Grid Code Modification Recommendation Form	

Title of Recommended Proposal:

MPID 322 Update of CNC and Non-CNC Unit Definitions

Date:	20/11/2024
Recommended at GCRP Meeting No.:	The revised modification was presented at the Ireland GCRP Meeting dated 24 September 2024.
Grid Code Version:	14.2
Grid Code Section(s) Impacted by Recommended Proposal:	- CC.15.6 - CC.15.19.6 - RfG Generation Unit - Non-RfG Generation Unit - HVDC Unit - Non-HVDC Unit - DCC Unit - Non-DCC Unit

The Reason for the Recommended Modification:

On 25th September 2020, EirGrid and ESB Networks jointly published the guideline document *EirGrid and ESB Networks' Guideline for the Application to Existing Users of Commission Regulation (EU) 2016/631 establishing a network code on requirements for grid connection of generators (RfG), Commission Regulation (EU) 2016/1388 establishing a Network Code on Demand Connection (DCC) and Commission Regulation (EU) 2016/1447 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current connected power park modules (HVDC)*.

The purpose of this guideline document was to "detail criteria which will be used by EirGrid and ESB Networks in relation to modernisation, refurbishment or equipment replacement for existing users which would require a user to comply in part or fully with the requirements of Commission Regulation (EU) 2016/631 establishing a network

code on requirements for grid connection of generators (RfG), Commission Regulation (EU) 2016/1388 establishing a Network Code on Demand Connection (DCC) and Commission Regulation (EU) 2016/1447 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules (HVDC) (hereafter these three codes referred to as 'Connection Network Codes')."

The Connection Network Codes apply to new Users who connect to the Transmission and Distribution Systems on or after the respective effective dates of each network code. However, these Connection Network Codes do not retrospectively apply to existing users of the Transmission and Distribution Systems unless the user's plant is modified to such an extent that its connection agreement must be substantially revised in accordance with the procedure detailed in the each of the Connection Network Codes. The Connection Network Codes are not prescriptive in terms of:

- What constitutes the "modernisation" or "refurbishment" of an existing User's plant; or
- If the replacement of faulted plant, such a circuit breaker, requires the User to comply with the requirements of the relevant Connection Network Codes; or
- If the Connection Network Codes will only be applied where the equipment is being replaced as part of a scheduled or planned project.

As part of the Connection Network Codes implementation, the TSO and DSO gave significant consideration to the interpretation of Article 4 for each of the Connection Network Codes and agreed to only apply the Connection Network Codes to an existing User when a modernisation of an existing User's plant is characterised by a change in the capabilities of that User's plant, and that only the requirements of the Connection Network Codes which are relevant to the capabilities of the User's plant that are changing shall be applicable. This is essentially a proportional application of the Connection Network Codes based on the works being carried out by the User. By applying the Connection Network Codes to existing Users in this way, it will ensure that the Connection Network Codes are applied to all Users in a fair and equitable manner.

Summary of proposed changes presented at GCRP Meeting 20 March 2024:

The first version of this modification, presented at the March 2024 GCRP, suggested updating specific Grid Code definitions and clauses to better reflect the criteria detailed in EirGrid and ESB Networks' guideline document, aligning them with current custom and practice. For the HVDC Unit definition, it was also proposed that the text referring specifically to embedded Interconnectors within one control area connected to the Transmission System, and embedded Interconnectors within one control area connected to the Distribution System when a cross-border impact is demonstrated to the TSO, be removed from the definition and instead placed in relevant clauses CC.15.6 and CC.15.19.6 of the Grid Code. The modification proposal was not recommended to the CRU at the March 2024 GCRP meeting as feedback from industry indicated that the text on embedded Interconnectors originally placed in the Grid Code HVDC Unit definition needed to be revised to better represent the HVDC Code requirements.

