

Stage 07: Final Self-Governance Modification Report

Grid Code

GC0098:

Using GB Grid Code data to construct the EU Common Grid Model in accordance with Regulation (EU) 2015/1222 (CACM), Regulation (EU) 2016/1719 (FCA) and Regulation (EU) 2017/1485 (SOGL).

Purpose of Modification: This modification seeks to give all parties visibility as to which data collected through the Grid Code is to be used to construct the GB Individual Grid Model in accordance with Regulation (EU) 2015/1222 (CACM), Regulation (EU) 2016/1719 (FCA) and Regulation (EU) 2017/1485 (SOGL). A common grid model representing the European interconnected system is to be established so that TSOs can calculate cross-zonal capacity in a coordinated way.



The purpose of this document:

This Final Self-Governance Report has been prepared in accordance with the terms of the Grid Code. An electronic version of this document and all other GC0098 related documentation can be found on the National Grid website via the following link:

<https://www.nationalgrid.com/uk/electricity/codes/grid-code/modifications/gc0098-using-gb-grid-code-data-construct-eu-common>

At the Grid Code Panel meeting on 28 June 2018, the Panel members carried out their second Self-Governance Vote and unanimously agreed that the Original was better than the baseline and decided that it should be implemented following the closure of a fifteen day appeal window.

Published on: 16 July 2018



Low Impact:

Transmission system owners and operators as it is linked to their compliance with the EU network guidelines. Generators, Independent Distribution Network Operators, Distribution Network Operators, Generation, Interconnectors as data collected from these parties through the GB Grid Code will be used to construct a GB grid model and shared with other EU Transmission System Operators (TSOs).

What stage is this document at?

01	Modification Proposal
02	Code Administrator Consultation
03	Draft Grid Code Modification Self-Governance Report
04	Grid Code Modification Self-Governance Report
05	Second Code Administrator Consultation
06	Draft Grid Code Modification Self-Governance Report
07	Grid Code Modification Self-Governance Report

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Timetable

Below is the post appeal timetable approved by the Grid Code Panel:

Revised Proposal Report presented to Panel	24 April 2018
Code Administrator Consultation Report issued to the Industry (10 Working Days)	24 May 2018
Code Administrator Consultation closes	8 June 2018
Draft Grid Code Self-Governance Report presented to Panel	21 June 2018



Any Questions?

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Panel Determination Vote	28 June 2018
Final Grid Code Self-Governance Report published	12 July 2018
Appeal window opens (15 Working days)	12 July 2018/ 2 August 2018
Implementation (10 Working Days after closure of appeal window)	16 August 2018

About this document

This document is the Final Self-Governance Modification Report which includes the Panel determination vote which was held at the Grid Code Review Panel on 28 June 2018. The Panel members carried out their second Self-Governance Vote and unanimously agreed that the Original was better than the baseline and decided that it should be implemented following the closure of a fifteen day appeal window.

All documents published in relation to GC0098 can be accessed [here](#).

Document Control

Version	Date	Author	Change Reference
1.0	21 August 2017	Code Administrator	Code Administrator Consultation to Industry
1.1	13 September 2017	Code Administrator	Draft Grid Code Self-Governance Report
1.2	3 October 2017	Code Administrator	Grid Code Self-Governance Report
1.3	18 April 2018	Code Administrator	2 nd Code Administrator Consultation draft to Panel
1.4	24 May 2018	Code Administrator	2 nd Code Administrator Consultation Paper published
1.5	18 June 2018	Code Administrator	Draft Self-Governance Modification Report
1.6	13 July 2018	Code Administrator	Final Self-Governance Modification Report

Acronyms Table

Acronym	Definition
CGMES	Common Grid Model Exchange Specification

TSO	Transmission System Operator
CACM	Capacity Allocation and Congestion Management Guideline
SOGL	System Operation Guideline
FCA	Forward Capacity Allocation Guideline

1 Summary

GC0098 was originally proposed by National Grid Electricity Transmission (NGET) and submitted to the Grid Code Modifications Panel for their consideration on 30 May 2017. The Panel recommended that the Proposer of this modification amended the legal text provided. The Proposer completed this work and the modification was resubmitted to the Grid Code Panel for discussion on the 19 July 2017. The Panel decided that this Modification should be classed as Self-Governance and should proceed directly to Code Administrator Consultation for 15 Working Days.

The first Code Administrator Consultation closed on the 12 September 2017. One response was received (see Annex 1).

Grid Code Panel Determination (Sept 2017)

On 20 September 2017 and on conclusion of the Code Administrator Consultation, a draft Grid Code Self-Governance Report for GC0098 was presented to the Grid Code Review Panel. The Panel assessed the proposed solution against the Grid Code Objectives, determining by majority that the objectives were satisfied. During the subsequent appeal window, which closed on 20 October 2017, a notice of appeal was submitted by one interested party which suspended the proposed implementation.

