

# Grid Code Modification Proposal Form

Email to [gridcode@eirgrid.com](mailto:gridcode@eirgrid.com)



## Title of Modification Proposal:

Incorporation of the DCC requirements into the Grid Code

**MPID (EirGrid Use Only): MPID276\_a**

<b>Date:</b>	1 <sup>st</sup> November 2019		
<b>Company Name:</b>	EirGrid		
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<b>Grid Code Version:</b>	8.0		
<b>Grid Code Section(s) Impacted by Modification Proposal:</b>	Various – further details are available in the document entitled “MPID276_a_GC9_DCC_Article_Incorporation_Locations”, as attached to the GCRP invitation email.		

## Modification Proposal Justification:

### Background

Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection (hereafter referred to as **DCC**) aims to establish a set of common, minimum requirements and principles for demand connections across EU Member states to enable the appropriate use of demand facilities’ and distribution systems’ capabilities to increase system security, facilitate trade and assist in the integration of renewable sources.

The CRU issued a [decision](#) to extend the “existing classification” date to 7<sup>th</sup> September 2019, in line with the full go-live date of the DCC. This means that for all relevant demand connections connecting after the 7<sup>th</sup> September 2019 the DCC requirements will apply, unless the facility owner has concluded a final and binding contract for purchase of the main plant before the 7<sup>th</sup> September 2019 and has provided evidence of same as required by DCC.

A **Non-DCC Unit** does not have to comply with DCC, and is defined as:

**A Demand Facility, Closed Distribution System or Distribution System with a signed Connection Agreement:**

- Connected to the **Network** on or before the 7<sup>th</sup> September 2019; or
- Whose owner has concluded a final and binding contract for the purchase of the main **Plant** on or before the 7<sup>th</sup> September 2019 and provides evidence of same, as acknowledged by the **TSO**, on or before the 7<sup>th</sup> March 2020. Such evidence shall at least contain the contract title, its date of signature and date of entry into force, and the specifications of the main **Plant** to be constructed, assembled, or purchased; or
- Is an exception to the applicability of the **DCC Unit** requirements and is a **Non-DCC Unit** such as a **Pumped Storage Unit** that has both generating and pumping operation mode.

An existing **Demand Facility, Closed Distribution System or Distribution System** that undergoes modernisation, refurbishment or replacement of equipment which drives a modification to its **Connection Agreement**, and has concluded a final and binding contract for the purchase of the **Plant** being modified after the 7<sup>th</sup> September 2019 will be deemed a **DCC Unit**, unless the **Plant** being modified is one of the exceptions listed in c) above.

For clarity, should an existing **Distribution System** undergo modernisation, refurbishment or replacement of equipment, such as the addition of a new **Distribution Facility** or the refurbishment of an existing **Distribution Facility**, part or all of the DCC requirements will apply to the appropriate part of the **Distribution System** in question.

**Note:** Where a **Generation Unit** is installed to provide back-up power to a **Demand Facility**, the **Generation Unit** shall be deemed to be an **RfG Generation Unit** and will be subject to the relevant sections of the **Grid Code**, unless the **Generation Unit** is only intended to provide back-up power and will operate in parallel with the **System** for less than five minutes per calendar month while the **System** is in normal state.

A **DCC Unit** does have to comply with DCC, and is defined as:

A **Demand Facility**, **Closed Distribution System** or **Distribution System** that is not a **Non-DCC Unit**. A **Pumped Storage Unit** which only operates as **Pumped Storage Plant Demand**, and does not meet **Non-DCC Unit** criteria, is classified as a **DCC Unit**.

It is important to note that, as per Article 4 of DCC, following modernisation, refurbishment or replacement of equipment to a non-DCC Unit, some or all of the DCC requirements may become applicable.

The full text of the DCC is available on the [ENSTO-E website](#).