Summary of proposed changes presented at GCRP Meeting 24 September 2024:

There was discussion at the March 2024 GCRP meeting around the value of adding "is not a Non-RfG Generation Unit" or "is not a non-HVDC Unit" or "is not a non-DCC unit" to the CNC unit definitions. It was agreed to remove these terms from the proposal to prevent ambiguity, and this change has been implemented in the revised modification proposal.

The TSO issued a revised modification proposal based on what was agreed, and members were given ten business days to review. The TSO received comments on the text referring specifically to embedded Interconnectors within one control area connected to the Transmission System, and embedded Interconnectors within one control area connected to the Distribution System when a cross-border impact is demonstrated to the TSO, indicating that the purpose of the text was not clear. Upon further consultation, this text has been reworded for clarity and added to this revised modification.

History of Progression through GCRPs, Working Group and/or Consultation: On the 20 March 2024 this modification proposal was presented to the EirGrid GCRP. Feedback was provided by members both during and after the meeting, and subsequently implemented into a revised version of the modification proposal. The revised modification was presented at the GCRP Meeting on 24 September 2024 and recommended for submission to the CRU.
Summary Note of any Objections to the Recommended Change from GCRP Members or Consultation Responses: No objections were raised by the GCRP members at the EirGrid GCRP meeting on 24 September 2024.
Outcome of any GCRP Meeting Actions Relating to the Recommended Modification: The EirGrid GCRP recommended that the revised proposed modification be submitted to the CRU. No further actions were raised at the EirGrid GCRP.

A Table Outlining the Proposed Changes:

Definition	Red Line Version Text ***Deleted text in ~~strike-through-red-font~~ and new text highlighted in blue font***	Green Line Version Text
CC.15.6	The **Interconnector Owner** shall demonstrate to the **TSO** that it has complied with **Interconnector** requirements by successfully completing the Operational Notification Procedure for connection of each **Interconnector**. Where **HVDC Units** are comprised of: a) embedded **Interconnectors** within one control area and connected to the **Transmission System**, and/or b) embedded **Interconnectors** within one control area and connected to the **Distribution System** when a cross-border impact is demonstrated to the **TSO**, such **Interconnectors** shall not be subject to this clause if one or more of the following conditions apply: 1) the **Interconnector** has at least one **Interconnector Converter Station** owned by the **TSO**;	The **Interconnector Owner** shall demonstrate to the **TSO** that it has complied with **Interconnector** requirements by successfully completing the Operational Notification Procedure for connection of each **Interconnector**. Where **HVDC Units** are comprised of: a) embedded **Interconnectors** within one control area and connected to the **Transmission System**, and/or b) embedded **Interconnectors** within one control area and connected to the **Distribution System** when a cross-border impact is demonstrated to the **TSO**, such **Interconnectors** shall not be subject to this clause if one or more of the following conditions apply: 1) the **Interconnector** has at least one **Interconnector Converter Station** owned by the **TSO**;

