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28th March 2014

***By email to**:* JeanPierre.Miura@uregni.gov.uk & pnewsome@cer.ie

***Re:*** **Response to the consultation document on implementing a new High Level Design for the Integrated Single Electricity Market (I-SEM) in Ireland by the end of 2016**

Dear Jean Pierre,

The IWFA appreciate the opportunity to respond to the consultation document on implementing a new High Level Design for the Integrated Single Electricity Market in Ireland by the end of 2016.

First of all as presented in the consultation document, option 4 is the only option the IWFA could support in the development of the Integrated Single Electricity Market to allow a transparent, thriving and competitive market which will allow Ireland to deliver on its 2020 renewable targets. To also highlight the importance of option 4 it is the only option that will deliver value to the consumer in lowering prices. All other options as presented in the consultation document would tilt the playing field so badly against wind generators, especially independent SME wind generators that they could not survive. Competition would be severely weakened and consumers would suffer.

The IWFA were extremely disappointed and concerned on the SEM group's decision to reject our request to have a representation on the SEM-HLD Review Group. We feel they missed a valuable opportunity to have a voice of an independent SME wind farm generator to participate in the assessment of the various options. It is clear in the I-SEM consultation document that the high level of utility companies on the review group influenced the option selection, as 3 of the 4 options are in favour of the utility companies (portfolio generators). This is clearly pointed out on several occasions in the consultation document that option 1 to 3 favours the portfolio generators.

The IWFA would finally like to thank the I-SEM committee for attending our workshop and positive engagement with us on numerous occasions to discuss the consultation paper and address our questions on the four options. We look forward to a positive and constructive participation in the final stages of the I-SEM design.

Yours sincerely,

**James Carville**_____

James Carville, Chairman
Irish Wind Farmers Association

# Integrated Single Electricity Market (I-SEM)

## High Level Design for Ireland and Northern Ireland from 2016

**Consultation Response**
**from the**
**Irish Wind Farmers Association (IWFA)**

**28th March 2014**

## Table Contents

# 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].

Jean-Pierre Miura
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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 | Irish Wind Farmers Association |
| CONTACT DETAILS | James Carville<br>Chairman<br>Irish Wind Farmers Association<br>Unit F06 Kilkenny Research & Innovation Centre,<br>Burrell Hall,<br>St. Kieran's College,<br>Kilkenny,<br>Ireland<br>Tel: 056 7790856<br>Email: info@mnag.ie<br>Web: www.mnag.ie |
| MAIN INTEREST IN CONSULTATION | The Irish Wind Farmers Association (IWFA) is Ireland's representative body for independent wind farm developers.<br><br>The IWFA has over 100 members with operational wind farms ranging from 1MW to 35MW. IWFA members currently have some 300MW of generating capacity in operation, and a further 200MW under development.<br><br>We are the only body representing small independent wind farms, distinct from the large portfolio utilities, some of whom have wind portfolios.<br><br>Our interest in the consultation is to ensure that the island of Ireland puts in place new trading arrangements, compliant with EU target model requirements, in which both existing and new small independent wind generators can compete on an entirely level playing field with portfolio generators. This will ensure a thriving competitive market in future, to the long term benefit of consumers throughout the island. |

## 2.2 GENERAL COMMENTS/EXECUTIVE SUMMARY

The IWFA welcomes the opportunity to respond to the recent consultation on the High Level Design of the I-SEM. We were disappointed to be excluded from the I-SEM HLD Review Group, and our recent meeting with you in Dublin was much too short to enable us to discuss these critically important issues with you in sufficient depth. We very much hope that our response to this consultation will form the basis for much closer engagement with us on the design and implementation of the new trading arrangements, and that the concerns and interests of independent wind generators will be taken much more fully into account than has been the case to date.

Independent wind generation is fundamental to the future development of the power system on the island of Ireland. We will be central both to the de-carbonization of the sector and to ensuring that there is a genuine and thriving competitive element in the market, as a counter-weight to the large portfolio generators. Wind is also the island's best source of security of supply, at a point in time when we have been reminded of the vulnerability of gas supplies due to the emerging conflicts in Eastern Europe.

The design of the I-SEM will determine whether we, and future independent wind generators, will be able to participate. We are deeply concerned that several of the options under consideration would place wind generators in general, and small independent wind generators in particular, at a significant competitive disadvantage – to the extent that we believe many IWFA members would be forced out of business and no new independent wind generators would enter the market in future. If this were to happen, it would be to the long term detriment of all electricity consumers on the island – competition would reduce and prices would rise as a result.

**As presented in the Consultation Document, Option 4 is the only option in which IWFA members could survive.**

The Consultation Document is very frank that Option 1 has several features which "… advantage portfolio generators…" and that the ex-post imbalance price would be "… less attractive for wind…" than an ex-post pool price. The very fact that Option 1 is being considered when it is so openly acknowledged to tilt the playing field against independent wind generators is extremely worrying. This option would destroy our businesses and lead to a less competitive, less decarbonized sector to the detriment of all consumers. We can think of no modifications that would make it acceptable. It should, in our view, be rejected and taken no further.

Option 2 would, we fear, operate in practice in a very similar way to Option 1. It would be in the portfolio generators' interest to minimize the volume settled in the ex-post imbalance process. As a result, the ex-post imbalance price to which IWFA members will inevitably be exposed, will again be "… less advantageous for wind …" than in a full ex-post pool. We know of no other market/country in which Option 2 operates. We set out in this response the minimum modifications that would be required for IWFA members to be able to survive in such a model.

Option 3 is the worst of all four options for IWFA members. It has all the disadvantages of Option 1 and, in addition, IWFA members would be forced to trade in a day-ahead market at a time which will only add risk to our businesses. Markets should be created to enable us to manage our risks, not create additional ones. Forcing us to trade at the day-ahead stage, when we do not yet know whether the wind will blow, creates a potentially catastrophic risk for our members. Being told that we can then manage that risk by active trading in Intra Day markets is of no comfort – we have neither the skills nor resources to do so, and in any case we would, at best, be trying to manage down an exposure that we should not have incurred in the first place! IWFA members (or our contract counter-parties) would inevitably still be exposed to the ex-post imbalance price – which, as the Consultation Document again acknowledges in respect of Option 3, would be "… less attractive for wind…" than a full ex-post pool.

Since publication of the Consultation Document, there has been informal talk of exemptions and modifications under Option 3. We comment on these and other modifications that would be required to Option 3, in this response. We have two major concerns however. First, the modifications and exemptions that are being considered must, in our view, retain a single market somewhere in the new trading arrangements in which everyone participates. This is of fundamental importance to a small generator. We must be able to rely on the diversity of the entire system - if not the portfolio utilities will be at a huge competitive advantage. Secondly, in our view the interests of consumers on the island of Ireland will be best served by a set of trading arrangements in which small independent wind generators can participate fully and on an equal footing with all other market participants - rather than relying on exemptions and special rules to enable us to survive within trading arrangements that are ill suited to such a key segment of the market.

