

# Housekeeping Modification GC0157

## APPENDIX

### APPENDIX A

#### 1. GC0130 implementation

##### Why the modification?

GC0130 was implemented on 18 March 2021. When preparing the legal text, we found there were two versions of an excel file of 'other changes' and the final version was missing some changes that we believe were required. We could not implement them because they weren't in the final version, so those changes are still needed, although the code as it stands it not unworkable.

##### Baseline Legal Text:

##### General Conditions

The (daily or weekly) forecast value (in MW), at the time of the (daily or weekly) peak demand, of the maximum level at which the **Genset** can export to the **Grid Entry Point**, or in the case of **Embedded Power Stations**, to the **User System Entry Point**. In addition, for a **Genset** powered by an **Intermittent Power Source** the forecast value is based upon the **Intermittent Power Source** being at a level which would enable the **Genset** to generate at **Registered Capacity**.

For the purpose of OC2 only, the term **Output Usable** shall include the terms **Interconnector Export Capacity** and **Interconnector Import Capacity** where the term **Output Usable** is being applied to an **External Interconnection**.

##### Proposed Change:

Proposed change	Im
<b>Output Usable or OU</b> The <del>(daily or weekly)</del> forecast value (in MW), <del>at the time of the (daily or weekly) peak demand, of the maximum</del> profiled across the time period affected by the unplanned or planned <b>Event</b> of the level at which the <b>Genset</b> can export to the <b>Grid Entry Point</b> , or in the case of <b>Embedded Power Stations</b> , to the <b>User System Entry Point</b> . In addition, for a <b>Genset</b> powered by an <b>Intermittent Power Source</b> the forecast value is based upon the <b>Intermittent Power Source</b> being at a level which would enable the <b>Genset</b> to generate at <b>Registered Capacity</b> . For the purpose of OC2 only, the term <b>Output</b>	

## 2. GC0130 implementation

(DRC - SCHEDULE 3)

Baseline Legal Text:

PLANNING FOR YEARS 3 - 7 AHEAD (OC2.4.1.2.1(a)(i), (e) & (j))

Proposed Change:

delete the table for "PLANNING FOR YEARS 3 - 7 AHEAD (OC2.4.1.2.1(a)(i), (e) & (j))"

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## 3. GC0130 implementation

(DRC - Schedule 3)

Baseline Legal Text:

PLANNING FOR YEAR 0

Proposed Change:

delete the table for "PLANNING FOR YEAR 0"

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**The Company** will then consider the updated **Output Usable** and takes this into account in the next calculation and submission to **BMRA**.

OC2.4.1.2.3 **The Company** retains the right to contact **Generators** with **Large Power Stations**, **Interconnector Owners** and **Network Operators** in reference to planned outages of their assets in timescales beyond the European Requirements (3 years) up to the 5 year ahead period to assist in the operational planning of **National Electricity Transmission System** outages.

OC2.4.1.3 Planning of National Electricity Transmission System Outages

OC2.4.1.3.1 Operational Planning Phase - Planning for Financial Years 2 to 5 inclusive ahead

**The Company** shall plan **National Electricity Transmission System** outages required in

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## 4. European Network Code implementation.

(European Connection Conditions)

Baseline Legal Text:

ECC.6.3.8.4.1 Each **Type C** and **Type D Onshore Power Park Module, Onshore HVDC Converter and OTSDUW Plant and Apparatus** shall be fitted with a continuously acting automatic control system to provide control of the voltage at the **Grid Entry Point** or **User System Entry Point** (or **Interface Point** in the case of **OTSDUW Plant and Apparatus**) without instability over the entire operating range of the **Onshore Power Park Module, or Onshore HVDC Converter or OTSDUW Plant and Apparatus**. Any **Plant** or **Apparatus** used in the provisions of such voltage control within an **Onshore Power Park Module** may be located at the **Power Park Unit** terminals, an appropriate intermediate busbar or the **Grid Entry Point** or **User System Entry Point**. In the case of an **Onshore HVDC Converter** at a **HVDC Converter Station** any **Plant** or **Apparatus** used in the provisions of such voltage control may be located at any point within the **User's Plant and Apparatus** including the **Grid Entry Point** or **User System Entry Point**. **OTSDUW Plant and Apparatus** used in the provision of such voltage control may be located at the **Offshore Grid Entry Point** an appropriate intermediate busbar or at the **Interface Point**. When operating below 20% **Maximum Capacity** the automatic control system may continue to provide voltage control using any available reactive capability. If voltage control is not being provided, the automatic control system shall be designed to ensure a smooth transition between the shaded area below 20% of **Active Power** output and the non-shaded area above 20% of **Active Power** output in Figure ECC.6.3.2.5(c) and Figure ECC.6.3.2.7(b) The performance requirements for a continuously acting automatic voltage control system that shall be complied with by the **User** in respect of **Onshore Power Park Modules, Onshore HVDC Converters** at an **Onshore HVDC Converter Station, OTSDUW Plant and Apparatus** at the **Interface Point** are defined in ECC.A.7.

