

Electricity Industry Colleagues and Interested Parties

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Open letter on BELLA participation in the Balancing Mechanism

Dear Industry Colleague,

In order to stimulate renewable generation investment in pursuit of the Government's 2020 renewable target, the Department of Energy and Climate Change (DECC) implemented the Connect and Manage regime on August 2010 for Grid access¹. The aim of this was to enable generation, particularly renewables, to connect to the network more quickly, by connecting ahead of wider system reinforcement. A consequence of allowing generators to connect ahead of wider works being completed is that constraints may be exacerbated and need to be managed. This is particularly apparent in locations with high generation output and during low demand periods.

On September 2011, we issued a consultation² which highlighted amongst other things, concerns over the lack of Balancing Mechanism (BM) Participation in areas which may have localised constraints. Importantly, these areas contained a high proportion of intermittent and embedded generation - where generators choose not to actively participate, this can contribute to difficulty in managing congestion.

Following the closure of the consultation, we discussed the responses with the industry at the National Grid-led Commercial Balancing Services Group (CBSG)³. The aim of this was to develop potential solutions to the issues encountered through operationally managing the amount of intermittent generation on the system. One such issue which was discussed at the CBSG centred on the balancing arrangements for embedded generation, as a proportion of this is not accessible within the BM. As an embedded party has different agreements with National Grid depending on the nature of its rights to use the National Electricity Transmission System, a question was raised whether the type of agreement affected an embedded party's ability to participate in the BM and what, if any, additional requirements would need to be placed on such party if they were to actively participate.

There are principally two forms of agreement that an embedded generator can enter into with National Grid: a Bilateral Embedded Generation Agreement (BEGA) and a Bilateral Embedded Licence Exemptable Large Power Station Agreement (BELLA), however further

¹ <http://www.decc.gov.uk/assets/decc/Consultations/Improving%20Grid%20Access/251-govt-response-grid-access.pdf>

² <http://www.nationalgrid.com/uk/Electricity/Balancing/consultations/>

³ <http://www.nationalgrid.com/uk/Electricity/Balancing/CommercialBalancingServicesGroup/>

distinctions apply where BEGAs are <100MW⁴ in size. Further detail on these two types of agreement can be found in Annex 1 of this letter, which contains a paper presented to the CBSG to highlight their main differences. Historically, we have specified that embedded parties, who wish to actively participate in the Balancing Mechanism in their own right, must be a party to a BEGA rather than a BELLA. Under the industry codes⁵ a generator who is party to a BEGA has “Transmission Entry Capacity” (TEC) and rights under CUSC section 3 to generate power up to that level on to the National Electricity Transmission System. In contrast a generator who is party to a BELLA does not have TEC and so any express right to generate power on to/have power accepted on to the National Electricity Transmission System⁶.

However, in response to a question raised at the CBSG whether this approach is appropriate, we are keen to explore whether you think that generators who are parties to a BELLA should be allowed to actively participate in the BM.

A BELLA is only for those generators who are Supplier Volume Allocation (SVA)⁷ registered or Central Volume Allocation (CVA)⁸ registered by another party who pays use of system charges. In each case, it is the supplier who manages a generator’s output. A BELLA explicitly states that if the generator ceases to be SVA registered or becomes CVA registered other than by a supplier it must apply for a BEGA, in which case the generator may manage its own output. It follows therefore that under the terms of the CUSC, a BELLA contracted generator may not register its BM units as Central Volume Allocation (CVA) i.e. be responsible for their own output and to achieve this, the party would have to sign up to a BEGA.

From a system operation point of view, we would like to encourage greater BM participation from all generators to better facilitate the operational management of intermittent generation. If embedded generators do not wish to register their own BMU through being party to a BEGA, “active participation” through a supplier would still be of benefit.

The BSC does allow for a supplier to register the BMU of an embedded generator who is party to a BELLA as an “Additional BM Unit” to its “Base BM Unit” and so remain treated as SVA. In this way an embedded generator with a BELLA could be said to participate in the BM.

As with a generator with a BEGA, a generator with a BELLA who actively participates in the BM (or is deemed to do so because its supplier registers an “Additional BM Unit” in respect of that embedded generator) would need to comply with any technical requirements for participation in the BM that are described in the Grid Code and CUSC (section 6.8).

In addition, as a BELLA’s output would still be managed by a supplier, any embedded benefits would still be received by the supplier rather than the BELLA party as is currently the case.

As it is a user’s choice whether to select either a BELLA or a BEGA, the purpose of this letter is not to discuss the merits of either agreement but to discover whether you think that the

⁴ Differences do exist with regard to TNUoS charges: For units ≥ 100 MW BEGAs are liable for TNUoS charges; for units <100MW no TNUoS is applicable for either BEGAs or BELLAs. See annex 1.