Option 4 is the only option which offers independent wind generators that level playing field. We strongly support the development of a full suite of forward and future markets, and would support 'market maker' obligations on portfolio generators to ensure a minimum volume of trading in those markets. It is essential, however, that these are underpinned by an ex-post imbalance mechanism which reflects the full underlying power system. It is inevitable that independent wind generators (or our counter-parties under contract) will be exposed to the imbalance price – every hour of every day. This price must pay us the full value of our energy on the system (no more, no less). Option 4 is the only option that provides a fully liquid, transparent market for setting that price on a timescale in which independent wind generators can participate. It will give the correct price signals to deliver an optimal plant mix over time, and can be coupled with appropriate ancillary service payments to secure sufficient flexible plant for system operation consistent with the 40% wind target. It also gives a clear and unambiguous REFIT reference price, unlike every other option.

We do not believe that possible concerns over demand side participation and efficient interconnector scheduling, hinted at in the Consultation Document in relation to Option 4, are valid. Quite the contrary, Option 4 is the option that will best incentivize optimal demand side management and interconnector flows. The best way to ensure that interconnector flows and demand decisions are correct when wind volumes are uncertain is to ensure that we have a single market price that accurately reflects the actual outturn

characteristics on the entire power system (as in Option 4), and to give all participants the flexibility in the forward markets, particularly IDM (because it is nearer to live) to trade in order to drive export trades across the interconnector or to facilitate DSM. Everyone (i.e. not just wind generators) will try to improve their wind forecasts, and those who do best will make money. The danger of all other options is that these decisions will be made using imperfect day-ahead and intra-day prices (because (i) they derive from markets in which not everyone participates, and (ii) wind volumes are unknown), which will lead to more (not less) wind curtailment.

We note that concerns have been raised that we have recently seen simultaneous wind curtailment and imports in some overnight periods. We do not believe that this should occur in an I-SEM with a properly designed ex-post settlement price (that reflects strict merit order dispatch based on complex bids and generating plant technical characteristics, but takes no account of any system stability or constraint issues), flexibility in the IDM to enable trading to relieve curtailment and correct incentives on the TSO to minimize the cost of meeting system stability, transmission and other technical system requirements. Specifically:

- If wind is curtailed in both real time and the ex post unconstrained settlement schedule, settlement prices in the I-SEM under Option 4 will be very low and every participant will be incentivized to forecast those prices and export energy if GB prices are higher;

- If wind is not curtailed in the ex post unconstrained schedule, then the cost of curtailment (to pay the generator that is run out of merit and compensate the in merit generator that is unable to run) must be borne by the TSO. The TSO will be then be incentivised to keep wind generating and export the power if it is technically possible to do so.

It is essential, under any of the Options under consideration, that the TSO faces this incentive in respect of out-of-merit operation, so that it makes the economically optimal decisions on relieving those constraints for the long term benefit of consumers. Import/export decisions that arise due to technical system requirements on the Irish system must, in any option, be to the account of the TSO. (We note that if the TSO were not incentivized to do this, and issues related to out-of-merit operation were left to market participants, some level of correct interconnector flows could still be achieved under Option 4. Any trader would see the opportunity to purchase energy from wind generators that were receiving no payment by being made idle due to system stability issues and would sell that energy to GB at a profit. Participant trading could, under Option 4, therefore achieve interconnectors flows, but would remove the incentive that should sit with the TSO to resolve those system issues).

If anomalous outcomes are occurring under the current SEM arrangements, these should be addressed (we note, for example, that a SEM paper of 2011 (SEM-11-072) identified issues related to frequency of access to interconnector capacity that may be hampering efficient price arbitrage on the interconnectors). Assessment of Option 4 should not be done on the assumption that those problems would be carried into the I-SEM. A properly designed ex-

post imbalance price, flexibility to trade in the IDM and TSO incentives with respect to system issues should stimulate efficient interconnector flows. No other option under consideration will do so.

We are strongly supportive of the development of day ahead and intra markets, and would support the introduction of market maker obligations on the portfolio generators, within Option 4, to ensure that these markets are established with some agreed level of liquidity.

To further limit unnecessary cost burden on small generators, we propose an increase in the de-minimis level to 20MW in the new I-SEM arrangements. To minimize delay and disruption, we would wish to see all other SEM/CER directions (e.g. Tie Break arrangements) to remain unchanged, with one exception. SEMC's proposed removal of compensation for curtailment is discriminatory, contrary to the EU Target Model, causes a perverse incentive to curtail virtually free energy, and fails to incentivize the TSO and SEMC to develop the system to meet its obligations to renewables, and this proposal should not carry through to I-SEM under any Option.

**We support the inclusion of a Capacity Remuneration Mechanism (CRM). We believe that the only option that solves the 'missing money' problem, and in which wind generators can participate, is a long-term price-based mechanism.**

A short term price based mechanism would be little better than a pure energy market. Capacity-based options impose penalties for non-availability which would (wrongly) prevent wind generators from participating. We suggest focusing capacity payments only on a 'reasonable margin' of plant on the system (so as not to keep old uneconomic plant on the system) and to periods of highest system load (so as not to pay capacity payments, for example, to imports overnight at the expense of curtailing wind).

**In summary**,

1. A fully liquid and transparent ex post imbalance settlement mechanism, voluntary day-ahead and intra-day markets, primed by market maker obligations on the portfolio generators, accompanied by a long-term price based CRM, will provide an entirely level playing field on which generators of all sizes and technologies can participate effectively. It would also provide the best reference price for the various renewable support schemes, while minimizing cost to the consumer (via the PSO). It is the only market model in which small independent wind generators, as represented by IWFA, have any real prospect of survival, in particular where they are out of support.

2. Assuming the known existing anomalies and inefficiencies in the rules for the inter-connectors are resolved, the forward markets in such a market design could to some extent assist inter-connector flows and facilitate DSM, in order to relieve curtailment, even though no market can actually fix the root causes of curtailment. To really address that issue, there is a need for the TSO to be subject to at least some of the curtailment costs (which should be restored by SEMC) and constraining-on costs, arising from schedule adjustments caused by the under development of the island's system, so as to

incentivize the necessary and urgent improvements (DS3, flexible plant, exit signal for redundant plant, mitigate market power, etc). In the meantime, there is a continuing role of the TSO to trade out some of the excess power, in order to keep wind generators operating at or near their availability, while respecting the SEMC's 'tie-breaks' decision.

3. The result will be a thriving competitive market, which will drive efficiency and lower prices to the long term benefit of all consumers. This is by far the biggest prize that the new trading arrangements should seek to secure.

4. All other options, as presented in the Consultation Document, would tilt the playing field so badly against wind generators, especially small independent wind generators, that even with a De Minimis increase to 20MW (as we propose), many such projects could not survive. Competition would be severely weakened and consumers would suffer.

**The remainder of this response** sets out our views, summarized above, in more detail – in answer to each of the specific questions posed. We look forward to discussing our response to the Consultation with you and all other interested parties over the coming weeks, and to participating actively to the detailed design of the new arrangements.