Post Panel Appeal (October 2017)

On 19 October 2017, Ofgem received notice of an appeal by Senvion UK ('Senvion') in accordance with clause [GR.24.13](#) of the Grid Code Governance Rules. This appeal was made in respect of the decision of Grid Code Review Panel published on 3 October 2017 to approve Grid Code modification GC0098.

On 12 February 2018, the Authority decided to quash the Self-Governance decision of the Grid Code Review Panel and to refer GC0098 back to the GCRP for further review, and a further GCRP Self-Governance decision. The Ofgem appeal decision letter can be accessed [here](#).

On 22 February 2018, the GCRP agreed for the modification to be issued for a second Code Administrator Consultation once revisions to the legal text had been made in response to industry feedback and the concerns raised in the appeal had been addressed.

- 1.8 The revised Self-Governance Report was submitted to the April GCRP who approved for the Consultation to be issued.
- 1.9 The legal text has been revised to address the concerns raised in the appeal. The revised legal text can be found at Section 12 of this report.
- 1.10 The author of the appeal has reviewed the revised legal text and their support for the revised text was noted at the Grid Code Review Panel on 26 April 2018.

Second Code Administrator Consultation (May/June 2018)

- 1.11 A second Code Administrator Consultation was approved by the Grid Code Review Panel in April and was subsequently issued in May. Two responses

were received from NGET and Scottishpower Generation Ltd. These can be read in full at Annex 6.

Panel Determination Vote post appeal (June 2018)

1.12 On 28 June 2018 and on conclusion of the Code Administrator Consultation, a draft Grid Code Self-Governance Report for GC0098 was presented to the Grid Code Review Panel. The Panel assessed the proposed solution against the Grid Code Objectives, determining unanimously that the objectives were satisfied and therefore decided that the modification should be implemented following the closure of the appeal window.

2 Modification Proposal

What

- 2.1 Existing data collected through the Grid Code will be used to construct a GB Individual Grid Model and shared with other EU TSOs. Without this modification it is unclear which data is being used to build the Individual Grid Model. CACM, FCA and SOGL specify confidentiality obligations on TSOs regarding *“information received, exchanged or transmitted pursuant to this Regulation”* in Articles 13, 7 and 12 respectively.

Why

- 2.2 The requirement for TSOs to construct and send an Individual Grid Model is set out in CACM, FCA and SOGL. Without this modification, TSOs will still be obliged to share Individual Grid Models; however, GB parties would have little visibility on which data was used to construct these models.

How

- 2.3 The proposed solution is to include a general statement on why the data is to be shared referencing the EU regulations, and then to include an annex where the relevant sections of the Grid Code are listed.
- 2.4 The proposed modification was raised 12 April 2017 was presented by the Proposer to the Panel on 30 May 2017.

The panel originally requested provision of the following to support the modification;

- the legal text was amended to give greater clarity on the type of data items, rather than just the paragraph references.
- clarification on whether the modification included the SOGL Common Grid Model requirements, this has now been included.
- confirmation that merging the Common Grid Model is a SO (rather than TO) responsibility.

- 2.5 The amended modification was presented to Panel on 19 July 2017. The Proposer of GC0098 amended the legal text as suggested by the Grid Code Panel. In addition, following the July Panel meeting some more wording was added to ensure there is clarity of the modification.

2.6 Please now refer to Section 1.3-1.10 above.

3 Governance

The Proposer of GC0098 put forward that this modification should be considered for **Self-Governance** as the modification is unlikely to have a material effect on any party, but rather gives greater visibility to interested parties on the data used within EU processes. The criteria can be found outlined below:

Self-Governance - *The modification is unlikely to discriminate between different classes of Grid Code Parties and is unlikely to have a material effect on:*

Existing or future electricity customers;

Competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution or supply of electricity,

The operation of the National Electricity Transmission System

Matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies

The Grid Code's governance procedures or the Grid Code's modification procedures

At the Grid Code Panel on the 19 July 2017 the Panel decided that the modification satisfied the Self-Governance Criteria. The Code Administrator furnished a Self-Governance Statement to the Authority.

The Panel determination took place on 20 September 2017 the details of this vote can be found in Section 11.

3.4 Sections 1.3-1.10 outline the continued governance of this modification as a Self-Governance modification subsequent to the appeal raised by Servion in October.

