

9<sup>th</sup> August 2013

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

## **RE: Rate of Change of Frequency (RoCoF) Modification to the Grid Code**

Dear Robert,

Bord Gáis Energy (BG Energy) welcomes the opportunity to respond to the consultation on the proposed modification to the Rate of Change of Frequency (RoCoF) standard in the Grid Code. This consultation is crucial to ensuring that the concerns of all stakeholders regarding the proposed change to the RoCoF standard are identified and addressed before a decision is made on whether the Code Mod should be approved.

BG Energy would like to reiterate the crucial role that the DS3 Programme has in the context of meeting national energy policy goals in Ireland. The curtailment of wind generation must be minimised to ensure the required investment to meet renewable targets is viable. Delivery of the DS3 Programme will be an important contributor to achieving this goal.

### **1. Main Points**

- The Code Mod MPID 229 should not be approved, nor any GPIs applied, at this time as there is insufficient information to determine that it is the best solution to the system inertia problem. Further engagement with generators and their OEMs is required, along with more detail from the TSOs regarding the types and frequencies of expected RoCoF events before a decision to approve or reject the modification can be made. Alternative solutions to the inertia problem should be investigated in parallel. A detailed cost benefit analysis should then be completed to determine the best solution for the system and the market.
- The TSO cannot be allowed to independently “certify” the ability of generators to comply with the proposed RoCoF standard. Generators, with their OEMs, must determine if they

can comply with the standard and either inform the TSO accordingly or apply for a derogation.

- The TSO is best placed to co-ordinate the project in a Programme Management role but it is solely the generators role to determine compliance through engagement with their OEMs.
- The costs of achieving compliance should be recovered from the value that delivery of higher RoCoF will bring. Investment in RoCoF is a valuable service to the market, akin to the system services being considered. Furthermore, cost recovery better incentivises generators to achieve compliance, whereas a mechanism centred on penal GPIs incentivises generators to seek derogations.
- If the RoCoF modification is approved, GPIs may be relevant as an incentive but within the mechanism must include sufficient flexibility to recognise the difficulties and likely durations needed to complete technical studies and prove compliance.

## **2. Approval of Proposed RoCoF Code Mod**

BG Energy does not agree at this time with the proposal from the CER to approve the RoCoF Code Mod in principle purely subject to the condition that the TSO is satisfied in terms of system security. Approval can only be given when sufficient information is known about the impact of the higher RoCoF standard on generators and it has been demonstrated following a cost-benefit analysis including alternative solutions that the RoCoF Code Mod is the optimal solution to the system inertia problem.

Until sufficient evidence is available to determine the impact of the higher RoCoF standard on generators, BG Energy does not accept the TSOs assertion that generators should be able to withstand a 1 Hz/sec RoCoF. This evidence will only be available from technical studies on the impact of the higher RoCoF standard on conventional generators, a statement echoed by PPA energy in their recommendations following a study commissioned by the CER.

The consultation refers to higher RoCoF standards in the Grid Code of Spain (2 Hz/sec) Denmark (2.5 Hz/sec) as examples of systems with higher RoCoF standards that the same OEMs operate in. These examples do not offer assurance to Irish generators as no reference is

made in these examples to primary concerns of Irish generators; namely the frequency of RoCoF events and the maximum RoCoF in these systems over 100ms.

The PPA energy study made a number of the other recommendations that need to be explored before any decision is made on the approval of the RoCoF Code Mod, including:

- That the TSOs provide RoCoF levels within 100 ms over a range of scenarios that will meet the proposed RoCoF level of 1 Hz/sec over 500ms
- That the TSOs provide more information on the alternative solutions to changing the RoCoF standard
- That the TSOs explain the process by which generators would apply for derogations from the proposed new RoCoF standard and the implications for the power system of generators not being able to comply with the new standard.
- That the TSOs give further consideration to the impact on demand customers and, along with the DSOs, consult with demand customer groups on the issue

Given the importance of this issue and the potential scale of the costs and benefits that will arise from this decision, these recommendations should be accepted by the CER and used in a cost benefit analysis of possible solutions to the system inertia problem. The results of this analysis will inform the CER on the solution that will deliver greatest value and necessary investment.

### **3. Project Governance**

It has been correctly acknowledged in the consultation that the full implementation of the RoCoF Code Mod is a substantial project with a long lead time and a number of stakeholders. BG Energy welcomes the proposal to define the project governance structure and believes that the TSO has a critical role to play in the successful conclusion of the project. BG Energy believes that the TSO is best placed to facilitate the programme management and that the scope and activities of their role must be distinct as project managers and not the overall decision makers. Their role and governance must be transparent.

BG Energy is strongly opposed to any proposal that the TSO will be empowered to certify that a plant is compliant by examining historical records or by any other method that is not in full agreement with the generator. Generators are exposed to the potential for damage from frequent high RoCoF events and only generators, alongside their OEMs, will determine if they

can comply with the higher RoCoF standard and either inform the TSO accordingly or apply for a derogation.

