

### Demand Side Response Installation Documents.

For DNO contracted DSR, the Demand Response Unit Document and the Installation Document are one and the same document.

However there are two versions of this document:

DSR 1 for individual customers, DSR 2 for aggregators.

DSR 3 should be completed for each Demand Unit reported under DSR 1 or DSR 2 – either on a site by site basis or once only as a type test certification, the details of which can be quoted on DSR 1.

It is the aggregator's responsibility to ensure Distribution Code compliance for each Demand Unit included within their DSR 2 submission.

DSR 4 – Demand Unit Decommissioning form.

## DSR 1 - Demand Unit - Installation Document

Please complete and provide this document for every **Demand Facility**.

Part 1 should be completed for the **Demand Facility**.

Part 2 should be completed for each **Demand Unit(s)** being commissioned. Where the installation is phased the form should be completed and returned to the **DNO** as each part of the installation is commissioned.

### DSR 1 - Part 1 Demand Facility

To ABC electricity distribution      **DNO**  
99 West St, Imaginary Town, ZZ99 9AA      [abcd@wxyz.com](mailto:abcd@wxyz.com)

#### Customer Details:

<b>Customer</b> (name)	
Address	
Post Code	
Contact person (if different from <b>Customer</b> )	
Telephone number	
E-mail address	
MPAN(s)	
<b>Customer</b> signature	

#### Installation details

Address	
Post code	

**Summary details of Demand Units - where one or more Demand Units will exist within one premises.**

Manufacturer / Reference	Date of commissioning	Technology Type eg Air Conditioning Refrigeration Heating EV / Battery Charging Demand reduction via DG operation	Manufacturers Ref No. (Product ID) or other identification	Demand Unit Rated Capacity in kW	Modulation Capacity (kW)	Modulation Capacity (kVAr)

**Commissioning Checks**

Description	Confirmation
Operational Monitoring provides the appropriate data to the DNO.	Yes / No*
DSR3 Compliance Verification Report completed for each Demand Unit	Yes / No*

**DSR 1 - Part 2 Demand Unit****Demand Unit Type/Description****Manufacturer name****Other identification information****Commissioning Checks**

Operational Monitoring provides the appropriate data to the DNO.

Yes / No\*

\*Circle as appropriate. If "No" is selected the **Demand Unit** is deemed to have failed the commissioning tests and the **Demand Unit** shall not be put in service for DSR purposes (although it can continue to be used normally).

Additional comments / observations:

**Declaration – to be completed by Customer or the Customer's Appointed Technical Representative**I declare that for the **Demand Unit**:

1. Compliance with the requirements of the Distribution Code is achieved.
2. The commissioning checks have been successfully completed.

Name:

Signature:

Date:

Company Name:

Position:

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

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:

Date:

Company Name:

## DSR 2 – Aggregator’s Compliance Document

Please complete and provide this document for every **Demand Facility**.

Part 1 should be completed for the Aggregator’s details.

Part 2 should be completed to list each **Demand Unit** forming part of the contract with the **DNO**.

### DSR 2 - Part 1 Aggregator’s Details

Contract Reference:

To ABC electricity distribution **DNO**  
99 West St, Imaginary Town, ZZ99 9AA [abcd@wxyz.com](mailto:abcd@wxyz.com)

#### Aggregator Details:

Aggregator  
(name)

Address

Post Code

Contact person

Telephone number

E-mail address

Customer  
signature

#### Summary details of Demand Units.

Number of **Demand Units**

Number

Aggregate modulated Active Demand

MW

Aggregate modulated Reactive Demand

MVAr

#### Commissioning Checks

Description

Confirmation

Confirmation that all the **Demand Unit** associated with the **DNO** contract responds to the **DNO**’s command signal within 5s and that the response is held for the duration of the signal (not less than five minutes) and that unmodulated behaviour resumes when the signal is

Yes / No\*

removed.	
Operational Monitoring provides the appropriate data to the DNO.	Yes / No*
If "No" is selected the <b>Demand Unit</b> is deemed to have failed the commissioning tests and the <b>Demand Unit</b> shall not be put in service for DSR purposes (although it can continue to be used normally).	
Declaration – to be completed by Customer or the <b>Customer's</b> Appointed Technical Representative	
I declare that for all the <b>Demand Units</b> associated with this contract: 1. Compliance with the requirements of the Distribution Code is achieved. 2. The commissioning checks have been successfully completed.	
Name:	
Signature:	Date:
Company Name:	
Position:	
Declaration – to be completed by <b>DNO</b> Witnessing Representative if applicable. Delete if not witnessed by the <b>DNO</b> .	
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:	Date:
Company Name:	



### DSR 3 - Compliance Verification Report for Demand Units

This form should be used by the **Manufacturer** to demonstrate and declare compliance with the requirements of the Distribution Code. The form can be used in a variety of ways as detailed below:

1. To obtain **Fully Type Tested** status

The **Manufacturer** can use this form to obtain **Fully Type Tested** status for a **Demand Unit** by registering this completed form with the Energy Networks Association (ENA) Type Test Verification Report Register.

