Grid Code Modification Recommendation Form



Title of Recommended Proposal:

MPID 311 Housekeeping of Various Clauses

Date:	01/08/2023
Recommended at GCRP Meeting No.:	The modification was presented at the Ireland GCRP Meeting dated 28 June 2023.
Grid Code Version:	12
Grid Code Section(s) Impacted by	Clauses:
Recommended Proposal:	- PC.A3.3.2, 3.3.3, 3.3.4, 3.3.6, 4.8, 8.2.1
	- OC.4.4.5.2, 4.5.5.4, 4.6.5.2.1, 4.7.1.1, 4.7.3.3, 5.4.4, 5.5.1, 6.4.2, 6.7.2.2, 7.1.5.3, 7.1.9.2, 7.2.8.1, 8.2.3
	- Unit symbols throughout the Grid Code

The Reason for the Recommended Modification:

The Grid Code is a living document and is constantly evolving. Several formatting errors have come to our attention. The TSO are proposing a fix to the errors that span various clauses within the code itself.

History of Progression through GCRPs, Working Group and/or Consultation:

On the 28 June 2023 this modification proposal was presented to the EirGrid GCRP members.

Summary Note of any Objections to the Recommended Change from GCRP Members or Consultation Responses:

No objections were raised by the GCRP members.

Outcome of any GCRP Meeting Actions Relating to the Recommended Modification:

No actions were raised at the meeting.

A Table Outlining the Proposed Changes:

Clause	Error	Red Line Version Text Deleted text in strike through red font and new text highlighted in blue font	Green Line Version Text
PC.A3.3.2	The terms 'load', 'embedded generation', and 'system' appear unbolded, but are defined terms.	A coincident set of measurements of MW and Mvar values both at 12.30 and 18.00 hours on the second Thursday in December is required. If the second Thursday in December is the 8th, then the measurements should be taken on the following Tuesday, December 13th. The readings should be taken with both the transmission and distribution networks intact, and with normal sectionalising of the Distribution System, i.e. under normal feeding conditions. The load Load reading shall take account of embedded generation Embedded Generation as detailed in section PC.A3.3.6. A forecast of the expected MW and Mvar winter peak demand at the Measurement Point at 12.30 and 18.00 hours for the next ten (10) years is required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The load Load	A coincident set of measurements of MW and Mvar values both at 12.30 and 18.00 hours on the second Thursday in December is required. If the second Thursday in December is the 8th, then the measurements should be taken on the following Tuesday, December 13th. The readings should be taken with both the transmission and distribution networks intact, and with normal sectionalising of the Distribution System, i.e. under normal feeding conditions. The Load reading shall take account of Embedded Generation as detailed in section PC.A3.3.6. A forecast of the expected MW and Mvar winter peak demand at the Measurement Point at 12.30 and 18.00 hours for the next ten (10) years is required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The Load forecast shall take account of sections PC.A3.3.6 through PC.A3.3.9

