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L I M I T E D**

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Ref: TEL/PH/17/051

20th March 2017

RE: Response to Trading and Settlement Code Consultation I-SEM Operational Parameters Credit Cover and Imbalance Settlement (SEM-17-009)

Dear Sheena, Kenny,

Tynagh Energy Limited (TEL) welcomes the opportunity to respond to the I-SEM Operational Parameters Credit Cover and Imbalance Settlement consultation.

TEL have separated this response into two sections; Section A highlights TEL's views on reducing credit cover requirements for all participants due to a prepayment option and Section B comments on the Credit Cover Parameters.

The fundamental market changes have imposed huge credit cover requirements on generators that were not existent in SEM. This consultation paper highlights an increase in credit cover for generators that are frequently constrained down. However, it fails to highlight:

1. the increase in credit cover requirements for:
 - a. generators that do not have a positive settlement with SEMO i.e. never constrained on,
 - b. generators that are exposed to capacity charges, and
2. the significant barrier to entry the new credit cover requirements place on generators.

In SEM, generators are required to post a fixed credit requirement of €5,000 which equated to a market collateralisation of €60,000 from thermal generators on an average day (12x€5,000). Whereas in I-SEM, an average daily thermal generator output of 72,000 MWh with an average Balancing Market price of €50/MWh would result in a daily market collateralisation of €3,600,000 from thermal generators. This will be an enormous increase in market collateralisation even though less generation will be traded through the Balancing Market as the majority of trades will be in the Day-Ahead Market.

Based on similar running to 2016, it is forecasted that TEL will be required to post approximately a **50,000% (fifty thousand percent)** increase in credit cover to SEMO, see Appendix A.

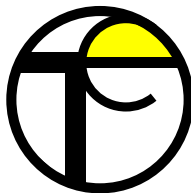
SECTION A

TEL have raised the need for a prepay option in our response to the T&SC Consultation (SEM-16-075) but feel it is necessary to again highlight the issue in this response. It is important to reduce the over collateralisation requirements from SEMO on generators in I-SEM.

There is a maximum of seven days that are settled but not yet issued that accrue before a participant can pay their bills. During these seven days, the participant will have been settled in the Day-Ahead markets and have the funds available. However, the current payment setup will

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not allow a prepayment by the participant to SEMO. An ability to prepay a settlement bill not yet issued could decrease a participant's exposure to a credit cover increase notice.

A prepayment option will not only reduce a participant's exposure to a Credit Cover Increase Notice but will also assist participants in avoiding a Trading Halt/Suspension in the NEMO markets. This prepayment option is not only advantageous to generators that are frequently constrained off but it will help all generators after an ASP event has occurred. Depending on the size of capacity charge, an ASP event could see a generator who is continuously paid by SEMO switch to owing SEMO. A prepayment option will allow participants to pay the capacity charge and avoid posting more credit cover rather than increasing their credit cover and waiting for the bill.

Considering that credit cover is based on previous and future settlements TEL believe that a participant who successfully pays their settlement bills on time and prepays the bills not yet issued should not be required to post credit cover based on trading behaviour. TEL believe that determining the Undefined Exposure component of the credit cover requirement should be based on settlement behaviour which includes prepayments.

The implementation of a prepay option will help reduce Breach Limit events, Credit Cover Increase Notices and over collateralisation by the market.

SECTION B

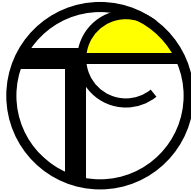
Number of Days in the Undefined Exposure Period

TEL agree that the generator suspension delay period should be fixed at seven days to allow a generator to consult with the RAs on a suspension (AIP/SEM/07/460). The inclusion of two days for carrying out the credit assessment is also acceptable. As stated in section 1.1 of the consultation paper, the current market structure and Transmission System Operator (TSO) balancing market actions will "*increase the collateral requirement for generators who are frequently constrained down from their spot market positions*". This coupled with the decision to apply a single value to all participants in I-SEM i.e. 16 days, will result in significantly more credit cover requirements placed on generators than necessary.

Appendix B illustrates how a Generator Suspension Delay Period of nine days instead of the proposed 16 days would reduce the Undefined Energy Exposure from €7,680,000 to €4,320,000 in a worst-case scenario for a generator. Applying a single Undefined Exposure Period for all units should be reviewed considering the impact the market changes will have on participants. An Undefined Exposure Period per supplier (16 days) and generator (9 days) should be implemented as to apply a Supplier Suspension Delay Period upon a generator results in excessive over collateralisation by the generator.

Level of the Breach Limit

A decrease in the Breach Limit will result in NEMO Trading Halts imposed on participants earlier in the Day-Ahead and Intraday markets. The proposed 92.59% Breach Limit could see participants with sufficient credit cover in the Balancing Market being restricted from trading in the Day-Ahead market two days before there is a credit cover issue. The two-day leeway in the Breach Limit will be of limited use to some participants as some banks require three working days to change a Letter Of Credit. TEL believe the inclusion of the breach remedy period in the SEMOpX rules is necessary if the reduced level of the Breach Limit is to be applied. If participants have the required credit cover they should not be prevented from participating in the Day-Ahead Market.



