

DRAFT DEMAND RESPONSE SERVICES CODE - LEGAL TEXT

DEMAND RESPONSE SERVICES CODE (DRS)

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PART I

DRSC.1 INTRODUCTION

DRSC.1.1 The **Demand Response Services Code** is concerned with **Demand Side Providers** who wish to contract with **NGET** for the provision of **Ancillary Services**.

DRSC.1.2 **Ancillary Services** are non-mandatory services used by **NGET** in operating the **Total System**. They are provided by **Demand Response Providers** with payment being dealt with under the terms of the relevant agreement for the **Ancillary Service**.

DRSC.1.3 Where **NGET** and a **Demand Response Provider** enter into an **Ancillary Services** agreement, it shall be in accordance with **Transmission Licence** condition C16 and the **Standard Contract Terms**.

DRSC.1.4 The **Demand Response Code** applies only to **Demand Response Providers** who have contracted with **NGET** to provide **Ancillary Services**. This **Demand Response Services Code Code** does not apply to **Users** who are not **Demand Response Providers**.

DRSC.1.5 For the avoidance of doubt, **Network Operators** and **Non Embedded Customers** in respect of **EU Grid Supply Points** are only required to satisfy the compliance requirements specified in the **European Compliance Processes** (ECPs) and not those defined in section DRSC.11 of this code. In the case of a **Non-Embedded Customer**, the requirements of this **DRSC** would only apply if they were also a **Demand Response Provider**.

Comment [A1]: Check this with Legal

DRSC.2 OBJECTIVE

The objectives of the **DRSC** are to

DRSC.2.1 Define the minimum technical and compliance requirements, **Demand Response Providers** are required to satisfy if they enter provide a **Demand Response Service** to **NGET** in accordance with the terms of an **Ancillary Services Agreement** and:

DRSC.2.2 Ensure the obligations of **European Regulation (EU) 2016/1388** have been discharged.

DRSC.3 SCOPE

DRSC.3.1 The **DRSC** applies to:

any **Demand Response Provider** who has entered into an agreement to provide **Ancillary Services** with **NGET**.

DRSC.3.2 The **DRSC** does not apply to **Users** or parties who are not a **Demand Response Providers**

DRSC.4 GENERAL PROVISIONS

DRSC.4.1 **Demand Response Providers** who have an agreement with **NGET** to provide **Ancillary Services** shall be based on the following categories.

(a) Controlled by instruction from **NGET**

(i) **Demand Response Active Power Control**

(ii) **Demand Response Reactive Power Control**

(iii) **Demand Response Transmission Constraint Management**

(b) Automatic operation once the facility has been instructed into operation upon instruction from **NGET** pursuant to the terms of the **Ancillary Services** agreement.

- (i) **Demand Response System Frequency Control**
- (ii) **Demand Response Very Fast Active Power Control**

DRSC.4.2 **NGET** procure a range of **Balancing Services** to balance **Demand** and supply. DRSC.A.1 defines how these **Balancing Services** fit into the categories defined in DRSC.4.1.

DRSC.4.3 **Demand Facilities** and **Closed Distribution Systems** which constitute all or part of a **Demand Response Provider** may provide **Demand Response Services** to **NGET**. **Demand Response Providers** can offer **Demand Response Services** on an individual or collective basis and increase or decrease their **Demand** in accordance with the terms of their **Ancillary Services** agreement.

DRSC.4.4 The **Demand Response Services** specified in DRSC.4.1 are not exclusive and do not preclude **Demand Response Providers** from negotiating other services with **NGET**. These requirements would be pursuant to the terms of the **Ancillary Services** agreement. DRSC.A.1 provides a summary of **NGET's Balancing Services**.

DRSC.5 SPECIFIC PROVISIONS FOR DEMAND UNITS WITH DEMAND RESPONSE ACTIVE POWER CONTROL AND TRANSMISSION CONSTRAINT MANAGEMENT

DRSC.5.1 Where a **Demand Response Provider** (including **Demand Facilities** or **Closed Distribution Systems**) provide **Demand Response Active Power Control**, **Demand Response Reactive Power Control** or **Demand Response Transmission Constraint Management** to **NGET**, then the following requirements as detailed below shall apply. For the avoidance of doubt these requirements shall apply either individually or where it is not part of a **Demand Facility**, collectively as part of a **Demand** aggregation scheme through a **Demand Response Provider**. **Demand Response Providers** shall ensure that any of their **Plant** and **Apparatus** which provides the **Demand Response Services** as detailed in DRSC.5.1 shall:-