		forecast shall take account of sections PC.A3.3.6 through PC.A3.3.9 dealing with embedded generation Embedded Generation, description of forecast methodology, transformer reinforcements and permanent load Load transfer. The DSO, in preparing the forecast for winter peak load Load, shall bear in mind that the coincident load Load readings taken on the second Thursday in December may be lower than at system System peak.	dealing with Embedded Generation , description of forecast methodology, transformer reinforcements and permanent Load transfer. The DSO , in preparing the forecast for winter peak Load , shall bear in mind that the coincident Load readings taken on the second Thursday in December may be lower than at System peak.
PC.A3.3.3	The terms 'load' and 'embedded generation' appear unbolded, but are defined terms.	A coincident set of measurements of MW and Mvar values at 12.30 hours on the fourth Thursday in June is required. The load Load reading shall take account of embedded generation Embedded Generation as detailed in section PC.A3.3.6. A corresponding 10-year forecast of the MW and Mvar demand at the Measurement Point in June at 12.30 hours for the next ten (10) years is also required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The load Load forecast shall take account of sections PC.A3.3.6 through PC.A3.3.9 dealing with embedded generation Embedded Generation, description of forecast method, transformer reinforcements and permanent load Load transfer.	A coincident set of measurements of MW and Mvar values at 12.30 hours on the fourth Thursday in June is required. The Load reading shall take account of Embedded Generation as detailed in section PC.A3.3.6. A corresponding 10-year forecast of the MW and Mvar demand at the Measurement Point in June at 12.30 hours for the next ten (10) years is also required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The Load forecast shall take account of sections PC.A3.3.6 through PC.A3.3.9 dealing with Embedded Generation, description of forecast method, transformer reinforcements and permanent Load transfer.
PC.A3.3.4	The terms 'load' and 'embedded generation' appear unbolded, but are defined terms.	A coincident set of measurements of MW and Mvar values at 06.00 hours on the Sunday preceding the early August Monday Public Holiday is required. The load Load readings shall take account of embedded generation Embedded Generation as detailed in section PC.A3.3.6. A corresponding 10-year forecast of the MW and Mvar minimum demand at the Measurement Point in August at 06.00 hours for the next ten (10) years is also required. For example, the forecasts to be received by calendar	A coincident set of measurements of MW and Mvar values at 06.00 hours on the Sunday preceding the early August Monday Public Holiday is required. The Load readings shall take account of Embedded Generation as detailed in section PC.A3.3.6. A corresponding 10-year forecast of the MW and Mvar minimum demand at the Measurement Point in August at 06.00 hours for the next ten (10) years is also required. For

		week 9 of 2003 should cover years 2003 through 2012. The load Load forecast shall take account of sections PC.A3.3.6 through PC.A3.3.9 dealing with embedded generation Embedded Generation, description of forecast method, transformer reinforcements and permanent load Load transfer.	example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The Load forecast shall take account of sections PC.A3.3.6 through PC.A3.3.9 dealing with Embedded Generation , description of forecast method, transformer reinforcements and permanent Load transfer.
PC.A3.3.6	The terms 'load', 'embedded generation', 'generator', 'system' and 'capacity' appear unbolded, but are defined terms.	All load Load readings shall specify, separately, the MW and Mvar contribution from significant embedded generation Embedded Generation. The User should indicate whether the generator Generator is producing or absorbing Mvar from the system System. The type or types of significant embedded generation Embedded Generation should be specified – hydro, wind, CHP, biomass, diesel or other. All load Load forecasts shall specify, separately, the installed capacity Capacity of existing and projected significant embedded generation Embedded Generation. Both MW and Mvar capability should be given, indicating the Mvar limits both for production and absorption. The type or types of embedded generation Embedded Generation should be specified – hydro, wind, CHP, biomass, diesel or other.	 All Load readings shall specify, separately, the MW and Mvar contribution from significant Embedded Generation. The User should indicate whether the Generator is producing or absorbing Mvar from the System. The type or types of significant Embedded Generation should be specified – hydro, wind, CHP, biomass, diesel or other. (i) All Load forecasts shall specify, separately, the installed Capacity of existing and projected significant Embedded Generation. Both MW and Mvar capability should be given, indicating the Mvar limits both for production and absorption. The type or types of Embedded Generation should be specified – hydro, wind, CHP, biomass, diesel or other.
PC.A4.8	The terms 'generating unit', 'operating characteristics', 'system' and 'disturbance' appear unbolded, but are defined terms.	Supply any additional Laplace domain control diagrams and associated parameters for any outstanding control devices including Power System Stabiliser or special protection relays in the generating unit Generating Unit, which automatically impinge on its operating characteristics Operating Characteristics within 30 seconds following a system System disturbance Disturbance and which have a minimum time constant of at least 0.02 seconds.	Supply any additional Laplace domain control diagrams and associated parameters for any outstanding control devices including Power System Stabiliser or special protection relays in the Generating Unit , which automatically impinge on its Operating Characteristics within 30 seconds following a System Disturbance and which have a minimum time constant of at least 0.02 seconds.
PC.A8.2.1	The terms 'operation' and 'collector network' appear	The TSO requires the Model to represent the operation Operation of the User's Plant at the Connection Point	The TSO requires the Model to represent the Operation of the User's Plant at the Connection Point and therefore it is

