Integrated Single Electricity Market (I-SEM)

High Level Design for Ireland and Northern Ireland from 2016

Consultation Response Template

5 February 2014

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1 PURPOSE OF THIS DOCUMENT

1.1 PURPOSE AND STRUCTURE OF THIS DOCUMENT

1.1.1 This supplementary document provides a template for responses to the consultation document on implementing a new High Level Design ('HLD') for the Integrated Single Electricity Market (I-SEM) in Ireland by the end of 2016. We request all responses to the consultation are submitted in this template, and in **Microsoft Word** format.

1.1.2 This template contains the questions presented in the consultation document.

1.1.3 Responses to the Consultation Paper are requested by 17.00 4th April 2014. Following a review of the responses to this paper the SEM Committee will publish its draft decision on the proposals set out in this paper in June 2014.

1.1.4 Responses should be sent to Jean-Pierre Miura (JeanPierre.Miura@uregni.gov.uk) and Philip Newsome (pnewsome@cer.ie). Please note that the SEM Committee intends to publish all responses unless marked confidential[1].

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[1] While the SEM Committee does not intend to publish responses marked confidential please note that both Regulatory Authorities are subject to Freedom of Information legislation.

2 CONSULTATION QUESTIONS

2.1 RESPONDENT DETAILS

COMPANY	Mainstream Renewable Power
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MAIN INTEREST IN CONSULTATION	Integration of wind in the new market

2.2 GENERAL COMMENTS

Mainstream welcomes the opportunity to reply to the Commission's consultation on the High Level Design for the new Integrated SEM.

The SEM HLD Criteria are fundamental to the design of the new market however Mainstream believe additional criteria or revised definitions of the defined criteria should also be considered in any new market design. These include:

Security of Supply
Though the document evaluates the options against this criteria Mainstream believe that security of supply means the security of fuel supply as well as the security of the operation of the system. Ireland is largely dependent on imported fuel – according to Eurostat we imported 84.8% of our primary energy in 2012, and the increase in security that will come from encouraging and providing for the future supply to come from indigenous fuel should form part of this criteria when evaluating the options. As recent events in Russia and the Ukraine should highlight, there is a very real possibility and risk that a portion (30%) of EU bound gas from Russia could be switched off at any time. Indigenous sources of fuel should be evaluated as a stable source of supply and maximized in their deployment. Any new market which is prohibitive to generation from indigenous sources will increase the country's exposure to imported fuel.

Stability and Equity
Any new market will need to provide for a predictable level of return in order for a wind farm to be financeable. Currently all generation receives the same price for all of their generation. Any mandatory day ahead trading exposing wind farms to imbalance prices for volumes which were not forecasted day ahead will potentially make wind farms un-financeable. This non forecasted volume and the prices at which this volume will be charged are not predictable enough to compensate lenders and/or investors accepting the risk. This change in risk exposure from the current market arrangements to a new market with this type of design is much greater for wind than it is for conventional generation and is therefore unequitable. Any design based on a mandatory day ahead market for wind will

have to mitigate this risk in order to provide an equitable environment for both conventional and wind generation to be financed.

Priority Dispatch

Priority Dispatch does not just mean Wind generators have the right to bid in at zero marginal cost and therefore provide electricity supply before other generators that must bid in above zero. Priority dispatch means that wind generation should be dispatched before any other conventional generation to meet demand. It is not an economical rule but an environmental rule. Therefore creating a market whereby there is not enough volume to bring on wind due to bilateral trades outside the market with conventional generation is counter to the priority dispatch rule. Simply because the TSO allows wind to bid into the Day Ahead Market ("DAM") or the balancing/pool market at zero doesn't mean that the market has met the priority dispatch obligation. If conventional generation has been contracted with demand in the forward market and there is not enough demand for all wind this means that conventional generation is being dispatched ahead of wind. Any new market design must create a market that allows all wind to generate if it can provided there is enough demand in the market as a whole (not just net demand after bilateral contracts). Allowing Wind to generate in a market of last resort does not fulfil the obligation of priority dispatch fully if the prices in the market of last resort are prohibitive. When wind is available (to be scheduled for dispatch DA or ID) it must have access to these markets for all its forecasted volumes. This means that liquidity in these markets must be created to allow all potential wind to be scheduled where there is enough demand.

