

## OPERATING CODE NO.2 Redraft

**(OC2)**  
**OPERATIONAL PLANNING AND DATA PROVISION**  
**CONTENTS**

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## OC2.1 INTRODUCTION

OC2.1.1 The objectives of OC2 are:

- a) To facilitate the co-ordination of **Planned Outages** of the **NETS** and **Users' Plant** and **Apparatus**.
- b) To enable **The Company** to:
  - i. publish the **NETS Surplus**;
  - ii. establish the level of **System Negative Reserve Active Power Margin (NRAPM)**;
  - iii. plan the deployment of **Frequency Sensitive Mode**;
  - iv. establish **Operating Margin** parameters; and
  - v. agree for release of **Existing Gas Cooled Reactor Plant** for outages in certain circumstances.
- c) The co-ordination of outages on **Plant** and **Apparatus** necessary for the operation of the **System Restoration Plan**.

OC2.1.2 **Operational Planning** considers matching generation output with forecast **NETS Demand** and **Interconnector** flows in order to maintain a reserve of generation to provide margin, taking into account outages on the **NETS** together with outages of **Users' Plant** and **Apparatus** over various timescales as described below, in addition to the ability to restore the **Total System**, in accordance with the requirements of the **Electricity System Restoration Standard**, following a **Total Shutdown** or **Partial Shutdown**.

OC2.1.3 **Restoration Contractors** should separately identify data which shall be provided in respect of **Plant** and **Apparatus** for which they have **Restoration Contracts**. **Restoration Contractors** with **Embedded Plant** and **Apparatus** need only provide data to the relevant **Network Operator** should they be required to do so by the **Distribution Code**, i.e., there is no need to provide identical data to **The Company**.

OC2.1.4 In OC2, Year 0 means the current calendar year, Year 1 the next calendar year etc., and references to weeks are to calendar weeks as defined in ISO 8601.

OC2.1.5 References in OC2 to a **Generator's, Interconnector Owner's and Restoration Contractor's** best estimate shall mean that **Generator's, Interconnector Owner's or Restoration Contractor's** best estimate acting as a reasonable and prudent **Generator or Interconnector Owner**.

OC2.1.6 In Scotland, it may be possible with the agreement of **The Company**, to reduce the administrative burden for **Users** in producing planning information where either the active power output from a **Power Station** is small or the **import** of a demand **User** is small.

OC2.1.7 Where in OC2 there is a requirement to submit data or provide information on a particular day that falls on a non-**Business Day**, that data or information must be submitted by the next **Business Day** unless otherwise agreed in advance with **The Company**.

OC2.1.8 **Generators** and **Interconnector Owners** who have a **CUSC Contract** and who are also **Restoration Contractors**, need only submit the data once in respect of their **Plant** and **Apparatus**. **Generators** and **Interconnector Owners** who are also **Restoration Contractors** are required to state for which **Plant** they have a **Restoration Contract**.

OC2.1.9 **Network Operators** who have a **Distribution Restoration Zone Plan** in place shall notify **The Company** whenever an outage of a **Restoration Contractor's Plant** or **Apparatus** which contributes to a **Distribution Restoration Zone Plan** is unavailable or a circuit forming part of that **Distribution Restoration Zone Plan** is unavailable, making the operation of that **Distribution Restoration Zone Plan** unviable.

## OC2.2 SCOPE

OC2.2.1 OC2 applies to **The Company** and to the following **Users**:

- a) **Generators** in respect of their generating **Plant** which is directly connected to the **NETS** and to any generating **Plant** in **Embedded Large Power Stations**.
- b) **Network Operators**.
- c) **Non-Embedded Customers**.
- d) **HVDC System Owners** and **DC Converter Station** owners.
- e) **Interconnector Owners** in respect of their **External Interconnections**; and
- f) **Restoration Contractors** who are party to a **Local Joint Restoration Zone Plan** and who have a **CUSC Contract** where such data has not already been provided in OC2.2.1(a), (c), (d) or (e).

## OC2.3 PROCEDURE

### OC2.3.1 Co-ordination of Outages

OC2.3.1.1 OC2 makes provision for information exchange between the following parties:

- |  |  |
|--|--|
| a) Each <b>Generator</b> and each <b>Interconnector Owner</b> and <b>The Company</b>         | In respect of outages of <b>External Interconnection Circuits</b> , generating <b>Plant</b> and/or <b>Apparatus</b> directly connected to the <b>NETS</b> .  |
| b) The <b>Company</b> and each <b>Generator</b> and each <b>Interconnector Owner</b>         | In respect of <b>NETS</b> outages relevant to the <b>Generator</b> and/or <b>Interconnector Owner</b> .  |
| c) <b>The Company</b> and each <b>Network Operator</b>                                       | In respect of outages of all <b>Embedded Large Power Stations</b> and related <b>Plant</b> and <b>Apparatus</b> .  |
| d) The <b>Company</b> and each <b>Network Operator</b> and each <b>Non-Embedded Customer</b> | In respect of <b>NETS</b> outages relevant to that <b>Network Operator</b> or <b>Non-Embedded Customer</b> .   |
| e) Each <b>Network Operator</b> and each <b>Non-Embedded Customer</b> and <b>The Company</b> | <p>In respect of outages on the <b>User's System</b> relevant to <b>The Company</b>.<br/>           For <b>Network Operators</b> only, outages of the <b>Network Operator's System</b> that may have an impact on:</p> <ul style="list-style-type: none"> <li>• an <b>Offshore Transmission System</b> connected to that <b>Network Operator's System</b>.</li> <li>• that <b>Network Operator's</b> ability to operate a <b>Local Joint Restoration Plan</b> or <b>Distribution Restoration Zone Plan</b>.</li> </ul> |

OC2.3.1.2 Provision of **Output Usable** data of generating **Plant** and **External Interconnection Circuits**, and the publication of **Surplus**.

OC2.3.1.2.1 If a **Generator**, **Interconnector Owner**, or **Restoration Contractor** referred to in OC2.2.1 (f) where applicable:

- a) experiences any unplanned change to the availability of generating **Plant**, or an **External Interconnection Circuit** and which is expected to last one **Settlement Period** or longer and up to three years ahead, the **Generator** and/or **Interconnector Owner** shall provide **The Company** with the best estimate of the revised **Output Usable**.
- b) makes a plan which would affect the availability of generating **Plant** or an **External Interconnection Circuit** and which is expected to last one **Settlement Period** or longer and up to three years ahead, resulting in a change of level in the **Output Usable** of that generating **Plant** or **External Interconnection Circuit** to a level below or above its previously notified availability, the **Generator** and/or **Interconnector Owner** shall provide **The Company** with the best estimate of the revised **Output Usable**.
- c) experiences any unplanned change to the availability of their generating **Plant** or **External Interconnection Circuits** or makes a future plan which would affect the availability of their generating **Plant** or **External Interconnection Circuits**, to contribute to a **Local Joint Restoration Plan** for which the **Generator** and/or **Interconnector Owner** is a **Restoration Contractor**, the **Generator** and/or **Interconnector Owner** shall provide **The Company** with the best estimate of the revised **Output Usable**.

- OC2.3.1.2.2 **Generators, Interconnector Owners** and/or **Restoration Contractor** shall provide the revised data within 24 hours of the unplanned unavailability occurring, or of the change in planned availability. For multi-shaft generating **Plant** the individual shaft availability levels must also be provided at the same time. For those **Generators, Interconnector Owners** and/or **Restoration Contractor** subject to **Retained EU Law** (Commission Regulation (EU) 543/2013) the revised data must be provided within 1 hour of planning the availability change.
- OC2.3.1.2.3 In the case of an **External Interconnection Circuit**, the details of the individual pole-capacity levels that have been summed to produce the **Output Usable** should also be defined within 24 hours.
- OC2.3.1.2.4 In the case of **Restoration Contractors**, referred to in OC2.2.1(f), **Restoration Contractors** which are subject to an unplanned change in availability shall provide the data within 1 hour of the unplanned change and for a planned change to the availability, the **Restoration Contractor** shall provide the data within 1 hour of planning the availability change.
- OC2.3.1.2.5 **The Company** may, as appropriate, contact each **Generator**, each **Interconnector Owner** and each **Restoration Contractor** referred to in OC2.2.1(f) who has supplied information to seek clarification on their **Output Usable** submissions.
- OC2.3.1.2.6 At a regular time interval, at least once per day (by 1600 hours) up to every hour  
**The Company** will:
- (i) having taken into account the information notified to it by **Generators** and **Interconnector Owners** and **Restoration Contractor** as provided for in OC2.2.1(f) via the process defined in OC2.3.1.2.1 and taking into account:
    - (1) **Demand** forecasts and details of proposed use of **Demand Control** received under **OC1**, and an **Operational Planning Margin** requirement set by **The Company** (the "OPMR"),
    - (2) **National Electricity Transmission System** constraints and outages,
    - (3) **Network Operator System** constraints and outages, known to **The Company**, and
    - (4) the **Output Usable** required, in its view, to meet daily total MW requirements,

Provide each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** as provided for in OC2.2.1(f) (where required by **The Company**) in writing with any suggested amendments to the provisional **Output Usable** supplied by the **Generator** and **Interconnector Owner** and **Restoration Contractor** as provided for in OC2.2.1(f) which **The Company** believes necessary, and will advise **Generators** with **Large Power Stations** of the **Surpluses** for the **National Electricity Transmission System** and potential export limitations, which would occur without such amendments;
  - (ii) calculate and submit to **BMRA**:
    - 1. total generating **Output Usable** from **Generating Units** assumed to be available to the **Total System** (National **Output Useable**);
    - 2. generating **Output Usable** by fuel type from **Generating Units** assumed to be available to the **Total System** (**Output Useable** by fuel type);
    - 3. generating **Output Usable** by individual **Generating Units** assumed to be available to the **Total System** (**Output Useable** by **Generating Unit**);
    - 4. total **Generating Plant Demand Margin** assumed to be available to the **Total System** (This is sometimes referred to as the National Margin);

5. total **Generating Surplus** assumed to be available to the **Total System** (this is sometimes referred to as the National Surplus)

with daily resolution, for at least the peak **Demand** of each day for 2 day-ahead to 14 day-ahead time scope, and

with weekly resolution, for at least peak **Demand** of each week for 2 week-ahead up to 3 year-ahead time scope.

Information from the calculations referred to in OC2.3.1.2.6 under (ii) will effectively define the envelope of opportunity for outages of **Power Generating Modules** (including **DC Connected Power Park Modules**), **Synchronous Generating Units** and **Power Park Modules** covering both **Embedded** and directly connected **Large Power Stations**.

**The Company** may, as appropriate, contact each **Generator** and each **Interconnector Owner** and **Restoration Contractor** (as provided for in OC2.2.1(f)) who has supplied information to seek clarification on outages and suggest amendments.