Proposed Change:

ECC.6.3.8.4.1 Each **Type C** and **Type D Onshore Power Park Module, Onshore HVDC Converter and OTSDUW Plant and Apparatus** shall be fitted with a continuously acting automatic control system to provide control of the voltage at the **Grid Entry Point** or **User System Entry Point** (or **Interface Point** in the case of **OTSDUW Plant and Apparatus**) without instability over the entire operating range of the **Onshore Power Park Module, or Onshore HVDC Converter or OTSDUW Plant and Apparatus**. Any **Plant** or **Apparatus** used in the provisions of such voltage control within an **Onshore Power Park Module** may be located at the **Power Park Unit** terminals, an appropriate intermediate busbar or the **Grid Entry Point** or **User System Entry Point**. In the case of an **Onshore HVDC Converter** at a **HVDC Converter Station** any **Plant** or **Apparatus** used in the provisions of such voltage control may be located at any point within the **User's Plant and Apparatus** including the **Grid Entry Point** or **User System Entry Point**. **OTSDUW Plant and Apparatus** used in the provision of such voltage control may be located at the **Offshore Grid Entry Point** an appropriate intermediate busbar or at the **Interface Point**. When operating below 20% **Maximum Capacity** the automatic control system may continue to provide voltage control using any available reactive capability. If voltage control is not being provided, the automatic control system shall be designed to ensure a smooth transition between the shaded area below 20% of **Active Power** output and the non-shaded area above 20% of **Active Power** output in Figure ECC.6.3.2.45(c) and Figure ECC.6.3.2.67(b) The performance requirements for a continuously acting automatic voltage control system that shall be complied with by the **User** in respect of **Onshore Power Park Modules, Onshore HVDC Converters** at an **Onshore HVDC Converter Station, OTSDUW Plant and Apparatus** at the **Interface Point** are defined in ECC.A.7.

## 5. GC 0136 Implementation

OC5.A.2.8.8

Baseline Legal Text:

While the diagram was populated in the documents sent as part of the GC0138 Code Administrator Consultation and Final Modification Report, it is missing from the current baseline Legal Text.