4 Why Change?

This Proposal is one of a number of Proposals which seek to implement relevant provisions of a number of new EU Network Codes/Guidelines which have been introduced in order to enable progress towards a competitive and efficient internal market in electricity. Some EU Network Guidelines are still in development and these may in due course require a review of solutions developed for Codes that come into force beforehand. The full set of EU network guidelines are;

Regulation 2015/1222 – Capacity Allocation and Congestion Management (CACM) which entered into force 14 August 2015

Regulation 2016/1719 – Forward Capacity Allocation (FCA) which entered into force 17 October 2016

Regulation 2016/631 - Requirements for Generators (RfG) which entered force 17 May 2016

Regulation 2016/1388 - Demand Connection Code (DCC) which entered force 7 September 2016

Regulation 2016/1447 - High Voltage Direct Current (HVDC) which entered into force 28 September 2016

Transmission System Operation Guideline (SOGL) - which entered into force on 14 September 2017

Emergency and Restoration (E&R) Guideline – which entered into force in December 2017

Electricity Balancing Guideline (EBGL) - which entered into force in December 2017

- 4.2 This modification relates to the CACM, FCA and SOGL guidelines which together aim to; promote effective competition in the generation, trading and supply of electricity, promote effective long-term cross-zonal trade with long-term cross-zonal hedging opportunities for market participants, and determining common operational security requirements and principles.
- 4.3 The guidelines require National Grid Electricity Transmission plc (NGET) to contribute data towards a pan-EU Common Grid Model (CGM) which will underpin the new European processes. NGET has carried out a mapping exercise with GB industry parties and is confident that we already collect the required data through the GB Grid Code. The legal right for NGET to share the data with EU TSOs arises from the CACM guideline; however, several stakeholders have requested a Grid Code Modification be raised so that it is transparent to all parties which data will be shared.
- 4.4 With reference to the Ofgem decision¹ on the assignment of Transmission System Operator obligations under the Capacity Allocation and Congestion Management Regulation within GB, NGET understands the obligation to merge inputs to form the Common Grid Model (CGM) is an SO obligation. Extract from Annex 2 of the Ofgem decision; “We consider this Sub Paragraph [CACM Article 28.5] applicable to SOs only as it will be the SO's individual grid models (which they are responsible for the operation of) which are merged to form the common grid model.”
- 4.5 For the avoidance of doubt, the scope of GC0098 is limited to describe the sharing of data between the SO and other EU TSOs. GC0098 does not actually describe the *gathering* of that data from generators. It is noted that other Grid Code modifications (GC0100-GC0103) are currently being implemented or developed which may change the data which is currently collected².

¹ Decision for our consultations on the assignment of Transmission System Operator obligations under the Capacity Allocation and Congestion Management Regulation within GB

<https://www.ofgem.gov.uk/publications-and-updates/decision-our-consultations-assignment-transmission-system-operator-obligations-under-capacity-allocation-and-congestion-management-regulation-within-gb>

² See National Grid website for Authority decision letters in respect of GC0100-102: GC0100 can be found [here](#), GC0101 can be found [here](#), and GC0102 can be accessed [here](#)

5 Code Specific Matters

Technical Skillsets

- 5.1 The Proposer considers that the technical skillset required to assess this modification includes; an understanding of data currently collected by NGET under the Grid Code and an understanding of the common grid processes proposed under CACM, FCA and SOGL.

Reference Documents

Ofgem Decisions on the Generation and Load Data Provision Methodology and Common Grid Model Methodology:

<https://www.ofgem.gov.uk/publications-and-updates/decisions-generation-and-load-data-provision-methodology-and-common-grid-model-methodology>

Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management:

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.197.01.0024.01.ENG&toc=OJ:L:2015:197:TOC

Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation Generation and Load Data Provision Methodology (GLPDM) code mapping:

<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589938097>

Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R1485>

Common Grid Model Exchange Specification (CGMES)

<https://www.entsoe.eu/digital/common-information-model/>

6 Original Solution

Inclusion of a reference within the Planning Code section of the Grid Code that data collected by NGET through the Grid Code, as specified in a separate Appendix to Planning Code shall be used to build an individual grid model, so that NGET can fulfil its obligations under CACM, FCA and SOGL.

7 Revised Solution (Post-appeal)

This modification was raised at the request of a number of stakeholders for greater transparency on the information that will be used to construct the GB individual grid model. It is not required to enable NGET to collect and share information to fulfil the EU obligations. One of the key concerns raised in the appeal was that all of the information listed in the appendix of the previous legal text would be directly shared with other EU TSOs, including detailed dynamic control models. For the avoidance of doubt, all of the information listed in the appendix will be used to create a model of the GB transmission system. This model will be constructed using the common grid model exchange specification (CGMES) as the data exchange format. It will be this model of the GB transmission system that will be shared with other EU TSOs, rather than explicitly sharing the data collected. This aspect has been clarified in the updated legal text.

There is no obligation on NGET to collect the information in a particular format, therefore to minimise disruption to all parties NGET will utilise the existing information collection processes established under the Grid Code. NGET is required to share the information using a CGMES, as agreed with all other EU TSOs and NGET will be translating the information it already receives into this more anonymised format. NGET will then provide the GB individual grid model to other EU TSOs to meet the minimum requirement as specified in the EU regulations and associated methodologies. Following the review of the requirements referred to above, NGET believes that sufficiently detailed information is already collected under existing GB provisions to enable NGET to construct the GB individual grid model.