## 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? | The IWFA's strong preference is for Option 4.<br><br>As small independent wind generators, we cannot participate in multiple forward, day ahead and other markets. We do not have the resources or capabilities, such as wind forecasting tools, to do so. Even if we did, we will always be subject to significant uncertainty about our generation volumes right up to real time. The option (or obligation) to trade day-ahead is of little or no value to us if we have no better information about our generation volume in those timescales.<br><br>As a result, small independent wind generators (or the counter-parties with whom we contract, to the extent that we pass on this volume risk) will always be exposed to the ex-post imbalance price. We need to be very confident that this price will always be a true and accurate reflection of the value on the island's system of the energy we generate. If it is not, because it is based on anything other than the full and accurate physical and costs characteristics of the system, or because it is subject to the vagaries of the risk management strategies of the portfolio generators (or even gaming), or subject to dumping of cheap power or ROC supported wind from the UK, independent wind generators will be exposed to very considerable risk. The effect would be to deter entry, drive existing independent wind generators off the system – and so lessen competitive pressure in the market to the long term detriment of all consumers.<br><br>**Option 4 is the only option that would provide an ex-post imbalance price in which we could trust, as it would be based on a full system schedule of all generation units on the system. It would be a fully transparent, fully liquid market on which all participants can depend equally. As the only option that is 'anchored' by a fully liquid market price, but with the necessary flexibility in the forward markets, it is also the option that is most likely to result in efficient demand side participation and inter-connector flows.**<br><br>No other option offers this. In particular:<br>• under Option 1, portfolio generators would be at a significant advantage, able to manage risks within their own portfolio, with no fully liquid market available for independent participants to access on an equal footing<br>• Option 3 seeks to address this by mandating participation in a single market. However, mandating participation at the day-ahead stage would drive independent wind generators out of business. It would force us to trade at a time that would expose us to significant unnecessary risk. Exemptions, and the inevitable tendency of wind to undersell in any such market |

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| | means that there would again be no single fully liquid market on which we could depend<br>• under Options 1 & 3, the imbalance 'market' would be very thin and is no substitute for a fully liquid 'back stop' or 'anchor' market on which we can rely – and with no other single liquid market in the system, we can have no confidence that prices in this thin market will be driven ('arbitraged') to reflect the full value of energy on the system. What prices would emerge from this form of balancing mechanism, in the absence of any single fully liquid market, is simply too uncertain for a small generator to rely on.<br>• under Option 2, the imbalance market would be a strange hybrid, which is difficult to predict how it might operate and hence too risky for independent wind generators to support<br><br>The IWFA strongly supports the development of day-ahead, intra-day and other markets, <u>if grounded in an ex-post imbalance settlement system that reflects full optimal system despatch</u> (i.e. an ex-post pool), but with sufficient flexibility to allow forward prices suitable for export and DSM, which carry over into settlement. We would support the introduction of 'market maker' obligations on portfolio generators to ensure that such markets are established and primed with a minimum volume from those generators. |
| 2. Is there a requirement for a CRM in the revised HLD, and why? | Yes. The IWFA supports the continuation of a CRM in I-SEM.<br><br>The market price must fully remunerate all efficient plant on the system. Unless the market price can rise above marginal generating costs, the marginal generator would never be able to recover its fixed and capital costs. (This is referred to in the Consultation Document as the 'missing money' problem). The rationale for a form of CRM for the I-SEM is, in our view, based on the fact that the main alternative ways of fully remunerating the marginal generator would not work well in the I-SEM system:<br>• Generators could be allowed to bid high prices at times of system stress. However, the Consultation Document rightly notes that this is very risky on a small system – where the addition of one new generating set could swing the system from shortage to significant surplus for a prolonged period. The danger is that too little new capacity would be built, in order to keep the system tight enough to remunerate marginal plant.<br>• Prices at times of system stress could be set by demand side bids which reflect their valuation of a secure energy supply. However, this too suffers from the small system concern noted above (i.e. generators would need to keep the system tight in order for demand side bids to be at the margin and so set the price) and demand side bidding is insufficiently established on the island for us to be confident that this would work well. |

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| | For these reasons, the IWFA supports the view that some form of capacity payment will be required to raise the imbalance price / market price above the marginal cost of the marginal generator.<br><br>We also stress that this 'capacity payment' must, in our view, be market-wide. All generators must be paid the full value of the energy they produce, in order to get an efficient plant mix. In an "energy only" market, the single market price would be bid up (by generators or demand) at times of system stress, and all generators producing energy at that time would (rightly) benefit from that higher market price. Any CRM must do the same. |
| 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? | Our strong preference is for a Long Term Price-Based Capacity Remuneration Mechanism.<br><br>The Strategic Reserve and Quantity Based options are unacceptable as they would benefit only some generating plant. As noted above, we believe that all generators that generate must be paid the full value of their energy at times of system stress (as they would be in an energy only market in which generators or demand-side participants would bid up the energy price). The Strategic Reserve and Quantity Based options would not meet this fundamental requirement. Furthermore, the 'penalties' for non-availability under these options would, in effect, preclude variable wind generators from participating – leaving us as the only generators unable to recover the 'missing money'.<br><br>A Short Term Price Based CRM would suffer the same problem as an energy-only market - namely that in our small system, lumpy generation investments would swing the system into sustained surplus for prolonged periods and hence no Capacity Payment would be payable. Generators would have to under-invest in order to keep prices at sustainable levels. |

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

| Question | Answer |
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| 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? | Yes. The topics covered in the Consultation Document appear to us to be a good and comprehensive list of high-level design issues. |
| 5. Are there other aspects of the | We are not aware of any other material issues. |

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| 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 |
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| 6. What evidence can you provide for the assessment of the HLD options with respect to security of supply, efficiency, and adaptability? | Issue of supply security and efficiency are, in our view, of crucial importance in the design of the I-SEM, along with the need to de-carbonise the sector.<br><br>The Consultation Document takes too narrow a view of both supply security and efficiency, by focussing primarily on short term despatch. We will only have a secure and low cost system in the longer term if we establish the conditions for a highly competitive market, in which all participants can compete on a level playing field. As we note below in our comments on the individual options, we are very concerned that some of the options under consideration will significantly advantage large portfolio generators. The result will be a market dominated by a few large players, with the risks of collusion and 'co-ordinated behaviour' that have been seen in other markets which do not have a thriving independent generation sector. This would deliver long term inefficiencies that would far outweigh any marginal efficiency improvements that might be possible in short term despatch process – to the long term detriment of consumers throughout the island of Ireland. |

## 2.6 ADAPTED DECENTRALISED MARKET (SECTION 6)

| Question | Answer |
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| 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 | There are two major problems with Option 1 in the view of the IWFA:<br>- Option 1 advantages portfolio generators over small generators. This is acknowledged in the Consultation Document on several occasions. In the IWFA's view, the model could only be pursued if the portfolio generators were broken into multiple single plant generators, and regulations were introduced to prevent the re-emergence of multi-plant portfolio generation companies.<br>- Option 1 (in the words of the Consultation Document, paragraph 6.4.39) "… would typically provide a less attractive price for wind than an ex-post pool". This is entirely unacceptable to IWFA members. Option 1 could only be |

