

SEM Committee Paper

Trading and Settlement Code

Application by Tynagh Energy Limited

for Dual Rated Generator Unit Consent

Information Note

24 August 2012

SEM-12-073

1. Background

The Trading and Settlement Code (“TSC” or the “Code”) provides for the registration of a Generator Unit as a Dual Rated Generator Unit subject to the prior written consent of the Regulatory Authorities. On the 9th December 2010, the SEM Committee published its decision on the criteria to apply for a Regulatory decision on Dual Rated Generator Units¹ following an earlier consultation². The criteria are:

1. The generator design is such that it can use more than one fuel in normal operation;
2. The effective rating (i.e. Maximum Generation) of the generator is different depending upon the fuel it burns;
3. Having considered the issue (and on advice from the Market Operator, as necessary), the SEM committee must be satisfied:
 - a. that the process for transfer between fuels for the generator is such that the MSP software is likely to determine infeasible Market Schedules for that Generator Unit (i.e. where the schedule cannot be replicated in actual dispatch) unless it is registered as a Dual Rated Generator Unit;
 - b. that the MSP Software is likely to determine an uneconomic SMP on occasions unless the Generator Unit is registered as a Dual Rated Generator Unit;
 - c. that in relation to items a. and b. Above, that the generator concerned is materially different from other Generator Units registered in the Pool (which are not Dual Rated Generator Units); and,
 - d. that there is no practical way (other than registration as a Dual Rated Generator Unit) that the generator could be represented in the market (e.g. as more than one Generator Unit) which would avoid the problems in a. and b. above.

On 19th November 2010, the SEM Committee published an information note on the Application of the Regulator’s Decision on the Dual Rated Generator Unit’s Criteria³. In this publication, the SEM Committee identified that it had considered how the criteria applied to all the generators currently operating in the market and had established that two Kilroot units met the criteria. Those units are now registered as Dual Rated Generator Units.

¹ See SEM-10-074, 9 December 2010.

² See SEM-08-160, 29 October 2008.

³ See SEM-10-078, 19 November 2010.

2. Tynagh Energy Limited application

On 23rd January 2012, Tynagh Energy Limited submitted an initial application for consent from the Regulatory Authorities for the registration of its Generator Unit as a Dual Rated Generator Unit. Following their initial consideration of this application, the Regulatory Authorities requested additional information from Tynagh Energy Limited and consulted with the Market Operator (SEMO) and the System Operators. Having reviewed the additional information provided by Tynagh Energy Limited, the Regulatory Authorities identified that they had sufficient information to reach a decision on the application in relation to all the criteria except criterion 3 (c), which requires that the applicant generator should be materially different from other Generator Units (which are not Dual Rated Generators) in the Pool. The Regulatory Authorities therefore wrote (on 6th July 2012) to each generator, seeking information to allow them to reach a conclusion on this criterion. That letter is attached as Appendix 2.

The Regulatory Authorities received responses from 9 generators: AES Northern Ireland, Bord Gáis Energy, Bord na Móna Powergen, Endesa Ireland, ESB PG, ESB Energy International, iPower, Power NI Energy, and Synergen Power. In summary the responses allowed the Regulatory Authorities to establish whether the Tynagh Energy Unit was materially different to other Generator Units which are not Dual Rated Units.

3. Review against criteria

The Regulatory Authorities have considered how the criteria apply in relation to the Tynagh Energy Limited (TEL) Unit. The assessment is below:

Criterion 1: The generator design is such that it can use more than one fuel type in normal operation;

This TEL Unit can use two fuels in normal operation – gas and distillate oil.

Criterion 2: The effective rating (i.e. Maximum Generation) of the generator is different depending on which fuel it burns;

The maximum generation is markedly different - between 375 and 390MW on gas and 400 to 404MW on oil.

Criterion 3: Having considered the issue (and on advice from the Market Operator, as necessary), the SEM Committee must be satisfied:

- (a) Although that the process for transfer between fuels for the generator is such that the MSP software is likely to determine infeasible Market Schedules for that Generator Unit (i.e. where the schedule cannot be replicated in actual dispatch) unless it is registered as a Dual Rated Generator Unit;***

The TEL Unit can switch from gas to oil readily, the reverse process takes about 2 hours and requires an initial drop in output to about 30MW. This behavior cannot be fully represented in a single set of Technical Offer Data in the SEM. Due to that, the MSP Software is likely to determine an uneconomic SMP on occasions unless the Generator Unit is registered as a Dual Rated Generator Unit;

- (b) that the MSP Software is likely to determine an uneconomic SMP on occasions unless the Generator Unit is registered as a Dual Rated Generator Unit;**

Due to the fact that the MSP Software cannot take into account the changeover times and output restrictions, there is inevitably a risk that the software will determine an inappropriate SMP.

- (c) that in relation to items a) and b) above, that the generator concerned is materially different from other Generator Units registered in the Pool (which are not Dual Rated Generator Units); and**

Based upon the responses from the generators received following the letter on this topic mentioned above, it appears that the TEL Unit is materially different to other (non Dual Rated) Generator Units currently operating in the SEM.

- (d) that there is no practical way (other than registration as a Dual Rated Generator Unit) that the generator could be represented in the market (e.g. as more than one Generator Unit) which would avoid the problems in a) and b) above.**

Following consultation with SEMO and with the System Operators, the Regulatory Authorities accept that there is no other appropriate manner in which the TEL Unit might be registered in the SEM.

Based upon this analysis, the Regulatory Authorities have reached the conclusion that the TEL Unit complies with the current criteria for Dual Rated Units.

4. Next Steps

Tynagh Energy Application

The SEM Committee has now approved the registration of Tynagh Energy's Unit as a Dual rated Generator in SEM. Tynagh Energy Limited may therefore register that Unit as a Dual Rated Generator Unit. Tynagh Energy Limited will also need to demonstrate its technical capabilities associated with its Dual Rated Status under the Grid Code.

Dual Rated Generator Policy

The terms of the SEM Trading and Settlement Code provide an incentive for any generator that can generate increased output using a secondary fuel, to register as a Dual Rated Unit. This is because the Eligible Availability of a Dual Rated Unit is based upon the greater of the availability on the primary and secondary fuel, whether or not it is dispatched on that fuel.

The November 2010 information note⁴ concluded that only the two Kilroot units complied with the criteria. This conclusion in relation to criterion 3(c) does not appear to have been valid. It was never expected, in regard to the Dual Rated Generator Unit status, that such registrations should be widespread. The incentive for its initiation was a series of price spikes in the SEM resulting from the inappropriate scheduling of the Kilroot units by the MSP Software and the intention was to solve that problem without having to introduce major changes in the scheduling mechanism to deal with generators which could operate with more than one fuel.

The SEM Committee does not expect to receive further applications for Dual Rated status. However, the SEM Committee reserves the right to review both the incentives in the Code and the current criteria to identify whether any changes are needed. Any such changes would be consulted upon.

⁴ SEM-10-078, 19th November 2010