- (iii) Where a **Generator** or **Interconnector Owner** or a **Network Operator** or **Restoration Contractor** (as provided for in OC2.2.1(f)) has concerns with the suggested amendments to its provisional outage programme (in the case of a **Generator** or **Interconnector Owner** or in the case of a **Restoration Contractor** as provided for in OC2.2.1(f)) or such potential outages (in the case of a **Network Operator**) it may contact **The Company** to explain its concerns and **The Company** and that **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.2.1(f)) or **Network Operator** will then discuss the problem and seek to resolve it.
- (iv) The possible resolution of the problem may require **The Company** or a **User** to contact other **Generators**, **Interconnector Owners**, **Restoration Contractors** (as provided for in OC2.2.1(f)) or **Network Operators**, and joint meetings of all parties may, if any **User** feels it would be helpful, be convened by **The Company**. The need for further discussions will be determined at the time.

Each **Generator** will provide **The Company** with updated **Output Usable** as per OC2.3.1 resulting from the above for **Generating Unit**, **Power Generating Module**, and **Power Park Module** outage programme covering both **Embedded** and non-**Embedded Large Power Stations**.

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

- OC2.3.1.2.7 **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.

#### OC2.3.1.3 Planning of National Electricity Transmission System Outages

The outage planning process is undertaken annually for each of years 0-5 with each iteration making the plan more certain. **The Company** shall take into account **NETS** outages required as for maintenance, construction or refurbishment works.

##### OC2.3.1.3.1 Operational Planning Phase - Planning for Years 2 to 5 inclusive ahead

**The Company** shall take into account **NETS** outages required as for, construction or refurbishment works. Maintenance is taken into account in years 0-1 outage planning.

**The Company** will plan the **NETS** outage programme on the basis of the previous year's **Final Generation Outage Programme**. If a **Generator's**, **Interconnector Owners** or **Network Operator's** outages differ from those contained in the **Final Generation Outage Programme**, or in the case of **Network Operators**, they differ from those known to **The Company**, or in any way conflict with the **NETS** outage programme, **The Company** is not obliged to alter the **NETS** outage programme. **Users** should bear this in mind.

OC2.3.1.3.2 The timescales within which a **User** shall provide the required information to **The Company** is tabulated below. **Users** may identify their obligations in the relevant clauses using the matrix in figures 1, 3, 7, 9, 13, and 15 below. These figures are intended for guidance and to assist **Users** to navigate and identify their requirements more easily; however, the text prevails.

**Key**



Provides information



Receives information



Do nothing

	By the end of Week				
Party	8	13	28	30	34
Generator and/or Interconnector Owner	Do nothing	Provide Info	Receive Info	Do nothing	Receive Info
The Company	Receive Info		Provide Info		
Non-Embedded Customer	Do Nothing				
Network Operator	Provide Info	Receive Info			
Restoration Contractors as provided for in OC2.2.1(f)	Same as <b>Generator</b> and/or <b>Interconnector Owner</b> obligations				

Figure 1: Overview of information exchange by party – **NETS** outage planning process from Week 8 to Week 34.

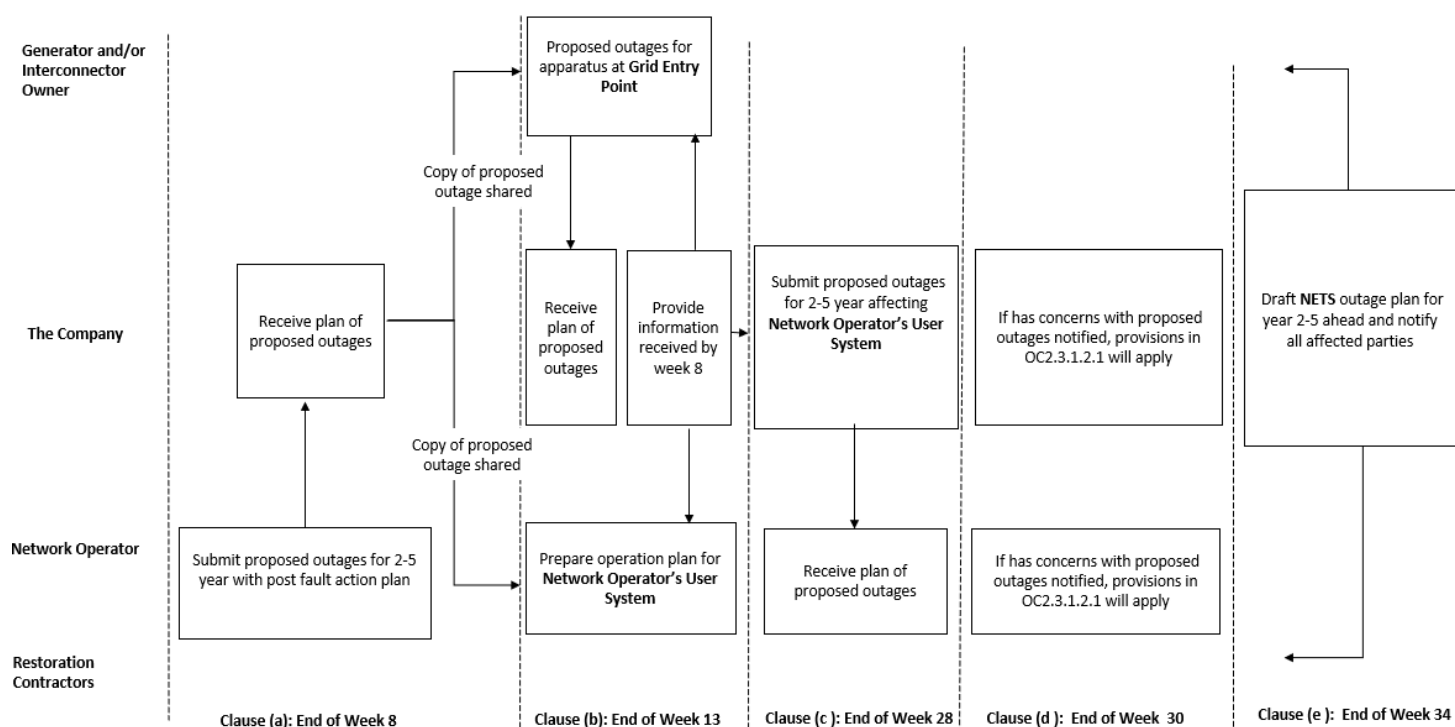


Figure 2: Overview of the **NETS** outage planning process from Week 8 to Week 34.

In each calendar year:

a. By the end of Week 8

Where the items i, ii and iii below may affect the performance of the **Total System** (which includes, but not limited to, outages of **User System Apparatus** at **Grid Supply Points**) each **Network Operator** will provide to **The Company**:

- i All proposed outages in Years 2-5 in its **User System** which may affect the performance of the **Total System** (which includes but is not limited to outages of **User System Apparatus** at **Grid Supply Points** and outages which constrain the output of **Power Generating Modules** (including **DC Connected Power Park Modules**) and/or **Synchronous Generating Units** and/or **Power Park Modules Embedded** within that **User System**)
- ii In relation to **Offshore Transmission Systems** all proposed outages in Years 2 – 5 in its **System** that may affect the declared values of **Maximum Export Capacity** and/or **Maximum Import Capacity** for each **Interface Point** together with the **Network Operator's** revised best estimate of the **Maximum Export Capacity** and/or **Maximum Import Capacity** during such outages, any automatic and/or manual post fault actions that it intends to use or plans to use during such outages.
- iii any outages of its **Apparatus** that may affect the ability to activate and/or operate a **Distributed Restoration Zone Plan**.

b. By the end of week 13

- i. Each **Generator** will inform **The Company** of proposed outages of **Generator-owned Apparatus** (e.g., substation **Apparatus** not generating **Plant**) in Years 2 - 5, at each **Grid Entry Point**.



- ii. **The Company** will provide each **Network Operator**, **Generator**, and **Interconnector Owner** a copy of the information given to **The Company** under paragraph (a) above (other than the information given by that **Network Operator**). In relation to a **Network Operator**, the data must only be used by that **User** in planning and operating that **Network Operator's User System** and must not be used for any other purpose or passed on to, or used by, any other business of that **User** or to, or by, any person within any other such business or elsewhere.
- c. By the end of week 28  
**The Company** will provide each **Network Operator** with details of proposed outages in Years 2 - 5 which may affect the performance of that **Network Operator's User System**.
- d. By the end of week 30  
Where **The Company** or a **Network Operator** has concerns with the proposed outages notified to it under (a), (b) or (c) above, the affected party should discuss their concerns with the notifying party; in this event the provisions set out in OC2.3.1.2 will apply.
- e. By the end of week 34  
The **Company** will draw up a draft **NETS** outage plan for Years 2 - 5 and notify each **User** of those aspects of the plan which may affect that **User**. **The Company** will also indicate where a need may exist to issue other relevant operational instructions or notifications to **Users** in accordance with BC2 to retain the necessary security of the **NETS**.

OC2.3.1.4 Operational Planning Phase - Planning for Year 1

Each calendar year, **The Company** shall update the draft **NETS** outage plan prepared under OC2 3.1.3 and shall in addition take into account outages required as a result of maintenance work.

Key

Provides information

Receives information

Do nothing

	By the end of Week				By the end of Week			By the end of Week
Party	13	28	32		34	36		49
Generator and /or Interconnector Owner	Provide info	Do nothing			Receive info	Provide info	Do nothing	Receive info
The Company	Receive info	Provide info	Receive info	Provide info		Receive Info	Provide info	
Non-Embedded Customer	Provide info	Receive info	Do nothing					Receive info
Network Operator	Do nothing		Provide info	Do nothing	Receive info	Provide info	Do nothing	
Restoration Contractors as provided for in OC2.2.1(f)	Same as <b>Generator</b> and/or <b>Interconnector Owner</b> obligations							

Figure 3: OC2.3.1.4 Operational Planning Phase – Planning for Financial Year 1 ahead.

