TYNAGH ENERGY
LIMITED

Robert O'Rourke
Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

REF: TEL/DV/13/142

9th August 2013

Re: Rate of Change of Frequency Modification to the Grid Code

Dear Robert,

Tynagh Energy Limited (TEL) welcomes the opportunity to respond to the consultation paper on the Rate of Change of Frequency (ROCOF) Modification to the Grid Code (CER/13/143) that was published on the 28th June 2013. TEL would like to make comments under the following headings:

1. Approval in Principle
2. Definition of RoCoF Standard
3. 18 Month Timeline
4. Programme Governance
5. Cost Recovery
6. RoCoF GPI
7. Alternative Solution

1. Approval in Principle

TEL supports the achievement of the Government's target of 40% of electricity generation from renewable energy by 2020. TEL acknowledges that, in order to meet this target, it will be necessary to raise the system non-synchronous penetration (SNSP) limit to 75%. In order to manage the system securely with such a high level of non-synchronous generation the TSO has identified additional system services that will be required from all generators and proposes to deliver these services through the DS3 programme. Underpinning this is the assumption that the rate of change of frequency (RoCoF) standard can be raised to 1Hz/s measured over 500ms.

There is considerable technical uncertainty as to whether conventional generation units are capable of complying with the increased standard. There have been a relatively small number of events which have resulted in a RoCoF in excess of the current standard of 0.5 Hz/s in Ireland and Northern Ireland, and there is no prior international experience on which to base an assessment.

Detailed technical studies will be required for every unit on the system to ascertain generators' ability to withstand a RoCoF event as proposed. TEL supports the need for technical studies to assess the capability of existing plant to comply with any increased RoCoF standard. These technical studies will need to be completed before the new standard that can safely be achieved is determined. It is wholly inappropriate to approve in principle MPID229 without knowing that this standard can safely be achieved by a majority of generators.

2. Definition of RoCoF Standard

TEL cannot operate the generation plant in a manner that is outside the specification set by the original equipment manufacturer (OEM). To do so could void the long term service agreement and insurance in the event of a plant failure. TEL's OEM, GE, has indicated that in order to sign-off on the plant ability to sustain a RoCoF event of 1Hz/s averaged over 500ms the technical study will need to assess the maximum RoCoF that the plant will experience. The TSO has indicated that this could be as high as 3Hz/s if measured over a shorter time period[1]. If this is the testing that is required to comply with the increased standard then 3Hz/s should in fact be the standard.

TEL strongly argues that the RoCoF modification should be a duration curve which plots the maximum RoCoF over time that the generation unit would be required to endure in the event of the loss of the largest infeed during periods of high wind. This would ensure that all generators are testing their units to the same standard before declaring compliance (or not) to EirGrid.

3. 18 Month Timeline

GE has indicated that a technical study for TEL's generation plant will take 18 months to complete. GE is also the OEM for a significant number of other large generators in the SEM. Each technical report for these generators will be machine specific. The specialist resources required to complete these technical reports are in limited supply, meaning that there is little prospect of these technical reports being completed in parallel. Running the reports in parallel could in fact result in the reports taking longer to complete.

It is the result of these same reports that will be used to certify generators to the current RoCoF standard. It is therefore inappropriate to set an 18 month time limit on the completion of the technical studies as generators may be unable to comply due to resource constraints that are outside their control. If a GPI is introduced it should not be applied until the generator has at the very least completed their technical report. This technical report could detail further remedial work that would be required to achieve any increased RoCoF standard.

4. Programme Governance

TEL agrees that a co-ordinated industry wide programme would be the most efficient way to manage this process. TEL agrees that EirGrid would be best placed to co-ordinate this but it would not be appropriate to define the role as a project manager. A project manager delivers the objective of a project while managing the constraints of cost, time and scope. EirGrid will be defining the scope (i.e. who needs to complete a study, what the study entails and what constitutes compliance), the time (18 months) but will not be constrained by costs as the cost of implementation will not be borne by EirGrid.

Were the RoCoF standard to be increased it is generators who would bear the commercial risk to their plant if this standard is beyond the technical capability of the generator. All generators must be satisfied that their respective plant can achieve the new standard. Generators should therefore have the right to define the scope of the technical report so long

[1] RoCoF Modification Proposal – TSOs' Recommendations

as this scope does not create a risk to the transmission system. The fact that a finite technical resource exist within the OEMs may indicate that EirGrid would be best placed to set priorities but it is generators who should manage the interface with the OEMs and generators should not be commercially disadvantaged or incur additional costs due to a decision made by EirGrid.

