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Kevin Hagan  
Commission for Energy Regulation  
The Exchange  
Belgard Square North  
Tallaght  
Dublin 24

Our Ref: GS-004420

25 March 2015

Dear Kevin Hagan,

Re: RES Response to Integrated Single Electricity Market (I-SEM) Building Blocks Consultation (SEM-15-011)

RES is one of the world's leading renewable energy developers working across the globe to develop, construct and operate projects that contribute to our goal of a sustainable future. We have a portfolio of low carbon energy technologies and a range of services which together can meet demand from the industrial, public and commercial sectors on whatever scale.

RES has been an established presence at the forefront of the wind energy industry for over three decades. Our core activity is the development, design, construction, financing and operation of wind farm projects worldwide. RES has developed or built over 9GW of wind energy worldwide and we have several thousand megawatts under construction and in development, we continue to play a leading role in what is now the world's fastest growing energy sector. RES is also involved in the solar, offshore wind, wave and tidal sectors, as well as developing storage and demand-side response offerings.

RES welcomes the opportunity to respond to this Building Blocks Consultation Paper on the Energy Trading Arrangements Detailed Design for the I-SEM. RES has responded to all the previous I-SEM consultations, in particular we responded to the recent I-SEM Aggregator of Last Resort (AOLR) consultation paper. It is vitally important that independent renewable generators are able to participate in the new market.

RES is also an active member of IWEA and we are supportive of their response. Our response to the specific consultation topics are attached to this letter and the key points to note in our response are:

1. All the topics discussed in this consultation paper need to be considered in their entirety, how all the separate proposals interact needs to be considered. For example if renewables receives priority dispatch then renewables should not be constrained off unless there is no other option for the system available. Additionally, how these topics interact with existing and future support mechanisms needs to be considered. For example how will the new Feed-in Tariff with Contracts for

Difference (CfD FiT) generators in Northern Ireland be treated for priority dispatch in the event of negative prices.

2. RES completely agrees with the decision not to exclude non-firm capacity from all ex-ante markets. If non-firm capacity was excluded it would have an extremely distortive impact on the market, prices would in all likelihood be higher as non-firm wind capacity would not be taken into account by trades and the resulting flows on the interconnectors would not be optimal.
3. RES believe that priority dispatch for renewables should be followed in the I-SEM at all times. The principles of priority dispatch and access are set out in Directive 2009/28/EC of 23 April 2009 (the "Directive", as transposed in Ireland by S.I. No. 147 of 2011). However, there needs to be detailed consideration of how priority dispatch will work with support mechanisms going forward, given there will still be no self-dispatch in the I-SEM.
4. Both options for the treatment of compensation for curtailment presented in the consultation paper seem overly complicated to implement and monitor. The curtailment and imbalance risk perceived under the new I-SEM design at present is likely to stop wind generators trading in the Day Ahead (DAH) or Intraday Market (IDM). This will reduce liquidity and lead to sub-optimal flows across the interconnectors. RES does not support the proposed treatment of curtailment put forward in this consultation paper and believe that a separate consultation, appropriately considering the treatment of wind curtailment in the I-SEM should be undertaken. Furthermore, the decision to remove compensation for curtailment in Decision SEM-13-010 should now be withdrawn.
5. Although, imbalance settlement is not discussed in this consultation paper we remain concerned about the impact of the proposed imbalance calculation. Applying marginal imbalance prices will have a specifically detrimental impact on wind and intermittent generation due to the likelihood of a low wind event coinciding with a high energy balancing action cost occurring. The development of commercial aggregators in the market will be dependent on the balancing risk for participants. Marginal imbalance prices will also increase both the volatility and spread between imbalance prices. This will not only deter new market entrants, it will also make it more difficult for them to participate in the market. Additionally, more marginal imbalance prices will in all likelihood lead to larger credit requirements for participants in the balancing market to cover the sharper imbalance prices which could become a barrier to entry.
6. Renewable technologies play a leading role in the current and future market arrangements, therefore emerging innovative measures like storage and demand-side response at all scales should also be able to participate in the new market. Establishment on the new market needs to appropriately consider the future needs of the market.