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| altogether)? | pursued if imbalance settlement were done on the basis of a mandatory ex-post pool to ensure that independent wind generators were fairly remunerated.<br><br>**<u>Why?</u>**<br>Small independent wind generators have to be primarily concerned with the ex-post imbalance price. Whether or not we generate depends on outturn wind. While we support the development of more and better forward, day ahead and intra-day markets, it is inevitable that we (or our contract counter-parties, to the extent that we pass on this volume risk) will be exposed to the imbalance price every hour of every day.<br><br>In Option 1, the ex-post imbalance price will be determined by the nominations and inc/dec bids of the portfolio generators – who, as the Consultation Document recognises, are far better placed to internalise risks than a small independent generator. The ex-post price would reflect how much the portfolio generators say they need to be paid to move away from their nominated positions, and which of those incs and decs had to be called on on-the-day. This is not a reliable basis to pay for outturn wind output. Given its importance to independent wind generators, it is of fundamental importance to the IWFA that the ex-post imbalance price should be a true reflection of the value of energy on the whole system – so that independent wind generators are paid the true value of our energy.<br><br>In Option 1 there is no single fully liquid market to 'anchor' the system – i.e. produce a reliable, full-value, price to which all other prices in the market would be driven. |
| 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)? | The IWFA does not agree with many aspects of the qualitative assessment of Option 1. We believe that the assessment paints much too positive a picture of this option.<br><br>At paragraph 6.4.39 the Consultation Document points out that the Imbalance price under Option 1 "… would typically provide a less attractive price for wind than an ex-post pool …", and that it is important therefore that wind can "…manage this risk…" in a liquid day-ahead and intra-day market. We make several observations:<br>- the option to trade ahead of time is of very little value to an variable wind generator if the volume of generation will not be known until real time. Problems in the imbalance settlement price cannot be traded away ahead of time by an independent wind generator<br>- the transaction costs of trying to do so would be prohibitive for all small independent wind generators. IWFA members are simply not in a position to trade actively, every day, in the suite of proposed day-ahead and intra-day markets. To have to do so would, quite simply, put most (probably all) IWFA members out of business<br>- as the Consultation Document notes several times, markets in |

all timeframes are highly inter-dependent. The terms on which a wind generator could trade in a day-ahead market is inextricably linked to the fall-back option in ex-post imbalance settlement. An imbalance price that is "… less attractive to wind…" will feed into prices in all other markets.

This fundamental disadvantage for independent wind generators, and advantage for portfolio generators, under Option 1 is not followed-through adequately into many of the other assessment criteria. Specifically:

Security of Supply: disadvantaging small independent wind generators in this way can only harm long term supply security – it will deter entry and could force some existing wind generators off the system

Stability: Option 1 changes the risk profile of independent wind generators materially from those we face in the current SEM. In our view this is a clear disadvantage, regardless of the extent of liquidity in the DAM or IDM.

Efficiency: we do not understand how Option 1 can be scored as "neutral" on efficiency. This appears to us to reflect a very narrow definition of "efficiency". By advantaging portfolio generators and increasing the risk on independent wind generators, the longer term effect can only be to deter small new entrants, raise the cost of capital, and lessen the competitive pressure on the larger portfolio generators – all of which will increase costs and prices to consumers.

Practicality: Option 1 represents the biggest change to current arrangements and will impose the greatest cost both centrally and on individual participants to change to these new arrangements. Again, we do not agree the "neutral" scoring. A major change of this sort will require revision to the entire framework for independent wind generators that has been put in place over recent years. It would put new wind developments on hold for several years, again to the detriment of all consumers on the island.

Equity: Option 1 is, in our view, highly inequitable. The advantages to the portfolio generators, which are acknowledged numerous times in the document, are not resolved by liquid markets (i) because those markets are of little or no value to small wind generators (see above) and (ii) because, if it were indeed true that liquid day-ahead markets would neutralise the advantage of being a portfolio generator, then those generators would simply not participate in those markets, and hence they would not be liquid! This criterion must surely be scored negatively for Option 1.

Competition: similarly, the clear advantage given to portfolio generators under Option 1 will inevitably deter independents from the market and so lessen competition. This should be scored negatively. We note that the notion (para 6.4.32) that gaming in one market will

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| | be mitigated by a decline in participation in that market is incorrect. As the Consultation Document notes several times, all, of these markets are highly inter-linked. Trading in one market will be on terms that directly reflect the terms available in alternative markets. If there is gaming in one market, the effects will spill over directly into all other markets. |
| 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? | Option 1 is fundamentally at odds with these primary duties.<br><br>The Consultation Document is explicit in several places that Option 1 would favour portfolio generators. Quite simply, it is only portfolio generators who:<br>• Have the resources and capabilities to trade in multiple markets<br>• Can submit portfolio (gross or net) bids and internalise the risks of doing so within their portfolio of plant<br>• Can submit simple incs and decs for system balancing, and internally manage the risks that these differ from the underlying cost characteristics of their plant<br>• Can, thereby, directly influence the ex-post imbalance price to which small independent wind generators will inevitably be exposed every hour of every day<br><br>We do not believe that the solution to this is liquid day ahead or other markets (see above). However, if this was the case then the portfolio generators would simply ensure that these markets do not become liquid – by not participating!<br><br>The effect of giving portfolio generators such an advantage can only be to increase the risks and hence cost of capital of small independents and drive them from the market. As a result, competitive pressure will weaken, costs and prices will rise and the interests of the island's consumers will be materially damaged. |

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

| **Question** | **Answer** |
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| 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 | Option 2 would operate very much like:<br>• Option 1 if generators elect to submit nominated generation volumes for the bulk of their expected generation. In this case the ex-post pool price (to which most independent wind generators, or their contract counter-parties, would be exposed) would be based on very thin volumes of "balancing" actions; or<br>• Option 4 if generators elect to submit minimal nominated volumes. In this case the ex-post pool price would be based on a fully optimised system despatch. |

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| different topic altogether)? | The IWFA is concerned that, given the advantage that portfolio generators derive from portfolio nominations (see our comments on Option 1), the most likely outcome under this option would that the ex-post pool price would be based on very thin volumes. This would make the pool price very unpredictable and a poor reflection of the underlying value of energy on the system. The pool price would be the result of a complex despatch of only small volumes of energy to adjust pre-nominated volumes – which may have little or no link to the underlying value of energy on the system. Indeed, it is very difficult to see how this would work in practice and could give rise to some very unstable and volatile ex-post pool prices.<br><br>For Option 2 to be at all acceptable, a very low 'regulated limit' would need to be imposed on trading and hence nominated volumes - so that the overwhelming majority of energy would be centrally despatched and hence the ex-post price would be a good reflection of that optimal central despatch.<br><br>We suggest:<br>• A 'regulated limit' of no more than 10% to 15% of each generator's output<br>• Clear and binding commitments that this limit would not be increased in future |
| 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)? | We believe that the uncertainty over how this Option would work in practice and the potential for instability in both despatch and settlement prices is correctly reflected in the assessment. It is clear to the IWFA that the authors of the Consultation Document are uncertain about this option.<br><br>As noted above, we believe that without a very low 'regulated limit', this Option would work in practice in a very similar way as Option 1. The portfolio generators would gain a competitive advantage by maximising the pre-traded and hence nominated generation volumes, leaving very little to be subject to optimal central despatch. We believe, therefore, that the assessment of this option should be the same as for Option 1, and our comments on the Option 1 assessment apply equally here.<br><br>In addition, we believe that the "efficiency" of the short term despatch process under Option 2 could be worse than under Option 1. As noted above, it is very difficult to understand precisely how complex bids would be used to schedule small changes in output from pre-nominated volumes. We have no confidence that the result would be an efficient, least cost outcome. We have still less confidence that it would produce rational cost reflective and predictable ex-post pool prices. We re-emphasise that it is inevitable that small independent wind generators (or their contract counter-parties) will be exposed to the ex-post pool price every hour of every day. We are very concerned that, without a very low 'regulated limit' on pre-nominated volumes, independent wind generators would be exposed to an extremely |