	2) the **Interconnector** is owned by an entity which exercises control over the **TSO**; or 3) the **Interconnector** is owned by an entity directly or indirectly controlled by an entity which also exercises control over the **TSO**. In the relevant **TSO's** assessment of whether or not a **HVDC Unit** embedded **Interconnector** within one control area and connected to the distribution network has a cross-border impact, the relevant **TSO** shall consider the long-term development of the network.	2) the **Interconnector** is owned by an entity which exercises control over the **TSO**; or 3) the **Interconnector** is owned by an entity directly or indirectly controlled by an entity which also exercises control over the **TSO**. In the relevant **TSO's** assessment of whether or not a **HVDC Unit** embedded **Interconnector** within one control area and connected to the distribution network has a cross-border impact, the relevant **TSO** shall consider the long-term development of the network.
CC.15.19.6	If the **TSO** does not grant an extension of the period of validity of the LON in accordance with CC.15.19.4 or if it refuses to allow the operation of the **Interconnector** once the LON is no longer valid in accordance with CC.15.19.5, the **Interconnector Owner** may refer the issue for decision to the CRU within six months after the notification of the decision of the **TSO**. Where **HVDC Units** are comprised of: a) embedded **Interconnectors** within one control area and connected to the **Transmission System**, and/or b) embedded **Interconnectors** within one control area and connected to the **Distribution System** when a cross-border impact is demonstrated to the **TSO**, such **Interconnectors** shall not be subject to this clause if one or more of the following conditions apply: 1) the **Interconnector** has at least one **Interconnector Converter Station** owned by the **TSO**; 2) the **Interconnector** is owned by an entity which exercises control over the **TSO**; or 3) the **Interconnector** is owned by an entity directly or indirectly controlled by an entity which also exercises control over the **TSO**. In the relevant **TSO's** assessment of whether or not a **HVDC Unit** embedded **Interconnector** within one control area and connected to the distribution network has a cross-border impact, the relevant **TSO** shall consider the long-term development of the network.	If the **TSO** does not grant an extension of the period of validity of the LON in accordance with CC.15.19.4 or if it refuses to allow the operation of the **Interconnector** once the LON is no longer valid in accordance with CC.15.19.5, the **Interconnector Owner** may refer the issue for decision to the CRU within six months after the notification of the decision of the **TSO**. Where HVDC Units are comprised of: a) embedded Interconnectors within one control area and connected to the Transmission System, and/or b) embedded Interconnectors within one control area and connected to the Distribution System when a cross-border impact is demonstrated to the TSO, such Interconnectors shall not be subject to this clause if one or more of the following conditions apply: 1) the Interconnector has at least one Interconnector Converter Station owned by the TSO; 2) the Interconnector is owned by an entity which exercises control over the TSO; or 3) the Interconnector is owned by an entity directly or indirectly controlled by an entity which also exercises control over the TSO. In the relevant TSO's assessment of whether or not a HVDC Unit embedded Interconnector within one control area and connected to the distribution network has a cross-border impact, the relevant TSO shall consider the long-term development of the network.

RfG Generation Unit	A **Generation Unit** ~~that is not a **Non-RfG Generation Unit.**~~ with a signed **Connection Agreement**: a) Connected to the **Network** after the 30th November 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** after the 30th November 2018; or c) Is not one of the exceptions to the applicability of the **RfG Generation Unit** requirements and is not a **Generation Unit** as follows: (i) Installed to provide back-up power and operate in parallel with the **Network** for less than five minutes per calendar month while the system is in normal system state; or (ii) No permanent **Connection Point** and is used by the **TSO** to temporarily provide power when normal system capacity is partly or completely unavailable; or (iii) **Energy Storage Units** except for **Pumped Storage Plant.**	A **Generation Unit** with a signed **Connection Agreement**: a) Connected to the **Network** after the 30th November 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** after the 30th November 2018; or c) Is not one of the exceptions to the applicability of the **RfG Generation Unit** requirements and is not a **Generation Unit** as follows: (i) Installed to provide back-up power and operate in parallel with the **Network** for less than five minutes per calendar month while the system is in normal system state; or (ii) No permanent **Connection Point** and is used by the **TSO** to temporarily provide power when normal system capacity is partly or completely unavailable; or (iii) **Energy Storage Units** except for **Pumped Storage Plant.**
Non-RfG Generation Unit	A **Generation Unit** with a signed **Connection Agreement**: a) Connected to the **Network** on or before the 30th November 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** on or before the 30th November 2018 and provides evidence of same, as acknowledged by the **TSO**, on or before the 31st May 2019. 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** and/or **Apparatus** to be constructed, assembled, or purchased; or c) Is one of the exceptions to the applicability of the **RfG Generation Unit** requirements and is a **Generation Unit** as follows: (i) Installed to provide back-up power and operate in parallel with the **Network** for less than five minutes per calendar month while the system is in normal system state; or (ii) No permanent **Connection Point** and is used by the **TSO** to temporarily provide power when normal system capacity is partly or completely unavailable; or (iii) **Energy Storage Units** except for **Pumped Storage Plant**.	A **Generation Unit** with a signed **Connection Agreement**: a) Connected to the **Network** on or before the 30th November 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** on or before the 30th November 2018 and provides evidence of same, as acknowledged by the **TSO**, on or before the 31st May 2019. 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** and/or **Apparatus** to be constructed, assembled, or purchased; or c) Is one of the exceptions to the applicability of the **RfG Generation Unit** requirements and is a **Generation Unit** as follows: (i) Installed to provide back-up power and operate in parallel with the **Network** for less than five minutes per calendar month while the system is in normal system state; or (ii) No permanent **Connection Point** and is used by the **TSO** to temporarily provide power when normal system capacity is partly or completely unavailable; or (iii) **Energy Storage Units** except for **Pumped Storage Plant**.