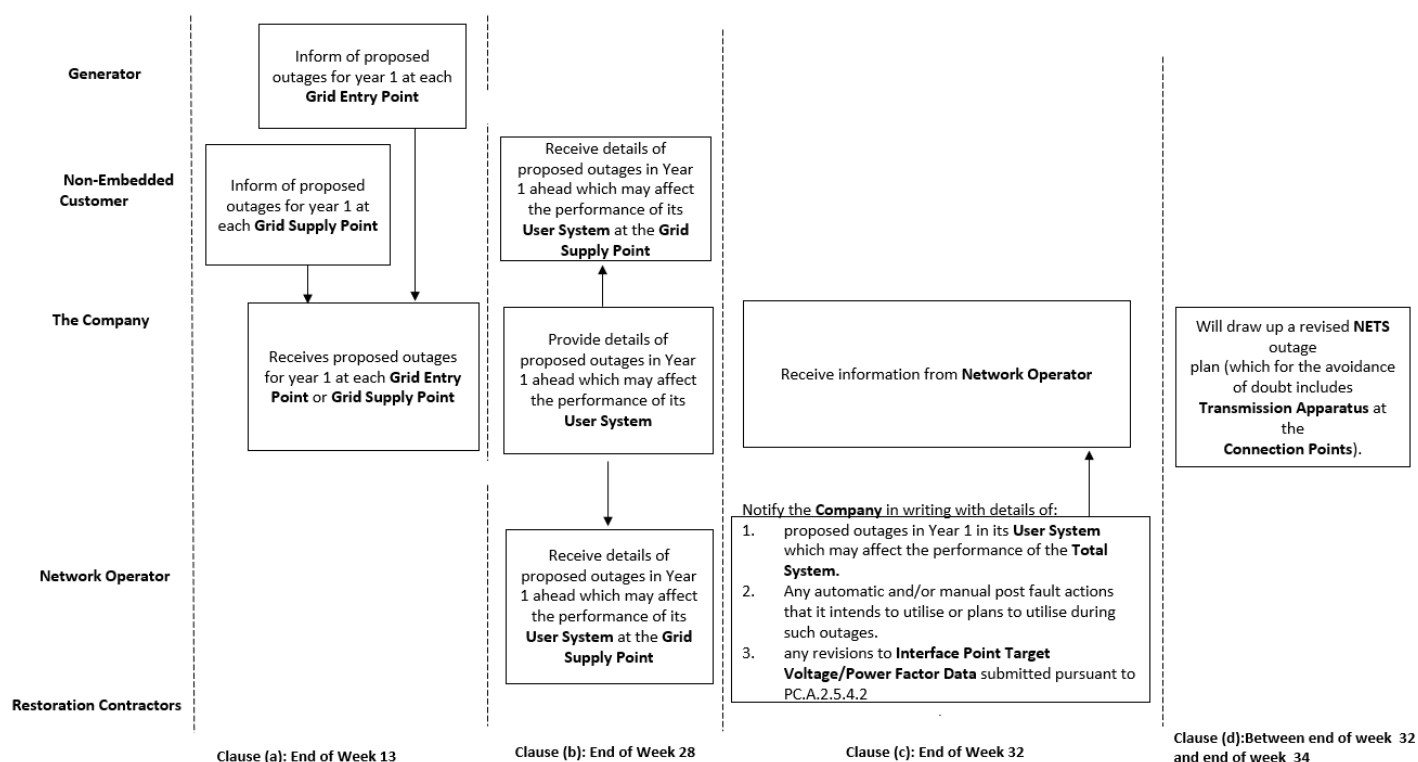


Figure 4: Summary of obligations in Operational Planning Phase from end of week 13 to end of week 34.

In each calendar year:

a. By the end of week 13

**Each Generators and Non-Embedded Customers** will inform **The Company** of proposed outages for Year 1 of **Generator-owned Apparatus** ((e.g., substation **Apparatus** not generating **Plant**) at each **Grid Entry Point** and at each **Grid Supply Point** (i.e, substation **Apparatus**).

b. By the end of week 28

**The Company** will provide each **Network Operator** and each **Non-Embedded Customer** with details of proposed outages in Year 1 which might affect the performance of its **User System** at the **Grid Supply Point**.

c. By the end of week 32

Each **Network Operator** will notify **The Company**:

- proposed outages in Year 1 in its **System** which may affect the performance of the **Total System**. (which includes but is not limited to outages of **User System Apparatus** at **Grid Supply Points** and outages which constrain the output of **Power Generating Modules** (including **DC Connected Power Park Modules**) and/or **Synchronous Generating Units** and/or **Power Park Modules Embedded** within that **User System**)
- In relation to **Offshore Transmission Systems**, proposed outages in Year 1 in its **System** which may affect the declared values of **Maximum Export Capacity** and/or **Maximum Import Capacity** for each **Interface Point** within its **System** together with the **Network Operator's** revised best estimate of the **Maximum Export Capacity** and/or **Maximum Import Capacity** during such outages, any automatic and/or manual post fault actions that it intends to use or plans to use during such outages.

- iii. any revisions to **Interface Point Target Voltage/Power Factor** data submitted pursuant to PC.A.2.5.4.2.
- iv. any outages of its **Plant** and **Apparatus** that **may** affect the ability to activate and/or operate a **Distributed Restoration Zone Plan**.

d. Between the end of week 32 and the end of week 34

**The Company** will draw up a revised **NETS** outage plan, which will include **Transmission Apparatus** at the **Connection Points**.

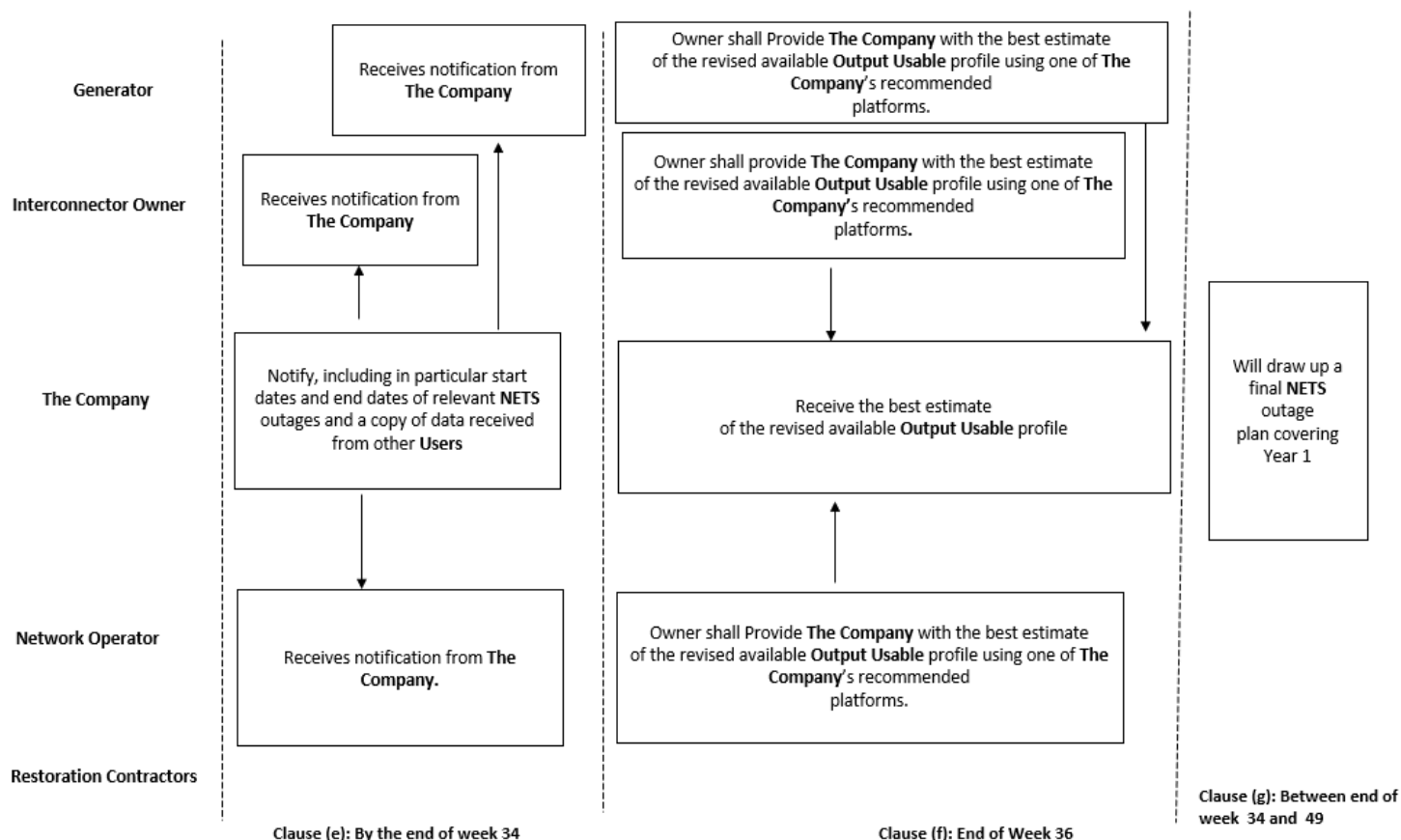


Figure 5: Summary of obligations in Operational Planning Phase from end of week 34 to end of week 49.

e. By the end of week 34

**The Company** will:

- Notify each **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.2.1(f) and **Network Operator** of those aspects of the **NETS** outage programme which may operationally affect that them and in particular, proposed start dates and end dates of relevant **NETS** outages.
- Provide to each **User** with a copy of the information given to **The Company** under paragraph (c) above<sup>1</sup> (other than the information given by that **Network Operator**). In relation to a **Network Operator**, the data must only be used by that User in planning and operating that **Network Operator's** User System and must not be used for any other purpose or passed on to, or used by, any other business of that User or to, or by, any person within any other such business or elsewhere.