	unbolded, but are defined terms.	and therefore it is essential that the Models of individual Generation Units can be aggregated into a smaller number of Models , each representing a number of Generation Units at the same Site . If all Generation Units in the User Site are not identical, the Model shall account for this by accurately representing the overall performance of the User's Plant at the Connection Point . A representation of the collector network Collector Network and any additional equipment such as Reactive Power compensation may be included in the aggregate Model of the User's Plant . Models for the simulation studies must be single lumped Models , scalable for different Active Power outputs as seen at the Connection Point .	essential that the Models of individual Generation Units can be aggregated into a smaller number of Models , each representing a number of Generation Units at the same Site . If all Generation Units in the User Site are not identical, the Model shall account for this by accurately representing the overall performance of the User's Plant at the Connection Point . A representation of the Collector Network and any additional equipment such as Reactive Power compensation may be included in the aggregate Model of the User's Plant . Models for the simulation studies must be single lumped Models , scalable for different Active Power outputs as seen at the Connection Point .
OC.4.4.5.2	The terms 'generation', 'control actions' and the word 'output' in the term 'MW output' appear unbolded, but are defined terms/part of a defined term.	The TSO shall adjust System Voltages , using control facilities that are available so as to achieve the Mvar capacity necessary in order to operate Transmission System Voltages at Connection Points within the levels specified in CC.8.3 and retain a dynamic Mvar capability to deal with changing System conditions which result from changes in Demand or changes in transmission or generation Generation configuration, whether as a result of control actions Control Actions or faults. This may necessitate the modification of Generation Unit MW output Output or Interconnector(s) Active Power transfer from an External System or Active Power transfer to the Transmission System .	The TSO shall adjust System Voltages , using control facilities that are available so as to achieve the Mvar capacity necessary in order to operate Transmission System Voltages at Connection Points within the levels specified in CC.8.3 and retain a dynamic Mvar capability to deal with changing System conditions which result from changes in Demand or changes in transmission or Generation configuration, whether as a result of Control Actions or faults. This may necessitate the modification of Generation Unit MW Output or Interconnector(s) Active Power transfer from an External System or Active Power transfer to the Transmission System .
OC.4.5.5.4	The text in a) and b) is identical.	Emergency Assistance to and from External Systems will be detailed in the Interconnector Operating Protocol agreed between the Interconnector Operator , the TSO and the External System Operator , and shall include the following actions:	Emergency Assistance to and from External Systems will be detailed in the Interconnector Operating Protocol agreed between the Interconnector Operator , the TSO and the External System Operator , and shall include the following actions:

		 (a) An External System Operator may request that the TSO take any available action to increase the Active Power transferred into its External System, or reduce the Active Power transferred into the Transmission System. Such request must be met by the TSO providing this does not require a reduction of Demand on the Transmission System, or lead to a reduction in security on the Transmission System. 	(a) An External System Operator may request that the TSO take any available action to increase the Active Power transferred into its External System, or reduce the Active Power transferred into the Transmission System. Such request must be met by the TSO providing this does not require a reduction of Demand on the Transmission System, or lead to a reduction in security on the Transmission System.
		(b) An External System Operator may request that the TSO take any available action to increase the Active Power transferred into its External System, or reduce the Active Power transferred into the Transmission System. Such request must be met by the TSO providing this does not require a reduction of Demand on the Transmission System, or lead to a reduction in security on the Transmission System. Not used.	(b) Not used.
OC.4.6.5.2.1	The term 'Trading and Settlement Rules' is bolded but is not a defined term. It should be replaced with the defined term 'Trading and Settlement Code'. Also, the terms 'disconnection' and 'generation' appear unbolded, but are defined terms.	 The TSO shall determine the amount of Primary Operating Reserve, Secondary Operating Reserve, Tertiary Operating Reserve and Replacement Reserve to be carried at any time to ensure system security. This will not be constrained by the Trading and Settlement Rules Trading and Settlement Code. Due consideration will be taken of relevant factors, including but not limited to the following: (a) the relevant TSO operating policy in existence at that time; (b) the extent to which Customer disconnections Disconnections allowed under the relevant standard have already occurred within the then 	 The TSO shall determine the amount of Primary Operating Reserve, Secondary Operating Reserve, Tertiary Operating Reserve and Replacement Reserve to be carried at any time to ensure system security. This will not be constrained by the Trading and Settlement Code. Due consideration will be taken of relevant factors, including but not limited to the following: (a) the relevant TSO operating policy in existence at that time; (b) the extent to which Customer Disconnections allowed under the relevant standard have already occurred within the then relevant period; (c) the elapsed time since the last Customer