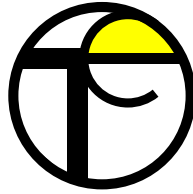
In summary, generators will be required to post huge sums of credit cover with SEMO purely due to market changes and TSO Balancing Market actions. TEL believe the comments made in Section A (prepay option) and Section B (individual Undefined Exposure periods) of this response will to be relatively straightforward to implement and help reduce the unnecessary over collateralisation by generators.

Should you have any queries, please do not hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink that reads "Paraic Higgins". The signature is written in a cursive style and is positioned above a horizontal line.

Paraic Higgins
I-SEM Analyst



Appendix A:

- TEL's maximum generating capacity is 404 MW.
- TEL's 2016 average MSQ and DQ were 49% and 27% respectively.
- Assume an average price of €60/MWh for the trading day (23:00 to 23:00).
- The dec price (€50/MWh) posted by the unit in the Balancing Market is accepted by the TSO and is constrained off.
- The unit is the marginal unit or SO flagged and thus the dec price sets the imbalance price in the Balancing Market.
- The dec price and imbalance price is €50/MWh for each hour of the trading day.
- The Credit Cover Requirement formula (T&SC) requires a unit that is dec'd to pay SEMO. This TSO dec action results in the unit having a negative cashflow with SEMO of €106,656 for the trading day. (404MW x (49%-27%) x €50/MWh x 24)
- This daily pattern repeats for a month.
- Capacity Payments/Charges are not included in this example.

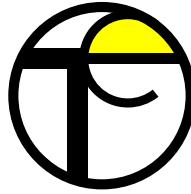
The Credit Cover Requirement formula is:

G.15.1.1 → The Market Operator shall procure that the Required Credit Cover (RCCpr) for each Participant p in respect of the Settlement Risk Period r shall be calculated as follows: ¶

$$RCCpr = FCRpy + EApb + ETNDpn + EUPESpg + EUPEGpg + EUPECCpg + EUPECPpg - FASRASpg + \sum_{a \neq p} FASRAPapbc$$

- The Fixed Credit Requirement (FCRpy), as per 2016, would be **€5,000**.
- The Actual Liability (EApb) includes settled not billed (max 12 days) and billed not paid (max 7 days). Both of these are based on cashflows from the settlement periods. From the example above the unit would owe SEMO €121,200 per day. In this example, TEL will pay the billed not paid straight away. Therefore, the Actual Liability would be **€1,279,872** (€106,656*12).
- The Energy Traded not yet Delivered (ETNDpn) is one day of trading and would be a negative cashflow of **€106,656**.
- The Undefined Energy Exposure (EUPEGpg) will be the average cashflow from the historical assessment period (100 days) for the undefined exposure period which is currently taken as 16 days. Therefore, the Undefined Energy Exposure would be **€1,706,496** (€106,656*16).
- The Undefined Capacity Exposure (EUPECPpg) for the worst case scenario would be 75% of the RO payment. Assuming the RO will tend to zero due to the oversupply of capacity, this value would be €0. The payments for capacity in the cashflow would also be **€0**.
- No SRA is in place. FASRASpg and FASRAP are **€0**.

A total credit cover requirement of **€3,098,024** will now be required by SEMO. This represents a **51,634%** increase.



Appendix B:

- Typical 400 MW CCGT gas unit has a Day-Ahead Market (DAM) schedule of 400 MW for a price of €60/MWh for the trading day (23:00 to 23:00).
- The dec price (€50/MWh) posted by the unit in the Balancing Market is accepted by the TSO and is constrained off.
- The unit is the marginal unit and thus the dec price sets the imbalance price in the Balancing Market.
- The dec price and imbalance price is €50/MWh for each hour of the trading day.
- The Credit Cover Requirement formula (T&SC) requires a unit that is dec'd to pay SEMO. This TSO dec action results in the unit having a negative cashflow with SEMO of €480,000 for the trading day.
- This daily pattern repeats for a month.
- Capacity Payments/Charges are not included in this example.

The Credit Cover Requirement formula is:

G.15.1.1→ The Market Operator shall procure that the Required Credit Cover (RCCpr) for each Participant p in respect of the Settlement Risk Period r shall be calculated as follows: ¶

$$RCCpr = FCRpy + EApb + ETNDpn + EUPESpg + EUPEGpg + EUPECCpg + EUPECPpg - FASRASpg + \sum_{a=1}^p FASRAPapbc$$

- The Fixed Credit Requirement (FCRpy), as per 2016, would be **€5,000**.
- The Actual Liability (EApb) includes settled not billed (max 12 days) and billed not paid (max 7 days). Both of these are based on cashflows from the settlement periods. From the example above the unit would owe SEMO €480,000 per day. Therefore, the Actual Liability would be **€9,120,000** (€480,000*12+€480,000*7).
- The Energy Traded not yet Delivered (ETNDpn) is one day of trading and would be a negative cashflow of **€480,000**.
- The Undefined Energy Exposure (EUPEGpg) will be the average cashflow from the historical assessment period (100 days) for the undefined exposure period which is currently taken as 16 days. Therefore, the Undefined Energy Exposure would be **€7,680,000** (€480,000*16).
- The Undefined Capacity Exposure (EUPECPpg) for the worst case scenario would be 75% of the RO payment. Assuming the RO will tend to zero due to the oversupply of capacity, this value would be €0. The payments for capacity in the cashflow would also be **€0**.
- No SRA is in place. FASRASpg and FASRAP are **€0**.

A generator suspension delay period of nine days would reduce the undefined energy exposure from **€7,680,000** to **€4,320,000**.