

# OPERATING CODE NO. 1

(OC1)

## DEMAND FORECASTS

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## OC1.1 INTRODUCTION

OC1.1.1 **Operating Code No.1 ("OC1")** is concerned with **Demand** forecasting for operational purposes. In order to match generation output with **Demand** for electricity it is necessary to undertake **Demand** forecasting. It is also necessary to undertake **Demand** forecasting of **Reactive Power**.

OC1.1.2 In the **Operational Planning Phase**, **Demand** forecasting shall be conducted by **NGETThe Company** taking account of **Demand** forecasts furnished by **Network Operators**, who shall provide **NGETThe Company** with information in the form set out in this **OC1**. The data supplied under the **PC** is also taken into account.

OC1.1.3 In the **Programming Phase** and **Control Phase**, **NGETThe Company** will conduct its own **Demand** forecasting taking into account information to be furnished by **Suppliers** and **Network Operators** and the other factors referred to in OC1.6.1.

OC1.1.4 In this **OC1**, the point of connection of the **External Interconnection** to the **National Electricity Transmission System** shall be considered as a **Grid Supply Point**. **Reactive Power Demand** includes the series **Reactive** losses of the **User's System** but excludes any network susceptance and any **Reactive** compensation on the **User's System**. **NGETThe Company** will obtain the lumped network susceptance and details of **Reactive** compensation from the requirements to submit data under the **PC**.

OC1.1.5 Data relating to **Demand Control** should include details relating to MW.

OC1.1.6 **OC1** deals with the provision of data on **Demand Control** in the **Operational Planning Phase**, the **Programming Phase** and the **Post-Control Phase**, whereas **OC6** (amongst other things) deals with the provision of data on **Demand Control** following the **Programming Phase** and in the **Control Phase**.

OC1.1.7 In this **OC1**, Year 0 means the current **Financial Year** at any time, Year 1 means the next **Financial Year** at any time, Year 2 means the **Financial Year** after Year 1, etc.

OC1.1.8 References in **OC1** to data being supplied on a half hourly basis refer to it being supplied for each period of 30 minutes ending on the hour and half-hour in each hour.

## OC1.2 OBJECTIVE

The objectives of **OC1** are to:

OC1.2.1 enable the provision of data to **NGETThe Company** by **Users** in the **Programming Phase**, **Control Phase** and **Post-Control Phase**; and

OC1.2.2 provide for the factors to be taken into account by **NGETThe Company** when **Demand** forecasting in the **Programming Phase** and **Control Phase**.

## OC1.3 SCOPE

**OC1** applies to **NGETThe Company** and to **Users** which in this **OC1** means:

- (a) **Network Operators**, and
- (b) **Suppliers**.

## OC1.4 DATA REQUIRED BY **NGETTHE COMPANY** IN THE OPERATIONAL PLANNING PHASE

OC1.4.1 (a) Each **User**, as specified in (b) below, shall provide **NGETThe Company** with the data requested in OC1.4.2 below.

- (b) The data will need to be supplied by each **Network Operator** directly connected to the **National Electricity Transmission System** in relation to **Demand Control** and in relation each **Generator** with respect to the output of **Embedded Medium Power Stations** within its **System**.

OC1.4.2 (a) Data

By calendar week 28 each year each **Network Operator** will provide to **NGETThe Company** in writing the forecast information listed in (c) below for the current **Financial Year** and each of the succeeding five **Financial Years**.

(b) Data Providers

In circumstances when the busbar arrangement at a **Grid Supply Point** is expected to be operated in separate sections, separate sets of forecast information for each section will be provided to **NGETThe Company**.

(c) Embedded Medium Power Station Output and Demand Control

For the specified time of the annual peak half hour **National Electricity Transmission System Demand**, as specified by **NGETThe Company** under PC.A.5.2.2, the output of **Embedded Medium Power Stations** and forecasts of **Demand** to be relieved by **Demand Control** on a **Grid Supply Point** basis giving details of the amount and duration of the **Demand Control**.

OC1.5 DATA REQUIRED BY **NGETTHE COMPANY** IN THE PROGRAMMING PHASE, CONTROL PHASE AND POST-CONTROL PHASE

OC1.5.1 Programming Phase

For the period of 2 to 8 weeks ahead the following will be supplied to **NGETThe Company** in writing by 1000 hours each Monday:

(a) Demand Control

Each **Network Operator** will supply MW profiles of the amount and duration of their proposed use of **Demand Control** which may result in a **Demand** change equal to or greater than the **Demand Control Notification Level** (averaged over any half hour on any **Grid Supply Point**) on a half hourly and **Grid Supply Point** basis;

(b) Medium Power Station Operation

Each **Network Operator** will, if reasonably required by **NGETThe Company**, supply MW schedules for the operation of **Embedded Medium Power Stations** within its **System** on a half hourly and **Grid Supply Point** basis.

OC1.5.2 For the period 2 to 12 days ahead the following will be supplied to **NGETThe Company** in writing by 1200 hours each Wednesday:

(a) Demand Control

Each **Network Operator** will supply MW profiles of the amount and duration of their proposed use of **Demand Control** which may result in a **Demand** change equal to or greater than the **Demand Control Notification Level** (averaged over any half hour on any **Grid Supply Point**) on a half hourly and **Grid Supply Point** basis;

(b) Medium Power Station Operation

Each **Network Operator** will, if reasonably required by **NGETThe Company**, supply MW schedules for the operation of **Embedded Medium Power Stations** within its **System** on a half hourly and **Grid Supply Point** basis.