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| | volatile pool price – the effect of which would be to make the businesses of IWFA members unviable. |
| 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? | We refer to our response on Option 1 to this question.<br><br>Unless the vast majority of energy is subject to optimal central despatch:<br>• Independent wind generators would be exposed to very volatile and unpredictable pool prices<br>• As a result their risk profile, and hence cost of capital, would rise significantly – forcing many out of business and deterring new entry<br>• As a result, competitive pressure on portfolio generators would weaken materially, costs and prices would rise …<br>• … and the long term interests of all consumers on the island would be damaged very significantly.<br><br>We re-iterate our view that Option 2 can only be a viable option if a very low 'regulated limit' is placed on the volume of pre-traded, pre-nominated energy that is not subject to optimal central despatch. |

## 2.8 MANDATORY CENTRALISED MARKET (SECTION 8)

| **Question** | **Answer** |
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| 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)? | The IWFA have three major concerns with Option 3:<br>• Risk: mandating day ahead trading would oblige independent wind generators to trade in a market which would expose us to additional, entirely unnecessary, risk – namely the risk that our day-ahead wind forecasts are wrong (which they inevitably will be, every hour of every day). This major weakness is recognised in the Consultation Document (paragraph 8.4.26): "… it exposes the wind generation to the impact of it being less predictable closer to real time". It is wholly unacceptable to compel wind generators to participate in a market which would increase our risk, and so put IWFA members at a competitive disadvantage. As a minimum, small wind generators would have to be exempted from mandatory participation.<br>• Price: in the words of the Consultation Document (paragraph 8.4.26) Option 3 "… would typically provide a less attractive price for wind than an ex-post pool". This is entirely unacceptable to IWFA members. As noted above (see comments on Option 1), it is inevitable that independent wind generators (or their contract counter-parties) will be exposed to the ex-post imbalance price and hence essential that that price should reflect the full and true value of the energy that we generate. An ex-post imbalance price based on the prices |

submitted (and accepted) by portfolio generators to induce them to move away from their nominated positions would, we agree, be an unattractive price for wind generators. There could also be a risk that UK based ROC supported wind generators bid very low, or even negative, into the Irish Market, thereby causing imbalance prices to fall, resulting in REFIT projects receiving a very low price and thereby increasing the Irish PSO, indirectly leading to the Irish consumer contributing to the renewable support program in another country. All of this would put wind at a competitive disadvantage and drive our members out of business – to the longer term detriment of all consumers.

- Practicality: IWFA members do not have the resources or skills to trade every day in a day-ahead market. To be required to do so would almost certainly drive most (probably all) IWFA members out of business. Again, as a minimum, small generators (of all types) would need to be exempted from mandatory participation.

The IWFA has considered whether Option 3 would be acceptable if amended, and we are aware of informal suggestions of:

- possible exemptions from mandatory participation in the day-ahead market, or
- a move from 'mandatory, to 'exclusive' – by which we understand that participants might be able to elect whether to participate in day-ahead, intra-day or balancing markets, but must do so in the 'designated' exclusive version of each.

The rationale for Option 3 (as opposed to Option 1) as we understand it, is to ensure that there is a single fully liquid market in which everyone participates. We share this objective entirely. (Our objection is not to 'mandatory' but rather to 'day ahead'!) If under Option 3, the mandatory requirement is relaxed, it appears to us that it undermines the rationale for this option.

A complete shift to an 'exclusive' approach would return us close to Option 1 – there would be no single market in which everyone participates, but instead a series of partial markets with trading/arbitrage between them. We have no idea what price would emerge from arbitrage among three (or more) partial markets, in each of which some, but not all, participants trade. Such a system would not be a secure and reliable basis for a small generator to enter and participate with any confidence; it would not produce prices that we can be confident will pay the full true value of energy; it would not produce prices on which good interconnector or demand side decisions could be made. The system must have a single fully liquid market somewhere if small generators (especially wind) are to enter and survive, and if the market price is to be a sound basis on which on make system operational decisions (especially in respect of interconnector flows). We believe the risk of wind curtailment in this option would be higher than under Option 4.

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| | It may be possible to construct a suite of lesser amendments for wind and/or small generators that tries to retain as much generation as possible in the day-ahead market. These would need to address all three of the concerns listed above. They might, for example, include:<br><br>• Exemptions: an exemption for some or all wind generators from the obligation to trade in the day ahead market, but for (some level of) mandatory obligation to remain on portfolio generators<br>• Imbalance settlement price: set on the basis of a full unconstrained system schedule (by 'unconstrained' we mean unaffected by any transmission constraints, system stability issues or other technical system issues that might require plant to be run out of strict merit order)<br>• Exclusivity: an obligation on exempted generators for any trades that they do undertake at the day-ahead stage to take place in the designated day-ahead market in which all other generators are obliged to trade<br>• De-minimis: an increase in the de-minimis threshold for small generators (to 20MW), to reduce the cost of very small generators of having to participate directly in the markets and settlement processes<br>• Incentives on the TSO to minimise the cost of all system stability and transmission constraints, including decisions on whether to curtail wind (and pay compensation) versus alter interconnector flows to meet any constraints or technical system requirements which require deviation from strict merit order despatch<br><br>This is not, however, an approach that we support. Wind generation is a fundamentally important part of the future of our power system. **We should put in place trading arrangements in which all wind can participate fully and on an equivalent basis as all other generators.** It seems perverse to implement trading arrangements that are fundamentally ill suited to wind, and then find exemptions and special arrangements to enable wind to survive. As the volume of wind grows over time, exemptions will apply to an ever larger part of the system, the day-ahead price will become ever more detached from reality, and the pressure to remove those exemptions will grow.<br><br>Our strong preference is to find trading arrangements in which all participants, including wind, can participate fully. |
| 14. Do you agree with the qualitative assessment of Mandatory Centralised Market against the HLD | The IWFA believes that the assessment of Option 3 in the Consultation Document is much too positive. We make the following observations:<br><br>Security of supply: the disadvantage to wind of Option 3 can only harm longer term security of supply, by deterring new independent wind generation from entering and threatening the viability of existing |