Demand Side Management

We understand that it is the intention of the new market to encourage demand side participation. Demand side participation is fundamental to any market which is intended to survive well into the future. Flexible demand providers should be made aware of the financial benefits of participating in the market and given a clear route to do so. For most demand side suppliers, participating in the market will not be a normal part of their business and therefore any new market design should create a mechanism through which any willing participants can access the market with minimal effort. This mechanism could possibly be an intermediary party or aggregator through which demand can easily sign up or de register with minimal notice. The market should allow for demand to participate in a trial period if they so wish in order to show them what financial benefits participation will give them. Also a conscious marketing effort by the TSO to obtain demand side participation should be made, whether this is a door to door campaign or through the design of an intermediary route whose role is to procure contracts and be the route to market for these players.

As well as facilitating the participation of the traditional big users of power in a new market, now is an opportune time to investigate innovative products which may provide a means for the domestic market to become more flexible. We understand that DSM is part of the DS3 project but feel that a new market design should consider all opportunities including, for example, the potential that smart grid devices connected to the "cloud" and modern ICT to aggregate particular demand types.

It is estimated that a flexible load of approximately 900MW could be incorporated into the market with such devices. As most flexibility is needed for short periods the customer's service should be minimally impacted and along with smart meters they should see the benefit of participating.

The Document states that a strong day ahead market may encourage greater demand side participation. Though this may be true, it is believed that DSM should be encouraged by other means including direct negotiation/explanation and providing easy access to the market.

Adaptive

Although the implementation of domestic demand side management may be a long term objective the ability of a new market design to incorporate such participation should be considered. Services such as battery storage will also be a reality in the medium term and consideration should be given on how this type of participation can be integrated into the design of the market.

Forecasting

All market options should include an optimal, equitable and cost effective way to forecast wind. It is clear that the RAs wish a new market to incentivise Wind generators in some way to increase predictability towards real time. However despit this, the TSO uses its own wind forecasts to dispatch the system no matter what Wind "bids" into the market day ahead. Therefore it is the TSO's forecasts that are considered to be the most accurate in terms of what is going to occur on an all island basis and individual plants forward trading could therefore be potentially based on these forecasts.

If it is the intention to encourage wind to individually participate in the forward market there should be some interaction between the TSO and their forecasts for each wind farm and the wind farm owner. All participants, not just wind, will benefit if the best forecasting system is used by all parties in the market for day ahead bidding as well as dispatch. Making the best forecasts available to individual wind farms will encourage them to participate in forward markets while mitigating their exposure to imbalance costs. Also the smaller the imbalance in the system the lower the imperfections cost incurred will be. Access to the best information will allow individual wind farms to decide whether to bid day ahead considering expected uncertainties and expected prices.

It may be possible for the TSO's wind forecasting system to generate individual wind farm forecasts. These could be made available to each wind farm owner who could then either use these directly to inform their forward bid or indirectly by altering them using site specific information or generate their own forecast with visibility of the TSOs forecast. In addition, we believe that the aggregate amount of wind on the system or a least in a region is what is pertinent for system stability and not whether, an individual wind generator forecast is within a certain percentage of DA forecast.

In conclusion Mainstream feel there could be a benefit to all parties including electricity customers if there was a two way street in terms of providing data between the TSO and the individual wind farm. Currently all wind farms provide production data and max power data (based on wind speeds at turbines) to the TSO. The TSO use this information to create their portfolio forecasts. Their forecasting results could potentially be made available back to the wind farms on a plant by plant basis to help inform their forward bid.

2.3 PURPOSE OF THE DOCUMENT (SECTION 1)

Question	Answer
1. Which option for energy trading arrangements would be your preferred choice for the I-SEM market, and why?	

- Mainstream's preferred choice for energy trading arrangements would be option 4. A gross pool arrangement provides a similar market to the current market through which wind projects are financeable with REFIT and allowing participants who want to trade in the forward markets the opportunity to do so through financial contracts.

