eGAMA OC2 Submission Interface Specification 1.1 Final

16 February 2021

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**eGAMA OC2 Interface Specification**

1. Introduction
	1. Purpose and Scope

The NGESO eGAMA platform along with Grid Code Change 0130 will replace the existing GOAMP platform and implement changes to the way NGESO gain availability data from market participants. The NGESO will now pick up data to fulfil OC2 requirements from the Elexon REMIT portal where possible.

This document defines the file specification needed for Generators and Interconnectors that need to submit availability to the NGESO eGAMA platform via manual file upload or File Transfer Mechanism in order to meet OC2 obligations in line with new changes in the way NGESO gains availability data defined in Grid Code change 0130.

Those Generators or Interconnectors that need to submit directly to us are those not obliged to submit under REMIT regulations or those who submit to REMIT via Generators in house systems and not though NGESO MODIS or direct to the Elexon REMIT portal, or if they are required to submit additional information regarding multi-shaft or multi-pole data.

Note: Documentation (user guides) for using the eGAMA web application will be made available separately.

* 1. Requirement

For Generators and interconnectors that will be submitting availability to eGAMA this can be provided via Manual File Upload, the web user interface or a File Transfer Mechanism.

Generators with multi-shaft assets can submit either just REMIT data (using the “Related information” field) or a mix of both REMIT for their BMU level availability and eGAMA for their multi-shaft availability.

Interconnectors will be required either to do just REMIT (using the “Related information” field for multi-pole information ) or just eGAMA (using the cause field for multipole information)

This data will be required for a new or change in the available capacity (planned or unplanned) and only entered on a change rather than daily and weekly like the old TOGA GOAMP system.

This will be for up to 3 years ahead so less onerous than the old system which was 5 years ahead.

The new system will require a start and end date and time and available capacity during this window to build a profile rather than a daily or weekly value.

If no data is received by NGESO covering a period, the default normal capacity will be used from a previous outage submission or the registered capacity if a previous submission is not avalible.

Submissions must be updated within 24hrs of an event or planning an event (if the Remit obligations apply on the data this is 1 hour).

This data will be used by NGESO to provide the following to the BMRA Elexon platform:

* + Margin Calculation
	+ Surplus Calculation
	+ Total Output Useable
	+ Output Useable by fuel type
	+ Output Useable by unit

Table 1: OC2 Data Flows from NGESO to BMRA/SAA

| Sl.No. | Data Flow | Description |
| --- | --- | --- |
|  | OC2 Generator Availability | NGESO receives availability from OC2 eligible GB market participants to notify of changes in Generator availability in the 0 day ahead to 3 year ahead period. |
|  | REMIT Generator Availability  | NGESO receives availability from REMIT eligible GB market participants to notify of changes in Generator availability in the 0 day ahead to 3 year ahead period  |
|  | NGESO calculates forecast | The eGAMA platform processes availability and forecast data to create data needed to fulfil our OC2 obligations.  |
|  | NGESO forwards OC2 data to Elexon BMRA platform. | NGESO forwards 3 year ahead forecast data on an hourly basis to BMRA which is then published on the BMRS website.* Margin Calculation
* Surplus Calculation
* Total Output Useable
* Output Useable by fuel type
* Output Useable by unit
 |
|  |  |  |

* 1. Definitions

|  |  |
| --- | --- |
| eGAMA | Generator Availability and Margin Analysis  |
| BMU | Balancing Mechanism Unit |
| GOAMP | Generator Outage and Maintenance Planning (legacy system) |
| OC2 | Operating Code No. 2 |
| REMIT | Regulation on Wholesale Energy Market Integrity and Transparency |
| NGESO | National Grid Electricity System Operator |
| Upload | The process of transfer of data from the Client to the Host. |
| UTC | Coordinated Universal Time |
| BMRS | ELEXON – Balancing Mechanism Reporting Application |
|  |  |

Table 2 – Definitions

1. Related Documents
2. [GC0130 mod changes](https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0130-oc2-change-simplifying-output-useable)
3. Transfer Mechanism
	1. Approach

Users will be able to submit availability by Manual File Upload or by entering availability via web user interface or using File Transfer mechanism the formats of which are outlined in later sections.

