

Submission by Bord na Móna

on

Integrated Single Electricity Market (I-SEM)  
Draft Decision Paper

SEM-14-045

**25<sup>th</sup> July 2014**

## 1. Introduction

Bord na Móna (BnM) welcomes the opportunity to participate and contribute towards the transition of the Single Electricity Market (SEM) to the Integrated SEM (I-SEM) to ensure compliance with the European Target Model (ETM). In particular, BnM welcomes the opportunity to respond to SEM-14-045 “Integrated Single Electricity Market (I-SEM) - High Level Design for Ireland and Northern Ireland from 2016”, the Draft Decision Paper. BnM have engaged with the consultation process of designing the I-SEM market at all stages to date.

BnM was broadly supportive of Option 3 (Mandatory Centralised Market) as outlined in the consultation paper SEM-14-008. BnM cautiously welcomes the draft decision to select a modified version of this option as the basis for Energy trading arrangements, but has noted some concerns below.

BnM welcomes the decision to include an explicit capacity remuneration mechanism (CRM) in the I-SEM. In its response to the consultation paper (SEM-14-008) BnM highlighted its preference for a Long Term Price Based Capacity Mechanism. This continues to be BnM’s preferred capacity remuneration mechanism. The move to a quantity based Reliability Options (RO) mechanism is a significant change for the Irish market and BnM have outlined our suggestions and concerns regarding this proposed change below. Should ROs be implemented it is important that an appropriate transitional mechanism is put in place to facilitate the change from the current CPM to ROs in the I-SEM.

As outlined in our response to the I-SEM consultation (SEM-14-008) BnM have been approaching the new I-SEM design with the overarching principle of ensuring a ‘Route to Market’ to provide ‘Revenue Adequacy’ for our generation assets. More specifically –

- Peaking Units – the investment in peaking units and their value to the system should be remunerated adequately, remuneration also from the sale of flexible products and from energy production
- Baseload plant with a combination of RES-E and conventional power – will require a market that respects absolute Priority Dispatch, as well as facilitating the opportunity to enter into off-take arrangements to satisfy REFIT requirements.
- Wind – liquid market will sufficient counterparties, a market with a robust reference price for REFIT, a liquid IDM to facilitate adjustments in position closer to real time as forecasts are refined.
- Hybrid Plant – Regulatory certainty around Hybrid Plant status and REFIT 3 is required.

## 2. Energy Market

### 2.1 Forwards Market

BnM welcomes the decision to have financial trading only for within zone and cross border trading in the forwards timeframe. This should allow for maximum liquidity in later time frames and also allows for the most efficient flows on the IC.

BnM have some concern over what level of liquidity might exist in the forwards market and welcome the proposal to look at measures to promote liquidity in the forthcoming detailed design stage. Further consultation should be carried out on any measures proposed for this purpose.

### 2.2 Day Ahead Market (DAM)

BnM acknowledges the removal of mandatory participation in the DAM (as was mooted in the consultation paper) and sees the benefit and merit in an 'exclusive' route to market for physical nominations in the DAM in terms of the benefits that should be delivered in terms of transparency and liquidity.

BnM welcomes the statement that the EUPHEMIA algorithm is considered 'fit for purpose' to serve as the means of unit commitment and scheduling in the I-SEM DAM. It is acknowledged that the SEMC have held discussions on EUPHEMIA's capability with expert parties. Some concern has been aired regarding the EUPHEMIA algorithm and how sophisticated bids, with minimum income conditions (MICs) are executed. The EUPHEMIA public description caveats the performance of the heuristic approximations warning that sub-optimal outcomes are possible. Obviously, this becomes a concern for I-SEM participants. Should 'in the money' I-SEM bids be rejected by the algorithm, it is unclear what decisions and actions can be taken to rectify the suboptimal schedule. It is suggested that rigorous testing should be completed at an early stage in the detailed design process to ensure that I-SEM bids (of any type) can be accommodated into EUPHEMIA in a manner that does not produce sub-optimal results, and if necessary draft contingencies if the propensity for such sub optimal outcomes could materially impact I-SEM participants.