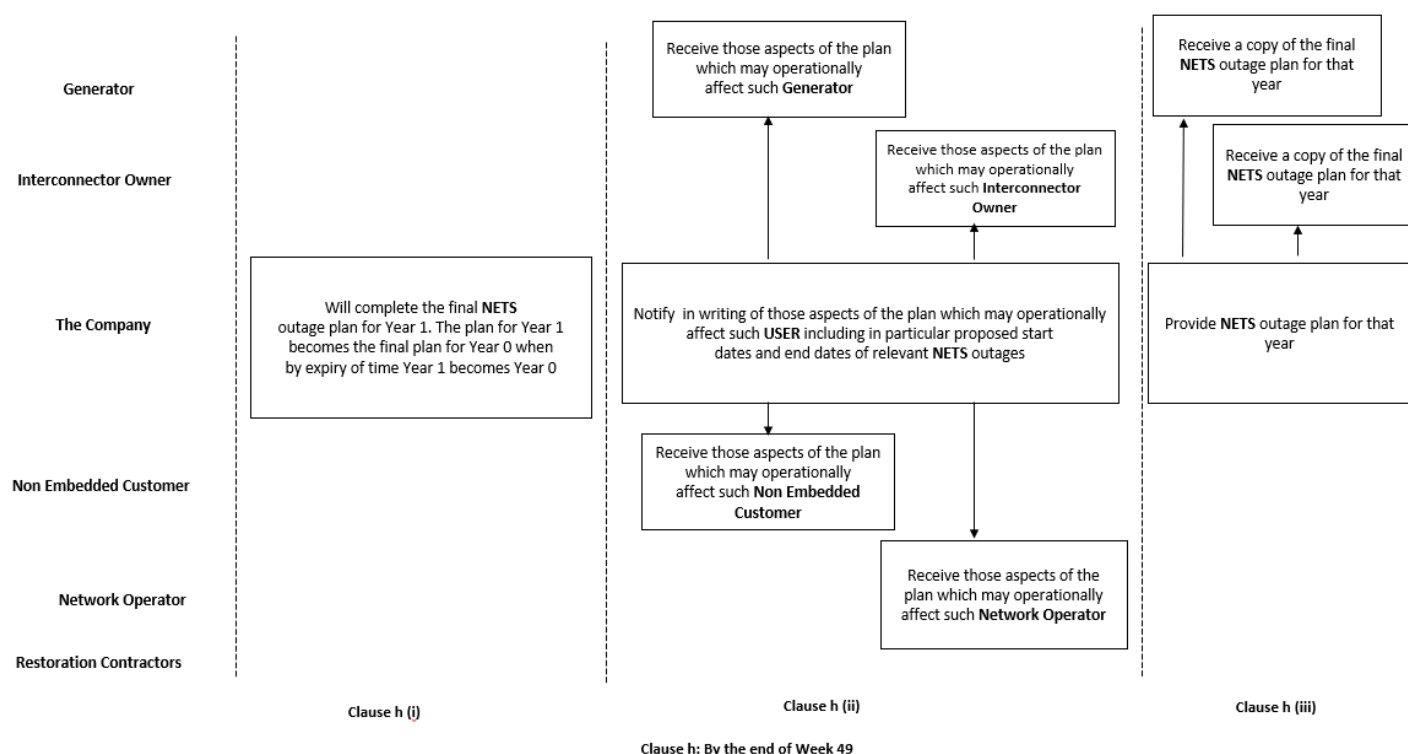
f. By the end of week 36

Where a **User** has concerns with the proposed aspects notified to it under (e) above, equivalent provisions to those set out in OC2.3.1.2.6 will apply.

g. Between the end of week 34 and 49

**The Company** will draw up a final **NETS** outage plan covering Year 1.

h. By the end of week 49



- (i) **The Company** will complete the final **NETS** outage plan for Year 1. The plan for Year 1 becomes the final plan for Year 0 when by the passage of time Year 1 becomes Year 0.
- (ii) **The Company** will notify each **User** of those aspects of the plan:
- which may operationally affect such **Generator, Interconnector Owner, Restoration Contractor** (as provided for in OC2.2.1(f)) and **Network Operator** including in particular proposed start dates and end dates of relevant **NETS** outages.
  - where a need may exist to issue other operational instructions or notifications (for example the requirement for the arming of an **Operational Interripping** scheme) or **Emergency Instructions** to **Users** in accordance with BC2 to retain the necessary security of the **NETS**.
- (iii) In addition, **The Company** will provide to each **Generator** and each **Interconnector Owner** a copy of the final **NETS** outage plan for that year. OC2.3.2.3 contains provisions whereby updates of the final **NETS** outage plan are provided. Note that the final **NETS** outage plan for Year 1 and any updates will not give a complete understanding of how the **NETS** will operate in real time, as the **NETS** operation may be affected by other factors which may not be known at the time of the plan and the updates. Therefore, **Users** should be advised that unforeseen network conditions in real time may have an impact on the plan.
- i. Information Release or Exchange

This paragraph (i) contains alternative requirements on **The Company**, paragraph (c) being an alternative to a combination of paragraphs (a) and (b). Paragraph (c) will only apply in relation to a particular **User** if **The Company** and that **User** agree

that paragraph (c) rather than paragraph (a) and (b) apply. Without any such agreement **The Company** will only be required to comply with paragraphs (a) and (b).

#### Information Release to Each Network Operator and Non-Embedded Customer

Between the end of Week 34 and the end of week 49 **The Company** will upon written request:

- (a) for radial systems, provide each **Network Operator** and **Non-Embedded Customer** with data to allow the calculation by the **Network Operator**, and each **Non-Embedded Customer**, of symmetrical and asymmetrical fault levels; and
- (b) for interconnected **Systems**, provide to each **Network Operator** an equivalent network, sufficient to allow the identification of symmetrical and asymmetrical fault levels, and power flows across interconnecting **User Systems** directly connected to the **NETS**; or

#### System Data Exchange

- (c) as part of a process to facilitate understanding of the operation of the **Total System**,
  - 1. **The Company** will make available to each **Network Operator**, the **NETS Study Network Data Files** covering Year 1 which are of relevance to that **User's System**.
  - 2. where **The Company** and a **User** have agreed to the use of data links between them, the **User** may take a copy of the **NETS Study Network Data Files** once during that period. The **User** may refer to that as often as it wishes. The access will be in a manner agreed by **The Company** and may be subject to separate agreement. In the absence of agreement, the copy of the **NETS Study Network Data Files** will be given to the **User** in hard copy or by other appropriate means.
  - 3. the data contained in the **NETS Study Network Data Files** represents **The Company's** view of operating conditions although the actual conditions may be different<sup>2</sup>. **Data Files** received by each **Network Operator** must only be used by that **User** in planning and operating that **Network Operator's User System** and must not be used for any other purpose or passed on to, or used by, any other business of that **User** or to, or by, any person within any other such business or elsewhere. This also applies in the case of OC2.3.1.4
  - 4. **The Company** will notify each **Network Operator**, as soon as reasonably practicable after it has updated the **NETS Study Network Data Files** covering Year 1 that it has done so, when this update falls before the next annual update under this OC2.3.1.4(j). **The Company** will then make available to each **Network Operator** who has received an earlier version, the updated **NETS Study Network Files** covering the balance of Years 1 and 2 which remain given the passage of time, and which are of relevance to that **User's System**. The provisions of

paragraphs (2) and (3) above shall apply to the making available of these updates.

OC2.3.1.5 Operational Planning Phase - Planning in Financial Year 0 down to the Programming Phase  
(and in the Case of Load Transfer Capability, also during the Programming Phase)

	Year 0		
Party	Anytime but not less than 8 weeks from requested change	14 days from date of request	Where necessary 8-52 weeks ahead
Generator and/or Interconnector Owner	Provide info	Receive info	
The Company	Receive Info		Provide info
Non-Embedded Customer	Provide info	Receive Info	
Network Operator		Do nothing	Receive info
Restoration Contractors as provided for in OC2.2.1(f)	Same as <b>Generator</b> and/or <b>Interconnector Owner</b> obligations		

Key

Provides information

Receives information

Do nothing

Figure 7: Operational Planning Phase - Planning in Financial Year 0 down to the NETS Programming Phase

- (a) The **NETS** outage plan for Year 1 issued under OC2 3.1.4 shall become the plan for Year 0 when by expiry of time Year 1 becomes Year 0.

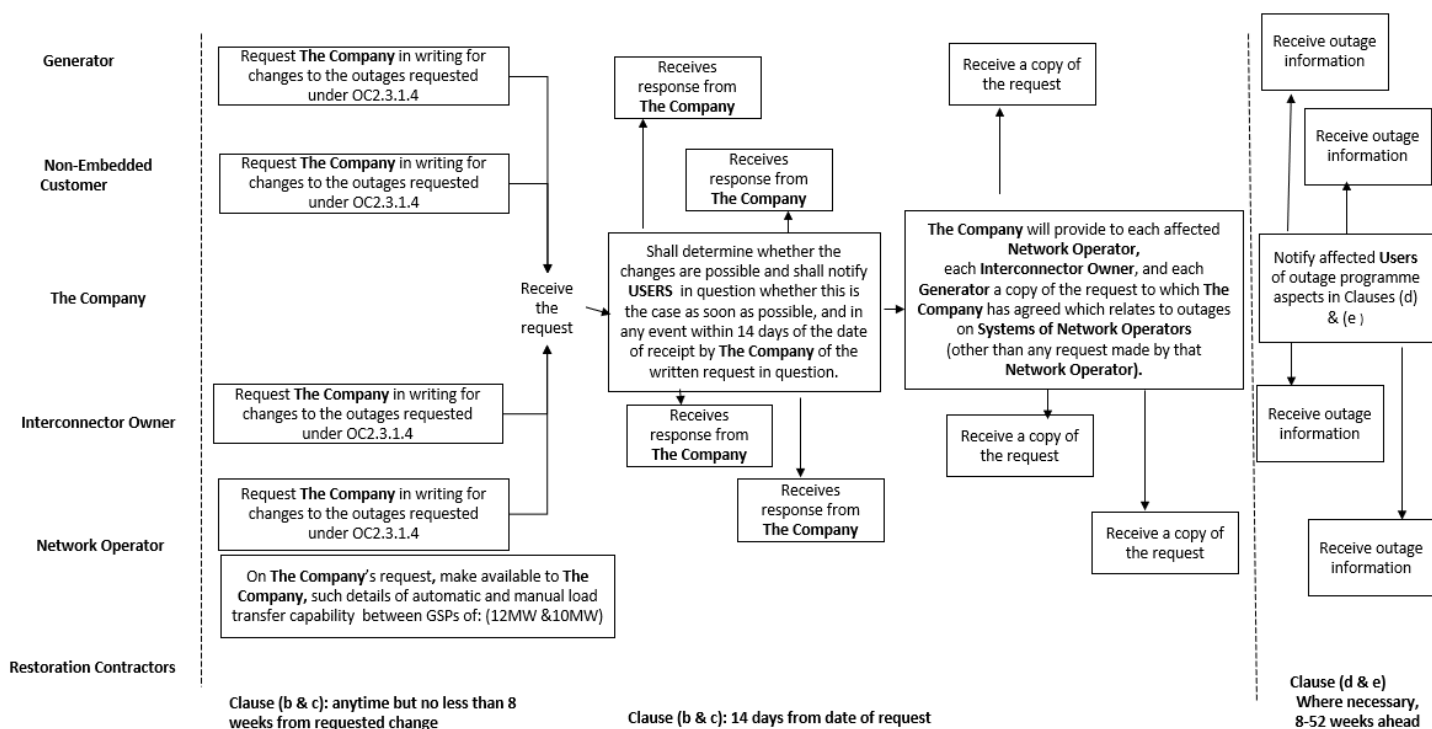


Figure 8: Summary of obligations in Operational Planning Phase Year 0



- (b) Each **User** may at any time during Year 0, request **The Company** for changes to the outages requested by them under OC2.3.1.4 In relation to that part of Year 0, excluding the period 1-7 weeks from the date of request, **The Company** shall determine whether the changes are possible and shall notify the **User** in question whether this is the case as soon as possible, and in any event within 14 days of the date of receipt by **The Company** of the request.

Where **The Company** determines that the requested change is possible and notifies the relevant **User** accordingly, **The Company** will provide to each **User** a copy of the request to which **The Company** has agreed which relates to outages on **Systems** of **Network Operators**.