	A **Non-RfG Generation Unit** that undergoes modernisation, refurbishment or replacement of equipment which drives a modification to its **Connection Agreement**, and had concluded a final and binding contract for the purchase of the **Plant** and/or **Apparatus** being modified after the 30th November 2018, ~~will be deemed an **RfG Generation Unit**~~ may have some or all of the relevant RfG requirements applied to the **Plant** and/or **Apparatus** being modified, unless the **Plant** and/or **Apparatus** being modified is one of the exceptions listed in c) above. Where all RfG requirements are to be applied, the **Generation Unit** will be considered an **RfG Generation Unit**.	A **Non-RfG Generation Unit** that undergoes modernisation, refurbishment or replacement of equipment which drives a modification to its **Connection Agreement**, and had concluded a final and binding contract for the purchase of the **Plant** and/or **Apparatus** being modified after the 30th November 2018, may have some or all of the relevant RfG requirements applied to the **Plant** and/or **Apparatus** being modified, unless the **Plant** and/or **Apparatus** being modified is one of the exceptions listed in c) above. Where all RfG requirements are to be applied, the **Generation Unit** will be considered an **RfG Generation Unit**.
HVDC Unit	An **Interconnector** or DC-connected **PPM** ~~that is not a **Non-HVDC Unit.**~~ with a signed **Connection Agreement**: a) Connected to the **Network** after the 15th September 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** after the 15th September 2018. ~~In addition, **HVDC Units**, which are comprised of:~~ ~~a) embedded **Interconnectors** within one control area and connected to the **Transmission System**, and/or~~ ~~b) embedded **Interconnectors** within one control area and connected to the **Distribution System** when a cross-border impact is demonstrated to the **TSO**. The relevant **TSO** shall consider the long-term development of the network in this assessment~~ ~~shall not be subject to **Grid Code** clauses CC.15.16 to CC.15.19.6, if one or more of the following conditions apply:~~ ~~1) the **Interconnector** has at least one **Interconnector Converter Station** owned by the **TSO**;~~ ~~2) the **Interconnector** is owned by an entity which exercises control over the **TSO**; or~~ ~~3) the **Interconnector** is owned by an entity directly or indirectly controlled by an entity which also exercises control over the **TSO**.~~	An **Interconnector** or DC-connected **PPM** with a signed **Connection Agreement**: a) Connected to the **Network** after the 15th September 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** after the 15th September 2018.
Non-HVDC Unit	An **Interconnector** or DC-connected **PPM** with a signed **Connection Agreement**:	An **Interconnector** or DC-connected **PPM** with a signed **Connection Agreement**:

