

TYNAGH ENERGY
L I M I T E D

Thomas Quinn
Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

Karen Shields
Utility Regulator
Queens House
14 Queens Street
Belfast
BT1 6ED

Ref: TEL/CJD/16/154

5th October 2016

RE: Response to Capacity Requirement and De-Rating Factor Consultation

Dear Karen, Thomas,

Tynagh Energy Limited (TEL) welcomes the opportunity to respond to this Capacity Requirement and De-Rating Factor Consultation (SEM-16-051).

There are two specific points that we want to address regarding this consultation:

- 1) Use of CONE for excess capacity cost in Least-Worst Regrets Analysis
- 2) Clarification on De-Rating Factor Methodology

Use of CONE for excess capacity cost in Least-Worst Regrets Analysis

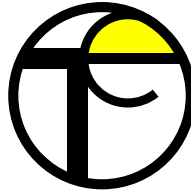
TEL believes that the input values used in the Least-Worst Regrets Analysis are distorting the true Capacity Requirement. The SEM Committee decision to use a Least-Worst Regrets Method to establish the optimum Capacity Requirement is a logical solution. However, it must be based upon realistic inputs. EirGrid have placed the cost of the excess capacity at the CONE (BNE for the example in the consultation paper). This is disproportionate, as by its nature, the price will clear significantly lower where there is excess capacity, as is the case in the existing market. In fact the RA's have stated this in the Locational Constraints Consultation Paper (SEM-16-052).

The auctions have not taken place yet, so it is not possible to say with clarity what price they will clear at, but as stated in the Locational Constraints Paper, the price is likely to tend towards zero where there is excess capacity. When the ISO-NE introduced reliability options, the clearing price was zero where there was excess capacity. Therefore, it is reasonable to assume that the same will happen in Ireland. If this were to happen then the price would be significantly less than the CONE, and the Regret Cost of Surplus Capacity and the Least-Worst Regrets Analysis would be wrong. The EirGrid proposed methodology would have underestimated the Capacity Requirement, as shown in the example below.

A solution to this would be to have different values at which to price excess capacity. At times where there is an expected shortage of capacity prior to the auction, the capacity could be priced at the CONE. Whereas at times where there is excess capacity, the price could be 20% of CONE (UK cleared at 40% of CONE, while ISO-NE cleared at zero). This will give a more accurate reflection of the Regret Cost of Surplus Capacity and Capacity Requirement. The example below illustrates when a more accurate representation of the Regret Costs of Surplus Capacity is implemented the Least-Worst Regrets scenario would be F4P2 – 7088 MW rather

**Block A, The Crescent Building, Northwood Park, Santry
Dublin 9 D09 X8W3
IRELAND**
TEL: +353 (0) 1 857 8700
FAX: +353 (0) 1 857 8701

DIRECTORS
Gerald Friel (US), Catherine Kelly (US)
Bran Keogh (IRE), Diarmuid Hyde (IRE)
Arif Ozozan (BE)
REGISTERED NUMBER: 378735



than F4P3 – 7013 MW. Figure 1 highlights the Regret cost of excess capacity in an over-supplied capacity market. Figure 2 and Figure 3 highlight the impact the 20% of CONE price has on the Least-Worst Regrets Analysis.

Scenario	F1P1	F1P2	F1P3	F2P1	F2P2	F2P3	F3P1	F3P2	F3P3	F4P1	F4P2	F4P3	F5P1	F5P2	F5P3
F1P1 - 6754 MW	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0
F1P2 - 6766 MW	0.4	0	1.6	0	0	0	0	0	0	0	0	0	0	0	0
F1P3 - 6715 MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F2P1 - 6848 MW	2.8	2.4	4	0	0	0.8	0	0	0	0	0	0	0	0	0
F2P2 - 6864 MW	3.2	2.8	4.4	0.4	0	1.2	0	0	0	0	0	0	0	0	0
F2P3 - 6826 MW	2	1.6	3.2	0	0	0	0	0	0	0	0	0	0	0	0
F3P1 - 6944 MW	5.6	5.2	6.8	2.8	2.4	3.6	0	0	0.8	0	0	0	0	0	0
F3P2 - 6973 MW	6.4	6	7.6	3.6	3.2	4.4	0.8	0	2	0	0	0	0	0	0
F3P3 - 6911 MW	4.4	4.4	5.6	2	1.2	2.4	0	0	0	0	0	0	0	0	0
F4P1 - 7065 MW	9.2	8.8	10	6.4	6	6.8	3.6	2.8	4.4	0	0	1.6	0	0	0
F4P2 - 7088 MW	9.6	9.2	10.8	6.8	6.4	7.6	4	3.2	5.2	0.8	0	2	0	0	0
F4P3 - 7013 MW	7.6	7.2	8.8	4.8	4.4	5.6	2	1.2	2.8	0	0	0	0	0	0
F5P1 - 7151 MW	11.6	11.2	12.8	8.8	8.4	9.6	6	5.2	6.8	2.4	2	4	0	0	0.8
F5P2 - 7196 MW	12.8	12.4	14	10	9.6	10.8	7.2	6.4	8.4	4	3.2	5.2	1.2	0	2
F5P3 - 7124 MW	10.8	10.4	12	8	7.6	8.8	5.2	4.4	6.4	1.6	1.2	3.2	0	0	0

