

**DATED** \_\_\_\_\_ **20**

**NATIONAL GRID ELECTRICITY TRANSMISSION PLC (1)**

**and**

**[ ] (2)**

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**FIRM FREQUENCY RESPONSE AGREEMENT**

**(BALANCING MECHANISM PARTICIPANT (DYNAMIC))**

**RELATING TO BM UNIT(S) [ ]**

**AT [ ] POWER STATION**

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**CONTRACT LOG NO:**

**SUBJECT TO CONTRACT**

THIS **FIRM FREQUENCY RESPONSE AGREEMENT** is made on the \_\_\_\_\_ day of 2014

## **BETWEEN**

- (1) **NATIONAL GRID ELECTRICITY TRANSMISSION PLC** a company registered in England with number 2366977 whose registered office is at 1-3 Strand, London, WC2N 5EH ("**NGET**", which expression shall include its successors and/or permitted assigns); and
- (2) [ \_\_\_\_\_ ] a company registered in [ \_\_\_\_\_ ] with number [ \_\_\_\_\_ ] whose registered office is at [ \_\_\_\_\_ ] ("**Provider**", which expression shall include its successors and/or permitted assigns).

## **WHEREAS**

- (A) The **Provider** is, or will by the **Commencement Date**, be bound by the terms of the **Balancing and Settlement Code**.
- (B) This **Firm Frequency Response Agreement** is entered into in respect of one or more **FFR Unit(s)** each comprising a single **BM Unit** within the **Provider's** [ \_\_\_\_\_ ] **Power Station**, in anticipation of the submission by the **Provider** of **FFR Tenders** in respect of such **FFR Unit(s)** in accordance with the **Tender Rules and Standard Contract Terms**.
- (C) Accordingly, the applicable provisions of this **Firm Frequency Response Agreement** shall apply with respect to each **FFR Tender** submitted by the **Provider**, and with respect to each relevant **FFR Unit** shall form part of each and any **FFR Contract** formed in relation thereto.

**NOW IT IS HEREBY AGREED** as follows:

### **1. DEFINITIONS, INTERPRETATION AND CONSTRUCTION**

Unless the subject matter or context otherwise requires or is inconsistent therewith, and unless defined herein, terms and expressions defined in Section 6 of the **Tender Rules and Standard Contract Terms** have the same meanings, interpretations or constructions in this **Firm Frequency Response Agreement**. Unless the subject matter or context otherwise requires or is inconsistent therewith, in this **Firm Frequency Response Agreement** the terms set out in Appendix 1 shall have the meanings set out respectively therein.

### **2. TENDER RULES AND STANDARD CONTRACT TERMS**

- 2.1 Subject to Sub-Clause 2.2, the **Parties** hereby agree to be bound by, and to comply with, the applicable provisions of the **Tender Rules and Standard Contract Terms** with respect to the submission of **FFR Tenders** and any

**FFR Contract** formed pursuant thereto, in each case insofar as relating to the provision of Dynamic **Firm Frequency Response** as described in Section 3 of the **Tender Rules and Standard Contract Terms** (and for the purpose of this **Firm Frequency Response Agreement** “**FFR Contract**” shall be construed accordingly).

2.2 The **Tender Rules and Standard Contract Terms** shall be read and construed subject to the special conditions (if any) set out in Appendix 2.

2.3 The **Provider** agrees that the relevant provisions as to determination of the payments to be made between **NGET** and the **Provider** in consequence of events of default set out in Section 3 of the **Tender Rules and Standard Contract Terms** are reasonable in light of the anticipated harm and the difficulty of estimating or calculating actual damages. The **Provider** accordingly waives the right to contest those provisions as an unreasonable penalty or otherwise.

### 3. COMMENCEMENT AND TERM

3.1 This **Firm Frequency Response Agreement** shall come into force on the date hereof and shall continue in force and effect until terminated by either **Party** by not less than two months notice in writing to the other (but not so as to expire during the subsistence of any **FFR Contract** in respect of any **FFR Unit**) or until earlier termination in accordance with the **Tender Rules and Standard Contract Terms**.