		 (c) the elapsed time since the last Customer disconnection Disconnection incident; (d) particular events of national or widespread significance, which may justify provision of additional Operating Reserve; (e) the cost of providing Operating Reserve at any point in time; (f) the magnitude and number of the largest generation Generation infeeds to the Transmission System at that time, including infeeds over External Interconnections and also over single transmission feeders within the Transmission System and also the amount of Generation that could be lost following a single Contingency; (g) ambient weather conditions, insofar as they may affect (directly or indirectly) Generation Unit and/or Transmission System reliability; (h) the predicted Frequency drop on loss of the largest infeed as may be determined through simulation using a dynamic model of the Power System; (i) constraints imposed by agreements in place with Externally Interconnected Parties; (j) uncertainty in future Generation output. 	 (d) particular events of national or widespread significance, which may justify provision of additional Operating Reserve; (e) the cost of providing Operating Reserve at any point in time; (f) the magnitude and number of the largest Generation infeeds to the Transmission System at that time, including infeeds over External Interconnections and also over single transmission feeders within the Transmission System and also the amount of Generation that could be lost following a single Contingency; (g) ambient weather conditions, insofar as they may affect (directly or indirectly) Generation Unit and/or Transmission System reliability; (h) the predicted Frequency drop on loss of the largest infeed as may be determined through simulation using a dynamic model of the Power System; (i) constraints imposed by agreements in place with Externally Interconnected Parties; (j) uncertainty in future Generation output.
OC.4.7.1.1	The term 'energise' appears unbolded, but is a defined term. Also, the word 'Total' in the term 'Total System' appears bolded, but is not a defined term itself or part of a defined term.	In order to recover the Transmission System from a Partial Shutdown or Total Shutdown, it is necessary to have certain Power Stations ("Black Start Stations") available which have the ability for at least one of its Generation Units to Start-Up from Shutdown and to energise Energise a part of the Total total System, or be Synchronised to the System, upon instruction from the TSO, without an external electrical power supply as detailed in the Interconnector Operating Protocol agreed	In order to recover the Transmission System from a Partial Shutdown or Total Shutdown, it is necessary to have certain Power Stations ("Black Start Stations") available which have the ability for at least one of its Generation Units to Start-Up from Shutdown and to Energise a part of the total System, or be Synchronised to the System, upon instruction from the TSO, without an external electrical power supply as detailed in the Interconnector Operating Protocol agreed between the Interconnector Operator, the TSO and the External System Operator.