BnM is strongly in favour of unit bidding in both the DAM and IDM. Unit based bids (as opposed to Portfolio bids) provide greater transparency, price discovery, reduces the likelihood of market power abuse and facilitates a level playing field for all participants irrespective of scale. BnM welcome the inclusion of portfolio bidding in 'certain circumstances' for variable generation; however BnM would like to see Portfolio bidding extended to all variable renewable generation regardless of size.

## **2.3 Balancing Market**

BnM is in favour of the concept of mandatory participation in the balancing market and accept balance responsibility is required. The decision to employ a marginal pricing mechanism in the balancing mechanism is in line with the thrust of the ETM for balancing and BnM sees the merit in such a proposal. BnM believe that those units providing energy balancing services to the system should be remunerated at the marginal price. However it must be acknowledged that the move to a balancing mechanism is a fundamental change for the Irish market and all aspects of the balancing market design should be studied and analysed during the detailed design stage.

BnM also believe that detailed study and discussion is needed to ensure that such a mechanism does not over penalise wind units given their variable nature and forecast errors that can arise. Forecast errors are a legitimate feature of wind units given the nature of the resource. Being fully exposed to a balancing mechanism significantly adds to the risk of trading wind in the market, it may therefore be possible to impose a degree of balance responsibility on wind units which does not expose such units to the full extent of imbalance pricing. It is a continuing government policy to support wind generation and the variable nature of the resource should be fully taken into account in the detailed design stage of the I-SEM.

BnM can see the logic in the proposal that non-energy actions will be remunerated pay-as-bid.

## **2.4 Imbalance Settlement**

BnM can see the merit in having a single imbalance price for Imbalance settlement but believe that it is more appropriately to make a final decision following analysis and consultation at the detailed design stage.

## **3. Capacity Remuneration Mechanism**

In our response to the consultation paper (SEM-14-008) BnM detailed its preference for a long term price based capacity mechanism as we believe it delivers a degree of certainty, reliable firm capacity, investor confidence and system security. Since its launch in 2007, the current Capacity Payment Mechanism has functioned well whereby the SMP recoups short run marginal costs and the capacity mechanism ensures long run costs are met. This mechanism signalled investment in flexible generation and provides consumers on the island with increased levels of system security as the power system transitions to a low carbon mix. It is vital that the new mechanism continues to encourage this objective. The new mechanism must be transparent, equitable and fair.

BnM is the owner and operator of the Cushaling Power Ltd (CPL) peaking Units (the newest on the system). It must be remembered that the investment in these units was made on the basis of the CPM as it is currently designed. BnM responded to investment signals generated by the Annual Capacity Payment Sum when commissioning CPL. Investment in plants such as CPL and others were made on the assumptions in a business case based on revenue adequacy. In terms of credibility for the market design, policy makers and regulators it is critical that these criteria are upheld in any new mechanism.

Investors must be provided with some degree of certainty around their revenue streams given that many investments were committed on the basis of the current CPM.

The comments below are included, notwithstanding Bord na Móna's preference for a long term price based capacity mechanism, to further the debate regarding ROs.

It is unclear whether a quantity based reliability options (ROs) mechanism will meet the range of objectives listed above in the same way as the current capacity mechanism. A new I-SEM market which fails to incorporate a facility in which capacity is sufficiently remunerated could threaten investor confidence.

A fundamental concern is that such a scheme may be perceived as a purely financial instrument divorced from physical delivery which could have long term implications for generation adequacy.

BnM would question whether the DAM market provides the best reference price for the reliability options and would call for analysis and testing to be carried out to determine this prior to a final decision.

Studies are also needed to determine if an additional penalty for non-delivery would lead to more efficient bidding from participants.

BnM acknowledge that much of the detail as to the workings of the ROs will be determined at the detailed design stage. Some queries that are outstanding include:

- How secondary trading be implemented?
- How will units with non-intermittent Priority dispatch be treated in the auction
- What is envisaged as being the main driver of the reference price in the market which will trigger the option being called?
- What type of transition mechanism will be put in place to facilitate the move from the current mechanism to the new I-SEM capacity mechanism?