- (a) Be capable of satisfying the **Frequency** range requirements as specified in ECC.6.1.2.1.
- (b) Be capable of satisfying the voltage range requirements as specified in ECC.6.1.4.1.
- (c) Be capable of controlling the power consumption from the **Total System** in accordance with the terms of the **Ancillary Services** agreement.
- (d) Be capable of receiving instructions from **NGET** either directly or through a third party to modify their demand in accordance with the **Demand Response Service** they have agreed to provide..
- (e) Be capable of adjusting its **Real Power** or **Reactive Power** flow within a time period pursuant to the terms of the **Ancillary Services** agreement.
- (f) Be capable of full execution of an instruction issued by **NGET** to modify its power flow.
- (g) Be capable of further demand changes as instructed by **NGET**, prior to a previous instruction having been issued by **NGET** where specified in the **Ancillary Services** agreement. Any such instruction shall not exceed the normal safe operating conditions of the **Demand Response Providers Plant** and **Apparatus** which could cause such equipment to trip. Instructions to modify **Active Power** or **Reactive Power** flow may have immediate or delayed effects but in any event would need to comply with the requirements of the **Ancillary Services** agreement.

Comment [A2]: This last sentence (relating to 110kV connections) is not relevant. Irrespective of the connection voltage - they would be classified as a Demand Response Provider and therefore have an agreement with NGET and be treated in the same way as any other Demand Response Provider.

Comment [A3]: Different providers will offer different services and these may be over different timescales. DCC does not mandate what these timeframes are so this would have to revert back to the Agreement.

- (h) Notify **NGET** of any change in the available capacity in accordance with the relevant **Ancillary Services** agreement.
- (i) Be capable of withstanding a rate of change of **System Frequency** of up to a maximum of 1Hz/s measured over a 500ms time frame.
- DRSC.5.2 In addition to the requirements of DRSC.5.1, where a **Demand Response Provider** automatically modifies its **Demand** in response to changes in **System Frequency** or **System** voltage or both, **NGET** will have previously instructed the **Demand Response Provider** to switch these facilities into service in accordance with the terms of the **Ancillary Services** agreement. The ability for **NGET** to issue instructions, receive acknowledgement of those instructions and receive operational metering data (for example voltage, current, **Active Power** and **Reactive Power** signals) from the **Demand Response Provider** shall be defined in the **Ancillary Services** agreement which shall be pursuant to the **Standard Contract Terms**..
- DRSC.5.3 **Non Embedded Customers** who are also **Demand Response Providers** shall be able to provide **Demand Response Reactive Power Control** by switching static compensation equipment into or out of service. i .
- DRSC.5.4 Part I of DRSC.A.1 lists the categories of **Balancing Services** that a **Demand Response Provider** who offers **Demand Response Active Power Control**, **Demand Response Reactive Power Control** or **Demand Response Transmission Constraint Management** may offer to **NGET**. Part II of DRSC.A.1 details the specific requirements for each of these **Balancing Services**.
- DRSC.6 SPECIFIC PROVISIONS FOR DEMAND UNITS WITH DEMAND RESPONSE FREQUENCY CONTROL
- DRSC.6.1 Where a **Demand Response Provider** (including **Demand Facilities** or **Closed Distribution Systems**) provide **Demand Response System Frequency Control** to **NGET** then the following requirements as detailed below shall apply. For the avoidance of doubt, these requirements shall apply either individually or where it is not part of a **Non-Embedded Customers System**, collectively as part of a **Demand** aggregation scheme through a **Demand Response Provider**. **Demand Response Providers** shall ensure that any of their **Plant and Apparatus** which provides the **Demand Response Services** as detailed in DRSC.6.1 shall:-
- (a) Be capable of satisfying the **Frequency** range requirements as specified in ECC.6.1.2.1.
 - (b) Be capable of satisfying the voltage range requirements as specified in ECC.6.1.4.1.
 - (c) Be fitted with a deadband facility no greater than 0.03Hz unless otherwise specified in the **Ancillary Services** agreement. This requirement shall not apply to **Demand Side Providers** where only a **Non-Dynamic Frequency Response Service** is provided.
 - (d) Be capable of continuous operation. The envelope of operation of the **Demand Response System Frequency Control** shall be in accordance with the terms of the **Ancillary Services** agreement and consistent with **NGET's Balancing Services**. For the avoidance of doubt, continuous operation would not apply to a static **Frequency Response** service..
 - (e) Be fitted with a control system which is capable of responding to changes in **System Frequency** outside the nominal value of 50Hz. A deadband either side of nominal **Frequency** shall be permitted which shall be in accordance with the requirement of the **Ancillary Services** agreement.