#### Consultation and approval of submitted parameters

While the DCC requires the TSO and DSO to consult on some of the non-exhaustive and/or non-mandatory parameters of the DCC, in the interests of openness and transparency, the TSO and DSO decided to consult on all of the non-exhaustive and/or non-mandatory parameters of the DCC. To that end, on the 6<sup>th</sup> of July 2018, EirGrid, as TSO, and ESB Networks, as DSO, issued a joint consultation paper on the proposal for the general application of technical requirements in accordance with Articles 12-21 and 27-30 of the DCC. This consultation was open for a period of five weeks until the 10<sup>th</sup> of August 2018.

The TSO received a total of 2 individual submissions. A summary of the submissions was included in the EirGrid DCC proposal submission to the CRU on the 20<sup>th</sup> of September 2018. ESB Networks made a separate DCC proposal submission to CRU, dated 17<sup>th</sup> September 2018.

On 12<sup>th</sup> September 2019, the CRU issued a decision paper which approved majority of the submitted proposals, and issued a request for amendment and/or further information in relation to the following:

- Article 18.3;
- Article 19.1;
- Article 19.4 (a) and (c);
- Article 28.2 (e) and (l); and
- Article 29.2 (d) and (e).

Following the issuing of the CRU decision paper, EirGrid proceeded with the incorporation of the approved proposals into the Grid Code, with the exception of Articles 27 – 30.

During the incorporation process, it was decided that further assessment was required to determine whether or not, it is appropriate to incorporate the Demand Response Services, as described in DCC Articles 27 -30, into the Grid Code. Demand Response Services are an optional requirement for Demand Units, which is not in keeping with the mandatory nature of the Grid Code. Another consideration is the presence of an existing demand response scheme, provided by DSUs via the DS3 programme. EirGrid will communicate a position to the GCRP following the completion of the necessary assessment of how to effectively implement these Demand Response Services requirements.

Please note that the relevant consultation, proposal and decision paper are available on the [Network Codes page](#) of the EirGrid website. Please scroll down to the consultation sections for further details.

#### Planned derogations

1. Article 13.1 - Voltage Withstand Capability:

Article 13.1 refers to Annex II which show a maximum voltage withstand capability of 1.118 p.u. for connections greater or equal to 110 kV and below 300 kV. In the case of 220 kV, this would require equipment to be able to continually withstand 246 kV.

It is important to note that under the existing Grid Code clauses CC.8.3.1 and CC.8.3.2, the maximum transmission system voltages are nominally 240 kV and 245 kV during normal conditions and following transmission faults respectively. As such, the transmission system would not be continuously operated at 246 kV.

In addition, 220 kV equipment is only able to withstand 245 kV on a continuous basis. To comply with the RfG requirement of 246 kV, 300kV equipment would have to be used at 220 kV level. This would place a substantial and unnecessary cost on any 220 kV installations going forward.

EirGrid is now planning to submit a class derogation to address this, which would align the voltage withstand capability requirements for new plant with the existing Grid Code requirements.

Please note that a similar derogation is also being sought in relation to the RfG Connection Network Code.

#### Formatting

EirGrid have continued the use of the “incorporative method” for the DCC requirements, which was previously used to harmonise the RfG requirements with the Grid Code. This method uses a combination of symbols as well as the enclosing of text in boxes to identify requirements that are:

1. Applicable to all users
2. Applicable to Non-DCC Units only
3. Applicable to DCC Units only

A more detailed description of the Incorporative methodology, as well as how it can be used for future versions of the Network Codes, is available in the document

“**DemarcationAndFutureHarmonisationMethodology**”, as attached to the GCRP invitation email.

Finally, in order to maintain the usability of the Grid Code throughout the incorporative process for DCC, where needed, EirGrid has updated the formatting and numbering of the relevant sections.

#### **Red-line Version of Impacted Grid Code Section(s) - show proposed changes to text:**

See document entitled “191104\_GC9 Red Line Version” attached to the GCRP invitation email.

#### **Green-line Version of Impacted Grid Code Section(s) - show proposed final text:**

See document entitled “191104\_GC9 Green Line Version” attached to the GCRP invitation email.