO brokered trades in the BM.</p> <p>We consider the additive approach to be slightly better but we consider it is important to note that the negative of this option is that the IDM is no longer an unconstrained market and this has consequences for the distribution of revenues among generators.</p> <p>This area would benefit from modelling to help quantify the potential extent of any such redistribution and what consequences this might have for the overall sustainability of the market and the longer term impacts for generators and customers.</p>
<p>2. If the substitutive PN Changes option is taken, there are two further options for swapping out or netting IDM trades against bid-offer acceptances:</p> <ul style="list-style-type: none"> • If the participant wishes to trade in the IDM and substitute the bid-offer acceptance they will need to achieve a more advantageous price in the IDM than the bid-offer acceptance price • Implement a methodology which sees the unit lock in the premium above or below the imbalance price through the bid-offer acceptance 	<p>PPB considers that if the Substitutive approach was the option selected then the simple option (option 1) should be employed.</p> <p>It should be noted that given the current proposal that a generating unit would receive the greater of its bid price and the BM price, then the generator will inevitably be trading not just against the price of the BOA but will also be considering that it could be trading against the BM price, for example, if gas price rose by 50% within day and it expected the BM price to be substantially higher.</p> <p>The description of the second option only appears to contemplate that the BOA price could be at a premium to the BM price whereas the current proposal is that the generator would receive the greater of the BOA price or the BM price. Hence under this more complicated option, a generator seeking to maximise its revenues would still need to contrast its potential trades with its forecast of the BM price. This may result in unexpected outcomes and the simpler approach would be the more rational.</p> <p>Again the consequences of decisions in this area are unclear and requires further objective consideration to understand the incentives being placed on participants and the potential consequences thereof.</p>

<p>3. Which of the three options put forward for dealing with “Trading in the Opposite Direction” should be implemented:</p> <ul style="list-style-type: none"> • No specific consideration of this would be reflected in the market design • Implementing a rule that would prohibit PN changes that increase the quantity of any offer or bid acceptances • Permit PN changes in either direction but, in the settlement of the offer or bid acceptances, to limit the quantity on which the premium is payable, such that a change in PN cannot increase this quantity 	<p>The first paragraph of section 6.5 seems to acknowledge that this is only an issue where the participant has issued a non-zero PN which the TSO then seeks to vary prior to IDM gate closure.</p> <p>Again understanding the scope of the actions that the TSOs will take is critical to the assessment of what, if any, protections are needed to avoid potentially disruptive counter-trading.</p> <p>The current proposals are that acceptance of Bids/Offer is initiated through dispatch instructions by the TSO. On this basis any change in output from a generator operating at or above its minimum stable generation level should be instructed after IDM gate closure. If this presumption is correct, then the only BOAs that would be capable of being counter-traded would be where the TSO instructs a start prior to IDM gate closure and the generator trades itself back off again in the IDM.</p> <p>However, on the assumption the TSO start decision has been made because the PN issued by the generator was zero (since otherwise the TSO would not have needed to issue the start instruction in the first place), and that under the current proposals the PN is not varied by the BOA (which as we have noted above we consider to be wrong and should be modified), then there is nothing to actually counter-trade against.</p> <p>Our earlier view was that such early BOAs should be reflected in updated/final PNs given they are firm ex-ante trades concluded theoretically over a day in advance of delivery. In this scenario, there could be scope for “trading in the opposite direction” but one option to address this could be that upon receipt of a start BOA, the generator must reflect that BOA in its FPN (i.e. cannot counter-trade it), except in exceptional circumstances such as a unit breakdown.</p> <p>This again highlights the need for greater understanding of TSO actions and the TSOs’ objective function for the</p>
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	balancing of the system before a definitive and coherent design can be identified.
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2.6 TREATMENT OF SYSTEM SERVICES (SECTION 7)