Comment [A4]: Check with Legal that this maps across correctly with DCC Art 29(2)

- (f) Be equipped with a controller that measures the actual **System Frequency**. The refresh rate for this controller shall be no longer than 0.2 seconds.
- (g) Be able to detect a change in **System Frequency** of 0.01Hz. Each **Demand Unit** owned or operated by a **Demand Response Provider** shall be capable of a rapid detection and respond to changes in **System Frequency** which shall be pursuant to the terms of the **Ancillary Services** agreement. An offset in the steady state measurement of **Frequency** shall be acceptable up to 0.05Hz. **Frequency** measurements must be recorded at each site and must not be derived on an aggregated basis.

DRSC.6.2 Part I of DRSC.A.1 lists the categories of **Balancing Services** that a **Demand Response Provider** who offers **Demand Response System Frequency Control** may offer to **NGET**. Part II of DRSC.A.1 details the specific requirements for each of these **Balancing Services**.

DRSC.7 SPECIFIC PROVISIONS FOR DEMAND UNITS WITH DEMAND RESPONSE VERY FAST ACTIVE POWER CONTROL

DRSC.7.1 Where a **Demand Response Provider** provides **Demand Response Very Fast Active Power Control** to **NGET**, then the applicable requirements shall be pursuant to the terms of the **Ancillary Services** agreement which shall specify:-

- (a) The relationship between the change in **Active Power** and the rate of change of **System Frequency** over the **Demand** range of the **Demand Response Provider**.
- (b) The operating principles of the **Demand Response Very Fast Active Power Control** and associated performance parameters.
- (c) The response time of the **Demand Response Very Fast Active Power Control** which shall be no longer than 2 seconds from the inception of the **System Frequency** change.

DRSC.7.2 Part I of DRSC.A.1 lists the categories of balancing services that a **Demand Response Provider** who offers **Demand Response Very Fast Active Power Control** may offer to **NGET**. Part II of DRSC.A.1 details the specific requirements for each of these **Balancing Services**.

DRSC.8 DATA REQUIRED BY NGET FROM DEMAND RESPONSE PROVIDERS

DRSC.8.1 All **Demand Response Providers** who have a contract with **NGET** to provide **Demand Response Services** are required to provide the data required pursuant to the terms of the **Ancillary Services** agreement. The data required to be submitted to **NGET** will vary depending upon the type of **Balancing Service** and the requirements of the **Ancillary Service** agreement. DRSC.A.1 Part II, provides additional information on the type of data that would be required in respect of each **Balancing Service** which would be pursuant to the **Standard Contract Terms**.

DRSC.9 OPERATIONAL METERING REQUIREMENTS

DRSC.9.1 **Demand Side Providers** are required to supply operational metering signals to **NGET** pursuant to the terms of the **Ancillary Services** agreement. These requirements would be consistent with the requirements in the **Standard Contract Terms** and will vary depending upon the type of **Ancillary Service**.

DRSC.10 INSTRUCTIONS ISSUED TO DEMAND RESPONSE PROVIDERS

DRSC.10.1 To enable **NGET** to instruct **Demand Response Providers** in the operational environment the requirement for **Demand Response Providers** shall be in accordance with the terms of the **Ancillary Services** agreement. These requirements would be consistent with the

requirements in the **Standard Contract Terms** and will vary depending upon the type of **Ancillary Service**.

PART II

COMPLIANCE REQUIREMENTS FOR DEMAND RESPONSE SERVICES

DRSC.11 OPERATIONAL NOTIFICATION PROCEDURE

DRSC.11.1 General Provisions

DRSC.11.1.1 All **Demand Response Providers** who enter into an agreement with **NGET** to provide **Ancillary Services** are required to undertake a compliance process to ensure the **Demand Response Providers Plant** and **Apparatus** satisfies the requirements of the **Ancillary Services** agreement. For the avoidance of doubt, **Demand Response Providers** who are also **User's**, will also be required to satisfy the requirements of the applicable requirements of the **European Compliance Processes (ECP's)**.