- (c) During Year 0 (including the **Programming Phase**) each **Network Operator** shall at **The Company's** request make available to **The Company**, such details of automatic and manual load transfer capability of:
- i. 12MW or more (averaged over any half hour) for England and Wales
  - ii. 10MW or more (averaged over any half hour) for Scotland

between Grid Supply Points.

During Year 0 (including the **Programming Phase**) each **Network Operator** shall notify **The Company** of any revisions to the information provided pursuant to OC2.3.1.4 (c) for **Interface Points** as soon as reasonably practicable after the **Network Operator** becomes aware of the need to make such revisions.

- (d) When necessary, during Year 0, **The Company** will notify each **User**, in writing of those aspects of the **NETS** outage programme in the period from the 8<sup>th</sup> week ahead to the 52<sup>nd</sup> week ahead, which may, in **The Company's** reasonable opinion, operationally affect that **User** including the proposed start dates and end dates of relevant **NETS** outages.

**The Company** will also notify changes to information supplied by **The Company** pursuant to OC2.3.2.1.4(i)(a) and (b) except where in relation to a **User** information was supplied pursuant to OC2.3.1.4. (i)(c). In this latter case: -

- (i) **The Company** will, by way of update of the information supplied by it pursuant to OC2.3.1.4(i)(c), make available at the first time in Year 0 that it updates the **NETS Study Network Data Files** in respect of Year 0 to each **Network Operator** who has received an earlier version of the of the **NETS Study Network Data Files** covering Year 0 which are of relevance to that **Network Operator's System**.
- (ii) **The Company** will notify each relevant **Network Operator**, as soon as reasonably practicable after it has updated the **NETS Study Network Data Files** covering Year 0, that it has done so. **The Company** will then make available the updated **NETS Study Network Data Files** covering the remaining balance of Year 0.
- (iii) The provisions of OC2.3.1.4. (i)(c)(2), (3) and (5) shall also apply to the provision of data under this part of OC2.3.1.4. (i).

**The Company** will also indicate where a need may exist to issue other operational instructions or notifications (for example the requirement for the arming of an **Operational Intertipping** scheme) or **Emergency Instructions** to **Users** in accordance with **BC2** to allow the necessary security of the **NETS** to be maintained except in the case of a **Total Shutdown** or **Partial Shutdown** as provided for in OC9 4.3.

- (e) In addition, by the end of each month during Year 0, **The Company** will provide to each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** (as provided for in OC2.2.1(f)) a notice containing any revisions to the final **NETS** outage plan for Year 1.

OC2.3.1.6 Programming Phase

	Programming Phase
Party	By 1600 hours each Thursday
Generator and/ or Interconnector Owner	Receive Info
The Company	Provide info
Non-embedded Customer	Receive Info
Network Operator	Receive Info

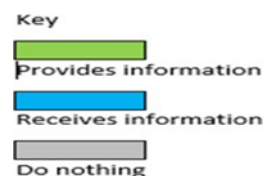


Figure 9: Programming Phase

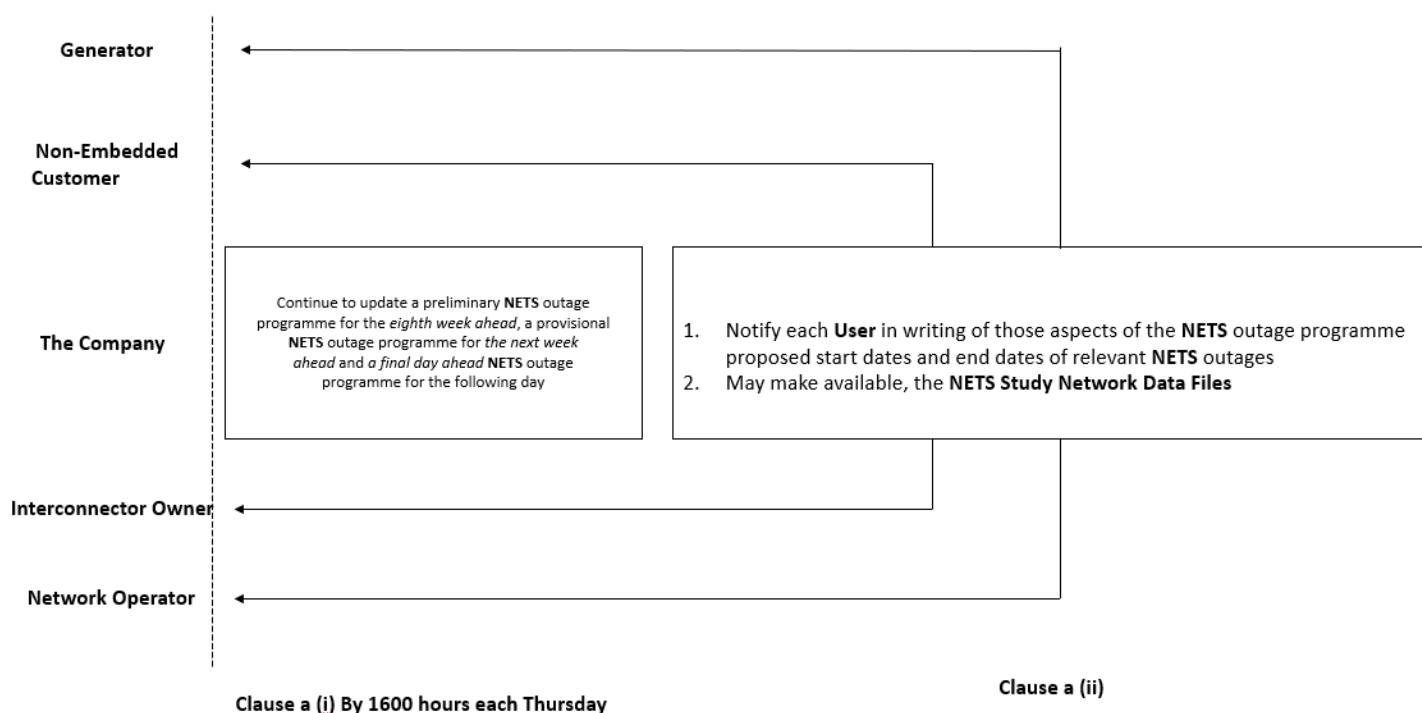


Figure 10: Summary of obligations in the Programming Phase by 1600 hours each Thursday

(a) 1600 hours each Monday, Tuesday, Wednesday and Thursday

- (i) **The Company** shall prepare a final **NETS** outage programme for the following day.
- (ii) **The Company** shall notify each **User** of the factors set out in (b)(ii) below.

(b) By 1600 hours each Thursday

- (i) **The Company** shall continue to update a preliminary **NETS** outage programme for the eighth week ahead, a provisional **NETS** outage programme for the next week ahead and a final day ahead **NETS** outage programme for the following day.
- (ii) **The Company** will notify each **User**, in writing of those aspects of the preliminary **NETS** outage programme which may operationally affect each **User** including the proposed start dates and end dates of relevant **NETS** outages.

**The Company** will also notify changes to information supplied by **The**

**Company** pursuant to OC2.3.1.4(a) and (b) except where in relation to a **User** information was supplied pursuant to OC2.3.1.4. (i)(c). In that latter case:

- 1) **The Company** will, by way of update of the information supplied by it pursuant to OC2.3.1.4(i)(c), make available the **NETS Study Network Data Files** for the next week ahead.
- 2) **The Company** will notify each relevant **Network Operator**, as soon as reasonably practicable after it has updated the **NETS Study Network Data Files** covering the next week ahead that it has done so, and
- 3) The provisions of OC2.3.1.4(c)(2), (3) and (5) shall apply to the provision of data under this part of OC2.3.1.6. (a)(ii) as if set out in full.

**The Company** may make available, the **NETS Study Network Data Files** for the next week ahead where **The Company** and a particular **User** agree.

**The Company** will also indicate where a need may exist an **Operational Interripping** scheme, emergency switching, emergency **Demand** management or other measures including the issuing of other operational instructions or notifications or **Emergency Instructions** to **Users** in accordance with **BC2** to allow the necessary security of the **NETS** to be maintained.

(c) By 1000 hours each Friday

**Users** will discuss with **The Company** and confirm to **The Company** acceptance or otherwise of the requirements detailed under OC2.3.1.6(a) above.

In respect of **Embedded Transmission Systems Network Operators** shall confirm for the following week:

- i. the details of any outages of its System that will restrict the **Maximum Export Capacity** and/or **Maximum Import Capacity** at any **Interface Points** within its **System** for the following week; and
- ii. any changes to the previously declared values of the **Interface Point Target Voltage/Power Factor**.

(d) By 1600 hours each Friday

- i. **The Company** shall finalise the preliminary **NETS** outage programme up to the seventh week ahead. **The Company** will give as much notice as possible to a **Generator** with nuclear **Large Power Stations** which may be operationally affected by an outage which is to be included in such programme.
- ii. **The Company** shall finalise the provisional **NETS** outage programme for the next week ahead.
- iii. **The Company** shall finalise the **NETS** outage programme for the weekend through to the next normal working day.
- iv. In each case, **The Company** will indicate the factors set out in (b)(ii) above to the relevant **Users**.
- v. Where a **Generator** with nuclear **Large Power Stations** which may be operationally affected by the preliminary **NETS** outage programme referred to in (i) above is concerned on safety grounds about the effect which an outage within such outage programme might have on one or more of its nuclear **Large Power Stations**, it may contact **The Company** to explain its concerns and discuss whether there is an alternative way of taking that outage. If there is such an alternative way, but **The Company** refuses to adopt that alternative way in taking that outage, that **Generator** may involve the **Disputes Resolution Procedure** to decide on the way the outage should be taken. If there is no such alternative way, then **The Company** may take the outage despite that **Generator's** concerns.

## OC2.3.2 Data Requirements

OC2.3.2.1 When a **Statement** of **Readiness** under the **Bilateral Agreement** and/or **Construction Agreement** is submitted, and thereafter in calendar week 24 in each calendar year,

- (a) each **Generator** shall (subject to OC2.3.2.1(j)) in respect of each of its: -: **Generating Units** submit to **The Company** in writing the **Generation Planning Parameters** and the **Generator Performance Charts** as set out in Schedule 2 of the Data Registration Code.
- (b) The **Generation Planning Parameters** and the **Generator Performance Chart(s)**

shall reasonably reflect the true operating characteristics of the **Generating Unit** and shall demonstrate that the **Generating Unit** meets the **Reactive Power Plant** performance requirements of CC.6.3.2 or ECC.6.3.2 (as applicable).