Ireland is moving towards 40% variable renewable generation by 2020 (in line with European targets) which will predominantly be supplied by wind generation. BnM are concerned that despite the fact that wind could be

contributing greatly to the system at times of high demand (and consequently keeping market prices low) there is no recognition or payment for this capacity in this new mechanism. We believe that wind should be remunerated in line with its capacity credit. It is likely under this new mechanism that plant will be called during times of high price spikes (i.e. when the reference price is above the strike price), and it can be assumed that this will be at periods of low wind on the system. BnM believe that wind generation should receive capacity payments reflective of its contribution to security of capacity on the system.

#### 4. Hybrid Plant

The REFIT scheme which supports renewable generation is vital to the continued build out of such generation and is a critical mechanism to aid the achievement of the government's mandatory renewable targets by 2020 and beyond. It is a pre-requisite that the new market design is compatible with the existing support schemes in place in Ireland (including PPAs which underpin these schemes).

RES support schemes are Government sanction instruments and generally outside the remit of the RAs. However, notwithstanding this, BnM would urge the RAs to take cognisance of the treatment of existing approved support schemes in the new I-SEM design. The I-SEM should be designed in such a manner that existing schemes can seamlessly transition into new market arrangements

The SEMC decision paper SEM-13-006 introduced a 'qualifier' to the general applicability of an 'absolute definition' of Priority Dispatch for plants producing renewable electricity in a hybrid plant co-firing renewable and non-renewable feedstocks. The SEMC decision stepped outside Directive 2009/28/EC – 'A Directive for the Promotion and Use of Energy from Renewable Sources' and introduced an additional assessment for carbon emission against an 'administrated' reference plant as a pre-requisite in reaching Hybrid plant status, although to date the actual calculation methodology has not been published. For the record, Bord na Móna fully endorsed<sup>1</sup> the general philosophy of the SEMC in that the "*definition/application of 'hybrid' should not serve to result in generators using minimal amounts of renewable fuel to secure priority dispatch status and a perverse incentive in this regard*". BnM continues to believe in a transparent, predefined, and regulatory stable 'de minimis' proportion of RES-E as the "*sole criterion for hybrid plant qualification, and recommends that the 'de minimis' threshold could be set somewhere within the range 15% to 30%*".

It is interesting to note that in the sixteen months since the publication of SEM-13-006 and despite the opening of the REFIT 3 support scheme (November 2011) for Biomass co-firing at Peat stations, not one MW of RES-E from a REFIT 3

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<sup>1</sup> Bord na Móna submission to SEM-12-056

- Hybrid station has been produced. In contrast, the second progress report submitted (February 2014) by the Irish Government to the EU Commission under Article 22 of the same Directive 2009/28/EC expressly includes and arguably relies upon the delivery of REFIT 3 - Hybrid' RES-E to meet binding 2020 RES targets. The root cause to this distinct lack of progress in achieving stated Government policy can be traced back to SEM-13-006. The regulatory uncertainty with this decision is a barrier to delivery. The potential for 'dispatchable' delivery of approximately 10% of Ireland's 2020 RES-E target is being forfeited. Given the direction of travel of the SEM, where currently all volumes are cleared ex-post and all RES imbalances are socialised, to a likely scenario where there will be liquid trading in numerous timeframes and where RES generators will assume balance responsibilities, it is possible that in the absence of a recalibrated SEM-13-006 that the associated regulatory uncertainty will not facilitate an environment where the full potential for the use of energy from Renewable sources can be exploited.

Take for example a co-firing Peat / Biomass plant would be generating essentially four different 'flavours' of electricity; REFIT supported RES from general biomass, REFIT supported RES from energy crops, Hybrid criterion RES (over and above that supported by REFIT) and power from Peat. Under REFIT 3 rules the Power Purchase Agreement (PPA) associated with the REFIT supported RES must be signed for a 15 year period, however the delivery of this power (given the relative cost of Biomass) requires such plants to operate with Priority Dispatch, but because of the lack of visibility of the qualifying criteria over the contract period, it is questionable as to whether a prudent generator would enter into such a contract. BnM would also query how a Price Taker generator operating in a plant as described above would be paid. Will the DAM price be the reference price for Price taker units? How will a price taker unit be treated in the intra-day, balancing and imbalance markets?