DRSC.11.1.3 Each **Demand Response Provider**, shall confirm to **NGET** its ability to comply with the requirements of the **Ancillary Services** agreement.

DRSC.11.1.4 Each **Demand Response Provider** shall notify **NGET** of any change to its **Plant** or **Apparatus** such that it is no longer able to satisfy the conditions specified in the **Ancillary Services** agreement. Such changes shall be notified to **NGET** in accordance with the terms of the **Ancillary Services** agreement.

DRSC.11.3 Operational Notification Procedures for Demand Response Providers Plant

DRSC.11.3.1 The operational notification procedure for a **Demand Response Providers** shall comprise a **Demand Response Unit Document (DRUD)**.

DRSC.11.3.2 The format of the **Demand Response Unit Document (DRUD)** shall take the format shown in DRSC.A.2 and shall provide sufficient information to demonstrate the **Demand Response Provider's Plant** and **Apparatus** is capable of satisfying the full requirements of the **Ancillary Services** agreement and the applicable requirements of the **DRSC**. The compliance requirements can be simplified to a single operational notification stage as well as be reduced. **Demand Response Providers** shall be required to submit a new **DRUD** for each subsequent **Demand Unit** added to its fleet.

DRSC.11.3.3 When the **Demand Response Provider** has submitted a final **DRUD** to the satisfaction of **NGET** which clearly demonstrates full compliance with the **Ancillary Services** agreement, **NGET** shall issue a **Final Operational Notification** to the **Demand Response Provider**.

DRSC.11.4 COMPLIANCE

DRSC.11.4.1 Responsibility of the Demand Response Provider

Comment [A5]: At the GC0104 meeting we agreed that it would not be appropriate to have a process for connections below 1000V and connections above 1000V.

DRSC.11.4.1.2 **Demand Response Providers** are required to satisfy the requirements of the **Ancillary Services** agreement which shall include satisfying the applicable requirements of this **Demand Response Services Code**.

DRSC.11.4.1.3 Should the **Demand Response Provider** wish to modify the technical capabilities of its **Plant** and **Apparatus** which affects its compliance with the **Ancillary Services** agreement, it should notify and agree any timescales for the change with **NGET** prior to making any change to its **Plant** and **Apparatus**.

DRSC.11.4.1.4 Any operational incidents or failure of the **Demand Response Provider's Plant** and **Apparatus** which impacts its ability to satisfy the compliance requirements detailed in this **Demand Response Services Code** shall be notified to **NGET** as soon as possible after occurrence of the incident.

DRSC.11.4.1.5 Any planned test schedules and procedures to verify compliance of the **Demand Response Providers Plant** and **Apparatus** shall be submitted to **NGET** in advance of the tests. **NGET** shall assess the test schedules and procedures in a timely manner prior to agreeing that the **Demand Response Provider** can carry out the tests.

DRSC.11.4.1.6 **NGET** may witness such tests and record the performance of the **Demand Response Providers Plant** and **Apparatus** to verify compliance with the **Ancillary Services** agreement and the **Demand Response Services Code**.

DRSC.11.4.2 Role of NGET

DRSC.11.4.2.1 **NGET** shall assess the compliance of the **Demand Response Provider** and shall undertake monitoring throughout the life time of the **Demand Response Providers Plant** and **Apparatus** to ensure compliance with the requirements of the **Ancillary Services** agreement.

DRSC.11.4.2.2 **NGET** may require **Demand Response Providers** to carry out compliance tests and simulations according to a repeat plan or general scheme or replacement of equipment which may have an impact on the compliance of the **Demand Response Providers Plant** and **Apparatus** as detailed in DRSC.11.4.1.3 and DRSC.11.4.1.4. **NGET** shall inform the **Demand Response Provider** of the results of these tests.

DRSC.11.4.2.3 As part of this compliance process, the **Demand Response Provider** shall provide the following items:-

- (a) All documentation and certificates
- (b) Details of the technical data required to ensure compliance with the **Ancillary Services** agreement.
- (c) Steady state and dynamic models of their **Plant** and **Apparatus**.
- (d) Timelines for the submission of system data required to perform **System** studies

- (e) Study results showing the expected steady state and dynamic performance of the **Plant and Apparatus**
- (f) Conditions and procedures including the scope for registering **Equipment Certificates** or otherwise as agreed with **NGET**.
- (g) Conditions and procedures for the use of relevant **Equipment Certificates** issued by an **Authorised Certifier** to a **Demand Response Provider**.