	a) Connected to the **Network** on or before the 15th September 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** on or before the 15th September 2018 and provides evidence of same, as acknowledged by the **TSO**, on or before 15th of March 2019. 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** and/or **Apparatus** to be constructed, assembled, or purchased. A **Non-HVDC Unit** that undergoes modernisation, refurbishment or replacement of equipment which drives a modification to its **Connection Agreement**, and had concluded a final and binding contract for the purchase of the **Plant** and/or **Apparatus** being modified after the 15th September 2018, ~~will be deemed a **HVDC Unit.**~~ may have some or all of the relevant HVDC requirements applied to the **Plant** and/or **Apparatus** being modified. Where all HVDC requirements are to be applied, the **Interconnector** or DC-connected **PPM** will be considered a **HVDC Unit**.	a) Connected to the **Network** on or before the 15th September 2018; or b) Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** on or before the 15th September 2018 and provides evidence of same, as acknowledged by the **TSO**, on or before 15th of March 2019. 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** and/or **Apparatus** to be constructed, assembled, or purchased. A **Non-HVDC Unit** that undergoes modernisation, refurbishment or replacement of equipment which drives a modification to its **Connection Agreement**, and had concluded a final and binding contract for the purchase of the **Plant** and/or **Apparatus** being modified after the 15th September 2018 may have some or all of the relevant HVDC requirements applied to the **Plant** and/or **Apparatus** being modified. Where all HVDC requirements are to be applied, the **Interconnector** or DC-connected **PPM** will be considered a **HVDC Unit**.
DCC Unit	A **Demand Facility**, **Closed Distribution System** or **Distribution System** ~~that is not a **Non-DCC Unit.**~~ with a signed **Connection Agreement:** a. Connected to the **Network** after the 7th September 2019; or b. Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** after the 7th September 2019.	A **Demand Facility**, **Closed Distribution System** or **Distribution System** with a signed **Connection Agreement:** a. Connected to the **Network** after the 7th September 2019; or b. Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** after the 7th September 2019.
Non-DCC Unit	A **Demand Facility**, **Closed Distribution System** or **Distribution System** with a signed **Connection Agreement**: a. Connected to the **Network** on or before the 7th September 2019; or b. Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** on or before the 7th September 2019 and provides evidence of same, as acknowledged by the **TSO**, on or before the 7th 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** and/or **Apparatus** to be constructed, assembled, or purchased; or	A **Demand Facility**, **Closed Distribution System** or **Distribution System** with a signed **Connection Agreement**: a. Connected to the **Network** on or before the 7th September 2019; or b. Whose owner has concluded a final and binding contract for the purchase of the main **Plant** and/or **Apparatus** on or before the 7th September 2019 and provides evidence of same, as acknowledged by the **TSO**, on or before the 7th March 2020. Such evidence shall at least contain the contract title, its date of signature and date of

	c. 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** and/or **Apparatus** being modified after the 7th September 2019, ~~will be deemed a **DCC Unit**~~ may have some or all of the relevant DCC requirements applied to the **Plant** and/or **Apparatus** being modified, unless the **Plant** and/or **Apparatus** being modified is one of the exceptions ~~listed~~ referenced in c) above. Where all DCC requirements are to be applied, the **Demand Facility**, **Closed Distribution System** or **Distribution** will be considered a **DCC Unit**. ~~If an existing **Demand Facility** undergoes modernisation, refurbishment or replacement of equipment, part or all of the DCC requirements will apply to the appropriate item of **Plant** or **Apparatus**.~~ ~~If an existing **Closed Distribution System** or **Distribution System** undergoes modernisation, refurbishment or replacement of equipment, part or all of the DCC requirements will apply to the appropriate item of **Plant** or **Apparatus** at the **Facility.**~~	entry into force, and the specifications of the main **Plant** and/or **Apparatus** to be constructed, assembled, or purchased; or c. 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** and/or **Apparatus** being modified after the 7th September 2019, may have some or all of the relevant DCC requirements applied to the **Plant** and/or **Apparatus** being modified, unless the **Plant** and/or **Apparatus** being modified is one of the exceptions referenced in c) above. Where all DCC requirements are to be applied, the **Demand Facility**, **Closed Distribution System** or **Distribution** will be considered a **DCC Unit**.