3.2 In accordance with the **Tender Rules and Standard Contract Terms**, this **Firm Frequency Response Agreement** may terminate in respect of one or more only of the **FFR Units**, and such termination shall be without prejudice to the continuing effect of the **Firm Frequency Response Agreement** in relation to such other of the **FFR Unit(s)**.

### 4. PROVISION OF FIRM FREQUENCY RESPONSE

Without limiting the generality of Sub-Clause 2.1, upon the formation of each **FFR Contract** pursuant to and in accordance with the **Tender Rules and Standard Contract Terms**, the **Provider** hereby agrees to provide **Firm Frequency Response** to **NGET** from the relevant **FFR Unit(s)** upon and subject to Section 3 and the other applicable terms and conditions set out in the **Tender Rules and Standard Contract Terms** and by reference to Clause 5.

### 5. DATA TABLES

5.1 For the purposes of each and every **FFR Tender** in respect of any **FFR Unit**, the **Parties** hereby agree that for any **FFR Confirmed Part Load Point** the **Frequency Response** to be provided from that **FFR Unit**, and (where applicable) the payments to be made by **National Grid** in respect thereof, shall be ascertained by reference to the applicable **FFR Capability**

**Data Tables and FFR Power Delivery Data Tables** set out and described as such in **DELETE AS APPROPRIATE [the Mandatory Services Agreement] [Appendix 4]**.

5.2 For the purposes of Sub-Clause 5.1, the **Parties** hereby agree that:-

- (a) the figures set out in such **FFR Capability Data Tables** represent, for each applicable **Genset Deload**, the amount of **Rapid Response, Primary Response, Secondary Response** and **High Frequency Response** referred to therein;
- (b) such **FFR Capability Data Tables** include a summary response table whose figures represent, for each applicable **Genset Deload**, the capabilities in respect of **Rapid Response, Primary Response, Secondary Response** and **High Frequency Response** at given levels of **De-Load** referred to therein; and
- (c) the figures set out in such **FFR Power Delivery Data Tables** represent, for each **Genset Deload**, the **Frequency Response** that is deemed to be delivered in respect of **Rapid Response, Primary Response, Secondary Response** and **High Frequency Response**.

## 6. **SUBSTITUTE FFR UNITS**

For the purposes of the **Tender Rules and Standard Contract Terms**, the **Parties** hereby agree that the **BM Unit(s)** (if any) shown respectively against each **FFR Unit** in Appendix 5 shall be those suitable for nomination by the **Provider** as **Substitute FFR Unit(s)** under and in accordance with the provisions thereof, although such inclusion in Appendix 5 shall not prejudice the discretion of **NGET** to accept or decline any nomination made by the **Provider**.

## 7. **PROVIDER'S AGENT**

In accordance with paragraph 5.16 of the **Tender Rules and Standard Contract Terms**, and unless and until otherwise notified by the **Provider** pursuant thereto, the details (if any) set out in Appendix 6 designate an **FFR Provider's Agent** for the purposes of all **FFR Contracts**, and where so designated the provisions of Appendix 6 shall apply.

## 8. **VARIATIONS**

No variation to this **Firm Frequency Response Agreement** shall be effective unless made in writing and signed by or on behalf of both **NGET** and the **Provider**.