DRSC.11.4.2.4 If compliance tests or simulations cannot be carried out as agreed between the **Demand Response Provider** and **NGET** due to reasons attributable to **NGET**, then **NGET** shall not unreasonably withhold the operational notification referred to in DRSC.11.3.3.

DRSC.11.5 Compliance Testing

DRSC.11.5.1 Common Provisions for Compliance Testing

DRSC.11.5.1.1 The purpose of Compliance testing is to ensure that the **Demand Response Providers Plant and Apparatus** is capable of satisfying the requirements of the **Ancillary Services** agreement and applicable sections of this **Demand Response Services Code** in addition to verifying that the models and data submitted provide a true and accurate representation of the **Plant** as built.

DRSC.11.5.1.2 Notwithstanding the minimum requirements for compliance testing detailed in DRSC.11.5 of this **Demand Response Services Code**, **NGET** shall:-

- (a) Allow the **Demand Response Provider** to carry out an alternative set of tests provided that they are efficient and sufficient to demonstrate that the **Demand Response Providers Plant and Apparatus** is capable of satisfying the requirements of the **Ancillary Services** agreement and the applicable sections of the **Demand Response Services Code**.
- (b) Require the **Demand Response Provider** to carry out additional or alternative tests to those specified in DRSC.11.6 where they would otherwise be insufficient to demonstrate compliance with the **Ancillary Services** agreement.
- (c) Require the **Demand Response Provider** to be responsible for carrying out the tests in accordance with the requirements specified in DRSC.11.6 of the **Demand Response Services Code**. **NGET** shall cooperate with the **Demand Response Provider** and will not unduly delay the scheduling of the tests.

DRSC.11.5.1.3 **NGET** may witness such tests (either on site or remotely from **NGET's** control room) to record the performance of the **Demand Response Providers Plant and Apparatus** to verify compliance with the **Ancillary Services** agreement and the **Demand Response Services Code**. Where **NGET** witnesses the tests remotely, the **Demand Response Provider** shall provide the monitoring equipment necessary to record all relevant test signals and measurements in addition to ensuring that necessary representatives from the **Demand Response Provider** are available on site for the entire testing period. Signals specified by **NGET** shall be provided if for selected tests, **NGET** wishes to use its own equipment to record performance. **NGET** will

inform the **Demand Response Provider** if it wishes to witness the tests.

DRSC.11.6 Compliance Testing for Demand Response Providers with Demand Response Active Power Control, Reactive Power Control and Transmission Constraint Management.

DRSC.11.6.1 Demand Modification Tests

DRSC.11.6.1.1 **Demand Response Providers** who have signed an **Ancillary Services** agreement with **NGET** to provide **Demand Response Active Power Control**, **Demand Response Reactive Power Control** or **Demand Response Transmission Constraint Management** are required to demonstrate (through site tests) the capability of their **Plant** and **Apparatus** to satisfy the requirements of the **Ancillary Services** agreement and applicable requirements of DRSC.5. The site tests should demonstrate the capability of the **Demand Response Providers** ability to operate with instruction over the agreed timeframes, **Demand** range and duration pursuant to the terms of the **Ancillary Services** agreement. The tests can be completed individually or as part of a **Demand** aggregation scheme.

DRSC.11.6.1.2 The tests shall be carried out either by instruction from **NGETs Control Centre** or by site tests through injections applied to the **Demand Response Providers Plant** and **Apparatus**.

DRSC.11.6.1.3 The test shall be deemed as passed if the requirements of the **Ancillary Services** agreement have been satisfied and the applicable requirements of DRSC.5 demonstrated to the satisfaction of **NGET**.