7.3 NGET, alongside other EU TSOs, will employ a simplified form of customers' data which, while not fully anonymised, does go some way towards being so. Given that that all individual grid models need to be constructed in the same way it is not possible to fully anonymise the data. The common grid model methodology requires that individual grid models sufficiently describe the behaviour of connected generators. Aggregation is specifically excluded in this circumstance. Please note that the information used to construct the model will not be directly shared in the form that NGET collects it. It is only the GB individual grid model itself that will be shared.

8 Impacts and Other Considerations

8.1 No impacts to other codes or processes, modification purely provides greater visibility of processes set out under EU regulations.

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

No

Consumer Impacts

None

8.2 Costs

Industry costs (Standard GC)	
Resource costs	£ 3,630 – 2 Consultations <ul style="list-style-type: none"> • 1.5 man days effort per consultation response • 1.5 (average over two consultations)
Total Industry Costs	£ 2,723

9 Relevant Objectives

Impact of the modification on the Relevant Objectives:

Relevant Objective	Identified impact
To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity	None
To facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity)	None
Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole	None
To efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and	Positive
To promote efficiency in the implementation and administration of	Neutral

the Grid Code arrangements

10 Implementation

This revised modification will continue as a Self-Governance modification. It will be implemented ten working days following the closure of the 15 day appeal window that opens on 12 July 2018. This means the modification will be implemented on 16 August 2018.

10.2 System changes are not required to implement GC0098.

11 Panel Determination Vote post appeal (28 June 2018)

The Grid Code Panel met on the 28 June 2018 to carry out their Self-Governance Determination Vote. The Grid Code Panel voted, unanimously, that the Original Proposal best facilitates the Grid Code objectives as detailed below.

Vote 1 – does the original or WACM facilitate the objectives better than the Baseline?

Vote recording guidelines:

“Y” = Yes

“N” = No

“-” = Neutral

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)?	Better facilitates AGCO (iii)?	Better facilitates AGCO (vi)?	Better facilitates AGCO (v)?	Overall (Y/N)
Guy Nicholson (vote case by alternate Sigrid Bolik)						
Original	Y	Y	Y	Y	Y	Y
New presented Draft is enabling NGET to fulfill its requirement to the European Regulations, while considering confidentiality information						
Robert Longden						
Original	Y	Y	Y	Y	Y	Y
The Modification provides greater visibility for users and meets an EU Code requirement.						
Damian Jackman (vote case by alternate Lisa Waters)						
Original	-	-	-	Y	-	Y
The change helps the UK comply with EU rules.						
Alastair Frew						
Original	-	-	-	Y	-	Y
This modification allows NGET to comply with European Regulations and does not affect any other users.						
Graeme Vincent						
Original	-	-	-	Y	-	Y

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Alan Creighton						
Original	-	-	-	Y	-	Y
The proposal increases the transparency relating data used to comply with EU regulations.						
Kate Dooley						
Original	-	-	-	Y	-	Y
Kyla Berry (vote cast by alternate Robert Wilson)						
Original	Y	Y	Y	Y	-	Y
As amended and agreed with stakeholders, this proposal facilitates compliance with an area of the European Network Codes and also assures stakeholders that confidential data will not be shared as part of the Common Grid Model.						

Vote 2 – Which option is the best?

Workgroup Member	BEST Option?
Guy Nicolson (Sigrid Bolik)	Original Proposal
Robert Longden	Original Proposal
Damien Jackman (Lisa Waters)	Original Proposal
Alastair Frew	Original Proposal
Graeme Vincent	Original Proposal
Alan Creighton	Original Proposal
Kate Dooley	Original Proposal
Kyla Berry (Robert Wilson)	Original Proposal

12 Legal Text (Track Changed)

Please note this is the track changed revised legal text post consultation amendments. The light blue text is the proposed text.

[NGET New proposal:](#)

[PC2 .1\(f\)](#)

[\(f\) to enable NGET to use the information provided to it by Users, as specified in Appendix G, to fulfil its obligations pursuant to Regulation \(EU\) 2015/1222, Regulation \(EU\) 2016/1719 and Regulation \(EU\) 2017/1485, in preparing the Common Grid Model \(CGM\) envisaged under those Regulations. The information specified in Appendix G will only be exchanged or transmitted by NGET to the extent necessary for the purpose of the performance of functions under these Regulations. In using the information provided by Users as specified in Appendix G for the purposes of fulfilling its obligations under such Regulations, NGET will develop the CGM in accordance with its obligations of](#)

Commented [BC1]: Update to state post consultation amendments

Deleted: provide for the supply of information required by NGET from Users in respect of the pan-EU Common Grid Model (CGM) and to

Deleted: carry out its duties under

Deleted: [SOGL]. Details of the

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[confidentiality to Users](#). Information transferred by [NGET](#) may take the form of simplified, standardised structures as specified within the most recently approved version of the [Common Grid Model Exchange Specification \(CGMES\)](#). This includes control system information to be transferred in the form of standardised dynamic model structures.