		between the Interconnector Operator, the TSO and the External System Operator.	
OC.4.7.3.3	The term 'Unit' appears bolded but is not a defined term in isolation, and as such has been replaced with the phrase 'Generation Unit or Interconnector' here. Also, 'generation' appears unbolded but is a defined term, and a typo in which 'or' appears bolded has been corrected.	If during the Demand restoration process any Generation Unit or Interconnector that is part of a Black Start Station cannot, because of the Demand being experienced, keep within its safe operating parameters, the Generator or Interconnector Operator shall inform the TSO . The TSO will, where possible, either instruct Demand to be altered or will re-configure the Transmission System or will instruct a User to re-configure its System in order to alleviate the problem being experienced by the Generator or Interconnector Operator . However, the TSO accepts that any decision to keep a Generation Unit or Interconnector operating, if outside its safe operating parameters, is one for the Generator or Interconnector Operator concerned alone and accepts that the Generator or Interconnector Operator may change generation Generation on that Generation Unit or Interconnector if it believes it is necessary for safety reasons (whether relating to personnel or Plant and/or Apparatus). If such a change is made without prior notice, then the Generator or Interconnector Operator shall inform the TSO as soon as reasonably practical.	If during the Demand restoration process any Generation Unit or Interconnector that is part of a Black Start Station cannot, because of the Demand being experienced, keep within its safe operating parameters, the Generator or Interconnector Operator shall inform the TSO. The TSO will, where possible, either instruct Demand to be altered or will re-configure the Transmission System or will instruct a User to re-configure its System in order to alleviate the problem being experienced by the Generator or Interconnector Operator. However, the TSO accepts that any decision to keep a Generation Unit or Interconnector operating, if outside its safe operating parameters, is one for the Generator or Interconnector Operator concerned alone and accepts that the Generator or Interconnector Operator may change Generation on that Generation Unit or Interconnector if it believes it is necessary for safety reasons (whether relating to personnel or Plant and/or Apparatus). If such a change is made without prior notice, then the Generator or Interconnector Operator shall inform the TSO as soon as reasonably practical.
OC.5.4.4	A typo in which 'the' appears bolded has been corrected.	In the event of Demand Control being exercised other than in accordance with the Rota Load Shedding Plan (due to reasons of short notice or otherwise), and if the Demand Control is expected to be sustained, then the TSO will arrange for the Rota Load Shedding Plan to be implemented as soon as practicable. The TSO may instruct certain modifications in the application of the the Rota Load Shedding Plan to provide for those Customers which have been subject to shedding in the initial phase prior to the initiation of Planned Rota Load Shedding .	In the event of Demand Control being exercised other than in accordance with the Rota Load Shedding Plan (due to reasons of short notice or otherwise), and if the Demand Control is expected to be sustained, then the TSO will arrange for the Rota Load Shedding Plan to be implemented as soon as practicable. The TSO may instruct certain modifications in the application of the Rota Load Shedding Plan to provide for those Customers which have been subject to shedding in the initial phase prior to the initiation of Planned Rota Load Shedding .

OC.5.5.1	The term 'Frequency Disconnection' has been replaced with the defined term 'Frequency Demand Disconnection'. Also, the terms 'event', 'system' and 'start-up' appear unbolded, but are defined terms.	The DSO shall make arrangements that will enable automatic low Frequency Demand Disconnection of a percentage of its total peak Customer Demand (based on Annual SLR Conditions) as specified by the TSO, in order to seek to limit the consequences of a major loss of Generation or an event Event on the total system System which leaves part of the total system System with a Generation deficit, provided that, so far as possible, Demand of Generation Units which is required to enable the Generation Units to start-up Start-Up shall not be subject to automatic low Frequency Demand Disconnection. The TSO retains the right to specify the Frequency settings on percentages of Demand subject to automatic low Frequency Demand Disconnection.	The DSO shall make arrangements that will enable automatic low Frequency Demand Disconnection of a percentage of its total peak Customer Demand (based on Annual SLR Conditions) as specified by the TSO, in order to seek to limit the consequences of a major loss of Generation or an Event on the total System which leaves part of the total System with a Generation deficit, provided that, so far as possible, Demand of Generation Units which is required to enable the Generation Units to Start-Up shall not be subject to automatic low Frequency Demand Disconnection. The TSO retains the right to specify the Frequency settings on percentages of Demand subject to automatic low Frequency Demand Disconnection.
OC.6.4.2	The term 'plant' appears unbolded but is a defined term, the term 'Available' appears bolded but is not a defined term and the term 'Unit' appears bolded but is not a defined term in isolation, and as such has been replaced with the phrase 'Generation Unit' here.	By the end of March in year 0, Small Scale Generators shall submit to the TSO, for each Generation Site, plant Plant Capacity Available available for each week for year 1 for inclusion in the Committed Outage Programme (COP) for year 1 and estimated weekly Load Factors for year 1. Generators shall specify the start date and time and the duration of each Outage. This information shall be supplied on a Generation Unit basis if so requested by the TSO.	By the end of March in year 0, Small Scale Generators shall submit to the TSO, for each Generation Site, Plant Capacity available for each week for year 1 for inclusion in the Committed Outage Programme (COP) for year 1 and estimated weekly Load Factors for year 1. Generators shall specify the start date and time and the duration of each Outage. This information shall be supplied on a Generation Unit basis if so requested by the TSO.
OC.6.7.2.2	The term 'Connection Agreements' appears unbolded but is a defined term.	Where it is identified and agreed, in accordance with the terms of the Connection Agreements Connection Agreements and/ or Operating Agreements, between the TSO and a User that a specific Control Action (usually an action affecting the Transmission System configuration) has an Operational Effect on a User and that there is merit in notifying the User in advance of the Control Action, then the TSO will notify the User of the Control Action (if planned and where time permits), in accordance	Where it is identified and agreed, in accordance with the terms of the Connection Agreements and/ or Operating Agreements, between the TSO and a User that a specific Control Action (usually an action affecting the Transmission System configuration) has an Operational Effect on a User and that there is merit in notifying the User in advance of the Control Action (if planned and where