DRSC.11.6.1.4 A list of references to **Equipment Certificates** issued by an **Authorised Certifier** or otherwise agreed with **NGET** used for equipment that is installed at the site or copies of the relevant **Equipment Certificates** issued by an **Authorised Certifier** or otherwise, can be supplied by the **Demand Response Provider** to demonstrate part of the evidence of compliance;

DRSC.11.6.2 Disconnection and Reconnection of Static Compensation Facilities

DRSC.11.6.2.1 **Demand Response Providers** who have signed an **Ancillary Services** agreement with **NGET** to provide **Demand Response Active Power Control**, **Demand Response Reactive Power Control** or **Demand Response Transmission Constraint Management** and have also agreed to disconnect or reconnect (or both) its static compensation facilities when receiving an instruction from **NGET** in accordance with the requirements of the **Ancillary Services** agreement and DRSC.5.3, shall be required to demonstrate the performance of their **Plant** and **Apparatus** in satisfying these requirements. These requirements can be demonstrated individually or collectively as part of a demand aggregation scheme.

DRSC.11.6.1.2 The tests shall be carried out either by instruction from **NGETs Control Centre** or by site tests resulting in the disconnection and subsequent re-connection of the static compensation facilities.

DRSC.11.6.1.3 The test shall be deemed as passed if the requirements of the **Ancillary Services** agreement have been satisfied and the applicable requirements of DRSC.5.3 demonstrated to the satisfaction of **NGET**.

DRSC.11.7 Compliance Simulation

DRSC.11.7.1 Common Provisions on Compliance Simulations

DRSC.11.7.1.1 **Demand Response Providers** who agree to provide **Demand Response Very Fast Active Power Control** in accordance with the terms of the **Ancillary Services** agreement and DRSC.7 are required to demonstrate their ability to satisfy the requirements of the **Ancillary Services** agreement and DRSC.7 through necessary simulation studies to the satisfaction of **NGET**.

DRSC.11.7.1.2 **Demand Response Providers** are required to submit further simulation studies in respect of **Demand Response Very Fast Active Power Control** where there has been a development, replacement or modernisation of the **Demand Response Providers Plant** and **Apparatus** or **NGET** has identified a non-compliance with the **Demand Response Providers** ability to satisfy the requirements of the **Ancillary Services** agreement and DRSC.7.

DRSC.11.7.1.3 Notwithstanding the requirements of DRSC.11.7.1.1 and DRSC.11.7.1.2 **NGET** shall be entitled to:-

- (a) Allow the **Demand Response Provider** to carry out an alternative set of simulations provided that they are efficient and sufficient to demonstrate that the **Demand Response Providers Plant** and **Apparatus** is capable of satisfying the requirements of the **Ancillary Services** agreement and the applicable sections of the **Demand Response Services Code**.
- (b) Require the **Demand Response Provider** to carry out additional or alternative simulations to those specified in DRSC.11.7 and DRSC.11.8 where they would otherwise be insufficient to demonstrate compliance with the **Ancillary Services** agreement.

DRSC.11.7.1.4 **NGET** may check that the **Demand Response Provider** complies with the requirements of the **Ancillary Services** agreement and the applicable sections of the **Demand Response Services Code** by carrying out its own compliance simulations based on the simulation reports, models and test measurements.

DRSC.11.7.1.5 **NGET** will supply upon request from the **Demand Response Provider**, data to enable the **Demand Response Provider** to carry out the required simulations in accordance with the requirements of the **Ancillary Services** agreement and DRSC.11.7.

DRSC.11.8 Compliance Simulations for Demand Units with Demand Response Very Fast Active Power Control

DRSC.11.8.1 **Demand Response Providers** shall supply a model to **NGET** to demonstrate the technical capability of the **Demand Response Providers Plant** and **Apparatus** to provide **Very Fast Active Power Control** in accordance with the terms of the **Ancillary Services** agreement and DRSC.7.

DRSC.11.8 The simulation shall be deemed successful provided the **Demand Response Providers Plant** and **Apparatus** satisfies the requirements to the **Ancillary Services** agreement and DRSC.7 to the satisfaction of **NGET**.

DRSC.9 GOVERNANCE OF BALANCING SERVICES PRINCIPLES IN ACCORDANCE WITH THE PROCUREMENT GUIDELINES

DRSC.9.1 The procurement guidelines have been developed in consultation with The **Authority** and in accordance with standard condition C16 of **NGET's Transmission Licence**. The guidelines may only be modified in accordance with the processes set out in standard condition C16 of **NGET Electricity Transmission Licence**. The procurement guidelines set out the kinds of **Balancing Services** which **NGET** may be interested in purchasing, together with the mechanisms by which such **Balancing Services** will be procured.