Question	Answer
<p>1. What are your views on the proposal whereby a unit that is deployed for reserves should be constrained to the minimum extent possible in the IDM</p>	<p>The consultation paper assumes reserves need to be scheduled prior to IDM gate closure. However, the only reserves that cannot be scheduled in the period available to the TSOs after IDM gate closure may be synchronised replacement reserve (i.e. where the units have a start-up time that exceeds the time available to the TSO after gate closure).</p> <p>Again this reiterates that the only early actions that the TSOs may require generators to take prior to gate closure are to start-up and load up to their minimum stable generation level. As a consequence, virtually all of the actual dispatch of system service can be concluded after the closure of the IDM minimising the distortion of the ex-ante markets.</p>
<p>2. Are there any market power issues that need to be specifically addressed in relation to System Services?</p>	<p>Market power is clearly a significant issue in the I-SEM and needs to be considered. The fact that INCs/DECs submitted into the BM are the basis of how the TSOs will schedule reserve is not really very different to the fact that these prices are also used to set prices in the BM. There are potential issues of Local Market power but it is not readily apparent that it is any different for reserves as it is for addressing transmission constraints, voltage support, etc. Hence these all need to be considered together.</p>
<p>3. Which of the two approaches should be utilised where the TSOs have to schedule a plant before the opening of the Balancing Market:</p> <ul style="list-style-type: none"> • A system services framework would be used to contract with those generators 	<p>PPB considers that the where the TSO is seeking to start a unit, regardless of its start-up lead time, it should make such decisions based on the INCs and DECAs available to it at that time. The generator will know its start-up costs for starting up the unit and to the extent it knows that the lead time means it could only start in the following trading day and that the costs of such a start are higher (e.g. it would incur a different gas capacity cost), then the generator can update its Offers to reflect those costs.</p> <p>Once the BO is accepted, the generator can continue to update it BOs to reflect accurate costs to the TSO for any additional change in output or to cancel the start of to shut the unit down again.</p>

<p>that need to be scheduled prior to the BM opening.</p> <ul style="list-style-type: none">• The TSOs would use incremental offers and decremental bids from previous trading day to call a plant pre-BM.	
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2.7 IMBALANCE PRICING (SECTION 8)

Question	Answer
<p>1. What are your views on the Tagging and Flagging Approach. A “cause” based method for identifying energy and non-energy actions with the imbalance price being set only on energy actions.</p>	<p>A Tagging and Flagging approach could certainly work and could successfully distinguish between Energy and Non-Energy actions. The issue is whether the actions taken in the I-SEM are such that very few Energy actions are left from which to determine the BM price.</p> <p>However, while this is identified as a risk there is no analysis to confirm whether or not this is a substantive risk. It is therefore impossible to provide definitive comments without much more information to inform the consideration.</p>
<p>2. What are your views on the Simple Stack? With this approach there would be a simple stack of the available bids and offers and the price would be set based on the net imbalance volume.</p>	<p>A simple stack would not provide a coherent price for the BM and could have unintended consequences if prices are lower or less volatile than in the ex-ante markets, for example, distorting where participants will opt to participate and hence distorting liquidity in the different markets.</p>
<p>3. What are your views on the unconstrained stack with plant dynamics included. These are two additions that this option would have over the simple stack:</p> <ul style="list-style-type: none"> • Plant Dynamics • An optimisation time horizon 	<p>While this option represents a slight improvement, it remains likely to dampen prices below the true marginal cost and would be subject to variability depending on how plant dynamics are utilised and the optimisation horizon is set. It is also worth noting that the HLD states (in para 4.6.) that imbalance prices “will reflect the marginal costs of energy balancing actions taken by the TSOs”. Hence neither of the price based unconstrained stack methods are consistent with the HLD decision.</p>
<p>4. What are your views on the price based method – unconstrained unit from actual dispatch?</p>	<p>The consultation indicates that this approach is straight forward and leverages systems required anyway for the purposes of system operations and doesn’t require any identification of action. However, given the ongoing uncertainty over the objective function for the TSOs in the BM, it is not possible, based on the information available, to</p>