RES looks forward to the further Markets Consultation Paper which will consider the detailed design of the Day Ahead Market, Intraday Market, Balancing Market and Imbalance Settlement and decision on the Building Blocks concepts in consideration with the overall detailed design of the trading arrangements in Quarter 3 2015. We also welcome any further contact in relation to this submission, to do so, please contact myself via the details below.

Yours sincerely,

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## **RES Response to Consultation Topics**

### **Treatment of Transmission Losses**

RES is supportive of the proposals in the consultation paper on the treatment on losses. The most important aspect of the decision on the treatment of transmission losses is that it is absolutely clear to all participants:

- “Volumes that are traded in the DAM and the IDM should be at the trading boundary and therefore net of losses. This means that generators would account for their losses in their commercial offers in the ex-ante markets.
- Conversely the physical notifications made by generators to the TSO shall be at the station gate and therefore gross of losses. It is proposed that it will be the responsibility of the generator to convert its contracted trades from the DAM and IDM into a physical notification.
- Hence the metered generation volumes of generators will be adjusted by their individual Transmission Loss Adjustment Factor (TLAF) in imbalance settlement.”<sup>1</sup>

As stated in the consultation:

“The cost of these residual losses is currently dispersed pro rata on the proportion of non-quarterly hour demand meters in a supplier’s demand portfolio as part of global aggregation.”

We would support the continuation of residual losses being dispersed pro rata, this process is currently known and understood, we would not want an overly complication approach to be introduced. Although, we note that this is to be addressed as part of the overall global aggregation solution in the Markets Consultation Paper.

### **Treatment of Constraints**

RES is supportive of the current proposals for the treatment of constraints:

- “A plant that is constrained down due to a dispatch instruction shall pay back the lower of its decremental bid price or the Balancing price; and
- a plant that is constrained up due to a dispatch instruction shall receive the higher of its incremental offer price or the Balancing price.”

The most important aspect on the treatment of constraints is that a generator is not left in an adverse position following a constraint event. For example, renewable generators will lose out on their support mechanisms if they are constrained down (e.g. ROC) and therefore they should retain their decremental bid which reflects this or the balancing price if it is higher.

However, the treatment of constraints needs to be considered with the other topics discussed in this consultation paper: priority dispatch, firm access, priority dispatch and curtailment. For example if renewables receives priority dispatch as discussed below then renewables should not be constrained off unless there is no other option for the system available.

### **Treatment of Firm Access**

RES completely agrees with the decision not to exclude non-firm capacity from all ex-ante markets. If non-firm capacity was excluded it would have an extremely distortive impact on the market, prices would in all likelihood be higher as non-firm wind capacity would not be taken into account by trades and the resulting flows on the interconnectors would not be optimal.

RES support a combination of both option c and b, option c put forward in the consultation paper:

“The plant must trade itself out of its trades for any non-firm volume in the IDM if notified that it will not be dispatched above its firm access level by the TSO in time.”

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<sup>1</sup> [http://www.allislandproject.org/en/wholesale\\_overview.aspx?article=a0314980-d66c-4281-8231-30e7a1999804](http://www.allislandproject.org/en/wholesale_overview.aspx?article=a0314980-d66c-4281-8231-30e7a1999804)

However, a level of responsibility should be placed on the TSO to provide an early warning to non-firm generators that have traded and will not be able to dispatch their non-firm capacity, for example requirements should be placed on the TSO e.g. a fixed number of hours ahead warning should be given. Then the generator has responsibility to trade their position in the IDM. If the generator cannot trade out their position then option b proposed in the consultation paper should be followed:

“The plant must bid to buy back any non-firm volumes in the Balancing Market at the DA price, or some price related to its actual trades (including trades in the IDM).”

We do not support option a this option would be very penal to generators if the imbalance price is set using the last unit or last MWh dispatched. If option a is introduced it would hinder generators trading and therefore participating in the market. This would be very detrimental to the market.

