

TYNAGH ENERGY

L I M I T E D

Clive Bowers
Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

Jean-Pierre Miura
Utility Regulator
Queens House
14 Queens Street
Belfast
BT1 6ED

REF: TEL/CJD/14/215

26th November 2014

RE: Rules Liaison Group Workshops

Dear Sirs,

Tynagh Energy Limited (TEL) welcomes the opportunity to respond on the Rules Liaison Group Building Blocks Workshops. TEL believes that the workshop process has been extremely useful, though would welcome more workshops to give a better chance to explore issues in greater detail.

TEL believes that the workshops have increased awareness across each of the topics discussed, and that these discussions have raised concerns about some of the topics covered. In summary, TEL has particular concerns around:

- EUPHEMIA Testing
- Treatment of Losses (TLAF's)
- Constraints
- Priority Dispatch
- Curtailment
- Credit
- Market Information

Addressing each of the topics in order:

1) Euphemia Update

TEL appreciates the update on the testing of EUPHEMIA. TEL strongly encourages a three stage approach to testing. Firstly, Proof of Concept Testing– verifying that scheduling the Day Ahead Market through EUPHEMIA is feasible; Full Regression Testing – market participants bidding into a test system using a datamap for their original SRMC bids; Commercial Testing where market participants can bid into a test system without being tied to SRMC bidding. This will provide the opportunity to "learn" as was referred to in the High Level Design Decision, without generators being exposed to significant losses during this learning process.

2) Treatment of Losses

TEL has two concerns regarding TLAFs. Firstly, TEL believes that nominations and bids should, if possible, be both at the same place i.e. the station gate. Adjustment for TLAFS

**The Crescent Building, Northwood Park, Santry
Dublin 9
IRELAND**

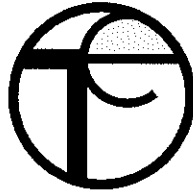
TEL: +353 (0) 1 857 8700

FAX: +353 (0) 1 857 8701

DIRECTORS

Mr John Cote (USA), Mr Gerald Friel (USA)
Mr Bran Keogh (IRE), Mr Diarmuid Hyde (IRE)
Mr Arif Ozozan (BE)

REGISTERED NUMBER: 378735



could easily be accommodated by the Market Operator as at present in the SEM. TEL argues that having TLAF adjusted gate and trading point values is an additional complexity that can be avoided and the same result can be achieved in a more streamlined manner by the Market Operator.

Secondly, TEL argues that the existing TLAF methodology needs to be reviewed in conjunction with the new market. TLAFs are currently calculated based on a PLEXOS dispatch model. The assumptions¹ for the TLAF calculation methodology state "The commercial and technical characteristics of each generator are modelled based on the fuel price and generator commercial and technical offer data assumptions. These parameters are based on the RAs validated SEM PLEXOS Forecast model dataset".

Based on the above one would have to question whether the calculated TLAFs will be accurate when / if a bidding code of practice is no longer in place. If this is the case the efficiency as used in the current PLEXOS model will no longer determine the merit order and any forecast TLAF calculated based on this model cannot be relied upon.

The commercial impact of TLAFs are significant and, notwithstanding the issue outlined above, there are other areas which could create significant changes within a year, such as system demand, fuel prices, wind forecast and generator / transmission outages. These could result in generators being penalised through TLAFs for a load flow based on PLEXOS which never materialises. This also presents a risk for suppliers as they will be exposed to the imbalances that result.

Some alternative options for determining TLAFs would be:

- A more real-time system
- Forecast with settlement based on actuals
- Average TLAF socialised across all generators

Of these three options the one that makes most sense is a TLAF socialised across all generators. A real time system would be complex, costly and may cause unforeseen problems, a later settled system, could see some plants being hit with substantial unexpected charges, while a uniform TLAF across all parties would level the playing field both within Ireland and across Euphemia particularly where other market have employed uniform TLAFs.

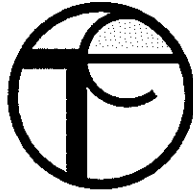
3) Constraints

There are two key concerns regarding constraints. Those plants that are constrained on are at a significant advantage. As they are constrained on, they will not need to internalise their start-up costs and will have the option if they choose, of bidding lower. These plants will then be cheaper in the market and will increase their market scheduled quantity.