		with any standing agreement that may be agreed with the User .	time permits), in accordance with any standing agreement that may be agreed with the User .
OC.7.1.5.3	The term 'operation' appears unbolded but is a defined term.	The User will notify the TSO of Operations on the User's System which will have (or may have) an Operational Effect on the Transmission System. The TSO may use this information in notifying any other User(s) on whose System(s) the operation Operation will have, or may have, in the reasonable opinion of the TSO, an Operational Effect, in accordance with this OC.7.1.	The User will notify the TSO of Operations on the User's System which will have (or may have) an Operational Effect on the Transmission System. The TSO may use this information in notifying any other User(s) on whose System(s) the Operation will have, or may have, in the reasonable opinion of the TSO, an Operational Effect, in accordance with this OC.7.1.
OC.7.1.9.2	The undefined term 'Significant System Event' has been replaced with the defined term 'Significant System Incident'.	The User will notify the TSO of Events which may be Significant System Incidents affecting the Transmission System. The TSO may use this information in notifying any other Users on whose System(s) the Significant System Event Incident will have, or may have, in the reasonable opinion of the TSO, an Operational Effect.	The User will notify the TSO of Events which may be Significant System Incidents affecting the Transmission System. The TSO may use this information in notifying any other Users on whose System(s) the Significant System Incident will have, or may have, in the reasonable opinion of the TSO, an Operational Effect.
OC.7.2.8.1	Addition of 'or' to correct format of clause.	Operational Data is all data required to be supplied by either the TSO or Users under the Grid Code or any other data expressly provided to be Operational Data under the Grid Code . Operational Data to be supplied by the User must be submitted to the department or address as the TSO may from time to time advise.	Operational Data is all data required to be supplied by either the TSO or Users under the Grid Code or any other data expressly provided to be Operational Data under the Grid Code . Operational Data to be supplied by the User must be submitted to the department or address as the TSO may from time to time advise.
OC.8.2.3	A typo in which 'or' appears bolded has been corrected.	OC.8 is not intended to deal with tests which may be called routinely by the TSO in order to assess compliance of Users with their design, operating and connection requirements as specified in the Grid Code and in each User's Connection Agreement, Ancillary Services Agreements and System Support Agreement , or to assess that Generators or Interconnector Operators are in compliance with their Registered Data as notified by Declarations , where appropriate, or to determine that Generation Units or Interconnectors are in compliance with Dispatch Instructions . These issues are covered under OC.10 (Monitoring, Testing and Investigation).	OC.8 is not intended to deal with tests which may be called routinely by the TSO in order to assess compliance of Users with their design, operating and connection requirements as specified in the Grid Code and in each User's Connection Agreement, Ancillary Services Agreements and System Support Agreement , or to assess that Generators or Interconnector Operators are in compliance with their Registered Data as notified by Declarations , where appropriate, or to determine that Generation Units or Interconnectors are in compliance with Dispatch Instructions . These issues are covered under OC.10 (Monitoring, Testing and Investigation).

Units	We have identified a number of	We will ensure that all references to unit symbols, where	
	uses of unit symbols within the	they do not form part of the name of a defined term, are	
	Grid Code where the symbols	not bolded in the next version of the Grid Code.	
	are bolded, but should be		
	unbolded. We propose fixing		
	this inconsistency by un-bolding		
	all unit symbols where they do		
	not form part of the name of a		
	defined term. Unit symbols are		
	not defined terms.		