- Mainstream's second choice for energy trading arrangements would be option 2 providing the pool price is used for the REFIT floor price payment.

- Mainstream's third choice for energy trading arrangements would be option 3 with a forecasting margin for wind nominations within which wind is not exposed to the balancing market.

- Mainstream do not believe that Option one is a workable market for the Island.

2. Is there a requirement for a CRM in the revised HLD, and why?	
3. If there is a requirement for a CRM in the revised HLD, what form would be your preferred choice for the I-SEM, and why?	

2.4 TOPICS FOR THE HIGH LEVEL DESIGN OF ENERGY TRADING ARRANGEMENTS (SECTION 4)

Question	Answer
4. Are these the most important topics to consider in the description of the HLD for the revised energy trading arrangements for the single electricity market on the island of Ireland?	
5. Are there other aspects of the European Internal Electricity Market that should form part of the process of the High Level Design of energy trading arrangements in the I-SEM?	

2.5 SUMMARY OF THE OPTIONS FOR ENERGY TRADING ARRANGEMENTS (SECTION 5)

Question	Answer
6. What evidence can you provide for the assessment of the HLD options with respect to security of supply, efficiency, and adaptability?	

Security if supply

Any market which exposes Wind generation to imbalance costs for volumes it did not deliver relative to a forecast will make wind generation un- financeable leaving the market dependent on imported fuels for electricity supply. The majority of Wind generators costs are upfront Capex costs and lenders require a form of fixed income over 15 to 20 years to ensure pay back of this fixed cost. No matter what the reference price is for wind under REFIT exposing it to "Top Up" cost for volumes not delivered will make it exceedingly difficult to finance. To make wind generation financeable in this environment these top up costs will need to be incorporated into the REFIT revenue somehow, only serving to increase costs for PSO customers.

2.6 ADAPTED DECENTRALISED MARKET (SECTION 6)

Question	Answer
7. **Are there any changes you would suggest to make the Adapted Decentralised Market more effective for the I-SEM (for instance, a different choice for one or more of the topics or a different topic altogether)?**	
8. **Do you agree with the qualitative assessment of the Adapted Decentralised Market against the HLD criteria? If not, what changes to the assessment would you suggest (including the relative strengths and weaknesses of an option)?**	

General

- Participants have a choice between which markets to trade in however, Mainstream disagree that this will constrain the exercise of market power. If the DAM and IDM are not mandatory vertically integrated, players will have the choice not to enter either of these markets creating illiquid markets. This will subsequently force independent generators to enter into bilateral agreements will suppliers under which suppliers will be able to charge for balancing costs based on the balancing cost forecasted in the market (or the difference between the DA and IDM/balancing cost) the difference between these prices will be great due to the fact that these very suppliers will not be trading through these markets. These players will also be the players submitting incs and decs for the balancing market and hence setting the balancing price.

- The Document says that this option will help integrate wind more fully into the market. This option will only force wind to enter into bilateral agreements with large players (on their terms) who can accommodate wind as part of their portfolio and bid in net volumes.

- Mainstream queries that the requirement to bid a gross portfolio will alleviate difficulties if the markets are not mandatory. If a vertically integrated player has 1,000MW of demand and 1,000MW of bilateral contracts they do not have to bid anything into the DAM market if it is not mandatory.

Stability:

- The amount of ex-ante intervention required in this market to ensure liquidity would be significant. In respect to market maker obligations, a large volume would be needed to be forced into the market to ensure liquidity. This is then essentially moving to a mandatory market.

- PTRs mean that interconnector capacity will be taken out of the market reducing liquidity before the stage that it has to be released if not used.

- It is possible that there would not be enough demand forced under the market maker obligations to cover the dispatch of all (uncontracted) wind at the day ahead price. If this occurs then the concept of priority dispatch begins to be eroded as participants could be scheduling their own fossil fuel plants to meet their demand instead of wind.

- It is Mainstream view that central dispatch should be retained if we priority dispatch is to be

maintained. It is understood that wind has priority dispatch in the balancing market but this is a market of last resort. Wind should have priority dispatch/ promise to dispatch in the DAM and IDM ahead of conventional generation.