### **Treatment of Priority Dispatch**

RES believe that priority dispatch for renewables should be followed in the I-SEM at all times. The principles of priority dispatch and access are set out in Directive 2009/28/EC of 23 April 2009 (the “Directive”, as transposed in Ireland by S.I. No. 147 of 2011). The RES-E Directive outlines a number of obligations on the member state to enable the integration of renewable energy and to minimise curtailment. Article 16.2(c) states:

“Member States shall ensure that when dispatching electricity generating installations, transmission system operators shall give priority to generating installations using renewable energy sources in so far as the secure operation of the national electricity system permits and based on transparent and non-discriminatory criteria. Member States shall ensure that appropriate grid and market-related operational measures are taken in order to minimise the curtailment of electricity produced from renewable energy sources. If significant measures are taken to curtail the renewable energy sources in order to guarantee the security of the national electricity system and security of energy supply, Members States shall ensure that the responsible system operators report to the competent regulatory authority on those measures and indicate which corrective measures they intend to take in order to prevent inappropriate curtailments.”<sup>2</sup>

However, there needs to be detailed consideration of how priority dispatch will work with support mechanisms going forward, given there will still be no self-dispatch in the I-SEM. For example under the new Feed-in Tariff with Contracts for Difference (CfD FiT) being introduced in Northern Ireland there will be limitations on generators in the event of negative prices. In GB generators will receive no CfD payments when prices are negative in the DAH Market for 6 or more hours and in any case CfD top up payments will only ever be made from £0. Therefore, CfD generators would be penalised if they dispatch in the event of negative prices but in accordance with priority dispatch requirements they may have to generate. The disincentive to generate under negative prices will in all likelihood also apply under the next REFIT arrangements for the Republic of Ireland given the new Guidelines on State aid for environmental protection and energy 2014-2020 state:

“124(c) measures are put in place to ensure that generators have no incentive to generate electricity under negative prices.”<sup>3</sup>

The proposed stages for generation which is eligible for priority dispatch is outlined in the consultation paper:

“I. observe prices in the DAM and IDM, trading in them as they see fit;

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<sup>2</sup>Renewable Energy Directive 2009,

<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=Oj:L:2009:140:0016:0062:en:PDF>

<sup>3</sup> [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628(01)&from=EN)

II. on the basis of observing prices and possibly trading in the ex-ante markets, decide on the physical notification reflecting the output at which it wishes to run given the prevailing market conditions;

III. submit any incs and decs reflecting the price at which it is willing to deviate from its physical notification.”

We are supportive of the three stages proposed but in addition to the three steps, it should be added that the TSO should consider the inc bids from priority dispatch generators first (for renewable generators these are likely to be lowest bids anyway).

### **Treatment of Curtailment**

The market systems must be able to deal with compensation for constraint and curtailment on an equal footing, considering the SEM Committee’s existing policy does not come into play until 2018 and the market is scheduled to go-live in 2017.

In that context, the same functionality should be applied for curtailment that is proposed for cash out of non-firm traded positions in the event of constraint. This is consistent with one of the presented SEM Committee’s option for the treatment of curtailment, i.e. Cash Out and Post Processing.

Both options for the treatment of compensation for curtailment presented in the consultation paper seem overly complicated to implement and monitor. The curtailment and imbalance risk perceived under the new I-SEM design at present is likely to stop wind generators trading in the DAH or IDM. This will reduce liquidity, discourage new market entrants and led to sub-optimal flows across the interconnectors. RES does not support the proposed treatment of curtailment put forward in this consultation paper and believe that a separate consultation, appropriately considering the treatment of wind curtailment in the I-SEM should be undertaken. In particular an assessment of the impact on independent generators of the proposed treatment of curtailment should be completed.

As raised previously by IWEA the principles of priority dispatch and priority access are set out in Directive 2009/28/EC of 23 April 2009 (the “Directive”, as transposed in Ireland by S.I. No. 147 of 2011). The RES-E Directive outlines also a number of obligations on the member state to enable the integration of renewable energy and to minimise curtailment. Article 16.2 states:

- a) “Member States shall ensure that transmission system operators and distribution system operators in their territory guarantee the transmission and distribution of electricity produced from renewable energy sources;
- b) Member States shall also provide for either priority access or guaranteed access to the grid-system of electricity produced from renewable energy sources;
- c) Member States shall ensure that when dispatching electricity generating installations, transmission system operators shall give priority to generating installations using renewable energy sources in so far as the secure operation of the national electricity system permits and based on transparent and non-discriminatory criteria. Member States shall ensure that appropriate grid and market-related operational measures are taken in order to minimise the curtailment of electricity produced from renewable energy sources. If significant measures are taken to curtail the renewable energy sources in order to guarantee the security of the national electricity system and security of energy supply, Members States shall ensure that the responsible system operators report to the competent regulatory authority on those measures and indicate which corrective measures they intend to take in order to prevent inappropriate curtailments.”