2. To obtain **Type Tested** status for a product

This form can be used by the **Manufacturer** to obtain **Type Tested** status for a product which is used in a **Demand Unit** by registering this form with the relevant parts completed with the Energy Networks Association (ENA) Type Test Verification Report Register.

3. One-off Installation

This form can be used by the **Manufacturer** or **Installer** to confirm that the **Demand Unit** has been tested to satisfy all or part of the requirements of the Distribution Code. This form must be submitted to the **DNO** as part of the compliance assessment.

A combination of (2) and (3) can be used as required.

Note:

If the **Demand Unit** is **Fully Type Tested** and registered with the Energy Networks Association (ENA) Type Test Verification Report Register, the Installation Document (Form DSR 1) should include the **Manufacturer's** reference number (the Product ID), and this form does not need to be submitted.

Where the **Demand Unit** is not registered with the ENA Type Test Verification Report Register or is not **Fully Type Tested** this form (all or in parts as applicable) needs to be completed and provided to the **DNO**, to confirm that the **Demand Unit** has been tested to satisfy all or part of the requirements of this Distribution Code.

<b>Demand Unit Type/Description</b>			
<b>Manufacturer name</b>			
Address			
Tel		Web site	
E:mail			
Capacity of modulated active power.	kW		
Capacity of modulated reactive power.	kVAr		
Maximum ramp rate(s) (if applicable)	kW and/or kVAr per second		
Minimum ramp rate(s) (if applicable)	kW and/or kVAr per second		

There are four options for Testing: (1) **Fully Type Tested**, (2) **Partially Type Tested**, (3) one-off installation, (4) tested on site at time of commissioning. The check box below indicates which tests in this Form have been completed for each of the options. With the exception of **Fully Type Tested Demand Units** tests marked with \* may be carried out at the time of commissioning.

Tested option:	1. Fully Type Tested	2. Partially Type Tested	3. One-Off Man. Info.	4. Tested on Site at time of Commissioning
0. <b>Fully Type Tested</b> - all tests detailed below completed and evidence attached to this submission		N/A	N/A	N/A
1. Operating Range			N/A	N/A
2. Demand modulation tests*				
<p>* may be carried out at the time of commissioning.</p> <p>Document reference for <b>Manufacturers' Information</b> including the ENA Type Test Verification Report Register Product ID number where applicable:</p>				
<p><b>Manufacturer</b> compliance declaration. - I certify that all products supplied by the company with the above <b>Type Tested Manufacturer's</b> reference number will be manufactured and tested to ensure that they perform as stated in this document, prior to shipment to site and that no site <b>Modifications</b> are required to ensure that the product meets all the requirements of the Distribution Code</p>				
Signed		On behalf of		
Name				
<p>Note that testing can be done by the <b>Manufacturer</b> of an individual component or by an external test house.</p> <p>Where parts of the testing are carried out by persons or organisations other than the <b>Manufacturer</b> then that person or organisation shall keep copies of all test records and results supplied to them to verify that the testing has been carried out by people with sufficient technical competency to carry out the tests.</p>				

## DSR 3 - Compliance Verification Report –Tests for Demand Units

**1. Operating Range:** Eight tests should be carried out; four with the **Demand Unit** operating at **Rated Capacity**, and four operating at maximum modulation.

Frequency, voltage and **Active and Reactive Power** measurements at the output terminals of the **Demand Unit** shall be recorded every second. The tests will verify that the **Demand Unit** can operate within the required ranges for the specified period of time.

	Rated Capacity	Fully modulated
Test 1 Voltage = 90% of nominal ((207.0 V), Frequency = 47 Hz, Period of test 20 s		
Test 2 Voltage = 90% of nominal (207.0 V), Frequency = 47.5 Hz, Period of test 90 minutes		
Test 3 Voltage = 110% of nominal (253 V), Frequency = 51.5 Hz, Period of test 90 minutes		
Test 4 Voltage = 110% of nominal (253 V), Frequency = 52.0 Hz, Period of test 15 minutes		

## 2 Modulation

Confirmation that the **Demand Unit** responds to the **DNO's** command signal within 5 s and that the response is held for the duration of the signal (not less than five minutes) and that unmodulated behaviour resumes when the signal is removed.

Yes / NA

Additional comments

## DSR 4 –Decommissioning Confirmation

Confirmation of the decommissioning of the DSR capability a **Demand Unit**

<b>Form DSR 4 - Decommissioning Confirmation</b>		
<b>Demand Facility Details</b>		
Demand Facility Address (inc post code)		
Telephone number		
MPAN(s)		
<b>Distribution Network Operator (DNO)</b>		
<b>Demand Unit Details</b>		
<b>Demand Unit Type/Description</b>		
<b>Manufacturer name</b>		
<b>Other identification information</b>		
<b>Voltage of Connection</b>	<b>Modulated Active Power (kW)</b>	<b>Modulated Reactive Power (kVA)</b>