1. Create New Messages via CSV

To create messages to report new changes in availability, use the ‘Active’ Status

If a message is sent that overlaps the date range with an existing record the whole file will be rejected.

1. Update existing Messages via CSV

To update messages the existing message must initially be removed by sending a message with the same details but with a status of ‘Dismissed’

The new update record should then use ‘Active’ status.

1. Delete existing Messages via CSV

Message can be deleted by sending a message with the same details but with a status of ‘Dismissed’

1. Files uploaded via the eGAMA user interface will be validated once loaded and success or failure messages will be displayed to the user if they check back after a period of time or via an email.
2. Users will be able to view and edit availability records via the eGAMA user interface, but only where uploaded to eGAMA, REMIT data will not be available.
3. Files submitted by a File transfer mechanism will receive an acknowledgement email of success or failure by email with relevant error messages described in further sections. This will be a secure file transfer, requiring credentials and an initial setup. Details of this service will be available on request. The file transfer mechanism is limited to 200 messages in each file.
4. If a user decides to change availability via the user interface this would not be reflected in the user’s source file transfer system.
5. Generators with multi-shaft units can either just use REMIT by using the “Related Information” field or will be able to do a mix of both, the BMU level unit data via Elexon REMIT and the multi-shaft level data via eGAMA.
6. Interconnectors with multi-poles have either the option to use just Elexon REMIT by using the “Related Information” field or just eGAMA for both BMU and multi-poles as unfortunately we cannot offer a mix of both.
	1. System Time

All the times mentioned in the file names and inside the files will be in UTC time standard.

1. File Naming Convention

The following file name definition is applicable when submitting via File Transfer, manual uploaded files via UI can be called anything but must adhere to the same content structure.

The extension will be .csv

| Title | Data Type | NGESO Notes |
| --- | --- | --- |
| Company Name | Alphanumeric – limited to 25 characters | Describing the Generator owning company. |
| Creation Date & Time | UTC Date Time | File Creation date and time Creation Date & Time YYYYMMDD\_HHMMSS |

Example: NorthWindFarm\_20200910\_095740

1. Files Message Definition for Generators

Table 5 : message definition of OC2 Generator Availability to eGAMA

Multi-shaft data can be included as sperate BMU IDs

| Element/Attribute Name | Data Type | Description | Mandatory |
| --- | --- | --- | --- |
| BMU ID | Alphanumeric 16 Chars | BMU ID, when using multi-shaft include ‘/generator unit’ | Y |
| Period Start  | UTC Format Date&Time | Start Date and Time of change in availability – UTC Format: YYYY-MM-DD HH:MM:SS | Y |
| Period End  | UTC Format Date&Time | End Date and Time of change in availability – UTC Format: YYYY-MM-DD HH:MM:SS | Y |
| Availability Capacity (Production) | Integer | MW Capacity Available during the defined period | Y |
| Asset Type   | Alphanumeric | ‘Generator’. | Y |
| Normal Capacity  | Integer | Normal Capacity of the BMU (Numeric field for MW) | Y |
| Unavailability Type  | Alphanumeric | Allowable values – ‘Planned’ , ‘Unplanned’ | Y |
| Event Status  | Alphanumeric | Determine whether the submission is new or cancelling/amending an existing submissionValues: ‘Dismissed’, ‘Active’ | Y |
| Cause | Alphanumeric (255 characters) | Description of reason for change to availability | N |
| Availability Capacity Demand  | Integer | Only needed for units that can act as demand as well as generation (Numeric field for MW). | N |

1. Files Message Definition for Interconnectors

Table 6: message definition of OC2 Interconnector Availability to eGAMA

Multi-pole data needs to be entered under the “Cause” field rather than as a separate BMU ID with a “/”.