## 9. **NOTICES**

For the purposes of this **Firm Frequency Response Agreement**, unless and until otherwise notified by the relevant **Party** to the other in accordance with paragraph 5.8 of the **Tender Rules and Standard Contract Terms**, any notice or other communication to be given by **NGET** or the **Provider** to the other under, or in connection with matters contemplated by, this **Firm Frequency Response Agreement** shall be sent to the following address and/or facsimile number and marked for the attention of the person named below:

**NGET:** National Grid  
Contracts and Trading  
NGT House  
Warwick Technology Park  
Gallows Hill  
Warwick CV34 6DA

Facsimile number: 01926 655630

For the attention of: The Company Secretary

Copy to: The Electricity Balancing and  
Energy Trading Manager

Facsimile number: 01926 656612

**Provider:** Address:  
  
Facsimile number:  
  
For the attention of:

## 10. COUNTERPARTS

This **Firm Frequency Response Agreement** may be signed in any number of counterparts and by the **Parties** on separate counterparts, each of which when signed shall constitute an original but all the counterparts shall together constitute but one and the same instrument. For the purposes of this Clause 9, the delivery of a facsimile copy of a signed counterpart of

this **Firm Frequency Response Agreement** shall be deemed to be a valid signature thereof provided that the **Party** so delivering a facsimile hereby undertakes to deliver an original copy of this **Firm Frequency Response Agreement** forthwith following such facsimile transmission.

**IN WITNESS WHEREOF** the hands of the duly authorised representatives of the parties hereto at the date first above written

SIGNED BY )  
**[name]** )  
for and on behalf of )  
**NATIONAL GRID ELECTRICITY TRANSMISSION PLC** )

SIGNED BY )  
**[name]** )  
for and on behalf of )  
**[Provider]** )

## APPENDIX 1 – FURTHER DEFINITIONS

<b>“Commencement Date”</b>	the date being the <b>Service Day</b> from which this <b>Firm Frequency Response Agreement</b> shall apply as specified in Clause 3;
<b>“FFR Units”</b>	each of the <b>BM Unit(s)</b> identified in Appendix 3;
<b>[“Mandatory Services Agreement”</b>	the agreement between the <b>Parties</b> described as such relating to the <b>Power Station</b> at which the <b>FFR Units</b> are located, as amended from time to time;]
<b>“Tender Rules and Standard Contract Terms”</b>	the document entitled “Firm Frequency Response Tender Rules and Standard Contract Terms” published by <b>NGET</b> and as revised from time to time in accordance with its terms.

**APPENDIX 2 – SPECIAL CONDITIONS**



**APPENDIX 3 – FFR UNIT(S)**

## APPENDIX 4 – DATA TABLES

### SECTION A FFR Power Capability Data Tables

Station:

BM Unit Nos:

Table 1		Low Frequency Response - Mode D						
Genset De-Load (MW)	$\delta f_p$ (Hz)	Rapid Response (MW)	Primary Response (MW)	Secondary Response (MW)				
				$\delta f_s = -0.1\text{Hz}$	$\delta f_s = -0.2\text{Hz}$	$\delta f_s = -0.3\text{Hz}$	$\delta f_s = -0.4\text{Hz}$	$\delta f_s = -0.5\text{Hz}$
	-0.1							
	-0.2							
	-0.3							
	-0.4							
	-0.5							
	-0.6							
	-0.7							
	-0.8							
	-0.1							
	-0.2							
	-0.3							
	-0.4							
	-0.5							
	-0.6							
	-0.7							
	-0.8							
	-0.1							
	-0.2							
	-0.3							
	-0.4							
	-0.5							
	-0.6							
	-0.7							
	-0.8							
	-0.1							
	-0.2							
	-0.3							
	-0.4							
	-0.5							
	-0.6							
	-0.7							
	-0.8							
	-0.1							
	-0.2							
	-0.3							
	-0.4							
	-0.5							
	-0.6							
	-0.7							
	-0.8							
	-0.1							
	-0.2							
	-0.3							
	-0.4							
	-0.5							
	-0.6							
	-0.7							
	-0.8							

Station:  
 BM Unit Nos:

Table 2			High Frequency Response (MW) – Mode D				
Genset De-Load (MW)	$\delta f_p$ (Hz)	Rapid Response (MW)	Frequency Deviation from Target Frequency				
			$\delta f_h = +0.1$ Hz	$\delta f_h = +0.2$ Hz	$\delta f_h = +0.3$ Hz	$\delta f_h = +0.4$ Hz	$\delta f_h = +0.5$ Hz
	+0.1						
	+0.2						
	+0.3						
	+0.4						
	+0.5						

[In relation to the levels of Response capability pursuant to Section 3 of the **Tender Rules and Standard Contract Terms** and Table 2 above it is agreed that for low operating outputs, the **High Frequency Response** capability will be limited such that the general level will under normal operating conditions not be caused to drop below [ ] MW.]