- Exposing wind to energy costs for volumes it doesn't deliver relative to its forward traded position negates some of the revenue received by generated volumes. Therefore the net volume for which an average price is received is going to be less than the gross volume produced by wind. In essence this means that priority dispatch has only been followed for a net volume and not the full volume.

- If conventional generation does not obtain or predict to obtain sufficient prices in the DAM it can choose not to participate. In comparison wind generation has to generate in order to access REFIT and recover capital costs. Wind does not have the option to turn down supply should it not contract for volumes it expects to generate in the IDM, this means that wind is essentially forced into the balancing market and then obtains prices that it has no influence over. Conventional generation can turn up or down its plant to match its contracted position so that it doesn't have to participate in the market of last resort. The balancing market for wind will be the only market for a certain percentage of its volumes and could potentially be discriminatory. Put simply if it was the only market for everyone such as a pool system than this would be alright, however the fact that conventional generation can turn up or down their generation depending on their contracted position means that they will not have the same exposure to the imbalance market as would wind generators.

- The cost of non-energy ancillary services is spread equally across the market. The TSO needs to procure non-energy ancillary services to maintain stability of the grid in response to all participants' actions including demand and conventional generation. However it is not defined explicitly who needs which non-energy ancillary service and how much of their use can be attributed to the actions of a particular generator. The system as a whole needs non-energy ancillary services to accommodate all generation and demand. However, wind is currently confined to 50% of the demand for system stability reasons. If wind generates over this level than it is curtailed. The Document states that the aim is to keep curtailment below 5% per annum. Wind curtailment provides an ancillary service to the system and wind pays for this through a reduction in its revenue. It is a function of the system that wind generators can be curtailed in this event. Respecting the nature of what wind can and cannot provide, it is proposed that wind should be allowed to under produce from its contracted position (to a certain percentage) without being exposed to energy costs and these energy costs spread across the whole market as an ancillary service. Otherwise wind is being penalised by a) not being allowed to generate to its maximum potential because the system cannot handle it and b) being charged for volumes it doesn't generate relative to a forward schedule.

Efficiency

- Balancing services should be purchased on a least cost basis and all balancing volumes should not be charged at the marginal rate but the cost averaged and pro-rated for imbalance volumes. Mainstream queries issues with pay as bid for energy balancing services as this will reduce the costs of balancing for all market participants.

Competition

- The document states that this option will enable market participants to be innovative in terms of trading strategies including different approaches to trading wind with benefits to consumers. Mainstream would like to be provided with an example of how Wind could be more efficiently traded than it currently is. The TSO forecasts wind on aggregate keeping the balancing costs to the system at a minimum and therefore customers.

Cost

- A cost benefit analysis of settling the imbalance price at the marginal cost (dual or single) versus pay as bid should be considered. A dual imbalance cost will be unfavourable to Wind as the system is likely to be short when there is little wind and long when there is lots of wind.

- Because of the nature of wind forecasting, the nearer real time the more accurate the forecast. Wind generation would have to be continuously trading 24 hours a day in order to minimise exposure to the imbalance market. It is suggested that an aggregator of wind should be considered by to bid in Day ahead and ID to minimise trading costs. Smaller participants will simply not have the ability to trade 24 hours a day.

Environmental

- Full exposure to the imbalance market for un-delivered volumes versus a forward traded position will inhibit new entry of wind. Therefore this option will not facilitate government targets for renewables.

9. How does the Adapted Decentralised Market measure against the SEM Committee's primary duty to protect the long and short term interests of consumers on the island of Ireland?

- It is in the interest of the customers of Ireland that wind generation be continued to be financeable under any new market rules as wind generation has been shown on numerous occasions to bring down the overall market price of electricity. If wind is made whole up to the reference price in REFIT for all its volumes (and not mandated to trade day ahead) wind will still be financeable but will not be incentivised to trade in the forward market and integrate into the EU market coupling regime.

- It is envisaged that a purely decentralised market will be too risky for wind generation and prohibitive to new entry unless the REFIT price is referenced against the imbalance price (if this is the case there would be no incentive for wind to play in the DAM).