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| criteria? If not, what changes to the assessment would you suggest (including the relative strengths and weaknesses of an option)? | generators.<br><br>We also do not believe that it is correct, as claimed in the Consultation Document, that additional day ahead information will help the TSO schedule the system (including interconnectors) more efficiently. Information about wind generation (which may comprise 40% of the system in future) will be no better under this option than any other. It cannot be presumed that the existence of a day ahead price (and intra-day markets) under Option 3 would be a good basis for making interconnector and demand management decisions – for several reasons:<br>• wind forecasts at day ahead stage will be wrong<br>• any wind generators obliged to trade day ahead will inevitably undersell in the day ahead market (the risk from overselling are potentially catastrophic)<br>• some (possibly all) wind generators will, in any case, have to be exempted from the day-ahead market<br><br>As discussed above, far from improving interconnector and demand side decisions, reliance on such day ahead (and within day) price signals are just as likely to lead to worse decisions.<br><br>The IWFA would score Option 3 negatively on security of supply, therefore.<br><br><u>Efficiency</u>: as with Option 1, we do not understand how Option 3 can be scored as "neutral" on efficiency. By disadvantaging wind, especially small independent wind generators who cannot hope to trade in day-ahead and intra-day markets, the longer term effect can only be to deter small new entrants, raise the cost of capital, and lessen the competitive pressure on the larger portfolio generators – all of which will increase costs and prices to consumers.<br><br><u>Practicality</u>: again we do not understand how Option 3 can be scored as 'neutral' on practicality. Participation is a mandatory day ahead market (and being told to then trade out of the risks that doing so would inevitably bring, by trading actively in intra-day markets) is entirely impractical for small independent wind generators. So much so that it would drive IWFA members out of business.<br><br>Further, a major change of this sort will require revision to the entire framework for independent wind generators that has been put in place over recent years. It would put new wind developments on hold for several years, again to the detriment of all consumers on the island.<br><br>This is the least practical option and must surely be scored as negative.<br><br><u>Equity</u>: Option 3 is, in our view, highly inequitable. It would be impossible, practically, for small independent generators to participate. It would produce settlement prices which disadvantage |

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| | wind generators. It would put the settlement price (to which IWFA members will inevitably be exposed) entirely in the hands of the portfolio generators, depending on their chosen risk management and trading strategies. This criterion must be scored negatively for Option 3.<br><br>Competition: we fundamentally disagree with the assessment of Option 3 as 'neutral/positive' for competition. Paragraph 8.4.26 correctly notes the disadvantage to wind of (a) having to trade at a time when wind is unpredictable and (b) an imbalance price which is disadvantageous to wind. The 'solutions' in the subsequent two paragraphs of the Consultation Document are that (a) wind generators will become better at forecasting the wind and (b) wind generators can trade actively in the intra-day markets! These comments reflect a very worrying lack of understanding about the inherent uncertainty of wind output and (more importantly) the resources and skills available to independent wind generators. No IWFA member would be in a position to trade in the way that is envisaged. The costs of doing so will inevitably drive IWFA members out of the market - thus significantly worsening competition. Option 3 must be scored as 'negative' on this criterion. |
| 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? | Option 3, as proposed, would be counter to the SEM's primary duty.<br><br>Option 3 would drive small wind generators from the market, disadvantage wind generators more generally, and hence harm the interests of consumers in both the short and longer term.<br><br>The interests of consumers on the island of Ireland are best served by ensuring that the new trading arrangements do not favour any class of generator. Only then will there be genuine competition among existing generators and for new entry. Option 3 would exclude independent wind generators from the market – by forcing them to incur unnecessary risks, by requiring them to have the skills and resources to then try to trade out of those risks, and by exposing them to a disadvantageous imbalance price.<br><br>No small wind generator would survive. Competition would be severely weakened, and consumers would pay higher prices to an oligopoly of portfolio generators as a result. |

## 2.9 GROSS POOL – NET SETTLEMENT MARKET (SECTION 9)

| Question | Answer |
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| 16. Are there any changes you would suggest to make the Gross Pool – Net | The IWFA supports the development of voluntary day-ahead and intra-day markets, with the fall-back of ex-post imbalance based on a full system despatch (i.e. ex-post pool) as envisaged by Option 4. It would (a) ensure that all generators are treated equally in the only |

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| 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)? | mandatory market, (b) that market would be fully open, transparent and easy to participate in for any small participant (c) ensure that the reference price, on which all prices would be based, is a full and true reflection of the value of energy on the system, (d) impose no unnecessary risks or transaction costs on small generators and/or wind generators, (e) provide the necessary flexibility for the requisite forward pricing in order to facilitate appropriate interconnector flows and demand side management, and (f) leave all participants to trade as they wish ahead of real time, according to their particular cost and risk characteristics..<br><br>The ex-post pool price should be determined by an ex post system schedule that schedules generating plant in strict merit order based on their complex price bids and technical characteristics of each generating unit. It should take no account of any transmission constraint, system stability or other technical system characteristics that might cause the TSO, in real time, to have to despatch plant out of merit.<br><br>The IWFA would wish the design of Option 4 to include:<br>• 'Market maker' obligations on portfolio generators, to ensure that day-ahead and intra-day markets are established and a minimum volume of energy is traded in those markets<br>• Appropriate flexibility for participation and pricing in DAM IDMs<br>• Incentives on the TSO to minimise the cost of all system stability and transmission constraints, including decisions on whether to curtail wind (and pay compensation) versus alter interconnector flows to meet any such constraints or technical system requirements which require deviation from strict merit order despatch<br>• An increase in the de-minimis threshold for small generators (to 20MW), to reduce the cost of very small generators of having to participate directly in the markets and settlement processes<br>• A regulatory requirement for cost reflective bidding into the despatch and ex-post pool process (or some equivalent regulatory control), to limit any risk of gaming by portfolio generators<br>• Priority despatch arrangements for wind generation (in line with those currently in place)<br><br>The IWFA would support either net settlement or gross settlement within Option 4. The choice should be made on grounds of practicality and cost. We would want assurances that the costs of the systems and information requirements for net settlement, as currently proposed, are not excessive. |
| 17. Do you agree with the qualitative | The IWFA broadly agrees the assessment of Option 4 in the Consultation Document, and notes in particular the equity, |

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| | 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)? | competitive and environmental strengths of this option. These are all features which would deliver long term benefit to consumers on the island of Ireland. A diverse, low carbon, competitive market in which all participants are able to compete on an equal footing will drive prices down to the long term benefit of consumers and the economy as a whole.<br><br>We make the following additional observations:<br>Security of supply: we agree that supply security can be delivered by this option – indeed it is the option that will best ensure long term supply security by enabling all participants to compete on an equal footing. However, we disagree with the comments in the Consultation Document on the 'relative disadvantage' of this option that interconnector flows would not be fully integrated into despatch.<br><br>As noted earlier, interconnector decisions in all options would still have to be made ahead of time based on the same lack of reliable information about actual wind output. It is wrong to suggest that interconnector decisions based on day-ahead prices will be better – they could just as easily be worse. As discussed above (see our comments on Option 3), we fundamentally disagree that day-ahead and intra-day prices based on trading in a series of partial markets, in none of which everyone participates are a sound basis on which to make interconnector flow decisions. Quite the opposite.<br><br>We believe that Option 4 is, in fact, the best option to minimise wind curtailment. Under Option 4, there will be an ex-post price (i.e. the imbalance price) that is the best possible reflection of the actual true outturn value of energy on the system. It will be based on actual, known wind volumes and reflect the actual technical and cost characteristics of every unit on the system.<br><br>There is a very strong incentive on everyone (i.e. not just wind generators) to try to forecast what the ex-post prices will be, in order to get the import/export decisions right. This is a very standard incentive mechanism in every commodity market in the world, and participants do not make systematic mistakes (i.e. keep getting it wrong in the same direction). In our view, therefore, Option 4 has perfect incentives to get interconnector (and demand side) decision right.<br><br>We are aware of concerns about potential wind curtailment. There are two possible scenarios under which wind could be curtailed:<br>- Scenario 1: wind is curtailed in real time AND in the ex post unconstrained settlement schedule. In this case, the ex post pool price will be very low and the interconnectors should be used to export (unless GB prices are even lower) – and the normal arbitrage incentive outlined above will apply<br>- Scenario 2: wind is curtailed in real time but NOT in the ex |

post unconstrained settlement schedule. In this case, the TSO should pay the full cost of the wind curtailment. This would comprise the cost of running the out-of-merit generator (paid at its bid price) and the cost of compensating the in-merit wind generator that is unable to run (paid the difference between settlement and bid price). Alternatively, rather than compensating the wind generator, the TSO itself could instead elect to export the energy to GB. If appropriately incentivised, it will do so when this is the least cost option (which will be almost every time).