- (c) The **Generation Planning Parameters** and the **Generator Performance Chart(s)** shall be applied (unless revised under this **OC2** or (in the case of the **Generator Performance Chart** only) **BC1** in relation to **Other Relevant Data**) from the **Completion Date**, in the case of the ones submitted with the **Statement of Readiness**, and in the case of the ones submitted in calendar week 24, from the beginning of week 25 onwards.
- (d) **Generator Performance Chart(s)** shall be in the format indicated in the **Planning Code** Appendix G and the **Generation Planning Parameters** shall be as set out in Appendix 1.
- (e) Any changes to the **Generator Performance Chart** or **Generation Planning Parameters** should be notified to **The Company** as soon as they are aware of the issue and are able to notify **The Company** through the necessary communication channels.
- (f) **Generators** should note that amendments to the composition of the **Power Generating Module**, **CCGT Module** or **Power Park Module** at **Large Power Stations** may only be made in accordance with the principles set out in PC.A.3.2.3 or PC.A.3.2.4 as applicable. If in accordance with PC.A.3.2.3 or PC.A.3.2.4 an amendment is made, any consequential changes to the **Generation Planning Parameters** should be notified to **The Company** promptly. If in accordance with PC.A.3.2.3 an amendment is made, an updated **CCGT Module Planning Matrix** or **Synchronous Power Generating Module Planning Matrix** must be immediately submitted to **The Company** in accordance with this OC2.3.2.1(b).
- (g) **The Generator Performance Chart** must be as described in paragraphs (i) – (v) below and demonstrate the limitation on reactive capability of the **System** voltage at 3% above nominal. It must also include any limitations on output due to the prime mover (both maximum and minimum), **Generating Unit** step up transformer or **User System**.
  - (i) For a **Synchronous Generating Unit** on a **Generating Unit** specific basis at the **Generating Unit** stator terminals. It must include details of the **Generating Unit** transformer parameters.
  - (ii) For a **Non-Synchronous Generating Unit** (excluding a **Power Park Unit**) on a **Generating Unit** specific basis at the **Grid Entry Point** (or **User System Entry Point** if **Embedded**).

- (iii) For a **Synchronous Generating Unit** within a **Synchronous Power Generating Module**, both the **Power-Generating Module Performance Chart** and **Synchronous Generating Unit Performance Chart** should be provided.
- (h) For each **Generating Unit** whose performance varies significantly with ambient temperature, the **Generator Performance Chart** (including the **Synchronous Generating Unit Performance Chart** in the case of **Synchronous Power Generating Modules**) shall show curves for at least two values of ambient temperature so that **The Company** can assess the variation in performance over all likely ambient temperatures by a process of linear interpolation or extrapolation. One of these curves shall be for the ambient temperature at which the **Generating Unit's** output equals its **Registered Capacity**.
- (i) The **Generation Planning Parameters** supplied under OC2.3.2.1 shall be used by **The Company** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism** (subject as otherwise permitted in the **BC**).

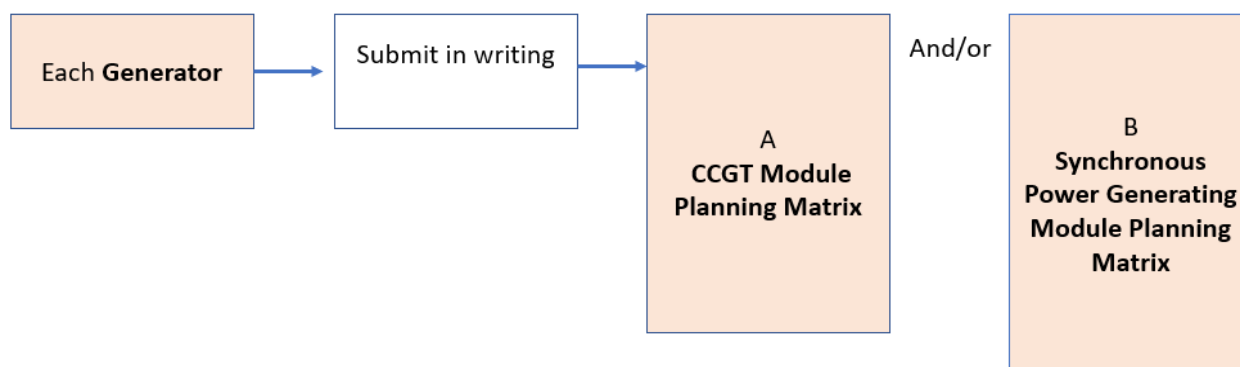


Figure 11: Types of Planning Matrices to be submitted by each Generator to The Company

- (j) Each **Generator** shall in respect of each of its **Synchronous Power Generating Modules** at **Large Power Stations** submit to **The Company** in writing a **Synchronous Power-Generating Module Planning Matrix** and/or a **CCGT Module Planning Matrix**. It shall be prepared on a best estimate basis relating to how it is anticipated the **Power-Generating Module** or **CCGT Module** will be running and shall reasonably reflect the true operating characteristics of the **Power-Generating Module** or **CCGT Module**. It will be applied (unless revised under this OC2) from the **Completion Date**, in the case of the one submitted with the **Statement of Readiness**, and in the case of the one submitted in calendar week 24, from the beginning of week 31 onwards. It must show the combination of **CCGT Units** or **Synchronous Power Generating Units** which would be running in relation to any given MW output in the format indicated in Appendix 3 of OC2.

Each **Generator** submission:

- (i) shall be prepared on a best estimate basis relating to how it is anticipated the **Synchronous Power-Generating Module** will be running and shall reasonably reflect the true operating characteristics of the **Power-Generating Module**.

- (ii) Will be applied (unless revised under this OC2) from the **Completion Date**, in the case of the one submitted with the **Statement of Readiness**,
- (iii) Must show the combination of **Synchronous Power Generating Units** which would be running in relation to any given MW output in the case of the one submitted in calendar week 24, from the beginning of week 31 onwards.

The **CCGT Module Planning Matrix** or **Synchronous Power-Generating Module Planning Matrix** will be used by **The Company** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism**.

- (k) Each **Generator** shall in respect of each of its **Cascade Hydro Schemes** also submit the **Generation Planning Parameters** detailed at OC2. A.2.6 to OC2.A.2.10 for each **Cascade Hydro Scheme**. Such parameters need not also be submitted for the individual **Gensets** within such **Cascade Hydro Scheme**.
- (l) Each **Generator** shall in respect of each of its **Power Park Modules** at **Large Power Stations** submit to **The Company** in writing a **Power Park Module Planning Matrix**. Each **Generator** submission shall:

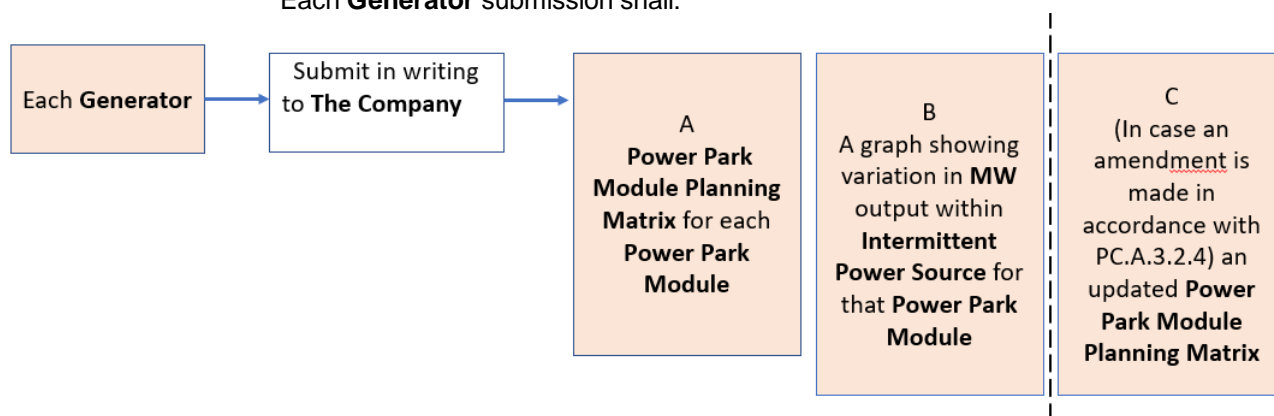


Figure 12: Best estimates information provided to The Company by each Generator.

- (i) Be prepared on a best estimate basis relating to how it is anticipated the **Power Park Module** will be running and which shall reasonably reflect the operating characteristics of the **Power Park Module** and the **Balancing Mechanism Unit** of which it forms part.
- (ii) Be applied (unless revised under this OC2) from the **Completion Date**, in the case of the one submitted with the **Statement of Readiness**, and in the case of the one submitted in calendar week 24, from the beginning of week 31 onwards.
- (iii) Show the number of each type of **Power Park Unit** in the **Power Park Module** typically expected to be available to generate and the **BM Unit** of which it forms part, in the format indicated in Appendix 3 of OC2.
- (iv) Be prompt (in case of any changes) and should note that amendments to the composition of the **Power Park Module** at **Large Power Stations** may only be made in accordance with the principles set out in PC.A.3.2.4



(v) Be used by **The Company** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism**.

(m) For each **Synchronous Generating Unit** where the **Generator** intends to adjust the **Generating Unit** terminal voltage in response to a MVar output instruction or a Level target voltage level instruction in accordance with BC2.A.2.6 the **Generator Performance Chart** including the **Synchronous Generating Unit Performance Chart** shall show curves corresponding to the **Generating Unit** terminal voltage being controlled to its rated value and to its maximum value.

In the case of **Restoration Contractors** (as provided for in OC2.2.1(f)) who are **Generators**, it would be expected that the above data required in OC2.3.2.1 (a) – (m) would apply.

OC2.3.2.2 Each **Network Operator** shall by 1000 hrs on the day falling seven days before each **Operational Day** inform **The Company** in writing of any changes to the circuit details called for in PC.A.2.2.1 which it is anticipated will apply on that **Operational Day** (under **BC1** revisions can be made to this data). This requirement shall also apply to circuits associated with a **Distributed Restoration Zone Plan**.

OC2.3.2.3 Under **Retained EU Law** (Commission Regulation (EU) 543/2013), **Users** are required to submit certain data to the **Data Publisher** for publication. **The Company** is required to facilitate the collection, verification and processing of data from **Users** for onward transmission to the data publisher.

Each **Generator** and **Restoration Contractor** (as provided for in OC2.2.1(f)) and each **Non-Embedded Customer** connected to or using the **NETS** shall provide **The Company** with such information as required by and set out in **DRC Schedule 6 (Users' outage data EU Transparency Availability Data)** in the timescales detailed therein.