- We believe this market is too far removed from the market that we are currently in and the costs of implementing will it be extensive compared to the other options. In terms of re-opening existing contracts and in terms of the floor price difference between the REFIT reference price and any market reference that will be used to make REFIT contract holders whole.

- Though this is similar to the NWE markets, the volumes traded through these markets are much greater than what would be traded in the SEM and liquidity would always be an issue in the ISEM under this option as substantial volumes will be tied up in bilateral contracts in the forward market.

- The NWE markets contain large volumes of Hydro which generally keep down the balancing cost so illiquidity in the DAM/IDM is not as big an issue. An imbalance market with little Hydro will result is higher imbalance costs. An illiquid DAM and a balancing market with high costs will not be in the interest of electricity customers.

2.7 MANDATORY EX-POST POOL FOR NET VOLUMES (SECTION 7)

Question	Answer
10. Are there any changes you would suggest to make the Mandatory Ex-post Pool for Net Volumes more effective for the I-SEM (for instance, a different choice for one or more of the topics or a different topic altogether)?	

General

- This option as defined would be a good fit for wind if REFIT made wind whole up to the pool price. If this was the case wind would be encouraged to play in the DAM to obtain a higher price but would also have the option of the pool to retain its value and meet its financing obligations. This would provide a similar environment to the one we have now which allows wind to be financed. In order to protect the PSO customer voluntary participation up to a regulated limit would have to be enforced in the forward market in order to create liquidity in the pool market giving a reasonable pool price.

- The voluntary nature of the forward market means some wind generation could leave everything to the pool (especially if REFIT makes Off-takers of wind whole up to the pool price). However, contracted wind may be bid in under a portfolio in order to potentially obtain a better price but then transparency may be an issue in terms of what value the PSO customer is paying. That is, if an Off-taker bids wind into the day ahead market and gets €100 but the pool price is €50, the PSO customer would be topping up to the reference price by €30 (if reference is €80) but in this case wind has actually received €100 and didn't need to be topped up. Not sure how this works in terms of portfolio bidding in forward markets and unit bids in the pool. Because of portfolio bidding, it will be impossible to say whether it was wind or some other generation in the portfolio that was bid in Day ahead.

- Most wind is likely to be in a long term bilateral agreement with a vertically integrated player. In this case the vertically integrated player will submit a portfolio bid (including its expected generation from contracted wind). It will be the exposure to imbalances that will determine the price the off-taker will give the Wind generation plant under the bilateral agreement. Again if REFIT makes the off-taker whole up to the pool price there may not be an issue (especially if the forward market is voluntary) however, if the forward market is mandatory the off-taker will discount the PPA price. The €9.90/MWh balancing payment in REFIT was initially defined exactly for this (the cost to the off-taker of balancing wind) however, it has since become an intrinsic part of the REFIT price under which Wind needs to obtain sufficient returns. If off-takers were not to pass on this balancing payment this will force wind into the supplier lite market and will then have to balance itself. It is considered that this is an inefficient way for wind to play in the market that is, all individual wind bidding in. The dispatch and therefore the economics of accommodating wind is maximised in a portfolio situation

The following suggestions are an attempt to encourage wind to play in the forward market;

- If the DA market was voluntary up to 50% for conventional generation and voluntary up to 100% for wind. This would encourage wind to partake in the day ahead market to obtain a better price. The different limits would mean that there would be more demand for definite wind volumes at this stage, encouraging wind to trade rather than leave volumes to the balancing market. However the voluntary nature of the market could see conventional generation not participating and leaving volumes to be settled in the pool (as well as wind generation).

Versus

- What if the DAM was mandatory for all conventional generators to bid in 50% (max) of their volumes, and voluntary for wind generators to trade up to 100% of their forecast. This would ensure better integration of wind into the markets. If the wind generator did not deliver to its traded position the remainder would be settled in the pool market. Where conventional generators would have bid in 50% of their volume (creating liquidity) and wind would be priority dispatch meaning that anything they hadn't traded day ahead or hadn't forecast would be settled at the pool price. This incentivises Wind to trade day ahead to obtain a better price but if it over trades in the forward market it will be exposed to Top Up in the pool (making it financially balance responsible).