| Element/Attribute Name | Data Type | Description | Mandatory |
| --- | --- | --- | --- |
| BMU ID | Alphanumeric 16 Chars | BMU ID of the Generation side of the Interconnector ie IEG\_INTC1 | Y |
| Period Start  | UTC Format Date&Time | Start Date and Time of change in availability – UTC Format: YYYY-MM-DD HH:MM:SS | Y |
| Period End  | UTC Format Date&Time | End Date and Time of change in availability – UTC Format: YYYY-MM-DD HH:MM:SS | Y |
| Availability Capacity (Production) | Integer | MW Capacity Available during the defined period | Y |
| Asset Type   | Alphanumeric | ‘Generator’. | Y |
| Normal Capacity  | Integer | Normal Capacity of the BMU (Numeric field for MW) | Y |
| Unavailability Type  | Alphanumeric | Allowable values – ‘Planned’ , ‘Unplanned’ | Y |
| Event Status  | Alphanumeric | Determine whether the submission is new or cancelling/amending an existing submissionValues: ‘Dismissed’, ‘Active’ | Y |
| Cause | Alphanumeric (255 characters) | Where the availability of individual poles can be made in the set format like below prefixed with ~~ING-PWL1,2021-10-26 16:00:00,2021-10-29 00:00:00,500 | N |
| Availability Capacity Demand  | Integer | Only needed for units that can act as demand as well as generation (Numeric field for MW). | N |

1. Validation and Error Message Codes

| Validation | Message |
| --- | --- |
| If Available Capacity > Normal Capacity | MSG = ‘BMU ###### start date=#######, end date=######, Available Capacity must be <= Normal Capacity’ |
| If Type = Generator and Available Capacity < 0 | MSG= ‘Generator BMU ##### must have Available Capacity >= 0’ |
| If Status = ‘Dismiss’ but unable to locate a BMU with matching start and end date/time | MSG=‘Unable to cancel message for BMU####, start date=#######, end date=######, Available Capacity=####’ |
| If Start Date + Time >= End Date + Time. | MSG = ‘Start date and time must be before end date and time for BMU####, start date=#######, end date=######, Available Capacity=####’ |
| End Date + Time must be > Now | MSG = ‘End date and time must be in the future, BMU####, start date=#######, end date=######, Available Capacity=####’ |
| Must be a valid BMU for this user | MSG = ‘BMU#### is not a valid BMU for user ########’ |
| Must provide mandatory fields | MSG=’Field ###### is missing for - BMU####, start date=#######, end date=######, Available Capacity=####’ |

1. REMIT submissions of multi-shaft or multi-pole assets

Generators who submit availability to REMIT with multi-shaft can either use the above to submit to eGAMA or must submit using the ‘Related Information’ field in REMIT or MODIS and populate as shown in the example below. This is required within 24 hours of a change. There is a character limit of 400 so do not submit more than this otherwise there is a risk of the file being rejected by MODIS or REMIT. If you have a both a generation and demand BMU then please just use the generation one to add the “RelatedInformation”. Interconnectors with multipoles can also use the below for entering this data in their REMIT submission.

Enter the data for Multi shaft units that will not be available (zero MW) in the “RelatedInformation” field.

The BMU name will be inferred from the main REMIT message.

Example for BMU 1 which is 500MW but has an overall availability of 400MW as has two GTs (both available at 200MW) and one ST(usually 100MW) which is offline.

*~Turbine name, Start DateTime, End DateTime, MW*

~/GT1,2020-07-06 13:00:00,2020-07-09 13:00:00,200

~/GT2,2020-07-06 13:00:00,2020-07-09 13:00:00,200

**~/ST1,2020-07-06 13:00:00,2020-07-09 13:00:00,0**

The minimum requirement is to enter any shafts/poles at zero (**Bold**) to notify NGESO of unavailability. eGAMA will not validate this information as only required for internal use by NGESO in system planning to know which parts of the generators or interconnector are not available.

If the whole BMU is at zero then we will imply all shafts/poles are unavailable and if they whole BMU is at capacity then we will imply all shafts/poles are available.