	<p>comment on whether this is indeed an advantage. It is also unclear how quickly any algorithm would solve the problem to determine prices. We agree that any lack of pricing consistency could be a significant disadvantage.</p> <p>Again in the absence of any modelling, it is difficult to comment on how the resulting BM price profiles relate to pricing in earlier timeframes and hence on whether the pricing could have any distortive impact on the overall dynamics of the markets.</p> <p>There is also the issue that this option also appears to be inconsistent with the HLD as the pricing may not reflect the marginal cost of actual energy balancing actions taken by the TSOs.</p>
<p>5. What are your views on the sharpness of the marginal imbalance price? Do any concerns relate to the transition between SEM and I-SEM or are there other broader concerns?</p>	<p>PPB agrees there may be issues with the volatility of imbalance prices but it is not possible to comment on whether such volatility is reflective of the imbalances the TSOs have been left to solve or whether they occur because of some wider problem with the market design. In addition, there may be a requirement to dampen prices over a transitional period, for example while the dynamics of the market are better understood and as participants adapt to the new arrangements. However, this clearly needs to be balanced with the fact that any dampening could itself distort the proper functioning and dynamics of the market.</p> <p>In relation to whether this would merely be a transitional requirement, that may depend on how the pricing is determined in the first instance and whether those underpinning processes (e.g. tagging and flagging) create artificial volatility that then requires an offsetting mechanism to dampen such unwarranted volatility.</p> <p>Again it is not possible to provide meaningful comment in the absence of information on, and analysis of, the possible consequences. It may therefore be appropriate to procure systems that would provide flexibility to enable a PAR to be employed.</p>

2.8 IMBALANCE SETTLEMENT (SECTION 9)

Question	Answer
<p>1. What are your views on the issues set out in the imbalance settlement section?</p>	<p>We do not plan to comment in great detail in the settlement algebra as it should be relatively straightforward to resolve the mathematics once the principles of the pricing formulation are agreed.</p> <p>However, there are a number of high level errors that we note that would need to be corrected in the final algebra.</p> <p>In the cashflow algebra set out in the formula referenced “9.1” (on page 122), there is no single Price and Quantity for ex-ante trades. There will be a single Price and Quantity for trades concluded in the DAM but there may be many trades concluded in the IDM that will each have different prices and quantities (which may also be buys and sells). Similarly there may be many BOAs agreed for a settlement period and hence each of those may have different prices and will need to be aggregated. The formula is also silent on the remuneration of start-up costs (for which a number of options have been proposed).</p> <p>A further issue that will need to be addressed is that the formula is set out to calculate the cashflow for each period j. However, the DAM trades are hourly trades, the IDM trades may be hourly but could also have shorter granularity and the BM quantities will be half-hourly. It should also be noted that the allocation of hourly trades to a half-hour may not be a simple pro-rata allocation and the allocation will need to capture any participant allocation that is provided for.</p> <p>Similarly the formula referenced “9.2” (on page 123) will need to reflect that there could be multiple ex-ante trades and multiple BOAs to be settled in that trading period.</p> <p>The HLD indicates that the I-SEM is to have a single imbalance price, yet sections 9.2 and 9.6 introduce the concept of different imbalance prices. However all imbalances are inherently “uninstructed” imbalances be they because a generator trips and doesn’t deliver the energy or because a supplier’s customers consumed more than the supplier has traded in the ex-ante markets. It is therefore unclear why a second imbalance price</p>