5. Cost Recovery

A retrospective modification of this nature and a requirement to carry out studies to establish capability is unprecedented. The cost of the studies is significant, at an estimated €20million on aggregate, with the potential for even greater cost depending on scope and initial findings. Notwithstanding acknowledgement that it could be considered an 'inequitable situation' to impose the cost of studies on conventional generators when the commercial benefits of the modification will accrue to wind farms (to the actual detriment of thermal generators through reduced utilisation), CER is proposing that the cost of such studies will not be recoverable, socialised or postalised in some form.

Non-recovery of costs is argued on the grounds that the proposed grid code modification is to support government policy on renewable targets; grid code compliance is the responsibility of generators and non-compliance is argued as a clear exit signal in the context of said government policy. Policy obligations are imposed on Government to meet a specific national target under the RES Directive. Compliance obligations on operators do not arise under this Directive or national policy. Conflating these two as justification for the proposed action is of concern.

The proposed refusal to provide for cost recovery of the studies required to test compliance is inequitable for the reasons provided in the consultation paper, particularly given that other options have not been examined. Such arbitrary behaviour undermines confidence in the regulatory process and jeopardises the future investment required to meet renewable energy and security of supply objectives. TEL strongly rejects the contention that a conventional plant which is not capable of demonstrating a capacity to meet the revised standard because of the current technical limitation of variable generating plant, is giving a clear exit signal.

The reason for increasing the RoCoF standard is to facilitate the connection of new renewable generation on the system to meet the 2020 targets. This is therefore a cost of those new connections. The CER is responsible under the Electricity Regulation Act 1999 (as amended by Regulation 40 of SI 630) for:

> *"[E]nsuring non-discrimination, effective competition and the efficient functioning of the electricity and gas markets, by monitoring in particular...the terms, conditions and tariffs for connecting new producers of electricity to guarantee that these are objective, transparent and non-discriminatory, in particular taking full account of the costs and benefits of the various renewable energy sources technologies, distributed generation and combined heat and power."*

As the full system wide costs of increasing the RoCoF standard are a cost of connecting new renewable generators, the CER is obliged to consider these full costs when monitoring the terms, conditions and tariffs for connecting these generators. To disregard the costs that these new connections are causing to the Irish system would be discriminatory to existing generators and would be in contravention of the CER's obligation under the Act.

Resolution of the RoCoF issue is a potentially significant component in realising the estimated €355 million value to customers of the DS3 system services review. Both the TSO and generators consider that a technical evaluation of the capability of plant to deliver a revised RoCoF standard is an essential part of realising this annual gain for customers. In this context TEL disagrees in the first instance with the CER's assertion that the cost incurred in

simply determining whether the RoCoF standard could be modified constitutes a "compliance" cost. Secondly, given the significant (relative) savings for customers that arise if the technical standard can be modified, then it is entirely reasonable that customers contribute towards the cost of delivering this saving.

One might with equal validity argue that since this cost is a result of Government imposed policy then it is reasonable the cost of implementation should be supported by central Government funds. Since Government has determined that its renewables policy delivers a social benefit then it is justifiable and economically rational that the cost should be socialised. To unfairly impose the cost on a subset of generators is economically irrational and inefficient and sends a very negative signal for future investment in generation that will be exposed to future government policy as interpreted and implemented in regulatory decisions. This could undermine the delivery of the system services under DS3.

6. RoCoF GPI

The CER has raised concern that some generators may not be able to demonstrate compliance with the current RoCoF standard. The Grid Code provides for "testing" to prove compliance rather than detailed (and costly) technical studies but the current standard is untestable given that the Grid Code does not specify the interval over which the 0.5Hz/s is measured. It is unreasonable and disproportionate to impose an onerous RoCoF GPI within 18 months of the CER decision where the current standard cannot be tested and all technical studies are unlikely to be completed.

7. Alternative Solution

There is an implicit assumption that the studies, as yet not technically specified, will indicate an ability by almost all plant on the system to comply with the revised standard and basing the proposed decision on this unsupported assumption is without foundation. Technical studies of this modification and of alternative solutions [with appropriate cost benefit analyses] need to be completed before it can be established if this is the most appropriate modification at this time. It is imperative that alternative measures to addressing the RoCoF issue be considered in parallel. There are no timelines proposed in the consultation paper for this to be progressed by the TSOs. Specific timelines should be stipulated. Alternative solutions may help reduce the magnitude and frequency of RoCoF events. If a large number of generators cannot meet the new RoCoF standard, alternative solutions may be the only way forward.

TEL hopes that these comments prove constructive to the process and look forward to further positive engagement with the CER.

Yours Sincerely,

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