OC1.5.3 Medium Power Station Output

Each **Network Operator** will, if reasonably required by **NGETThe Company**, supply **NGETThe Company** with MW schedules for the operation of **Embedded Medium Power Stations** within its **System** on a half hourly and **Grid Supply Point** basis in writing by 1000 hours each day (or such other time specified by **NGETThe Company** from time to time) for the next day (except that it will be for the next 3 days on Fridays and 2 days on Saturdays and may be longer (as specified by **NGETThe Company** at least one week in advance) to cover holiday periods);

OC1.5.4 Other Codes

Under **OC6** each **Network Operator** will notify **NGETThe Company** of their proposed use of **Demand Control** (which may result in a **Demand** change equal to or greater than the **Demand Control Notification Level**), and under **BC1**, each **Supplier** will notify **NGETThe Company** of their proposed use of **Customer Demand Management** (which may result in a **Demand** change equal to or greater than the **Customer Demand Management Notification Level**) in this timescale.

OC1.5.5 Control Phase

OC1.5.5.1 Demand Control

Under **OC6**, each **Network Operator** will notify **NGETThe Company** of any **Demand Control** proposed by itself which may result in a **Demand** change equal to or greater than the **Demand Control Notification Level** averaged over any half hour on any **Grid Supply Point** which is planned after 1000 hours, and of any changes to the planned **Demand Control** notified to **NGETThe Company** prior to 1000 hours as soon as possible after the formulation of the new plans;

OC1.5.5.2 Customer Demand Management

- (a) Each **Supplier** will notify **NGETThe Company** of any **Customer Demand Management** proposed by itself which may result in a **Demand** change equal to or greater than the **Customer Demand Management Notification Level** averaged over any half hour on any **Grid Supply Point** which is planned to occur at any time in the **Control Phase** and of any changes to the planned **Customer Demand Management** already notified to **NGETThe Company** as soon as possible after the formulation of the new plans.
- (b) The following information is required on a **Grid Supply Point** and half-hourly basis:
  - (i) the proposed date, time and duration of implementation of **Customer Demand Management**; and
  - (ii) the proposed reduction in **Demand** by use of **Customer Demand Management**.

OC1.5.5.3 Load Management Blocks

In Scotland, by 11:00 each day, each **Supplier** who controls a **Load Management Block** of **Demand** with a capacity of 5MW or more shall submit to **NGETThe Company** a schedule of its proposed switching times and profiles in respect of each block for the next day.

OC1.5.6 Post-Control Phase

The following will be supplied to **NGETThe Company** in writing by 0600 hours each day in respect of **Active Power** data and by 1000 hours each day in respect of **Reactive Power** data:

(a) Demand Control

Each **Network Operator** will supply MW profiles for the previous calendar day of the amount and duration of **Demand** reduction achieved by itself from the use of **Demand Control** equal to or greater than the **Demand Control Notification Level** (averaged over any half hour on any **Grid Supply Point**), on a half hourly and **Grid Supply Point** basis.

(b) Customer Demand Management

Each **Supplier** will supply MW profiles of the amount and duration of **Demand** reduction achieved by itself from the use of **Customer Demand Management** equal to or greater than the **Customer Demand Management Notification Level** (averaged over any half hour on any **Grid Supply Point**) on a half hourly and **Grid Supply Point** basis during the previous calendar day.

OC1.6 NGETTHE COMPANY -FORECASTS

OC1.6.1 The following factors will be taken into account by NGETThe Company when conducting **National Electricity Transmission System Demand** forecasting in the **Programming Phase** and **Control Phase**:

- (a) Historic **Demand** data (this includes **National Electricity Transmission System Losses**).
- (b) Weather forecasts and the current and historic weather conditions.
- (c) The incidence of major events or activities which are known to NGETThe Company in advance.
- (d) Anticipated interconnection flows across **External Interconnections**.
- (e) **Demand Control** equal to or greater than the **Demand Control Notification Level** (averaged over any half hour at any **Grid Supply Point**) proposed to be exercised by **Network Operators** and of which NGETThe Company has been informed.
- (f) **Customer Demand Management** equal to or greater than the **Customer Demand Management Notification Level** (averaged over any half hour at any **Grid Supply point**) proposed to be exercised by **Suppliers** and of which NGETThe Company has been informed.
- (g) Other information supplied by **Users**.
- (h) Anticipated **Pumped Storage Unit** demand.
- (i) the sensitivity of **Demand** to anticipated market prices for electricity.
- (j) **BM Unit Data** submitted by **BM Participants** to NGETThe Company in accordance with the provisions of **BC1** and **BC2**.
- (k) **Demand** taken by **Station Transformers**

OC1.6.2 Taking into account the factors specified in OC1.6.1 NGETThe Company uses **Demand** forecast methodology to produce forecasts of **National Electricity Transmission System Demand**. A written record of the use of the methodology must be kept by NGETThe Company for a period of at least 12 months.

OC1.6.3 The methodology will be based upon factors (a), (b) and (c) above to produce, by statistical means, unbiased forecasts of **National Demand**. **National Electricity Transmission System Demand** will be calculated from these forecasts but will also take into account factors (d), (e), (f), (g), (h), (i) and (j) above. No other factors are taken into account by NGETThe Company, and it will base its **National Electricity Transmission System Demand** forecasts on those factors only.

< END OF OPERATING CODE NO. 1 >