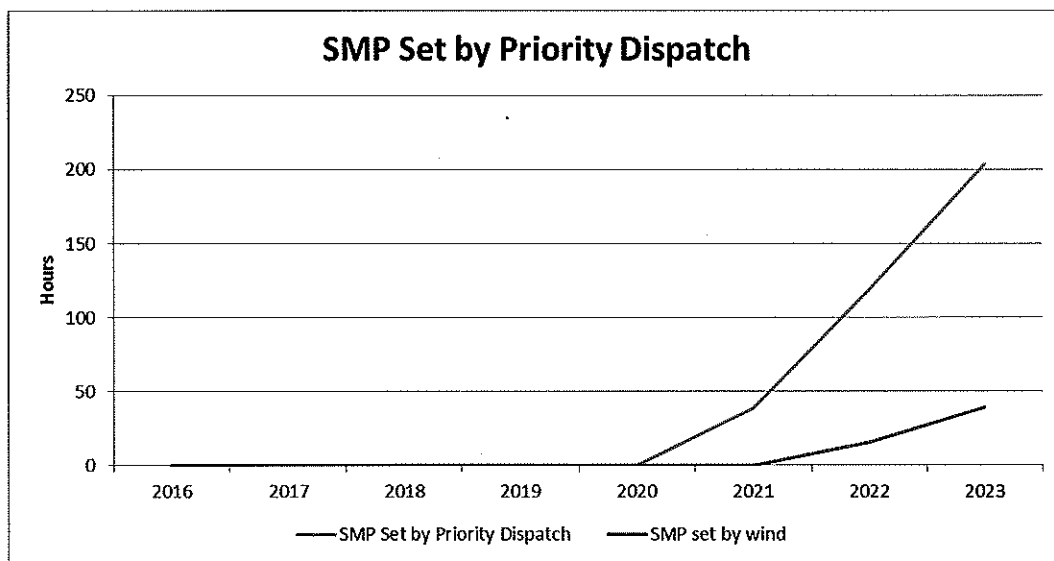
Secondly, portfolio players will have a greater insight of the market from how their plants have been scheduled. They will be able to understand which constraints are biting in real-time and will be able to bid accordingly. It is important that more real-time system wide availability and dispatch information is available to enable all market participants to construct offers that will reflect the true costs of generation and minimise any advantage for portfolio players.

4) Priority Dispatch

¹ Explanatory Paper for Transmission Loss Adjustment Factor (TLAF) Calculation Methodology – Eirgrid 27/09/2012



TEL believes that the proposal to allow priority dispatch generation to bid into the DAM at -€500 may need further consideration. Priority dispatch generation in the DAM for the I-SEM will not be constrained or curtailed, as such when there is a significant amount of wind capacity (4GW) on the system, and the wind blows across the island, the market price may be set at or close to €-500. The latest Generation Capacity Statement (GCS) from the TSOs sets the expected wind capacity by 2023 at 5800MW, so it is easy to see that priority dispatch is likely to set the price in the market on some occasions. The following chart (methodology is detailed in the appendix) shows where SMP is likely to be set both by priority dispatch and specifically by wind over the initial period of the I-SEM.

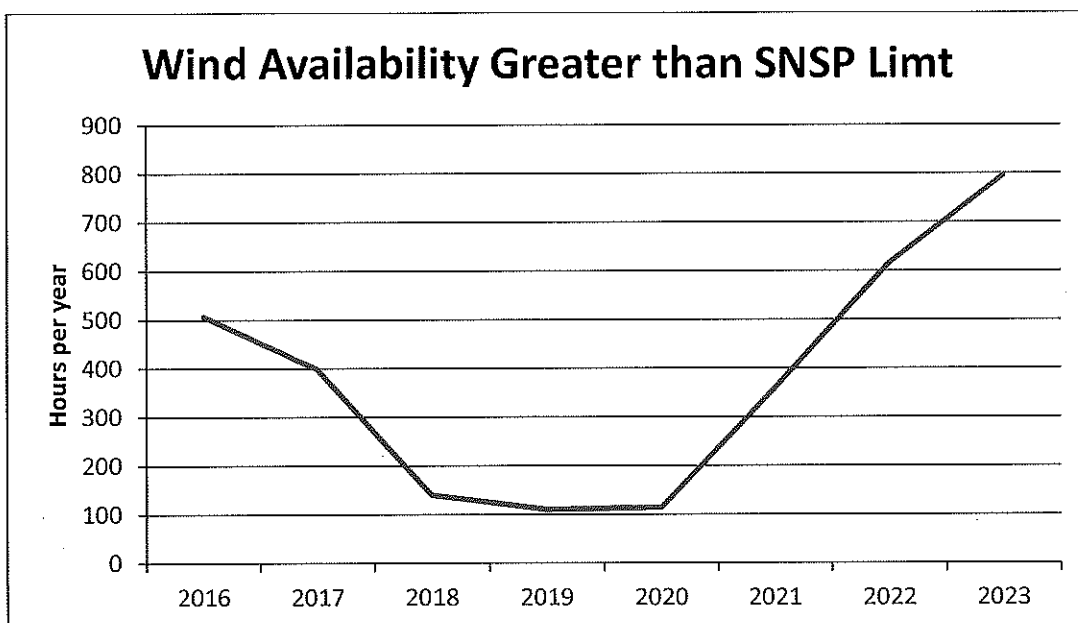
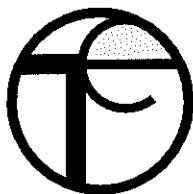