⁵ Principally, the CUSC, BSC and Grid Code

⁶ 1.2.4 of the CUSC

⁷ BM Units which are embedded are normally registered under SVA but not all of these are HH metered

⁸ All Transmission connected plant is registered under CVA. These sites will be Half Hourly (HH) metered, with the data feeding directly into the settlement calculations

balancing arrangements applicable for such contracts remain fit for purpose. As mentioned above from a system operation point of view, we are keen to encourage greater BM participation from generators to better facilitate the operational management of intermittent generation. This letter seeks views on the best way to achieve this.

Views invited

We would welcome views on any of the issues set out in this letter and in particular, in relation to the following:

- Whether you believe BELLAs should be able to participate in the BM;
- Whether the current framework allows for BELLAs to participate in the BM and if not, what additional technical (Grid Code) developments might be required to facilitate this;
- Whether a BELLA should be required to hold explicit access rights in order to participate in the Balancing Mechanism e.g. become a BEGA; and
- What parts of the CUSC and / or BSC may be required to change to facilitate the necessary commercial / contractual requirements.

Please send your responses to this open letter to balancingservices@nationalgrid.com by 05 September 2012. Unless clearly marked as confidential, responses will be published on our website. Following this open letter we will discuss the responses at the CBSG to discuss and agree an appropriate way forward.

If you wish to discuss the content of this letter, please contact Steve Lam (steven.lam@nationalgrid.com) in the first instance

Yours sincerely,

Ian Pashley

Electricity Codes Manager
National Grid

Annex 1

Contractual Obligations to participate in the Balancing Mechanism

Background

The concept of a Bilateral Embedded Licence exemptable Large power station Agreement (BELLA) was implemented by Ofgem under the British Electricity Trading and Transmission Arrangements (BETTA) in 2005. The reason for this was to ensure that large, licence Exemptable embedded plant in Scotland could connect to a DNO's system with the minimum of technical obligations and therefore did not have to be a BSC Party (Section 6.29 of CUSC) thus avoiding the technical requirements that were placed on those directly connected to the transmission system. Such licence exempt plant would not be liable for generation Transmission Network Use of System (TNUoS) charges or Balancing Services Use of System (BSUoS) charges. Additionally, Bilateral Embedded Generation Agreements (BEGAs) that are under 100MW are also considered licence Exemptable and are not liable for generation TNUoS charges. The key difference between the two agreement types is that BELLAs do not have use of system rights or Transmission Entry Capacity (TEC).

Historically, we have specified that embedded parties who wish to actively participate in the Balancing Mechanism i.e. submit bids and offers to reduce or increase their output, must sign up to a BEGA rather than a BELLA. In the Grid Code, BELLAs are considered as a Generation Unit rather than a Balancing Mechanism (BM) Unit and it is the latter which is required for participation within the BM.

As a large number of parties connecting in Scotland are signing up to a BELLA, this paper explores whether the codes allow BELLAs to actively participate in the BM.

Generation Charges

CUSC Section 14 describes the charges for large Exemptable embedded generation. Sub 100MW BEGAs and BELLAs are licence exemptible and therefore do not pay any TNUoS charges.

Paragraph 14.18.1

The following CUSC parties shall be liable for generation charges:

- i) Parties of Generators that have a Bilateral Connection Agreement with The Company.*
- ii) Parties of [Licensable Generation](#) that have a Bilateral Embedded Generation Agreement with The Company.*

Demand charges

As sub 100MW BEGAs and BELLAs are licence Exemptable, they will receive embedded benefits (payments) as they are seen to be reducing the overall value of the demand at that GSP.

Paragraph 14.17.14

Half hourly metered demand charges

For Supplier BMUs and BM Units associated with Exemptible Generation and

Derogated Distribution Interconnectors with a Bilateral Embedded Generation Agreement, if the average half-hourly metered volume over the Triad results in an import, the Chargeable Demand Capacity will be positive resulting in the BMU being charged. If the average half-hourly metered volume over the Triad results in an export, the Chargeable Demand Capacity will be negative resulting in the BMU being paid. For the avoidance of doubt, parties with Bilateral Embedded Generation Agreements that are liable for Generation charges will not be eligible for a negative demand credit.

BELLA Contractual Terms

Under the contractual terms of a BELLA, the optional clause below is generally included as default which means that BELLAs are deemed as a BM Participant, but do not actively participate in the BM:

Schedule 2 Exhibit 5 – BELLA v1.7

Clause 5.2

The Company and the **User** hereby agree that compliance by the **User** in respect of this **Embedded Exemptable Large Power Station** with the provisions of BC1 and BC2 of the **Grid Code** are reasonably required and therefore the provisions of BC1 and BC2 shall apply and be complied with by the **User** so far as applicable to it. Therefore, the provisions in BC1 and BC2 in respect of **Generating Units** and **Generating Unit Data** shall apply to and be complied with by the **User**. For the purposes of the **Grid Code** the **User** shall be treated as a **BM Participant**.