[For the purpose of sub-paragraph 3.6.1(a) of the **Tender Rules and Standard Contract Terms** the level of **Response** capability for a **Frequency Deviation** of 0.0 Hz shall be 0.0 MW.]

**SECTION B**

**FFR Power Delivery Data Tables**

Station:  
BM Unit Nos:

<b>Rapid Response Power Delivery - Mode D</b>						
Frequency	Genset De-Load (MW)					
Deviation (Hz)						
<b>-0.1</b>						
<b>-0.2</b>						
<b>-0.3</b>						
<b>-0.4</b>						
<b>-0.5</b>						

<b>Primary Response Power Delivery - Mode D</b>						
Frequency	Genset De-Load (MW)					
Deviation (Hz)						
<b>-0.1</b>						
<b>-0.2</b>						
<b>-0.3</b>						
<b>-0.4</b>						
<b>-0.5</b>						

<b>Primary &amp; Secondary Response Power Delivery - Mode D</b>						
Frequency	Genset De-Load (MW)					
Deviation (Hz)						
<b>-0.1</b>						
<b>-0.2</b>						
<b>-0.3</b>						
<b>-0.4</b>						
<b>-0.5</b>						

<b>High Frequency Response Power Delivery - Mode D</b>						
Frequency	Genset De-Load (MW)					
Deviation (Hz)						
<b>+0.1</b>						
<b>+0.2</b>						
<b>+0.3</b>						
<b>+0.4</b>						
<b>+0.5</b>						

The figures for Genset De-Load in the tables shall be taken from the figures for Genset De-Load shown in Table 1 of this Section A.

**APPENDIX 5 - SUBSTITUTE FFR UNITS**

FFR Unit	Suitable Substitute FFR Unit

## APPENDIX 6 – PROVIDER’S AGENT

[NOT USED]

### **[FFR Provider’s Agent**

Name:

Address:

Contact Details:

In connection with each and every **FFR Contract**, the **Provider’s Agent** is hereby authorised by the **Provider** to:

- i. make and receive on behalf of the **Provider** all notifications with respect to window nominations and revisions, pursuant to paragraphs 3.2 and 3.3;
- ii. specify on behalf of the **Provider** the **FFR Confirmed Part Load Point** pursuant to paragraph 3.4;
- iii. notify **NGET** on behalf of the **Provider** of any inability (and resumption of ability) to provide **Firm Frequency Response** pursuant to paragraph 3.4;
- iv. receive on behalf of the **Provider** the following payments pursuant to paragraph 3.5:
  - the **Availability Payment**;
  - the **Window Initiation Payment**;
  - the **Nomination Payment**;
  - the **Window Revision Payment**; and
  - the **Response Energy Payment**.
- v. make on behalf of the **Provider** all notifications with respect to substitution of **Contracted FFR Units** pursuant to paragraph 3.8;
- vi. notify **NGET** on behalf of the **Provider** of the **Provider’s** intention to enter into an arrangement which could impair the **Provider’s** ability to provide **Firm Frequency Response** pursuant to paragraph 3.12; and
- vii. receive notification on behalf of the **Provider** from **NGET** or on **NGET’s** behalf that a **Contracted FFR Unit** does not have capability to provide **Firm Frequency Response** pursuant to paragraph 3.14.

All references above to paragraphs shall be to paragraphs in the **Tender Rules and Standard Contract Terms.**]