Having the SMP set at -€500 would be extremely costly for the exchequer. As the above chart illustrates, Priority Dispatch is forecasted to set the SMP in 2023 for 204 hours. As REFIT may be based off the Day-Ahead price; the additional cost incurred in REFIT support payments would amount to €102,000 (204 hrs X €500) per MW of supported wind in 2023. The vast majority of new wind build in Ireland will be REFIT supported. Every 1,000 MW of REFIT supported wind will incur an additional cost to the exchequer of more than €100 million.

5) Curtailment

Under the current proposals curtailment is only an issue for the Balancing Market. This causes difficulty where the wind forecast is expected to exceed the permitted SNSP (including 100% export on the IC's). This would see Wind Generators bidding into the Day-Ahead Market in the knowledge that that generation will be curtailed.

From our analysis by 2023 more than 9% of the time wind will run on the Day Ahead market to a point that it could not feasibly run at the balancing market. The following chart (methodology is detailed in the appendix) details the forecasted hours per year where wind availability will exceed permitted SNSP including 100% export on the Interconnectors.



This is a new issue with the I-SEM market as it will be ex ante. As the SEM is ex post it can limit the volume of wind generation that participates in the market to 50% of SNSP.

As this intermittent generation will be allowed to bid into the Day Ahead Market, units that would otherwise have been on in the market will not be on, and may be economically disadvantaged when it comes to the Balancing Market as the notification and start-up time may see peakers come on instead of CCGTs.

TEL believes that intermittent generation needs to be limited (through an aggregator or otherwise) to the permitted SNSP % of the sum of forecasted system demand and 100% export on the Interconnectors:

6) De Minimis

Currently it is very difficult for market participants to understand the effect of de minimis plants. SEMO does not include the output of de minimis generation into their published market data. This can effect up to a quarter of wind power contributed and can lead to market demand not matching actual demand.

TEL suggests that the market publish this data using a de minimis umbrella generator. That is, all de minimis output would be grouped together under one pseudo generator id and published. TEL believes it would be helpful if more detailed data or information on the level of de minimis generation on the system was regularly published.

7) Participant Registration

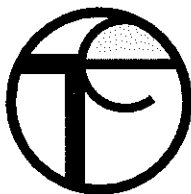
TEL believes that participant registration should be as simple as possible. It should be performed through a single central point for all market timeframes. The system should facilitate registration by presenting the participant with the existing SEM data that can be amended or appended depending on the additional required data.

8) Clearing and Settlement

TYNAGH ENERGY LIMITED

The Crescent Building, Northwood Park, Santry, Dublin 9, IRELAND

TEL: +353 (0) 1 8578700 • FAX: +353 (0) 1 8578701



TEL acknowledges that under Irish Tax legislation that invoices are required for all market trades; however TEL believes that energy transactions should be netted at the settlement stage to limit exposure and risk for both the market and participants.

TEL believes that the payment timeframe for the Day Ahead, Intraday and Balancing should be D+1 for both payments into and out of the market, similar to the settlement cycle for APX in the GB market. However this suggestion is dependent on the ability of banks to be able to handle these immediate payments. It may make sense to ensure that this system functions correctly, and to minimise chances of default, that generators have the option to deposit funds to their trading account in advance of invoices being issued.

There needs to be some mechanism to allow participants to query invoices.

The de minimis level for settlement using cash collateral which is currently set at €250, should be increased, possibly to around €5000.

9) Credit Risk Requirements

TEL believes that there should be three Letters of Credit required; one for capacity, one for the Day Ahead market and one for the Intraday and Balancing markets. This should ensure that participants are not excluded from subsequent markets in the event that a letter of credit has been drawn down.

TEL believes that netting by participants with the Market Operator should significantly reduce the Market Operator's potential exposure.


10) Market Information

TEL believes that while SEMO should be commended on providing a significant amount of quality market information, this may not be sufficient in the new market. TEL asserts that in the new market timely information will be of an even higher priority than it is now. There needs to be real-time information on the operation of the system.

In order to ensure that market power is not an issue TEL would suggest that all outages are published on a central platform in real-time. That all planned testing for a day would be published to the market in advance. There should also be greater information regarding de minimis plants, a published demand forecast, along with forecasts of wind availability and curtailment.