	<p>has been introduced and there is little discussion of why this deviates from the HLD.</p> <p>Section 9.3 needs to be revisited as it seems to only contemplate one type of BOA occurring in any settlement period (see formulae referenced 9.3a and 9.3b). However, there may be a combination of Bids and Offers accepted by the TSO for a participant in any settlement period and the settlement will need to reflect that (for example the TSO may have taken an early action to start a generator but then later decides close to real time that it no longer needs and which is dispatched back off again).</p>
<p>2. What are your views on the refined proposal whereby the payment rule applies only to incremental offer acceptance volumes above the PN and to decremental bid acceptance volumes below the PN?</p>	<p>PPB considers that all BOAs should be paid as an individual transaction. The examples provided in section 9.8 are unrealistic as they relate to TSO incremental/decremental dispatch which can all be concluded after IDM gate closure when the INC and DEC prices cannot be varied.</p> <p>Prices will vary between the commencement of the IDM (and possibly earlier if the TSO takes even earlier actions) and IDM gate closure and any change in the TSOs decision in this period must reflect the net cost of the individual BOAs that have been agreed. After IDM gate closure, the TSOs will have INCs and DEC prices and we consider they also require undo prices for circumstances where they accept BOAs that they subsequently decide to change over the course of the 2 hour period. Settlement of these BOAs should again simply be at the relevant prices for the transactions. There is no requirement for any further complication.</p>
<p>3. What are your views on the possible consequences of ex-ante trades based on trading periods of different duration to the Imbalance Settlement Period (ISP) and</p>	<p>Participants should not be exposed to imbalances just because the DAM trading period duration is different to that used for imbalance settlement. This should be the case regardless of what granularity the IDM trading period is as there may not be liquidity in the IDM to enable participants to manage the risk.</p> <p>We consider that the correct approach is to allow participants to allocate ex-ante contracts to reflect their underlying profile. For generators, if the approach to PNs is anything other than fully de-linked PNs then the FPN may naturally provide an allocation</p>

<p>what are your views on the options put forward in the paper.</p>	<p>of the generator's ex-ante trades across the BM settlement periods.</p>
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2.9 OTHER ISSUES (SECTION 10)

Question	Answer
<p>1. Global Aggregation – what are your views on the current policy and the three alternative options put forward in the paper for dealing with global aggregation</p>	<p>From the descriptions set out in the consultation paper and following the discussion at the RLG meetings, it would appear that Option 3 with a tariff is the most appropriate approach given that suppliers have no control over the risk.</p> <p>Allocating a volume to suppliers for them to trade out in the markets could add to their risks if the outturn direction of the error were different to their expectation and how they had traded, thereby increasing their risk.</p> <p>The tariff approach would also lead to greater transparency and scrutiny of the costs and underlying causes which could be beneficial for customers in the longer term.</p>
<p>2. Local Market Power – What are your views on whether there are any specific issues in relation to local market power which need to be considered at this stage.</p>	<p>Market Power clearly needs to be considered across all timeframes and markets (including the CRM and DS3 markets) and the interplay between these needs to be considered at a macro level. However that does not mean that the workstream considering the detailed design of the energy markets can ignore the matter. Market Power issues should be identified and assessed in each workstream and this should then be fed back to the more general market power workstream to help identify inter-relationships and also help identify whether more generic measures will assist with the management of issues or whether more specific measures are required that are unique to a particular part of the market design. We consider this identification process must occur within the individual workstreams.</p> <p>In relation to the issue of local market power, we believe that where possible, out of market arrangements should be avoided as they reduce transparency in the markets. We are also concerned that decisions on, for example, the delinking of PNs could increase the scope for market power. Hence it is important that as decisions are made on the design elements of the Energy markets that detailed consideration is given to the effect of those decisions on market power and whether they remain the correct decisions if they increase the scope for market power</p>