BELLA participation

In order for a BELLA party to participate, they would have to either register their BM Units as CVA (Central Volume Allocation) in which case they would have to sign up to a BEGA, or they could appoint a supplier to register their BM Units as CVA, allowing them to remain as a BELLA:

Schedule 2 Exhibit 5 – BELLA v1.7

Clause 2.4

*It is a condition of this **Agreement** that the **Embedded Exemptable Large Power Station** is **SMRS** registered (or **CMRS** registered by a **Supplier**) in the **BSC**. If, at any time the **Embedded Exemptable Large Power Station** ceases to be **SMRS** registered (or **CMRS** registered by a **Supplier**) and becomes **CMRS** registered other than by a **Supplier** then the **User** hereby undertakes to forthwith apply for and enter into a **Bilateral Embedded Generation Agreement**.*

If the embedded party appoints a supplier to register the BELLA's BM Units as CVA, the supplier would be responsible for any charges or payments for the use of system.

If a BELLA wishes to participate in the BM they will be required to install the following equipment, as specified in the Grid Code, which is identical to the obligations to a BEGA. This is also stated in Section 6.8 of the CUSC. However, the standard BELLA contract does not take this into account and therefore may need to be changed to facilitate this. This would mirror the technical obligations within a BEGA:

Under appendix F5 of a BEGA:

CC.6.5.6 Operational Metering (and Settlement Metering for Elexon)

CC.6.5.8(a) Electronic Data Transfer facilities to submit data

CC.6.5.8(b) EDL (Electronic Data Logging) to submit Bid-Offers

CC.6.5.2 – CC.6.5.5 - Control Telephony

Comparisons

The key differences between a BELLA and a **sub 100MW** BEGA are summarised in the table below:

	BELLA	BEGA
TNUoS Charges	None	None
BSUoS Charges	Supplier may be charged if there is a net import of energy. Supplier receives embedded benefit	User may be charged if there is a net import of energy. User receives embedded benefit
Licence Exemptable?	Yes	Yes
Can be despatched by National Grid?	Only by emergency instruction	Only if EDL/EDT has been installed (and by emergency instruction)
Meter registration	Supplier Volume Allocation (SVA). But a supplier may register the generator as CVA.	Register apparatus as CVA – generator controls output
Which codes must they comply with?	CUSC and Grid Code	CUSC, BSC, Grid Code
Use of system rights (TEC)?	No	Yes
Obligatory equipment	Operational Metering, telephony. (From 1/1/13 if required to provide all Part 1 system ancillary services then EDL is required).	Operational metering, EDT, telephony, automatic switching equipment. If participating in the BM – EDL. (From 1/1/13 if required to provide all Part 1 system ancillary services then EDL is required).
BM Unit or Generating Unit?	Generating Unit or Additional BM Unit	BM Unit
Physical Notification Obligations?	PNs may be required where applicable, under terms of the BELLA	PNs required

Initial findings

In relation to the query on whether we could allow BELLAs to participate in the BM, the codes do not appear to prohibit participation, however, they were not written to take this scenario into account as BELLAs were designed for parties who did not wish to be a BM Unit and are therefore classed as Generating Units. BELLAs that wish to participate in the BM would have to satisfy the same technical requirements as those generators signing up to a BEGA.

The wording in the BELLA contract itself also contains a flexible clause which states that they will need to comply with BC1 and BC2 of the Grid Code **where reasonably required**. Whilst this does not prevent participation, this would need to be made explicit to the party that compliance would be necessary.

The CBSG is invited to:

- Agree whether it is appropriate for BELLAs to participate in the BM
- Decide whether wider industry discussions are required in this area

FAQs

Does the size of the power station matter for participation in the BM?

There is a minimum level of 1MW for participation in the BM

Does it matter if the power station is licence exempt?

No – a BEGA that is under 100MW is considered as Licence Exemptable which will not affect its ability to actively participate.

Will BELLAs be liable for TNUoS and BSUoS charges if they convert to a BEGA?

No. Sub 100 MW BEGAs are not charged TNUoS or BSUoS as they are licence exemptable. Therefore such BELLAs will not be liable for these charges

Will there be any technical differences between generators signing up to BELLAs and BEGAs if they are both allowed to actively participate?

The technical obligations will have to be the same for both

What is in the codes which prevents BELLA participation in the BM?

The codes don't currently prohibit BELLAs from participating in the BM, however, they were not written to take this scenario into account as BELLAs were designed for parties who did not wish to be a BM Unit and are therefore classed as Generating Units.

The wording in the BELLA contract itself also contains a flexible clause which states that they will need to comply with BC1 and BC2 of the Grid Code **where reasonably required**. Whilst this does not prevent participation, this would need to be made explicit to the party that compliance would be necessary.

How are BELLAs metered?

BELLAs are required to install operational metering under Grid Code C.C.6.5.6. Generally the user provides this at the site and then a suitable communications link to the Scottish TO. National Grid then obtains these signals from the Scottish TO.