It is critically important that the TSO faces this incentive – so that:

- In the short term it makes decisions that minimise the cost of meeting the technical system requirement; and
- In the long term it invests in and develops the system efficiently, and so minimises (for example) the need to curtail wind out of merit unless economic to do so.

We note that this incentive on the TSO to minimise the cost of meeting technical system requirements, and hence of optimising import/exports consequent on technical system requirements, should apply identically under all of the Options under consideration. We would expect that a properly incentivised TSO will trade interconnector volumes in the intra-day market to help it manage its system constraint costs, and could be required to do so (as we understand is planned in Germany).

(We note that if the TSO were not incentivized to do this, and issues related to out-of-merit operation were left to market participants, some level of correct interconnector flows could still be achieved under Option 4. Any trader would see the opportunity to purchase energy from wind generators that were receiving no payment, by being made idle due to system stability issues and would sell that energy to GB at a profit. Such a trader would:

- Buy cheaply from the wind generator that would otherwise be curtailed and receive no payment
- Sell into GB at the GB market price
- As a result, be balanced in the I-SEM settlement process (and hence have no net exposure to the ex post I-SEM settlement price)

However, careful attention would need to be paid to any impact of such trades on the curtailment hierarchy set up by the SEMC tie-breaks decision (IWFA would discourage a re-opening of that decision, which took 5 years, and the industry cannot afford any more delay). Subject to respecting tie-breaks, participant trading could, under Option 4, therefore achieve better interconnector flows. It would, however, remove the incentive that should sit with the TSO to resolve those system issues, and given the tie-break issues, it may be best to leave it to the TSO, for now at least.

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| | We caution against drawing the wrong conclusion about Option 4 in this regard because of any anomalies in the current SEM. The I-SEM ex-post pool price, and TSO incentives with respect to technical system requirements, will need to be designed correctly to ensure that the system, including the interconnectors, is despatched efficiently, as outlined above.<br><br>Efficiency: The IWFA believes that Option 4 should be scored as 'positive' for efficiency. As noted above, it will ensure a level playing field and hence genuinely competitive market, which will drive long term efficiency and hence lower prices for consumers. This critical long term effect is given much too little weight throughout the Consultation Document. The Consultation Document notes that the lack of a liquid day-ahead market price could hamper demand side management. We disagree – for the same reasons outlined above in respect of interconnector flows. Again, because up to 40% of the system will be wind whose output cannot be known at the day-ahead stage, it should not be presumed that demand side response to a day-ahead price is efficient. (Put simply, demand may be curtailed in response to high day-ahead prices when, in fact, there is sufficient wind on the day to meet all demand at much lower prices)<br><br>Environmental: We agree that Option 4 is the best option for enabling wind generation to compete on a level playing field. We also support the view that adequate arrangements must be put in place to remunerate flexible plant which are able to respond quickly at times of unexpected low wind output. We dispute the notion that, under Option 4, wind has no incentive to improve wind forecasting. Wind generators will always want as much certainty as possible about future output levels, and so tie-in our prices and revenues as far in advance as possible (rather than be exposed to the outturn imbalance price). This incentive remains in Option 4. Indeed, as discussed above, Option 4 would incentivise all participants to try to forecast wind, and hence ex-post pool prices. It would be fundamentally wrong, however (as in Option 3 for example) to create an artificial incentive by forcing wind to expose itself to unnecessary risks in the day-ahead market.<br><br>The internal electricity market: The Consultation Document states that the efficiency of cross-border trade in Option 4 will depend on the liquidity of the DAM and IDM. We disagree. It will depend on how accurate wind forecasts are at the time that interconnector flows are decided. As noted above, with up to 40% of wind on the system, interconnector flow decisions made on the basis of trades in a day-ahead market are just as likely to be wrong - probably more so. (Put simply, we could decide to import based on day-ahead prices when, in fact, the wind blows strongly on the day and we should be exporting). We cannot remove the uncertainty of wind output through market design, and it is dangerous to believe that the mere existence of day-ahead or other markets will improve the efficiency |

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| | of decisions. Option 4 will, however, incentive efficient cross-border trades far better than any other option (as discussed earlier). |
| 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? | The IWFA believes that Option 4 best meets the SEM's primary duty.<br><br>It is the only option that will (a) produce a market price that accurately reflects the value of energy on the system, (b) enable wind to compete on a level playing field (c) enable small, non-portfolio generators to compete on a level playing field, (d) incentivise efficient interconnector flows and facilitate DSM, and hence (e) provide the long term conditions for an efficient and competitive market.<br><br>Customers on the island of Ireland will benefit through lower prices and greater supply security than under any other option. |

## 2.10 CAPACITY REMUNERATION MECHANISMS (CHAPTER 10)

| **Question** | **Answer** |
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| 19. 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? | The IWFA supports the continuation of a CRM in I-SEM.<br><br>The market price must fully remunerate all efficient plant on the system. Without some form of increase above marginal generating costs, the marginal generator would never be able to recover its fixed and capital costs (the so-called 'missing money' problem). The rationale for a form of CRM for the I-SEM is, in our view, based on the fact that the main alternative ways of remunerating the marginal generator would not work well in the I-SEM system:<br>• Generators could be allowed to bid high prices at times of system stress. However, the Consultation Document rightly notes that this is very risky on a small system – where the addition of one new generating set could swing the system from shortage to significant surplus. The danger is that too little new capacity would be built, in order to keep the system tight enough to remunerate marginal plant.<br>• Prices at times of system stress could be set by demand side bids which reflect their valuation of a secure energy supply. However, this too suffers from the small system concern noted above (i.e. generators would need to keep the system tight in order for demand side bids to be at the margin) and demand side bidding is insufficiently established on the island for us to be confident that this would work well.<br><br>For these reasons, the IWFA supports the view that some form of capacity payment will be required to raise the imbalance price / market price above the marginal cost of the marginal generator. |

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| | We also stress that this 'capacity payment' must be market-wide. All generators must be paid the full value of the energy they produce, in order to get an efficient plant mix. In an "energy only" market, the single market price would be bid up (by generators or demand) at times of system stress, and all generators who generate energy at those times would (rightly) benefit from that higher market price. Any CRM must do the same. |
| 20. Are these the most important topics for describing the high level design of any future CRM for the I-SEM? | The IWFA agrees that the Consultation Document has identified the key design issues and options for a CRM. |