Deleted: is given in Appendix G.

APPENDIX G

All data items collected under the following sections of the Grid Code may be used by [NGET](#) to fulfil the obligations under [Regulation \(EU\) 2015/1222](#), [Regulation \(EU\) 2016/1719](#) and [Regulation \(EU\) 2017/1485](#):

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Deleted: ¶
¶

[Physical Notifications, Export and Import Limits, Dynamic Parameters, BC1.4.2 \(a\), \(b\) and \(c\) BC1.A.1.1](#)

Deleted: [SOGL];

[Grid Voltage Variations, Plant Performance Requirements, Control Arrangements, System Ancillary Services, Commercial Ancillary Services](#)

[CC.6.1.4](#)
[CC.6.3.2](#)
[CC.6.3.7](#)
[CC.8](#)

Deleted: Bid-Offer Data,
Deleted:
Deleted: BC2.5.1

[Generation Planning Parameters, Generator Performance Chart, Final Generation Outage Programme, Genset inflexibility, Outages Adjustments, EU Transparency Availability Data, Test And Monitoring](#)

[OC2.4.1.2.1](#)
[OC2.4.1.2.2](#)
[OC2.4.1.3.2](#)
[OC2.4.1.3.3](#)
[OC2.4.2.1](#)
[OC2.4.7](#)
[OC5](#)
[OC6.6](#)

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[Standard Planning Data, Detailed Planning Data, Power Park Unit model, Single Line Diagram, Lumped System Susceptance, Reactive Compensation Equipment, Power Factor of the Power Park Module, production type, Busbar Arrangements, Registered Capacity, Output Usable, Minimum Generation, Rated Parameters Data, General Generating Unit Power Park Module and DC Converter Data, primary source of power, demand and active energy data, User's User System Demand \(Active Power\) and Active Energy Data, Connection Point Demand \(Active and Reactive Power\), Post Fault User System Layout, General Demand Data, Synchronous Generating Unit Parameters, Non-Synchronous Generating Unit and Associated Control System Data, Transient Overvoltage Assessment Data, User's Protection Data, Harmonic Studies, Voltage Assessment Studies, Short Circuit Analysis](#)

[PC.4.3.1](#)
[PC.A.5.4.2](#)
[PC.A.2.2.1](#)
[PC.A.2.2.2](#)
[PC.A.2.2.4](#)
[PC.A.2.2.5](#)
[PC.A.2.2.6](#)

[PC.A.2.3](#)
[PC.A.2.4.1 a\), b\), d\) and e\)](#)
[PC.A.2.4.2](#)
[PC.A.2.5.6](#)
[PC.A.3.1.4](#)
[PC.A.3.1.5](#)
[PC.A.3.2.2 a\)](#)
[PC.A.3.3.1](#)
[PC.A.3.4.1](#)
[PC.A.3.4.3](#)
[PC.A.4.1](#)
[PC.A.4.1.4.2](#)
[PC.A.4.2](#)
[PC.A.4.3.5](#)
[PC.A.5.4.2 a\), d\), e\), g\) and h\),](#)
[PC.A.5.4.3.1](#)
[PC.A.5.4.3.2](#)
[PC.A.5.4.3.3 i\) and ii\)](#)
[PC.A.6.2](#)
[PC.A.6.3.1 d\) and e\)](#)
[PC.A.6.4](#)
[PC.A.6.5](#)
[PC.A.6.6](#)

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13 Legal Text (Clean version)

Please note this is the clean version of the newly proposed legal text as shown in Section 12.

NGET New proposal:

PC2 .1(f)

(f) to enable **NGET** to use the information provided to it by **Users**, as specified in Appendix G, to fulfil its obligations pursuant to Regulation (EU) 2015/1222, Regulation (EU) 2016/1719 and Regulation (EU) 2017/1485, in preparing the Common Grid Model (CGM) envisaged under those Regulations. The information specified in Appendix G will only be exchanged or transmitted by **NGET** to the extent necessary for the purpose of the performance of functions under these Regulations. In using the information provided by **Users** as specified in Appendix G for the purposes of fulfilling its obligations under such Regulations, **NGET** will develop the CGM in accordance with its obligations of confidentiality to **Users**. Information transferred by **NGET** may take the form of simplified, standardised structures as specified within the most recently approved version of the Common Grid Model Exchange Specification (CGMES). This includes control system information to be transferred in the form of standardised dynamic model structures.

...

