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Ms Karen Shiels & Mr Kevin Leneghan  
Utility Regulator  
Queens House  
14 Queen Street  
Belfast BT1 6ED

15<sup>th</sup> June 2018

***Submission to consultation on Capacity Remuneration Mechanism (CRM) T-4 Capacity Auction for 2022/23 Best New Entrant Net Cost of New Entrant (BNE Net CONE) (SEM-18-025) (B***

Dear Ms Shiels & Mr Leneghan

ART Generation welcomes the opportunity to respond to the consultation on Capacity Remuneration Mechanism (CRM) T-4 Capacity Auction for 2022/23 Best New Entrant Net Cost of New Entrant (BNE Net CONE) (SEM-18-025).

ART Generation is an Irish-based renewable energy company with a track record in the delivery of windfarm projects.

**General Comments:**

We reject the proposed recommendations as they are fundamentally flawed and do not stand the scrutiny or interrogation consistent with the principles of being equitable, fair, and transparent. In fact, it is highly disappointing at this stage to issue such a paper that is contrary to the intent and spirit of the Irish EU capacity market State Aid Decision (Case 44465)

[http://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=3\\_SA\\_44464](http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_44464).

The concept of BNE is appropriate if targeted at high efficient mid-merit plant. It is disappointing that the Poyry report has not properly and comprehensively completed a detailed analysis of same, especially for reciprocating power plants.

**Incorrect Technology Selection:**

We believe that the approach to base this consultation on combined cycle gas technology (CCGT) is fundamentally flawed and not in the best interests of the Irish consumer. It is surprising that an investment in large-scale relatively inflexible stranded assets (i.e. 447 MW CCGT at a capital cost of €350M) is proposed as the logical, rational choice for an investor in iSEM, rather than fast flexible, modular generation plant to facilitate EU and Government strategy to move a lower carbon economy. This is particularly surprising when a mid-merit, fast flexible plant can

legitimately earn revenue in the balancing markets, which is one of the cornerstones of the iSEM market. This approach is in direct conflict with the Regulatory Authorities view that flexibility is required to accommodate increased renewable energy, as described in the EU capacity market State Aid Decision (Recital 16). We agree with the EU Commission on this point.

There are reciprocating power plants in operation globally. In fact, Wartsila (3<sup>rd</sup> largest power company globally and EU based in Finland) has a number of wind-integrating (or wind-chasing) plants in operation in the US (Colorado, Kansas, Oregon & Texas).

It is with no disrespect to Poyry but they are not in a position to comment as a rational investor. It is incorrect to introduce an arbitrary pre-qual to exclude reciprocating engine power plants in this assessment. In fact, the whole power and wind industry act to the contrary. A rational investor will invest in new technologies once the appropriate guarantees are in place for performance, efficiency, availability, delivery, MW production and liquidated damages. I draw attention the history of my former employer ABB and their GT24 and GT26. These were the state of the art technology in the power industry when first introduced and the market immediately accepted their superior technology.

### **CONE/Multipliers:**

CONE is derived from the Best New Entrant (BNE). Therefore, the level of BNE and CONE is an important consideration for new entrants in the capacity market.

One of the options being proposed in CRM Parameters for T-4 2022/23 Capacity Auction consultation (SEM-18-028) is to have an effective price cap for CONE for bidders requiring more than 1 year of capacity commitment such as new entrants. This is not consistent with the Irish Capacity State Aid Decision (Case 44465) which clearly set out that new generators could bid up to 1.5 CONE, not mentioning that this should be restricted to single year bids. This proposal should be absolutely rejected. If pursued, we request that the SEM Committee and DCCAE go back to EU Commission for a modification and amendment to the State Aid Decision.

### **Costs:**

Setting aside the point that the identified BNE proposal is inappropriate for iSEM, there are a number of items in the costing provided by Poyry which should be re-evaluated or queried.

### **Grid Costs**

It is our opinion and that of our consultants (Mullan Grid) that the assumptions around CCGT connection method and costs are inaccurate. It is unclear why Poyry assessment assumes 110kV costs for Northern Ireland and 220kV costs for the Republic. A c.400MW CCGT in Northern Ireland will need a 275kV connection. The maximum generation that could connect at 110kV is c.150-180MW. Additionally all existing CCGTs in Northern Ireland are connected at 275kV

### ***Land Costs***

Land costs in industrial zoned lands where a rational investor might wish to locate a power plant indicates that the €150K estimate for the Republic (particularly in the Dublin area with high energy demands) is too low and that at least €350K per acre is a more realistic cost.

### ***Gas Connection Costs***

The gas connection costs do not include any reinforcement of the gas transmission network. It is extremely likely that any new entrant would have to incur an additional €1.5m for upgrade of the nearest Above Ground Installation (AGI) to accommodate the additional capacity. The Poyry estimate of €5.1m to connect a CCGT is therefore underestimated by at least 30%.

### ***Grid O&M Costs***

It is unclear what annual grid O&M charge has been included in Northern Ireland and Republic. This should be approx 1.5-2% of the connection cost per annum.

### ***Cooling Costs***

We believe that it is unreasonable to base the CCGT costs on direct seawater cooling. There are a limited number of sites available on the coast with wet cooling facilities and are in the ownership of the incumbents and not available. This point is very important as it artificially depresses the CONE. We believe that at least €25M should be added for an Air-Cooled Condenser. The land area required to accommodate an Air-Cooled Condenser will need to be increased by at least 5 acres.

### ***Cost of Capital***

Poyry have used a very low Weighted Average Cost of Capital (WACC) in their calculation – 5% real, pre tax. This seems very low indeed for what would be a sizeable merchant power plant. Our advisors from UK have advised that the actual achievable cost of capital for a large merchant CCGT is significantly higher than that. Working in post-tax nominal terms, they would assume something closer to 10-11% and would view a figure of around 7% as being really at the lower end of the range.

### ***Cost of Debt***

This should be based on 3.5%-4% in line with Irish commercial bank interest rates.

### ***Recommendations***

The concept and method in which BNE has been assessed is wrong and is focused on technology that is not appropriate for the developing iSEM market and EU & Government policy to move towards a low carbon economy by 2050. Additionally the incorrect cost assumptions result in an artificially low CONE.

Therefore, ART Generation strongly recommends that the SEM Committee (SEMC) reconsider the concept of BNE.

1. Request Poyry to correct the mistakes in their analysis and base BNE on mid-merit plant.
2. Reject any change in the multiplier from 1.5 CONE down to 1.0 Net CONE.
3. Correct the cost assumptions in the Poyry report to ensure that a fair CONE value is established.

Yours sincerely

A handwritten signature in black ink, appearing to read "Richard Walshe".

**Richard Walshe (Managing Director)**