- The exposure wind experiences in being made to bid at the DA stage based on a forecast will be somewhat mitigated by the fact that its participation is voluntary. It can therefore assess the uncertainties of the Day ahead forecast and determine when and when not to bid in Day ahead. Also, any discrepancies will be settled at a pool price rather than in an imbalance market.

- Making the DAM and Pool mandatory for some volume, will to some extent help stability issues in that less regulatory intervention would be required to ensure liquidity in both markets.

- (The interaction with REFIT must be considered in terms of what price is used to make off-takers of wind whole to the REFIT reference price. If it is the pool price wind can decide to leave all volumes for the pool however, if REFIT allows any upside to be retained from trading Day ahead this would encourage participation in the forward market.

11. Do you agree with the qualitative assessment of Mandatory Ex-post Pool for Net Volumes against the HLD criteria? If not, what changes to the assessment would you suggest (including the relative strengths and weaknesses of an option)?

Stability

- The Document states that significant regulatory intervention is required to maintain a balance between the European market and the Pool. Mainstream believes making the pool mandatory for 50% of conventional generation could solve this problem.

Security of Supply

- A functioning Pool market where the pool price is used in REFIT would encourage Wind generation onto the system, increasing the dependence of the country on indigenous fuel.

Cost

- Mainstream believes the bid structures in the two markets do not have to be different and should be harmonised in some way to minimise costs to participants of submitting different bid types. One suggestion would be to have unit bids in both markets and to remove the requirement for complex bids to participate in a pool.

Environmental

- Mainstream believe that Wind *will* face commercial incentives to increase predictability closer to real time if the DAM is liquid, wind will seek to access this market as you would expect higher prices for your generation day ahead in a liquid market. Having a pool market as the market of last resort means that wind won't be as unduly penalised for the inherent forecast error that exists no matter how good the forecast is. Wind is never going to be able to bid in 100% of their forecast generation at the Day ahead stage because there will always be a level of uncertainty associated with any forecast no matter how good.

- If the DAM price is higher than the pool price this is the incentive for all parties to trade day ahead, their predictable volumes.

- A commercial Incentive to increase predictability would be welcomed. The best forecast however will also have a margin of error between DA/ID and real time. Wind generation will never be able to predict to 100% accuracy what it is going to generate therefore there is a margin where wind is simply being charged for not being 100% predictable rather than being incentivised for increasing predictability.

- The document states in 7.4.40 that if trading is concentrated outside the pool this may encourage wind generators to procure flexibility to avoid being exposed to more volatile pool prices. Mainstream would like to seek clarification on this statement. If it is the intention of a new market design to have individual generators procure their own ancillary services then we would note it has been shown in numerous electricity markets that the optimal way to procure ancillary services is on a system wide basis. The EU target model encourages the sharing across borders (if appropriate) of ancillary services to minimise costs.

12. How does the Mandatory Ex-post Pool for Net Volumes measure against the SEM Committee's primary duty to protect the long and short term interests of consumers on the island of Ireland?

- It is in the interest of the customers of Ireland that wind generation be continued to be financeable under any new market rules as wind generation has been shown on numerous occasions to bring down the overall market price of electricity. If wind is made whole up to the reference price in REFIT for all its volumes (and not mandated to trade day ahead) wind will still be financeable but will not be incentivised to trade in the forward market and integrate into the EU market coupling regime.

- Option Two with a liquid DAM and liquid pool will give Wind a commercial incentive to participate in the forward market while mitigating the risks by not mandating it to participate and providing a pool market for its net volumes rather than a penal imbalance regime.

2.8 MANDATORY CENTRALISED MARKET (SECTION 8)

Question	Answer
13. Are there any changes you would suggest to make the Mandatory Centralised Market more effective for the I-SEM (for instance, a different choice for one or more of the topics or a different topic altogether)?	

- Any mandatory DAM market will be prohibitive to Wind generation**.** Suggested changes to Option 3 are;

    1. Make the DAM Mandatory for conventional generation who can predict their volumes and voluntary for wind generation. In this case, as in all cases the interaction with REFIT will need to be considered. If REFIT makes wind whole up to the imbalance price received this option will be financeable yet encourage wind to play in the DAM to obtain a higher price. This would create a market with a positive incentive to trade on predicted volumes rather than concentrating on a negative incentive to predict volumes.