There is still an opportunity through the I-SEM process to re-align the delivery of dispatchable RES-E from Hybrid plants. In decision SEM-13-006, the SEMC had the foresight to indicate that "*[A]n assessment of the potential impact on this decision will be evaluated in the event of changes to the SEM made as a result of the EU target Electricity Model<sup>2</sup>.*"

The HLD process to date has not addressed this issue and BnM would respectfully request that such an assessment be acknowledged at this High Level Design (HLD) stage so that a realignment of SEM-13-006 can be included as a work stream during the detailed design process.

The recently published Green Paper envisages Biomass co-firing at the peat stations continuing to be an integral part of Irish Energy Policy, beyond 2020.

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<sup>2</sup> Decision Paper SEM-13-006 at pp 13

## 5. Further Observations

It is evident that the development of the various Network Codes at a European level are currently running behind their proposed schedule with none of the codes having yet completed the comitology stage. BnM understands that this is an issue outside of the control of the SEM-C and regulatory authorities, but would urge the SEM-C to consider any implications that further delays at European level may have on the development of an appropriate I-SEM market particularly in terms of the development of CACM and the Forwards and Balancing Network Codes.

BnM would welcome the publication of a comprehensive timeline outlining the detailed design phase of the I-SEM implementation project as soon as possible. BnM call for frequent Industry involvement throughout the detailed design stage and acknowledge the amount of engagement to date through the bilateral meeting at consultation stage, various forums etc. BnM look forward to continuing to actively engage in this process at all levels.

BnM believe that the publication of this draft decision paper (and subsequent decision paper in September 2014) is a critical component of the I-SEM design process. However we would caution that some aspects of the paper appear to delve into issues that would be more appropriately dealt with at the detailed design stage. It is important that all detailed design issues are consulted on in depth and that detailed design decisions made at this time are not 'set in stone'.

The proposed new I-SEM market will involve the largest ever fundamental change to the Irish Electricity market and will have significant impacts on market participants both North and South. A comprehensive trial with market like scenarios of the Euphemia algorithm must be an immediate priority.

BnM welcomes the publication of the *DS3 System Services Procurement Design Consultation paper (SEM-14-059)* and will be responding to the paper in due course. It is obviously important that all revenue streams, be they in terms of capacity, energy or services are considered as part of the whole market design process. It is still difficult for plant operators to estimate what revenues will accrue under DS3 in the I-SEM.

## 6. Conclusions

It is fundamental that the physical realities of the Irish power system are kept at the forefront of the High Level Design process while at the same time aiming to reach an enduring solution which is compliant with the ETM and ensuring the provision of secure, reliable and affordable electricity to consumers on the island of Ireland as well as achieving the goals of national and European energy policy.



The new I-SEM should be transparent, compliant and provide a 'route to market' and 'revenue adequacy' for generation assets in a fair and equitable manner.

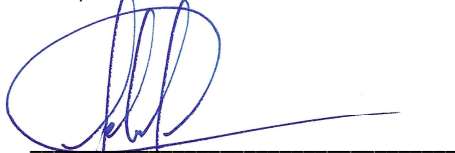
Renewable generation (primarily wind) will account for at least 40% of generated volumes post 2020 and consideration of how this renewable generation will be treated in the market should be at the forefront of this design process.

BnM welcome the draft decision to select a modified Option 3 for the new I-SEM market notwithstanding the comments above. BnM welcome the proposal of financial trading only in the forwards market as well as the 'exclusive' non mandatory DAM. BnM call for portfolio bidding for all variable generation. As discussed, BnM supports marginal pricing in the balancing market on the proviso that consideration is given to ensuring that wind units are not punitively penalised due to forecasting errors.

BnM strongly support the evidence given in the paper as to the rationale for a capacity remuneration mechanism in the I-SEM. As noted BnM had favoured a Long term price based mechanism (in our response to consultation SEM-14-008) and have outlined some concerns and queries regarding the Reliability Options mechanism above.

BnM look forward to the publication of the final decision paper on the I-SEM design in September and will continue to engage throughout the detailed design stage of this process. If you have any queries or require clarification on any point, please do not hesitate to contact me.

For, and on behalf of Bord na Móna PowerGen,



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Bord na Mona PowerGen

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