At the workshop it was discussed that there was less published information in the GB market than in Ireland and that this would see Irish generators at a disadvantage. TEL does not agree with this suggestion, the vast majority of competition for market participants will be within the I-SEM not across the interconnector. As such, market participants would want to be at a level playing field with each other, and transparency around competitor bidding facilitates that. Furthermore a lack of transparency will give rise to further concerns regarding market power.

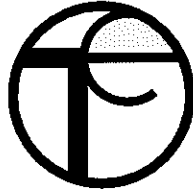
Yours Sincerely


Cormac Daly
I-SEM Analyst

TYNAGH ENERGY LIMITED

The Crescent Building, Northwood Park, Santry, Dublin 9, IRELAND

TEL: +353 (0) 1 8578700 • FAX: +353 (0) 1 8578701



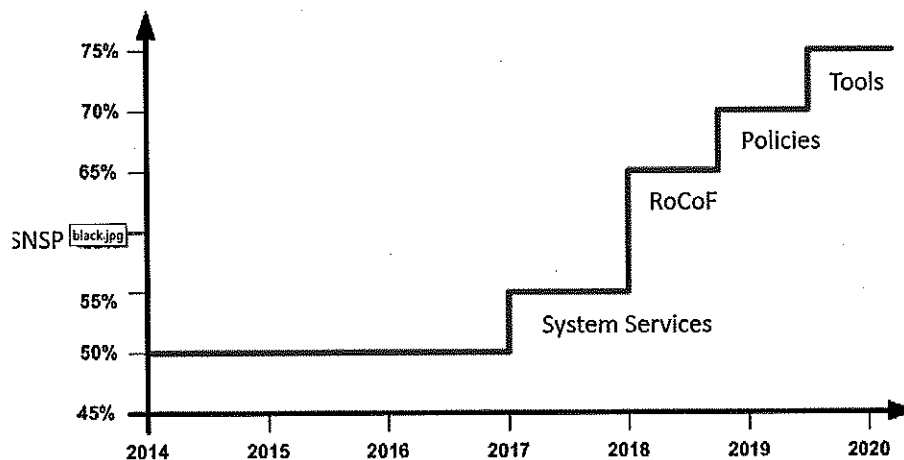
Appendix - Wind Curtailment

The levels of wind generation on the system relative to system demand is crucial for analysis of the various aspects of the I-SEM. TEL have assessed the wind generation for the length of the TSOs Generation Capacity Statement (GCS).

Base Assumptions:

- The GCS rollout of wind is accurate
- The GCS System Demand growth is accurate
- The GCS assumptions regarding Interconnectors is accurate
- Priority dispatch is considered to be 428MW (consisting of Hydro, Biomass / peat, CHP and Waste-to-Energy).
- Interconnectors are exporting at 100% at all times (intended to ensure conservative figures)
- The TSO's forecast for the growth in the SNSP limit is accurate:

Operational Capability Outlook



Source TSO DS3 Workshop Presentation 29/07/14

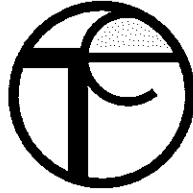
Methodology

- Created an average wind capacity figure for each year by averaging the year-end GCS values for y and y -1 (effectively giving a June/ July capacity for each year).
- A capacity factor for wind was determined for every 15 minutes of 2013.
- Used these figures, along with the GCS wind capacity rollout, to create a forecast wind generation figure for every 15 minutes out to 2023
- The 2013 System demand figures for every 15 minutes were extrapolated out to 2023 by using the GCS system demand growth figures.
- The projected wind generation was compared with the projected system demand to calculate the proportion of SNSP from wind.

TYNAGH ENERGY LIMITED

The Crescent Building, Northwood Park, Santry, Dublin 9, IRELAND

TEL: +353 (0) 1 8578700 • FAX: +353 (0) 1 8578701



TEL has tried to be conservative in these forecasts. The actual wind availability data for 2013 is not available; however TEL has used the wind generation figures. This is likely to result in the wind forecast being significantly less than it would have been if based on the availability figures and will lead to fewer instances in the forecast of wind setting the SMP or of curtailment.

2013 was a below average year (using the 2008-2013 wind generation data) for average wind capacity factor.

Using this input data TEL has forecast the number of hours that wind generation would meet 100% of all island system demand, where wind would exceed the SNSP limit, and, where wind would set the SMP (Wind greater than system demand and Interconnectors exporting).

The following table shows the forecast for the number of hours per year for each of these events:

	Wind > All Island Demand	Wind >SNSP	SMP Set by Priority Dispatch	SMP set by wind
2016	0	507	0	0
2017	0	398	0	0
2018	0	140	0	0
2019	2	110	0	0
2020	30	115	0	0
2021	138	359	39	0
2022	278	616	119	16
2023	379	796	204	40