### OC2.3.3 Negative Reserve Active Power Margins

OC2.3.3.1 At a regular time interval, at least once each day (by 1600 hours) and no more frequently than every hour **The Company** will, taking into account the **Generation Outage Programme** and forecast of **Output Useable** supplied by each **Generator** a defined in OC2.3.1.2.1 and forecast **Demand** for the minimum **Demand** period, calculate and publish:

- (1) the level of the **System NRAPM** each day within the period 2 to 14 days ahead (inclusive) and for each week the level of risk of **System NRAPM** within the 2-52 week ahead period; and
- (2) the level of the **Localised NRAPM** (currently for the main constraint between England and Scotland only) for each day within the period 2 to 14 days ahead (inclusive) having taken into account the appropriate limit on transfers to and from the **System Constraint Group** and for each week the level of risk of **Localised NRAPM** within the 2-52 week ahead period.

OC2.3.3.2 Outages Adjustments

- (a) Where necessary **The Company** will contact **Generators** to discuss outages as set out in the following paragraphs of this OC2.3.3.2.
- (b) **The Company** will contact all **Generators** in the case of low **System NRAPM** or low **Localised NRAPM**. **The Company** will raise with each **Generator** the problems it is anticipating due to the low **System NRAPM** or **Localised NRAPM** and will discuss:

- (1) whether any change is possible to the estimate of generating **Plant**

| inflexibility; and

- (2) whether generating **Plant** or **External Interconnection** outages can be taken to coincide with the periods of low **System NRAPM** or **Localised NRAPM**.

In relation to **Generators** with nuclear **Large Power Stations** the

discussions on outages can include the issue of whether outages can be taken for re-fuelling purposes to coincide with the relevant low **System NRAPM** and/or **Localised NRAPM** periods.

- (c) If agreement is reached with a **Generator**, then the **Generator** may take such outage, as agreed with **The Company**, and the **Generator** will update its **Output Useable** via the data provision process defined in OC2.3.1.2.1. **The Company** will process the updated data which will then be included in the next published update of the **System NRAPM** and/or **Localised NRAPM**.
- (d) If on the day prior to an **Operational Day**, it is apparent from the **BM Unit Data** submitted by **Users** under **BC1** that **System NRAPM** and/or **Localised NRAPM**, is too low, then in accordance with the procedures and requirements set out in BC1.5.5 **The Company** may contact **Users** to discuss whether changes to **Physical Notifications** are possible, and if they are, will reflect those in the operational plans for the next following **Operational Day** or will, in accordance with BC2.9.4 instruct **Generators** to **De-Synchronise** specific generating **Plant** for such period. In determining which generating **Plant** to instruct, **BC2** provides that **The Company** will not other than as provided for below instruct to **De-Synchronise** any generating **Plant** within an **Existing Gas Cooled Reactor Plant**.

**BC2** further provides that: -

- (i) **The Company** is permitted to instruct to **De-Synchronise** any generating **Plant** within an **Existing AGR Plant** if that generating **Plant** within an **Existing AGR Plant** has failed to offer to be flexible for the relevant instance at the request of **The Company** provided the request is within the **Existing AGR Plant Flexibility Limit**.
- (ii) **The Company** will only instruct any generating **Plant** within an **Existing Magnox Reactor Plant** or within an **Existing AGR Plant** (other than under (i) above) to **De-Synchronise** if the level of **System NRAPM** (taken together with **System** constraints) and/or **Localised NRAPM** is such that it is not possible to avoid **De-Synchronising** such generating **Plant**, and provided the power flow across each **External Interconnection** is either at zero or results in an export of power from the **Total System**. This provision applies in all cases in the case of **System NRAPM**, only when the power flow would have a relevant effect.

## OC2.3.4 Frequency Sensitive Operation

Party	By 1600 hours each Wednesday		
Generator			Receive Info
The Company	Provide info		
Non-embedded Customer	Do nothing		
Network Operator	Do nothing		

Key

- Provides information
- Receives information
- Do nothing

Figure 13: Guaranteeing Sufficient Generators for Frequency Sensitive Operation

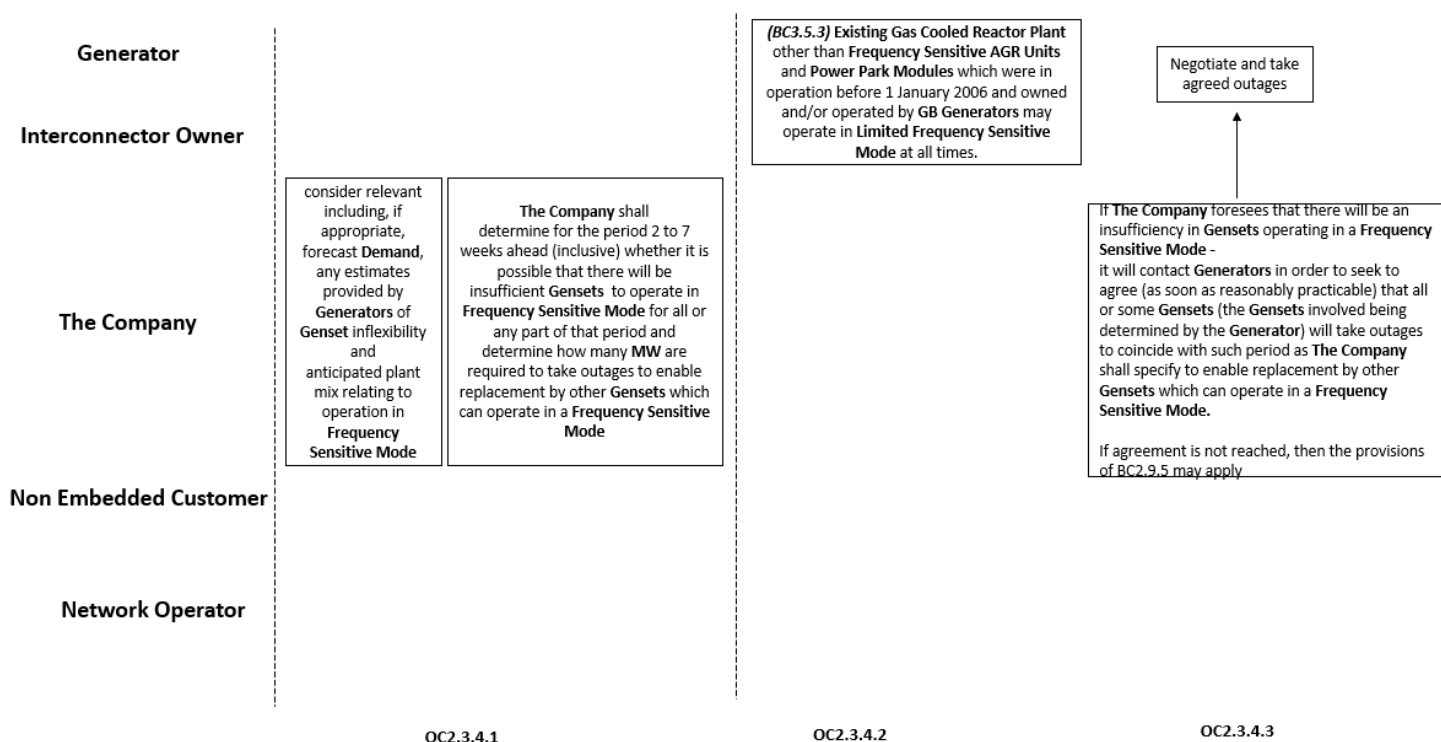


Figure 14: Summary of obligations during Frequency Sensitive Operation by 1600 hours each Wednesday

### By 1600 hours each Wednesday

OC2.3.4.1

Using such information as **The Company** shall consider relevant including forecast

**Demand**, any estimates provided by **Generators** of generating **Plant** inflexibility and anticipated plant mix relating to operation in **Frequency Sensitive Mode**, **The Company** shall determine for the period 2 to 7 weeks ahead (inclusive) whether it is possible that there will be insufficient generating **Plant** to operate in **Frequency Sensitive Mode** (other than that generating **Plant** within **Existing Gas Cooled Reactor Plant** which is permitted to operate in **Limited Frequency Sensitive Mode** at all times under BC3.5.3) to operate in Frequency Sensitive Mode for all or any part of that period.

OC2.3.4.2 BC3.5.3 explains that **The Company** permits **Existing Gas Cooled Reactor Plant** other than **Frequency Sensitive AGR Units** to operate in a **Limited Frequency Sensitive Mode** at all times.

OC2.3.4.3 If **The Company** foresees that there will be an insufficiency in generating **Plant** operating in a **Frequency Sensitive Mode**, it will contact **Generators** in order to seek to agree (as soon as reasonably practicable) that all or some of the generating **Plant** (the MW amount being determined by **The Company** but the specific generating **Plant** involved being determined by the **Generator**) will take outages to coincide with such period as **The Company** shall specify to enable replacement by other generating **Plant** which can operate in a **Frequency Sensitive Mode**. If agreement is reached (which unlike the remainder of **OC2** will constitute a binding agreement) then the **Generator** will take such outage as agreed with **The Company**. If agreement is not reached, then the provisions of BC2.9.5 will apply.

#### OC2.3.5 Operating Margin Data Requirements

Key

	Provides information
	Receives information
	Do nothing

Party	By 1600 hours each Wednesday	Between 1600 hours each Wednesday and 1200 hours each Friday		By 1500hours each Friday	
Generator	Do nothing	Receive Info	Provide info	Receive Info	Provide info
The Company	Provide info		Receive Info	Provide info	Receive Info

Figure 15: For Gensets that are available for start from standby by Low Frequency Relay initiation with Fast Start Capability agreed pursuant to the Bilateral Agreement