	<p>and whether mitigation measures need to be incorporated into the design.</p> <p>We consider that as there have been no decisions at this stage the market system procurement should include an option for local market power measures.</p>
<p>3. Metering – What are your views on the proposal for metering put forward in the Consultation Paper.</p>	<p>The early provision of meter data remains important for market participants to enable them to manage their positions in the energy markets by providing the earliest possible feedback on their actual meter data.</p> <p>There was a discussion at the RLG workshop as to whether there could be different arrangements for meter polling in each jurisdiction. It is unclear whether such a difference would affect the loss allocation to each jurisdiction although it was indicated at the meeting that it probably would. This would need to be investigated before any decision could be made.</p> <p>PPB agrees with the proposals to follow a similar process as was adopted for the SEM and that any issues that could affect the operation of the market or participants in the market should be consulted upon.</p>
<p>4. Instruction Profiling – What are your views on the instruction profiling section. In particular, is it feasible to more accurately model the precise loading of units and whether more technical characteristics need to be accommodated in the technical offer data.</p>	<p>Instruction profiling could benefit from greater flexibility in the use of Technical Offer Data. We have found that the SEM systems are unable to accommodate the range of possible scenarios that a generator could be facing, for example coupling up a second GT to a GT and Steam Turbine that is already operating.</p> <p>It would therefore be beneficial for both the TSOs and participants to be able to better reflect the technical characteristics of units on the system.</p>

<p>5. Units Under Test – What are your views on the two options put forward for units under test in I-SEM.</p>	<p>PPB considers the Testing regime in the SEM to be overly restrictive and requests that the arrangements in the I-SEM should seek to minimise the lead time required to arrange tests and should be more flexible such that generators can cancel Testing status as soon as their testing requirements are complete such that they can re-enter the energy markets as quickly as possible.</p> <p>We consider that Option 1 may be the most appropriate approach for testing although there may need to be different approaches for established generators that are testing following an outage compared to tests for units that are commissioning.</p> <p>It is also unclear from the current description of the option whether the TSO can instruct the generator to deviate from the test profile. It would seem more sensible, where a generator can deviate from the test profile if the TSO needed to do so, for the generator to have provided INCs and DECAs thereby providing the TSO with options to access the unit if possible and needed.</p> <p>We also note that Testing Tariffs are to be retained and the interplay between these and the BM payments must be assessed and considered.</p>
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3. CONCLUSIONS

Designing an electricity market is highly complex and there are many inter-related parts that make it more difficult to assess the dynamics and the consequences of different decisions. The I-SEM is further complicated by the fact that the governance and design of the ex-ante markets are not within the control of the Government, Regulators, TSOs or participants in the I-SEM.

We had highlighted a range of issues and concerns in our 4 March 2015 feedback following the RLG workshops that we considered needed to be addressed in the consultation paper. Unfortunately many of these issues remain to be considered and as a consequence of these outstanding matters, it is not possible in a number of areas to provide cogent responses or to identify what we consider to be the best design approach. As a consequence there remains much more work required before decisions can be made that can confidently be justified as rational decisions that will meet the objective of delivering a coherent and sustainable energy market that delivers an efficient market for customers and participants alike and which is transparent and avoids unnecessary complexity.

Further RLG groups would help with the consideration of the outstanding matters and would also help consideration of the emerging design as the SEMC reflects on responses to the current consultation. The Energy Market Arrangements are one of the most critical elements of the I-SEM and therefore must be rigorously scrutinised to ensure they are robust. Key issues that need to be addressed include :

- Establishing an unambiguous understanding of the TSOs' objective function in the operation of the balancing market;
- Understanding and agreeing the extent and scope of early actions the TSOs need to take to operate the system securely;
- All proposed detailed market design decisions must be supported by at least qualitative analysis, and where possible, quantitative analysis, to inform and support the decision making and to verify the expected outcomes; and
- Ensuring the end to end feasibility and coherency of the energy trading arrangements, starting with the outputs from the Euphemia testing.

Given the significant gaps that still need to be worked through, we consider it would be beneficial, in addition to further RLG workshops, for there to be a further consultation on Minded or Draft proposals to enable stakeholders to provide final comments on the proposed "end to end" market design. Such additional scrutiny can only help ensure the robustness and integrity of the market design for the benefit of all stakeholders.