    2. Establish an "Unpredictable Margin" under which if wind fails to produce after bidding in at the DAM stage it will not be forced to buy top up in the imbalance market and if it over produces will be settled at the day ahead price (or imbalance price if REFIT makes whole). All volumes outside this margin will be settled at the imbalance price. This will encourage wind to meet the best possible forecast. Best forecasts will on average always be out by 8% - 10% on average over the year. Some analysis would have to be done on this percentage but it could be the basis for establishing a daily margin of error under which wind would not be penalised when it doesn't perform to the volumes it predicted and bid into the mandatory market at the day ahead stage.

    No matter how good forecasts are the very best will always have a level of uncertainty associated with them. Any forecasting model will never get it 100% correct at the day ahead stage. Unlike conventional generation, no matter what the incentive is to generate to meet your schedule wind will never be able to tell with 100% accuracy what it is going to generate. There will always be a certain percentage that will be out of control of wind generation and therefore penalising for this percentage just becomes a straight forward charge on wind generation. If an "Unpredictable Margin" was established, this could be reduced as wind forecasts became more accurate, but would also encourage Wind to procure the very best forecasts in the market as any incorrect forecasting beyond the "Unpredictable Margin" would be exposed to Imbalance costs.

14. Do you agree with the qualitative assessment of Mandatory Centralised Market against the HLD criteria? If not, what changes to the assessment would you suggest (including the relative strengths and weaknesses of an option)?

Security of Supply

- Making the DAM voluntary for wind will not dis-improve the quality of information provided to the TSO for planning at the day ahead stage as the TSO use their own wind forecast and not the information from wind plants themselves.

Equity

- Section 8.4.22 states;

IDM prices should reflect the true value of within day flexibility (as opposed to being socialised through the operation of an ex post pool) as that would be one of the main ways for variable generators and demand to manage their imbalance exposure (which should be reflective of the cost of managing the overall system imbalance – with mandatory provision of bids into the balancing market from DAM onwards in this option).

Mainstream is of the opinion that this is the only way for intermittent generators to manage their imbalance.

15. How does the Mandatory Centralised Market measure against the SEM Committee's primary duty to protect the long and short term interests of consumers on the island of Ireland?

- It is in the interest of the customers of Ireland that wind generation continu to be financeable under any new market rules as wind generation has been shown on numerous occasions to bring down the overall market price of electricity. If wind is made whole up to the reference price in REFIT for all its volumes (and not mandated to trade day ahead) wind will still be financeable but will not be incentivised to trade in the forward market and integrate into the EU market coupling regime.

- A Mandatory DAM as in Option three puts too much risk on wind generators who would have to commit volumes at a day ahead stage based on a forecast exposing them to imbalance prices within day. In a mandatory day ahead market wind would be forced to bid near their P50 levels to make sure they were getting a good DA price for most of their volumes. The forecast on average over the year would be out by approximately 10%. Meaning that wind would have to buy or sell volumes in the balancing market for this percentage. Each day the error will be over or under 10% but when it is out it is likely all other wind forecasts will be out. Meaning the price in the balancing market will be anticorrelated to the volume that is, if you have volume to sell the price will be low and if you have volume to buy the price will be high.

2.9 GROSS POOL – NET SETTLEMENT MARKET (SECTION 9)

Question	Answer

16. Are there any changes you would suggest to make the Gross Pool – Net Settlement Market more effective for the all I-SEM (for instance, a different choice for one or more of the topics or a different topic altogether)?

- Mainstream believe that Option four could provide a cost effective , stable market for all generation and demand while implementing the EU target model.

17. Do you agree with the qualitative assessment of Gross Pool – Net Settlement Market against the HLD criteria? If not, what changes to the assessment would you suggest (including the relative strengths and weaknesses of an option)?

Security of Supply

- If the interconnector is scheduled to run from the DAM/IDM and not determined by the pool it could simply be input into the pool as a must run generator or demand at the DA/ID Price.