Proposed Change

Include diagram in Baseline Legal Text

OC5.A.2.8.8

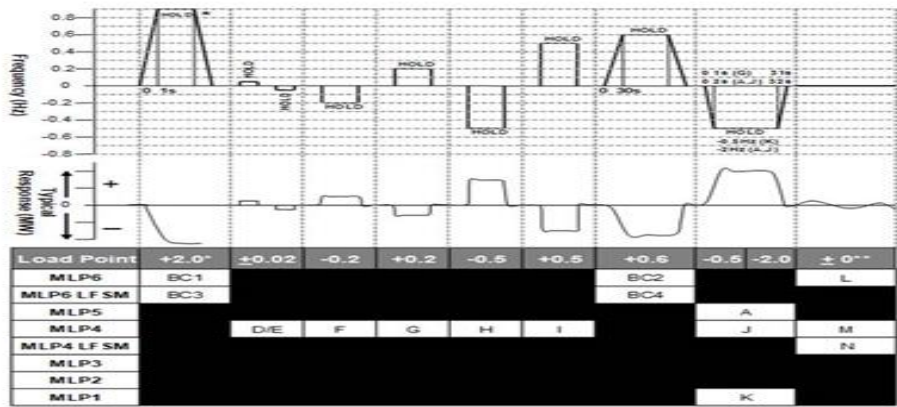


Figure 2: System islanding and step response tests

## APPENDIX B

## The GC Housekeeping Register – June 2022

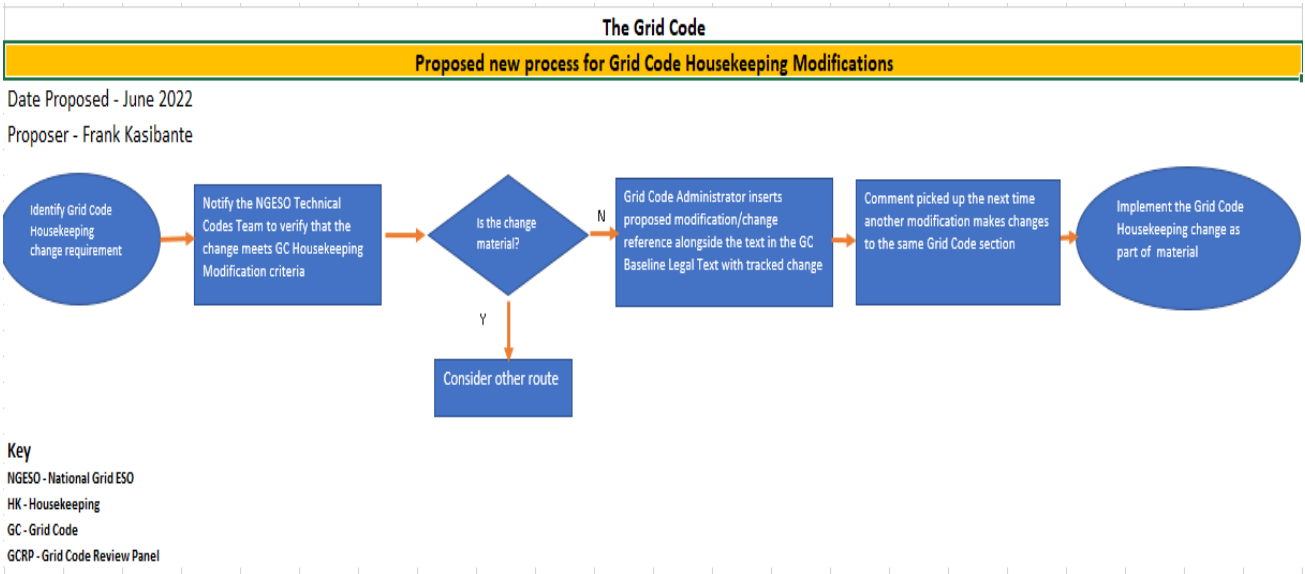
Suggested by	Origin	Explanation	Chapter/Section	Baseline date	Baseline	Proposed change	Implement	Approved by (Tech Co)
Phil Smith	GC0130 implementation	GC0130 was implemented on 18 March 2021. When preparing the legal text, we found there were two versions of an excel file of 'other changes' and the final version was missing some changes that we believe were required. We could not implement them because they weren't in the final version so those changes are still needed, although the code as it stands is not unworkable.	GLOSSARY & DEFINITIONS	28-Jan-20	Output Usable or OU The (daily or weekly) forecast value (in MW), at the time of the (daily or weekly) peak demand, of the maximum level at which the Genset can export to the Grid Entry Point, or in the case of Embedded Power Stations, to the User System Entry Point. In addition, for a Genset powered by an Intermittent Power Source the forecast value is based upon the Intermittent Power Source being at a level which would enable the Genset to generate at Registered Capacity. For the purpose of OC2 only, the term Output Usable shall include the terms Interconnector Export Capacity and Interconnector Import Capacity where the term Output Usable is being applied to an External Interconnection.	Output Usable or OU The (daily or weekly) forecast value (in MW), at the time of the (daily or weekly) peak demand, of the maximum level at which the Genset can export to the Grid Entry Point, or in the case of Embedded Power Stations, to the User System Entry Point. In addition, for a Genset powered by an Intermittent Power Source the forecast value is based upon the Intermittent Power Source being at a level which would enable the Genset to generate at Registered Capacity. For the purpose of OC2 only, the term Output Usable shall include the terms Interconnector Export Capacity and Interconnector Import Capacity where the term Output Usable is being applied to an External Interconnection.		Change is immaterial - daily or weekly not used any more (Ref to this fact was forgotten during the GC0130 Process) - to be considered in HK Mod.
Phil Smith	GC0130 implementation	As above	SCHEDULE 3	28-Jan-20	PLANNING FOR YEARS 3 - 7 AHEAD (OC2.4.1.2.1(a)(i), (e) & (j))	delete the table for "PLANNING FOR YEARS 3 - 7 AHEAD (OC2.4.1.2.1(a)(i), (e) & (j))"		Table still exists in current Baseline Legal Text - To be considered in HK Mod proposal
Phil Smith	GC0130 implementation	As above	SCHEDULE 3	28-Jan-20	PLANNING FOR YEAR 0	delete the table for "PLANNING FOR YEAR 0"		Table still exists in current Baseline Legal Text - To be considered in HK Mod proposal
Frank Kasibante	GC0136 implementation	an error in referencing that happened during European Network Code implementation	ECC	13-Jun-22	ECC.6.3.2.4.1 - If voltage control is not being provided, the automatic control system shall be designed to ensure a smooth transition between the shaded area below 20% of Active Power output and the non-shaded area above 20% of Active Power output in Figure ECC.6.3.2.45(c) and Figure ECC.6.3.2.67(b)	If voltage control is not being provided, the automatic control system shall be designed to ensure a smooth transition between the shaded area below 20% of Active Power output and the non-shaded area above 20% of Active Power output in Figure ECC.6.3.2.4(c) and Figure ECC.6.3.2.6(b)		an error in referencing that happened during European Network Code implementation

Figure 1 – Grid Code Housekeeping Register, June 2022

**APPENDIX C (This is provided for information only)**

**Proposed new process for Grid Code Housekeeping Modifications**

Proposed is the introduction of a new process for future housekeeping issues (formatting changes, grammatical errors, other immaterial inaccuracies with no impact on any party) such that these will be highlighted and sent to the Grid Code & Code Administrator Team’s dot box. Tracked changes will then be made to the baseline legal text and a comment added identifying the source of the requirement and who identified it. The change will then be included on the next occasion that that section of the baseline text is checked out for a Grid Code modification. Fig.2 shows the proposed new process referred to.



*Fig.2 – Proposed new process for Grid Code Housekeeping modifications*