APPENDIX I - DRSC.A.1

PART ISUMMARY OF DEMAND RESPONSE SERVICES AND BALANCING SERVICES

DEMAND RESPONSE SERVICE	BALANCING SERVICE
Demand Response Active Power Control	All non-dynamic frequency response products All reserve products
Demand Response Reactive Power Control	Any reactive power service
Demand Response Transmission Constraint Management	Any constraint service on the Transmission network
Demand Response System Frequency Control	All dynamic frequency response products
Demand Response Very Fast Active Power Control	Any frequency response product faster than Demand Response Active Power Control and Frequency Control

APPENDIX I - DRSC.A.1

PART II

BALANCING SERVICES REQUIREMENTS

Demand Response Providers can offer one or more **Balancing Services** to **NGET**. The following information has been provided on **NGET's** website to provide **Demand Response Providers** with more details of each **Balancing Service** and the necessary requirements should they wish to offer them as **an Ancillary Service** to **NGET**. Such requirements would be pursuant to the **Standard Contract Terms**.

Firm Frequency Response – Non Dynamic and Dynamic

<https://www.nationalgrid.com/uk/electricity/balancing-services/frequency-response-services/firm-frequency-response>

Short Term Operating Reserve

<https://www.nationalgrid.com/uk/electricity/balancing-services/reserve-services/short-term-operating-reserve-stor>

Demand Turn Up

<https://www.nationalgrid.com/uk/electricity/balancing-services/reserve-services/demand-turn>

Demand Side Response

<https://www.nationalgrid.com/uk/electricity/balancing-services/demand-side-response-dsr>

Enhanced Frequency Response

<https://www.nationalgrid.com/uk/electricity/balancing-services/frequency-response-services/enhanced-frequency-response-efr>

Fast Reserve

<https://www.nationalgrid.com/uk/electricity/balancing-services/reserve-services/fast-reserve>

APPENDIX II – DRSC.A.2Format of the **Demand Response Unit Document (DRUD)****Demand Response Unit Document (DRUD)**
Statement of Compliance for Demand Response Providers**Contract company details**

Contracted company name	
Primary contact name	
Contact number /s	
Email address	

Demand Response Service Details

Contract ID	
Service type,	
Asset type,	
Unit make up	
Aggregation methodology (if appropriate)	
Unit location / ID	
Contract signed date	
Service start date	
Desired test date	

Compliance Requirements

DRSC Requirement	Compliance Y/N	Demand Response Provider Statement
All documentation and certificates demonstrating compliance with the DRSC.		
Details of the technical data required to ensure compliance with the Ancillary Services agreement.		
Steady state and dynamic models (or equivalent information) of Plant and Apparatus.		
Timelines for the submission of system studies or equivalent data.		
Study results showing the expected steady state and dynamic performance of the Plant and Apparatus		
Conditions and procedures including the scope for registering Equipment Certificates or otherwise as agreed with NGET.		
Conditions and procedures for the use of relevant Equipment Certificates issued by an Authorised Certifier to a Demand Response Provider.		

DRSC Requirement	Compliance Y/N	Demand Response Provider Statement
Operational Metering Data to be submitted in accordance with Ancillary Services agreement.		
Ability to receive instructions to and from NGET in accordance with Ancillary Services agreement.		
Ability to operate over frequency range as specified in DRSC.5.1(a).		
Ability to operate over voltage range as specified in DRSC.5.1(b).		
Ability to withstand a rate of change of system frequency up to a maximum of 1Hz per second as measured over a 500ms timeframe as specified in DRSC.5.1(i).		
Non-Embedded Customers who are also Demand Response Providers ability to switch static compensation equipment into or out of service in accordance with DRSC5.3 as applicable.		
Deadband settings as applicable.		
Control System Block diagrams, parameters and settings as applicable.		

Declaration – to be completed by Customer or the **Demand Response Providers** Appointed Technical Representative

I declare that for all the **Demand Response Providers** information associated with this contract:

1. Compliance with the requirements of the **Demand Response Services Code** is achieved.
2. The commissioning checks have been successfully completed.

Name:

Signature:

Company Name:

Position:

Declaration – to be completed by **NGET** Witnessing Representative if applicable. Delete if not witnessed by the **NGET**.

I confirm that I have witnessed the commissioning checks in this document on behalf of

_____ and that the results are an accurate record of the checks
Name:
Signature:
Company Name:

< END OF DEMAND RESPONSE SERVICES CODE >