Figure 1: Regret cost of excess capacity (20% of CONE)

Scenario	F1P1	F1P2	F1P3	F2P1	F2P2	F2P3	F3P1	F3P2	F3P3	F4P1	F4P2	F4P3	F5P1	F5P2	F5P3
F1P1 - 6754 MW	0	3	1.2	11	15	6	28	35	20	52	64	41	88	106	72
F1P2 - 6766 MW	0.4	0	1.6	8	11	3	22	28	16	44	54	34	77	92	62
F1P3 - 6715 MW	4	7	0	17	22	11	37	45	28	66	79	52	108	129	88
F2P1 - 6848 MW	2.8	2.4	4	0	3	0.8	11	15	6	28	35	20	52	63	41
F2P2 - 6864 MW	3.2	2.8	4.4	0.4	0	1.2	8	11	3	22	28	16	44	54	34
F2P3 - 6826 MW	2	1.6	3.2	4	7	0	17	22	11	36	45	27	65	78	52
F3P1 - 6944 MW	5.6	5.2	6.8	2.8	2.4	3.6	0	2	0.8	11	15	6	28	35	20
F3P2 - 6973 MW	6.4	6	7.6	3.6	3.2	4.4	0.8	0	2	8	11	3	22	28	16
F3P3 - 6911 MW	4.4	4.4	5.6	2	1.2	2.4	4	7	0	17	22	11	36	45	28
F4P1 - 7065 MW	9.2	8.8	10	6.4	6	6.8	3.6	2.8	4.4	0	3	1.6	11	15	6
F4P2 - 7088 MW	9.6	9.2	10.8	6.8	6.4	7.6	4	3.2	5.2	0.8	0	2	7	11	3
F4P3 - 7013 MW	7.6	7.2	8.8	4.8	4.4	5.6	2	1.2	2.8	4	7	0	17	22	11
F5P1 - 7151 MW	11.6	11.2	12.8	8.8	8.4	9.6	6	5.2	6.8	2.4	2	4	0	3	0.8
F5P2 - 7196 MW	12.8	12.4	14	10	9.6	10.8	7.2	6.4	8.4	4	3.2	5.2	1.2	0	2
F5P3 - 7124 MW	10.8	10.4	12	8	7.6	8.8	5.2	4.4	6.4	1.6	1.2	3.2	4	7	0

Figure 2 Total Regret cost

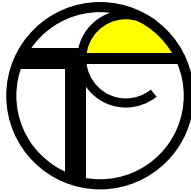
Scenario	Max Regret	Least Worst Regret
F1P1 - 6754 MW	106	
F1P2 - 6766 MW	92	
F1P3 - 6715 MW	129	
F2P1 - 6848 MW	63	
F2P2 - 6864 MW	54	
F2P3 - 6826 MW	78	
F3P1 - 6944 MW	35	
F3P2 - 6973 MW	28	
F3P3 - 6911 MW	45	
F4P1 - 7065 MW	15	
F4P2 - 7088 MW	11	11
F4P3 - 7013 MW	22	
F5P1 - 7151 MW	12.8	
F5P2 - 7196 MW	14	
F5P3 - 7124 MW	12	

Figure 3 Least-Worst Regrets Cost

Clarification on De-Rating Factor Methodology

The consultation paper does not clearly state how the de-rating factors will be applied to a generator depending on the size class. It is clear that the de-rating for each plant will be based on a function of $A * B = C$, where A is the size of the plant, B is the De-rating Factor and C is the de-rated quantity.

The consultation paper does state that A will be based on the lower of Registered Capacity and Max Export. In TEL's case, the Registered Capacity is 384MW and the Maximum Export Capacity is 404MW. Therefore, TEL has a value of 384 MW for A.



B is dependent on size class and technology class. The technology class for a Gas Plant is specified, however it is unclear what size class will be applied in this part of the equation i.e. the registered capacity or maximum export capacity. For a plant like Tynagh, this can have a significant impact on the de-rated capacity i.e.

A - Scenario	B - De-rating Factor (%)	C - De-rating Quantity (MW)
384 MW (Registered Capacity)	92.6 (Registered Capacity)	355.58
384 MW (Registered Capacity)	91.1 (Maximum Export)	349.83

It would be equitable if the lesser of the Registered Capacity and the Max Export was consistently applied across the De-Rating Process.

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

Yours sincerely,

Cormac Daly
Risk and Regulatory Manager