Environmental

- Section 9.4.31/32 Flexible resources required to manage variations in wind output do not receive the full value of this (in the pool price). Separate mechanisms will have to put in place to incentivise the delivery of within day flexibility.

18. How does the Gross Pool – Net Settlement Market measure against the SEM Committee's primary duty to protect the long and short term interests of consumers on the island of Ireland?

- It is in the interest of the customers of Ireland that wind generation be continued to be financeable under any new market rules as wind generation has been shown on numerous occasions to bring down the overall market price of electricity. If wind has access to a mandatory pool for all its volumes as it does in the current market along with REFIT it is known that wind generation can be financed. Such a market will facilitate the deployment of renewables to meet government targets.

- It is expected that the implementation of this Option would have the least cost in terms of new systems and costs passed on to customers due to the similarity of the pool to the current market.

2.10 CAPACITY REMUNERATION MECHANISMS (CHAPTER 10)

Question	Answer
What are the rationales for and against the continuation of some form of CRM as part of the revised trading arrangements for the I- SEM?	
Are these the most important topics for describing the high level design of any future CRM for the I-SEM?	

2.11 STRATEGIC RESERVE (CHAPTER 10.7)

Question	Answer
Are there any changes you would suggest to make the design of a Strategic Reserve mechanism more effective for the I-SEM (for instance a different choice for one or more of the topic?)	
19.	
Do you agree with the initial assessment of the strengths and weaknesses of a Strategic Reserve Mechanism? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Strategic Reserve Mechanism work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	

2.12 LONG-TERM PRICE-BASED CRM (CHAPTER 10.9)

Question	Answer
Are there any changes you would suggest to make the design of a Long-term price-based CRM effective for the I-SEM (for instance a different choice for one or more of the topic?)	
Do you agree with the initial assessment of the strengths and weaknesses of a Long-term price-based CRM? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Long-term price-based CRM work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	

2.13 SHORT-TERM PRICE-BASED CRM (CHAPTER 10.10)

Question	Answer
Are there any changes you would suggest to make the design of a Short-term price-based CRM effective for the I-SEM (for instance a different choice for one or more of the topic)?	
Do you agree with the initial assessment of the strengths and weaknesses of a Short-term price-based CRM? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Short-term price-based CRM work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	

2.14 QUANTITY-BASED CAPACITY AUCTION (CHAPTER 10.11)

Question	Answer
Are there any changes you would suggest to make the design of a Quantity-based Capacity Auction CRM effective for the I-SEM (for instance a different choice for one or more of the topic)?	
Do you agree with the initial assessment of the strengths and weaknesses of a Quantity-based Capacity Auction CRM? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Quantity-based Capacity Auction CRM work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	

2.15 QUANTITY-BASED CAPACITY OBLIGATION (CHAPTER 10.12)

Question	Answer
Are there any changes you would suggest to make the design of a Quantity-based Capacity Obligation CRM effective for the I-SEM (for instance a different choice for one or more of the topic)?	
20. Do you agree with the initial assessment of the strengths and weaknesses of a Quantity-based Capacity Obligation CRM? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Quantity-based Capacity Obligation CRM work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	

2.16 CENTRALISED RELIABILITY OPTIONS (CHAPTER 10.14)

Question	Answer
Are there any changes you would suggest to make the design of a Centralised Reliability Option CRM effective for the I-SEM (for instance a different choice for one or more of the topic)?	
Do you agree with the initial assessment of the strengths and weaknesses of a Centralised Reliability Option? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Centralised Reliability Option work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	

2.17 DECENTRALISED RELIABILITY OPTIONS (CHAPTER 10.15)

Question	Answer
Are there any changes you would suggest to make the design of a Decentralised Reliability Option CRM effective for the I-SEM (for instance a different choice for one or more of the topic)?	
Do you agree with the initial assessment of the strengths and weaknesses of a Decentralised Reliability Option? If not, what changes to the assessment would you suggest (including the strengths and weaknesses of an option relative to the others)?	
Would a Decentralised Reliability Option work or fit more effectively with a particular option for the energy trading arrangements. If so, which one and why?	