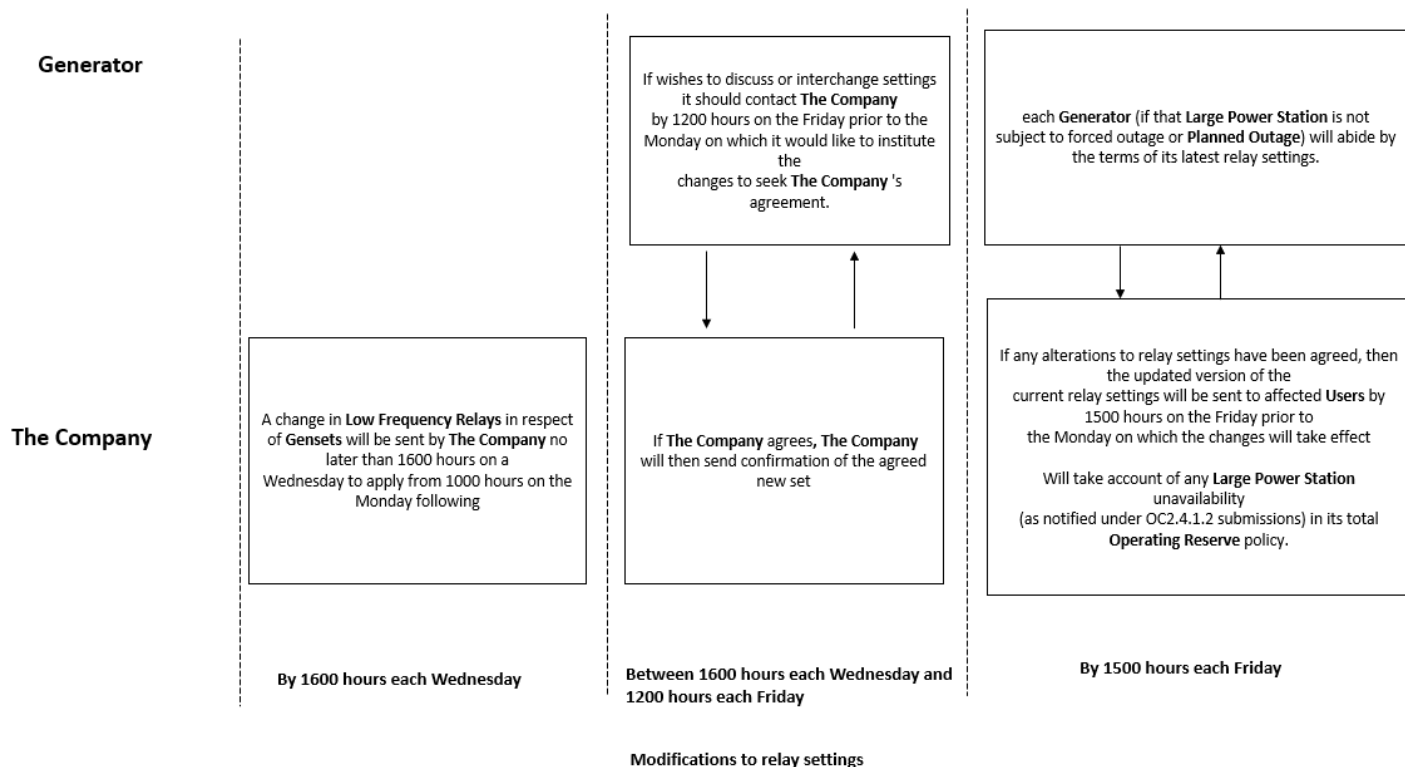


Figure 16: Summary of obligations under Operating Margin Data Requirements

OC2.3.5.1 Modifications to Low Frequency Relay settings for Fast Start from standby

'Relay settings' in this OC2.3.5.1 refers to the settings of **Low Frequency Relays** in respect of generating **Plant** that is available for start from standby by **Low Frequency Relay** initiation with **Fast Start Capability** agreed in the relevant **Bilateral Agreement**.

By 1600 hours each Wednesday

A change in relay settings will be sent by **The Company** no later than 1600 hours on a Wednesday to apply from 1000 hours on the Monday following. The settings allocated to particular **Large Power Stations** may be interchanged between 49.70Hz and 49.60Hz (or such other **System Frequencies** as **The Company** may have specified) provided the overall capacity at each setting and **System** requirements can, in **The Company's** view, be met.

Between 1600 hours each Wednesday and 1200 hours each Friday

If a **Generator** wishes to discuss or interchange settings it should contact **The Company** by 1200 hours on the Friday prior to the Monday on which it would like to institute the changes to seek **The Company's** agreement. If **The Company** agrees, **The Company** will then send confirmation of the agreed new settings.

By 1500 hours each Friday

If any alterations to relay settings have been agreed, then the updated version of the current relay settings will be sent to affected **Users** by 1500 hours on the Friday prior to the Monday on which the changes will take effect. Once accepted, each **Generator** (if that **Large Power Station** is not subject to forced outage or **Planned Outage**) will abide by the terms of its latest relay settings.

In addition, **The Company** will take account of any **Large Power Station** unavailability (as notified under OC2.4.1.2 submissions) in its total **Operating Reserve** policy.

**The Company** may from time to time, for confirmation purposes only, issue the latest version of the current relay settings to each affected **Generator**.

OC2.3.5.2 Operational Planning Margin Requirements (OPMR)

At a regular time interval, at least once each day (by 1600 hours) and no more frequently than every hour

**The Company** will provide its best estimate of the level of **Operating Reserve** to be utilised by **The Company** in connection with the operation of the **Balancing Mechanism** covering a 2-14 day ahead period (with a daily peak demand resolution) and the 2—52-week resolution (with a weekly resolution focusing on the peak demand of the week). This level shall be purely indicative.

This **Operational Planning Margin** requirements indication will also note the possible level of **High Frequency Response** to be utilised by **The Company** in connection with the operation of the **Balancing Mechanism** in the week beginning with the **Operational Day** commencing during the subsequent Monday, which level shall be purely indicative.

## OC2.3.6 In the event that:

- a) a **Non-Embedded Customer** experiences the planned unavailability of its **Apparatus** resulting in the reduction of **Demand** of 100MW or more, or a change to the planned unavailability of its **Apparatus** resulting in a change in **Demand** of 100MW or more, for one **Settlement Period** or longer or
- b) a **Non-Embedded Customer** experiences a change in the actual availability of its **Apparatus** resulting in a change in **Demand** of 100MW or greater; or



- c) a **Generator** experiences a planned unavailability of a **Generating Unit** resulting in a change of 100MW or more in the **Output Useable** of the associated **Power-Generating Module** below its previously notified availability, which is expected to last one **Settlement Period** or longer and up to three years ahead: or
- d) a **Generator** experiences a change of 100MW or more in the **Maximum Export Limit** of any generating **Plant** which is expected to last one **Settlement Period** or longer. or
- e) a **Generator** experiences a planned unavailability resulting in a change of 100MW or more in its aggregated **Output Useable** below its previously notified availability for a **Power Station** with a **Registered Capacity** of 200MW or more and which is expected to last one **Settlement Period** or longer and up to three years ahead, save where data has been provided pursuant to OC.2.3.6(c) above; or
- f) a **Generator** experiences a change of 100MW or more in the aggregated **Maximum Export Limit** of a **Power Station** with a **Registered Capacity** of 200MW or more, which is expected to last one **Settlement Period** or longer, save where data has been provided pursuant to OC.2.3.6(d) above,

such **Non-Embedded Customer** or **Generator** shall provide **The Company** with the **EU Transparency Availability Data** in accordance with **DRC Schedule 6** (Users' Outage Data) using **MODIS** and, with reference to points OC2.3.6(a) to (f), **Retained EU Law** (Commission Regulation (EU)543/2013) articles 7.1(a), 7.1(b), 15.1(a), 15.1(b), 15.1(c) and 15.1(d).

OC2.3.7 **The Company** will for each day publish the actual largest secured loss of generation (ie, the loss of generation against which, as a requirement of the **Licence Standards**, the **NETS** must be secured) or loss of import from **External Interconnections** for each settlement period on **The Company's** website.

## OC2 APPENDIX 1– GENERATION PLANNING PARAMETERS

### OC2.A.2 Generation Planning Parameters

The following parameters are required in respect of each **Genset**.

#### OC2.A.2.1 Regime Unavailability

Where applicable the following information must be recorded for each **Genset**.

- Earliest synchronising time:
  - Monday
  - Tuesday to Friday
  - Saturday to Sunday
- Latest de-synchronising time:
  - Monday to Thursday
  - Friday
  - Saturday to Sunday

#### OC2. A.2.2 Synchronising Intervals

- (a) The synchronising interval between **Generating Units** in a **Synchronising Group** assuming all **Generating Units** have been **Shutdown** for 48 hours.

- (b) The **Synchronising Group** within the **Power Station** to which each **Generating Units** should be allocated.

OC2.A.2.3 De-Synchronising Interval

A fixed value **De-Synchronising** interval between **Gensets** within a **Synchronising Group**.

OC2.A.2.4 Synchronising Generation

The amount of MW produced at the moment of **Synchronising** assuming the **Generating Unit** has been **Shutdown** for 48 hours.

OC2.A.2.5 Minimum Non-zero time (MNZT)

The minimum period on-load between **Synchronising** and **De-Synchronising** assuming the **Generating Unit** has been **Shutdown** for 48 hours.

OC2.A.2.6 Run-Up rates

A run-up characteristic consisting of up to three stages from **Synchronising Generation** to **Output Useable** with up to two intervening break points assuming the **Generating Unit** has been **Shutdown** for 48 hours.

OC2.A.2.7 Run-down rates

A run-down characteristic consisting of up to three stages from **Output Useable** to **De-Synchronising** with breakpoints at up to two intermediate load levels.

OC2.A.2.8 Notice to Deviate from Zero (NDZ)

The period of time normally required to **Synchronise** a **Generating Unit** following instruction from **The Company** assuming the **Generating Unit** has been **Shutdown** for 48 hours.

OC2.A.2.9 Minimum Zero time (MZT)

The minimum interval between **De-Synchronising** and **Synchronising** a **Generating Unit**.

OC2.A.2.10 Gas Turbine Units loading parameters

- Loading rate for fast starting
- Loading rate for slow starting

**OC2 APPENDIX 2 – PLANNING MATRIX FOR GENERATING UNITS**Planning Matrix Example Form

Power Generating MODULE	CCGT GENERATING UNITS AVAILABLE								
	1st GT	2nd GT	3rd GT	4th GT	5th GT	6th GT	1st ST	2nd ST	3rd ST
	OUTPUT USEABLE								
OUTPUT USEABLE									
MW									
0MW to 150MW									
151MW to 250MW									
251MW to 300MW									
301MW to 400MW									
401MW to 450MW									
451MW to 550MW									

**OC2 APPENDIX 3 – POWER PARK MODULE PLANNING MATRIX**Power Park Module Planning Matrix Example Form

<b>BM Unit Name</b>				
<b>Power Park Module</b> [unique identifier]				
<b>POWER PARK UNIT AVAILABILITY</b>	<b>POWER PARK UNITS</b>			
	<b>Type A</b>	<b>Type B</b>	<b>Type C</b>	<b>Type D</b>
Description (Make/Model)				
Number of units				
<b>Power Park Module</b> [unique identifier]				
<b>POWER PARK UNIT AVAILABILITY</b>	<b>POWER PARK UNITS</b>			
	<b>Type A</b>	<b>Type B</b>	<b>Type C</b>	<b>Type D</b>
Description (Make/Model)				
Number of units				

The **Power Park Module Planning Matrix** may have as many columns as are required to provide information on the different make and model for each type of **Power Park Unit** in a **Power Park Module** and as many rows as are required to provide information on the **Power Park Modules** within each **BM Unit**. The description is required to assist identification of the **Power Park Units** within the **Power Park Module** and correlation with data provided under the **Planning Code**.

< END OF OPERATING CODE NO. 2 >