1. Examples of Data files

**Example of Simple BMU new Message** (please note the “,”s for the non-mandatory field not used.)

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

BMU1,2020-10-26 16:00:00,2020-10-29 00:00:00,450,Generator,500,Planned, Active,’Slight tube leak’, <EOF>

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

**Example of BMU with multi-shaft new Message submitting only via eGAMA (the BMU level will be used for reporting and the multi-shaft for internal planning by NGESO)** (please note the “,”s for the non-mandatory field not used.)

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

BMU1,2020-10-26 16:00:00,2020-10-29 00:00:00,450,Generator,500,Planned, Active,’Slight tube leak’,

BMU1/GT1,2020-10-26 16:00:00,2020-10-29 00:00:00,200,Generator,200,Planned, Active,,

BMU1/GT2,2020-10-26 16:00:00,2020-10-29 00:00:00,200,Generator,200,Planned, Active,,

BMU1/ST1,2020-10-26 16:00:00,2020-10-29 00:00:00,50,Generator,100,Planned, Active,’Slight tube leak’,

<EOF>

**Example of BMU with multi-shaft new Message submitting BMU level via REMIT and multi-shaft via eGAMA (the BMU level will be used for reporting and the multi-shaft for internal planning by NGESO)** (please note the “,”s for the non-mandatory field not used.)

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

BMU1/GT1,2020-10-26 16:00:00,2020-10-29 00:00:00,200,Generator,200,Planned, Active,,

BMU1/GT2,2020-10-26 16:00:00,2020-10-29 00:00:00,200,Generator,200,Planned, Active,,

BMU1/ST1,2020-10-26 16:00:00,2020-10-29 00:00:00,50,Generator,100,Planned, Active,’Slight tube leak’,

<EOF>

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

**Example of Interconnector new Message BMU level in eGAMA not multipole(Only need to do the Generation part)** (please note the “,”s for the non-mandatory field not used.)

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

ING-PWL1,2020-10-26 16:00:00,1000-10-29 00:00:00,500,Generator,1000,Planned, Active,,

<EOF>

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

**Example of Interconnector with multi-pole new Message - All data in eGAMA (the BMU level will be used for reporting and the multi-pole for internal planning by NGESO) -multi-pole only required for the Generation BMU.** Multi-pole outages must be added to the Cause field prefixed with ~ (tilde)

(please note the “,”s for the non-mandatory field not used.) So here the cause contains the multipole information at a minimum the poles that are at lower than capacity.

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

ING-PWL1,2020-10-26 16:00:00,2020-10-29 00:00:00,1500,Generator,2000,Planned, Active, “~ING-PWL1/POLE4,2020-10-26 16:00:00,2020-10-29 00:00:00,0”,

<EOF>

**Example of Simple BMU Update, dismiss the existing messaged and then replace.** (please note the “,”s for the non-mandatory field not used.)

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

BMU1,2020-10-26 16:00:00,2020-10-29 00:00:00,450,Generator,500,Planned,Dismiss,’Slight tube leak’,

BMU1,2020-10-26 16:00:00,2020-10-29 03:00:00,450,Generator,500,Planned,Active,’Slight tube leak’,

<EOF>

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

**Example of BMU Breakdown message** (please note the “,”s for the non-mandatory field not used.)

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

BMU1,2020-10-26 16:00:00,2020-10-29 00:00:00,0,Generator,500, Unplanned, Active,,

<EOF>

**-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

1. DOCUMENT STATUS

AMENDMENT RECORD

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Issue** | **Draft** | **Date** | **Author** | **Description of changes** |
| 0 | 0.1 | 12/09/2020 |  | Initial draft for internal review and feedback |
| 0 | 0.2 | 14/09/2020 |  | Further draft for internal review and feedback |
| 0 | 0.3 | 09/10/2020 |  | Updates for Interconnectors |
| 1.0 | - | 16/11/2020 |  | Updates for file format commas and made final |
| 1.1 | - | 16/02/2021 |  | Updates for Interconnectors and FTM limit |

1. CHANGE FORECAST

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