#### **4. Cost Recovery**

BG Energy is opposed to the proposal in the consultation that the costs to generators of the technical studies required to prove compliance with the proposed RoCoF standard are not recovered. The carrot of cost recovery is a more effective tool to incentivise compliance than the stick of penal GPIs. If generators are exposed to GPIs they may be incentivised to seek derogations and this could result in the original purpose of the Code Mod being defeated. However, if the cost of compliance is met, generators have no incentive to seek derogations unless they genuinely cannot meet the requirements.

The DS3 studies conducted by the TSO have identified the value of delivering higher levels as being circa €300m annually by 2020. A proportion of this value will be used to ensure that the flexible System Services required are delivered. The TSO has also estimated that delivery of a higher RoCoF standard will increase SNSP by 10% singlehandedly. Given the size of the value, if the TSOs assertion is correct and the higher standard is successfully delivered, a similar approach to that proposed for the System Services work-stream should be used to incentivise investment in delivering the higher RoCoF standard. The cost of studies is not significant to the market when measured against the value delivered.

#### **5. Generator Performance Incentives (GPIs)**

BG Energy would like to reiterate that the RoCoF Code Mod cannot be approved until its impact on generators has been adequately assessed and compared using a cost-benefit analysis with alternative solutions to the system inertia problem. Only then, on its approval, should a suitable GPI be introduced.

The consultation proposes that after approval generators have 18 months to demonstrate compliance before GPIs will be applied. The CER must acknowledge that more flexibility is required given the retrospective nature of the Code Mod and the constraints on the OEM's ability to complete the technical studies individually for a number of generation units in the market. Please note, given the nature of generators individual OEM contracts, these studies cannot be aggregated across manufacturers. Studies for generators with the same OEMs are

likely to be completed sequentially, and the period taken to complete the studies is certain to exceed 18 months. Again, this has been acknowledged by PPA energy in their study. The introduction of a GPI to incentivise generators to complete the technical studies must recognise this fact. No GPI should be applied provided the generator can demonstrate reasonable progress towards the completion of the required studies.

## **6. Conclusion**

The Appendix below contains a summary of BG Energy's view from the response above in relation to the specific questions that were asked in the consultation.

Please do not hesitate to contact me if you have any queries on the comments raised in this response.

Yours sincerely,

Ciarán O'Brien  
Regulatory Affairs - Commercial  
Bord Gáis Energy

***{By email}***

## **Appendix 1: BG Energy Responses to Consultation Questions**

### **1. Do you agree with the CER's proposal to approve MPID 229 in principle?**

No, the Code Mod cannot be approved at this time. Further information is needed on the impact of the higher RoCoF standard as well as on alternative solutions to inform a cost-benefit analysis and enable the regulators to determine the optimal solution to the system inertia problem.

### **2. Do you agree with the conditions for giving MPID 229 effect in the Grid Code?**

No. A decision can only be made on the proposed RoCoF Code Mod when it has been clearly demonstrated that it is the best solution.

### **3. Do you agree with the proposal to establish an implementation project to co-ordinate the activities of generators and system operators?**

Yes.

### **4. Do you agree with the proposed high level governance structure?**

The proposed high level governance needs further definition. Particularly, the role of the TSO must be transparent and cannot include the ability to “certify” compliance or engage OEMs directly. They should only act in the role of Project Manager.

### **5. Do consider that the costs for the technical studies should be recoverable?**

Yes, given the value and policy objectives at stake the preferable approach should be to incentivise compliance through cost recovery rather than risk non-compliance and derogations through penal GPIs.

### **6. Do you agree with the proposed introduction of a GPI for ROCOF**

GPI penalties should not be introduced until the RoCoF Code Mod is approved. The introduction of a GPI must be flexible and recognise the sequential nature that OEM technical studies will be completed and the impact that will have on timelines.

**7. Do you agree with the proposal to require EirGrid to explore and implement alternative solutions?**

Yes, a clear programme of work is required to investigate alternative solutions and their costs and benefits prior to the decision on the approval of the RoCoF Code Mod.

**8. Are there any other issues you wish to raise?**

The overall objective of DS3 is to increase the penetration of non-synchronous generation across the SEM, both in Ireland and in Northern Ireland. Therefore, it seems sensible that a joined up approach is needed with Northern Ireland with aligned timelines around RoCoF consultations and Grid Code approvals.

- Required information from TSOs

Further information is needed from the TSOs in order for generators and OEMs to commence the technical analysis for their individual units. The TSO can assist the OEMs by providing a range of RoCoF event scenarios showing an average RoCoF of 1 Hz/sec over 500ms. These scenarios can be used by the manufacturers to test their impact. This should also include estimates around the frequency of events for each scenario. Such an approach would provide a standardised template of conditions that can be tested and enable generators to ascertain what impact, if any, the higher RoCoF standard would have on life usage, maintenance cycles etc.

- Alternative Solutions

The role of the interconnectors in reducing the number of RoCoF events should be investigated, as the EWIC business case was approved on the basis that it would help facilitate more renewables on the system.

- Derogation process

Clarification is also required regarding how the derogation process will be aligned with the application of GPIs. If a generator is applying or has successfully applied for a derogation from the higher RoCoF standard, no GPI should apply.