## 2.11 STRATEGIC RESERVE (CHAPTER 10.7)

| **Question** | **Answer** |
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| 21. 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?) | The IWFA does not support use of a Strategic Reserve mechanism, targeted at a specific quantity of generation that would not otherwise get built.<br><br>We have no changes to suggest that would make this an acceptable option. |
| 22. 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)? | The purpose of a CRM, as noted above, should be to ensure that all plant on the system receive a price equivalent to that which would ideally come from an energy-only market reflecting the value of energy at times of system stress. A Strategic Reserve mechanism does not do this. It would under remunerate all other plant on the system.<br><br>There is also a significant risk that plant built as part of the "Strategic Reserve" would dilute prices in the market – because decision makers would be very tempted to use this plant in preference to higher cost 'non-Strategic' plant. |
| 23. Would a Strategic Reserve Mechanism work | No |

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| 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 |
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| 24. 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?) | The IWFA supports a long-term price based CRM. This is, we believe, the best option to remunerate efficient investment in new generation.<br><br>The payment should be made to plant on the system in real time, rather than only paid (for example) to those which trade in a day-ahead or any other market.<br><br>Consideration should be given to narrowing the number of generating plant that receive the capacity payment. It should be paid to those required to generate to meet demand plus a "reasonable" plant margin. It should not be spread so thinly (as we are concerned is currently the case) that it enables excess old generating plant to remain on the system which should be retired. |
| 25. 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)? | We believe the assessment in the Consultation Document is fair and reasonable. The concern that it does not give an accurate short term signal of system tightness is, we believe, correct. However, as we note below, if the CRM were determined on the basis of short term system tightness it would suffer from the same problems as energy-only mechanisms on a small system – namely that relatively small increments of new capacity would push the system into surplus for long periods and so reduce the CRM to zero. This would negate its purpose.<br><br>An option for consideration may be for the total financial value of the CRM to be determined on a long term basis, but for the hourly distribution of the payment to be determined, in part at least, based on the hours of greatest actual (or expected) system stress (e.g. daytime/weekday peak periods). |
| 26. Would a Long-term price-based CRM work or fit more effectively with a particular option for the energy trading arrangements. If | This could fit with any option for energy trading arrangements. |

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| so, which one and why? | |

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

| Question | Answer |
|---|---|
| 27. 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)? | The IWFA does not support a short term price based CRM.<br><br>As noted above, there may be merit in considering using actual (or expected) hours of greatest system stress to determine the distribution of the fixed long term financial 'pot' within each month/year. |
| 28. 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)? | We believe that a short term price-based CRM would not achieve the objective of ensuring that efficiently built generation is fully remunerated in a small system such as the island of Ireland.<br><br>Lumpy investment would mean that a short term price based CRM would be very low / zero for prolonged periods – which is the problem of an energy-only mechanism that a CRM should seek to avoid. |
| 29. 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? | No |

## 2.14 QUANTITY-BASED CAPACITY AUCTION (CHAPTER 10.11)

| Question | Answer |
|---|---|
| 30. Are there any changes you would | The IWFA does not support a quantity-base capacity auction CRM for the I-SEM in any form. |

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|---|---|
| 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)? | |
| 31. 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)? | A quantity-base capacity auction CRM would under remunerate wind generation and distort the energy market.<br><br>Variable wind generation would not be able to participate in a CRM auction of this sort. IWFA members would not be able to bear, or manage, the delivery risk associated with penalties that are implicit in such a scheme – because we cannot predict wind availability with sufficient confidence. This does not mean, however, that wind generation should not receive capacity payments. As noted above, in an energy-only system, the energy price would rise at times of system stress and all generators who generate at those times would receive the higher payment. This would ensure that efficient plant is properly remunerated. A quantity-base capacity auction CRM would not, therefore, be an efficient alternative, and would discriminate against wind generators unreasonably. |
| 32. 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? | No |

## 2.15 QUANTITY-BASED CAPACITY OBLIGATION (CHAPTER 10.12)

| **Question** | **Answer** |
|---|---|
| 33. 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 | The IWFA does not support a quantity-base capacity obligation CRM for the I-SEM in any form. |

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| a different choice for one or more of the topic)? | |
| 34. 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)? | We have the same objections to a capacity obligation scheme as a capacity auction scheme.<br><br>A quantity-base capacity obligation CRM would under remunerate wind generation and distort the energy market.<br><br>Variable wind generation would not be able to participate in a CRM obligation scheme of this sort. IWFA members would not be able to bear, or manage, the delivery risk associated with penalties that are implicit in such a scheme – because we cannot predict wind availability with sufficient confidence. This does not mean, however, that wind generation should not receive capacity payments. As noted above, in an energy-only system, the energy price would rise at times of system stress and all generators who generate at those times would receive the higher payment. This would ensure that efficient plant is properly remunerated. A quantity-base capacity obligation CRM would not, therefore, be an efficient alternative, and would discriminate against wind generators unreasonably. |
| 35. 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? | No |

## 2.16 CENTRALISED RELIABILITY OPTIONS (CHAPTER 10.14)

| **Question** | **Answer** |
|---|---|
| 36. 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)? | The IWFA does not support a Centralised Reliability Option CRM for the I-SEM in any form. |

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| 37. 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)? | This option does not appear, to the IWFA, to achieve the desired objective of supplementing the income of generators when, on a small system, there will be prolonged periods of capacity surplus due to lumpy investment.<br><br>An auction of Reliability Options would attract very little (if any) additional income for generators if (following addition of a lumpy generation investment to the system) expected system margins are high. This is precisely the same position that generators would be in in an energy-only market. The Centralised Reliability Option appears to provide no benefit as a CRM over-and-above relying solely on an energy-only market mechanism – and would result in under-investment in generation capacity by generators in order to keep the system tight (and hence Reliability Option fees high). |
| 38. 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? | No |

## 2.17 DECENTRALISED RELIABILITY OPTIONS (CHAPTER 10.15)

| **Question** | **Answer** |
|---|---|
| 39. 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)? | The IWFA does not support a Decentralised Reliability Option CRM for the I-SEM in any form. |
| 40. Do you agree with the initial assessment of the | We have the same objections to a Decentralised Reliability Option CRM as we do to a Centralised Reliability Option scheme. Our concern does not relate to the mechanism by which the Options are sold, but |

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| 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)? | to the fact that neither of them would provide the assurance of 'missing money' revenue that is needed.<br><br>As above, the Decentralised version of a Reliability Option scheme does not appear to achieve the desired objective of supplementing the income of generators when, on a small system, there will be prolonged periods of capacity surplus due to lumpy investment. Sale of Reliability Options would attract very little (if any) additional income for generators if (following addition of a lumpy generation investment to the system) expected system margins are high. This is precisely the same position that generators would be in in an energy-only market. The Decentralised Reliability Option appears to provide no benefit as a CRM over-and-above relying solely on an energy-only market mechanism – and would result in under-investment in generation capacity by generators in order to keep the system tight (and hence Reliability Option fees high). |
| 41. 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? | No |