The new I-SEM needs to take these requirements of the RES-E Directive in its entirety into consideration and ensure that the market works in such a way that absolute priority dispatch is maintained and curtailment is minimised. We are very supportive of the DS3 programme and are keen to see the programme progress. While we recognise that it is difficult to incentivise delivery of the DS3 programme, penalizing wind

generation is not the solution. Consideration should be given to methods for incentivising the delivery of curtailment mitigation measures, including the DS3 programme. Innovative local solutions by participants should also be encouraged and facilitated. The DS3 programme to increase the instantaneous SNSP limit from 50% to 75% has already been delayed. The risk to delay currently only rests with wind generators who are not in a position to manage the risks. Therefore the removal of compensation for curtailment is not appropriate.

In the SEM Committee Decision on the Treatment of Curtailment in Tie-break situations (SEM-13-010) the SEM Committee outlines that generators would expect to see a significant reduction in curtailment levels resulting from substantial implementation of the DS3 programme:

“The SEM Committee is of the view that based on the programme plans set out by the TSOs, the DS3 programme will be substantially in place by 2018 which will ensure that levels of curtailment are lower than they might otherwise have been. The SEM Committee will continue to over-see and support the work of the TSOs in this regard. The SEM Committee believes that given these expected developments, it is appropriate to signal now that the burden of compensation for curtailment will only be carried by consumers up to a defined point (2018 at the latest).”

The delays which have occurred to date mean that these reductions in curtailment will not now occur in the expected timeframe. In light of the above the decision to remove compensation for curtailment in Decision SEM-13-010 should now be withdrawn. Additionally if wind is not compensated appropriately then it does not incentivise the right responses from DSR, storage or grid upgrades.

### **I-SEM De Minimis Level**

The new I-SEM arrangements will carry more risk for generators and therefore there is a strong argument for increasing the De Minimis level. However, the level is dependent on the AOLR arrangements which are ultimately put in place. RES support maintaining the current level of 10MW but this is dependent on the AOLR arrangements. As raised in our response to the AOLR consultation (SEM-14-106) we welcome the proposed functions of the AOLR, in particular the facilitation of trading in the DAM, IDM and BM with the intention to facilitate access to and participation in these ex-ante markets to reduce exposure to the imbalance arrangements. This should mitigate risks for renewable generators participating in the new market arrangements and provide a backstop route to market.

The consultation paper also refers to the possibility of reducing the De Minimis level to 5MW to align with the Grid Code. We do not believe that this is appropriate as the Grid Code refers to the technical capability of the plant and is not based on market participation. The forthcoming Network Code on Requirements for Generators will also be changing the level at which the Grid Code applies, and this should not have implications for market participation.

### **Policy for Currency in I-SEM**

RES agrees with the proposal in the consultation that the I-SEM should operate on the basis of dual currency as the SEM does now. We are also supportive of the intention that currency costs should be projected ex-ante and charged to suppliers as a tariff. Any differences between the projected and actual should be treated as a correction factor. However, it is important that the correction factors and distribution of payments is undertaken as soon as possible. There is a risk that if a significant exchange rate change occurs in one day that a Northern Irish generator would have to carry this risk. Although, the fact that this risk exists, even if only for a small timeframe, generators in Northern Ireland will have to provide credit cover to cover this. Northern Irish generators should not be exposed to this risk when Republic of Ireland generators are not, this risk should be socialised across all generators.

### **Market Information in I-SEM**

As suggested in the consultation paper there is a need to ensure that there is capability to publish as much information as possible subject to market power considerations. RES welcomes the offer for the TSO to publish aggregate wind notifications and expected wind output in the consultation, this information should be updated regularly intraday. This could be similar to the information currently published on the Elexon Portal, Elexon currently publish demand and generation forecasts and “Day-Ahead Generation Forecasts For Wind And Solar (B1440)”. In addition to this information, regional wind forecasts should be provided. This information would be extremely valuable to all market participants.

However, the timing of information released is also critical, so that a balance is struck between participants being able to respond to market signals and concerns over market power or gaming. All market participants need to have fair and consistent access to the same information. Also it is vitally important if everyone is using this information that it is accurate. Therefore, quality or performance requirements should be placed on the TSO.