APPENDIX G

All data items collected under the following sections of the Grid Code may be used by **NGET** to fulfil the obligations under Regulation (EU) 2015/1222, Regulation (EU) 2016/1719 and Regulation (EU) 2017/1485;

Physical Notifications, Export and Import Limits, Dynamic Parameters,
BC1.4.2 (a), (b) and (c)
BC1.A.1.1

Grid Voltage Variations, Plant Performance Requirements, Control Arrangements, System Ancillary Services, Commercial Ancillary Services
CC.6.1.4
CC.6.3.2
CC.6.3.7
CC.8

Generation Planning Parameters, Generator Performance Chart, Final Generation Outage Programme, Genset inflexibility, Outages Adjustments, EU Transparency Availability Data, Test And Monitoring
OC2.4.1.2.1
OC2.4.1.2.2
OC2.4.1.3.2
OC2.4.1.3.3
OC2.4.2.1
OC2.4.7
OC5
OC6.6

Standard Planning Data, Detailed Planning Data, Power Park Unit model, Single Line Diagram, Lumped System Susceptance, Reactive Compensation Equipment, Power Factor of the Power Park Module, production type, Busbar Arrangements, Registered Capacity, Output Usable, Minimum Generation, Rated Parameters Data, General Generating Unit Power Park Module and DC Converter Data, primary source of power, demand and active energy data, User's User System Demand (Active Power) and Active Energy Data, Connection Point Demand (Active and Reactive Power), Post Fault User System Layout, General Demand Data, Synchronous Generating Unit Parameters, Non-Synchronous Generating Unit and Associated Control System Data, Transient Overvoltage Assessment Data, User's Protection Data, Harmonic Studies, Voltage Assessment Studies, Short Circuit Analysis
PC.4.3.1
PC.A.5.4.2
PC.A.2.2.1
PC.A.2.2.2
PC.A.2.2.4
PC.A.2.2.5
PC.A.2.2.6
PC.A.2.3
PC.A.2.4.1 a), b), d) and e)
PC.A.2.4.2
PC.A.2.5.6

PC.A.3.1.4
 PC.A.3.1.5
 PC.A.3.2.2 a)
 PC.A.3.3.1
 PC.A.3.4.1
 PC.A.3.4.3
 PC.A.4.1
 PC.A.4.1.4.2
 PC.A.4.2
 PC.A.4.3.5
 PC.A.5.4.2 a), d), e), g) and h),
 PC.A.5.4.3.1
 PC.A.5.4.3.2
 PC.A.5.4.3.3 i) and ii)
 PC.A.6.2
 PC.A.6.3.1 d) and e)
 PC.A.6.4
 PC.A.6.5
 PC.A.6.6

...

Annex 1 Code Admin Consultation responses (Sept 2017)

The original GC0098 Code Administrator Consultation closed on 12 September 2017 and received one response.

Respondent	Do you agree that the GC0098 Proposal better facilitates the Grid Code objectives	Do you agree with the Proposed Implementation?	Do you have any other comments?
Scottish Power Generation Ltd	Yes, as the transfer of this data will be a legal requirement	Yes	I assume the correction to reference for System Operation Guide Line (SOGL) will be carried out once the regulation number is known as an administrative modification and not need to repeat this consultation process.

Annex 2 Grid Code Panel Determination vote (Sept 2017)

Grid Code Panel Determination vote

Following the original Code Administrator Consultation, the GCRP met on Wednesday 20 September to assess GC0098 against the Grid Code Objectives. The Panel agreed by majority that it better facilitates the objectives and therefore should be implemented. Details of the Panel member's votes are as follows;

Panel Member	(i)	(ii)	(iii)	(iv)	(v)	Overall
Graeme Vincent	Neutral	Neutral	Neutral	Yes	Neutral	Yes
Alastair Frew	Neutral	Neutral	Neutral	Yes	Neutral	Yes
Alan Creighton	Neutral	Neutral	Neutral	Yes	Neutral	Yes
Fergus Healy on behalf of Kyla Berry	Neutral	Neutral	Neutral	Yes	Neutral	Yes
Damian Jackman	Neutral	Neutral	Yes	Yes	Neutral	Yes
Kate Dooley	Neutral	Neutral	Yes	Yes	Neutral	Yes
Robert Longden	Neutral	Neutral	Neutral	Yes	Neutral	Yes
Guy Nicholson	Neutral	Neutral	No	Neutral	No	No
Steve Cox	Yes	Yes	Yes	Yes	Yes	Yes

11.2 The Panel were also asked to provide a statement with their vote which can be found below:

Graeme Vincent

I believe that the proposal facilitates the implementation of the CACM and SOGL code requirements and will allow TSOs to demonstrate compliance with the codes.

Alastair Frew

This modification allows NGET to comply with European Regulations and does not affect any other users.

Alan Creighton

The proposal increases the transparency relating data used to comply with EU regulations.

Fergus Healy (Kyla Berry alternate)

CACM, FCA and SOGL guidelines require NGET to contribute data towards a pan EU Common Grid Model that will underpin a number of new European processes. NGET already collects the data required via the GB Grid Code and whilst the CACM guideline gives NGET the right to share this data with other European TSOs we have raised this modification to ensure transparency of the data that will be shared. This better facilitate relevant objective (iv) as it will help NGET to efficiently discharge our obligation to comply with the Electricity Regulation and any legally binding decisions of the EU Commission.

Damian Jackman

I support this modification.

Guy Nicholson

I voted against this modification because I received last minute stakeholder feedback on this consultation concerned that detailed and commercially sensitive IP data that is necessary for a connection design and assessment would be made available on a European level when a) this granular data is far too detailed to be used in a macro European model and b) it exposes confidential IP to unnecessary increased risk of leaking to competitors, and industrial espionage.

Robert Longden

I support this modification

Annex 3 Self-Governance Statement

The original Self-Governance Statement submitted to the Authority in July 2017 can be accessed [here](#).

Annex 4 Legal Text (Original Proposed)

Please note this is the original legal text which accompanied the first Code Administrator Consultation.

[PC2 .1\(f\)](#)

(f) to provide for the supply of information required by NGET from Users in respect of the pan-EU Common Grid Model (CGM) and to enable NGET to carry out its duties under Regulation (EU) 2015/1222, Regulation (EU) 2016/1719 and Regulation (EU) 2017/1485 [SOGL]. Details of the information which may be transferred is given in Appendix G.

...

APPENDIX G

All data items collected under the following sections of the Grid Code may be used by NGET to fulfil the obligations under Regulation (EU) 2015/1222, Regulation (EU) 2016/1719 and Regulation (EU) 2017/1485 [SOGL];

Physical Notifications, Export and Import Limits, Bid-Offer Data, Dynamic Parameters,

BC1.4.2

BC1.A.1.1

BC2.5.1

Grid Voltage Variations, Plant Performance Requirements, Control Arrangements, System Ancillary Services, Commercial Ancillary Services

CC.6.1.4

CC.6.3.2

CC.6.3.7

CC.8

Generation Planning Parameters, Generator Performance Chart, Final Generation Outage Programme, Genset inflexibility, Outages Adjustments, EU Transparency Availability Data, Test And Monitoring

OC2

OC2.4.1.2.1

OC2.4.1.2.2

OC2.4.1.3.2

OC2.4.1.3.3

OC2.4.2.1

OC2.4.7

OC5

OC6.6

Standard Planning Data, Detailed Planning Data, Power Park Unit model, Single Line Diagram, Lumped System Susceptance, Reactive Compensation Equipment, Power Factor of the Power Park Module, production type, Busbar Arrangements, Registered Capacity, Output Usable, Minimum Generation, Rated Parameters Data, General Generating Unit Power Park Module and DC Converter Data, primary source of power, demand and active energy data, User's User System Demand (Active Power) and Active Energy Data, Connection Point Demand (Active and Reactive Power), Post Fault User System Layout, General Demand Data, Synchronous Generating Unit Parameters, Non-Synchronous Generating Unit and Associated Control System Data, Transient Overvoltage Assessment Data, User's Protection Data, Harmonic Studies, Voltage Assessment Studies, Short Circuit Analysis

PC.4.3.1

PC.A.5.4.2

PC.A.2.2

PC.A.2.2.2

PC.A.2.2.4

PC.A.2.2.5

PC.A.2.2.6

PC.A.2.3

PC.A.2.4

PC.A.2.5.6
PC.A.3.1.4
PC.A.3.1.5
PC.A.3.2.2
PC.A.3.3.1
PC.A.3.4.1
PC.A.3.4.3
PC.A.4.1
PC.A.4.1.4.2
PC.A.4.2
PC.A.4.3
PC.A.4.3.1
PC.A.4.3.2
PC.A.4.3.3
PC.A.4.3.5
PC.A.4.5
PC.A.4.7
PC.A.5.2
PC.A.5.2.1
PC.A.5.3.2
PC.A.5.4.2
PC.A.5.4.3.1
PC.A.5.4.3.2
PC.A.5.4.3.3
PC.A.6.2
PC.A.6.3
PC.A.6.4
PC.A.6.5
PC.A.6.6

Annex 5 Industry Feedback and NGET Responses

In April 2018, the Proposer presented the revised modification to the Grid Code Development Forum. NGET provided the following responses to industry:

Can NGET provide a tracked changes version of the legal text?

Response: (attached – this compares the new legal text with the previous version that went to panel in September last year).

Why is the sentence “Information transferred by NGET may take the form of simplified, standardised structures as specified within the most recently approved version of the Common Grid Model Exchange Specification (CGMES). This includes control system information to be transferred in the form of standardised dynamic model structures” in a separate appendix, rather than simply within the PC2.1(f)?

Response: The proposer has made this change to the updated legal text attached.

How is the CGMES is governed? And would references to the CACM, FCA and SOGL CGM methodologies be more appropriate instead?

Response: The Common Grid Model Exchange Specification (CGMES) 2.4.15. has now been adopted by the International Electrotechnical Commission as IEC CGMES Technical Specifications (IEC TS 61970-600-1:2017 & IEC TS 61970-600-2:20). More information can be found here; <https://www.entsoe.eu/major-projects/common-information-model-cim/cim-for-grid-models-exchange/standards/Pages/default.aspx>

To ensure that the International Electrotechnical Commission's (IEC) CIM standards are developed in line with TSO requirements, ENTSO-E established liaisons with IEC TC 57/WG13 (the working group dealing with CIM for transmission) and IEC TC57/WG16 (the working group responsible for CIM for energy markets). In addition, ENTSO-E is actively cooperating with the CIM User's Group and UCAI User's Group to exchange information within the CIM community.

The CIM standards are continuously evolving to meet the changing requirements for data exchange, which are increasing in both frequency and type, with higher RES integration and the introduction of smart grids. Specific ENTSO-E CIM specifications have been defined to ensure the suitability of the CIM for ENTSO-E and to reflect the complexity of TSO data exchanges.

I view the references to CGMES as more appropriate than references to the CACM, FCA and SOGL methodologies for two reasons;

- 1) Whilst the CACM, FCA and SOGL methodologies set the requirements for the *content* of the Common Grid Model (CGM), they do not directly specify the *data exchange formats*. This is detailed in the CGMES.
- 2) The legal text already makes references to the CACM, FCA and SOGL EU regulations. This reference covers associated the methodologies which, when approved, are essentially extensions of the EU Regulations.

Annex 6 Code Administrator Consultation Responses

Respondent:	Alastair Frew
Company Name:	Scottishpower Generation Ltd
Please express your views regarding the Code Administrator Consultation, including rationale. (Please include any issues, suggestions or queries)	<p><i>For reference, the Grid Code objectives are:</i></p> <p>To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity</p> <p>To facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity)</p> <p>Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole</p> <p>To efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and</p> <p>To promote efficiency in the implementation and administration of the Grid Code arrangements</p>

Code Administrator Consultation questions

Q	Question	Response
1	Do you believe that GC0098 better facilitates the Grid Code Objectives? Please include your	Yes, as it implements EU regulations.

	reasoning.	
2	Do you support the proposed implementation approach? If not, please provide reasoning why.	Yes
3	Do you have any other comments?	No

Respondent:	<i>Robert Selbie</i>
Company Name:	<i>National Grid</i>
Please express your views regarding the Code Administrator Consultation, including rationale. (Please include any issues, suggestions or queries)	<p><i>For reference, the Grid Code objectives are:</i></p> <ul style="list-style-type: none"> i. To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity ii. To facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity) iii. Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole iv. To efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and v. To promote efficiency in the implementation and administration of the Grid Code arrangements

Code Administrator Consultation questions

Q	Question	Response
1	Do you believe that GC0098 better facilitates the Grid Code Objectives? Please include your reasoning.	Yes. CACM, FCA and SOGL guidelines require NGET to contribute data towards a pan EU Common Grid Model (CGM) that will underpin a number of new European

		<p>processes. NGET already collects the data required via the GB Grid Code and whilst the CACM guideline gives NGET the right to share this data with other European TSOs we have raised this modification to ensure transparency of the data that will be shared. This better facilitate relevant objective (iv) as it will help NGET to efficiently discharge our obligation to comply with the Electricity Regulation and any legally binding decisions of the EU Commission; in helping to create and populate the CGM it will also help in (i) the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity.</p>
2	<p>Do you support the proposed implementation approach? If not, please provide reasoning why.</p>	<p>Yes</p>
3	<p>Do you have any other comments?</p>	<p>On 12 February 2018, the Authority decided to quash the Self-Governance decision of the Grid Code Review Panel and to refer GC0098 back to the GCRP for further review, and a further GCRP Self-Governance decision on the basis of concerns raised regarding what data would be shared and whether any of this could be confidential. The Ofgem appeal decision letter can be accessed here</p> <p>Following the appeal, NGET worked with the author of the appeal to amend the legal text in line with the Ofgem decision and to allay concerns regarding the content and confidentiality of the data that would be supplied for the CGM.</p> <p>On 4 April 2018, NGET presented the revised modification to the Grid Code Development Forum. A summary of the feedback is set out in Annex 5 of the GC0098 Second Code Administration Consultation report.</p> <p>On 26 April 2018 NGET presented the revised modification to the Grid Code Review Panel who approved for the 2nd Code Administrator Consultation to be issued. The author of the appeal has reviewed the revised legal text and their support for the revised text was noted at the Panel.</p> <p>With the revised legal text having resolved the earlier concerns and no further issues noted NGET supports that this modification should again proceed as self-governance.</p>