

UNIFORM NETWORK CODE – OFFTAKE ARRANGEMENTS DOCUMENT

SECTION H

NTS LONG TERM DEMAND FORECASTING¹

1 General

1.1 Introduction

1.1.1 This Section H sets out requirements for National Grid NTS and each DNO to exchange information relating to historic and forecast development of demand in relation to the DNO's LDZ(s).

1.2 Interpretation

1.2.1 For the purposes of this Section H:

- (a) in accordance with paragraph 2.1.1, the planning year is the Gas Year in which information is to be provided;
- (b) in relation to the planning year:
 - (i) Gas Year 0 is the planning year;
 - (ii) calendar year 0 is the calendar year commencing 1 January in the planning year; and
 - (iii) Formula Year 0 is the Formula Year commencing 1 April in the planning year;
 and references to Gas Year(s), calendar year(s) or Formula Year(s) –1, and 1 to 9, shall be construed accordingly.

1.2.2 For the purposes of this Section H (including the information specification in Annex H-1 or any revised information specification provided by National Grid NTS under paragraph 2.2):

- (a) references to a load are to the load at any Supply Point or CSEP (including a Storage Connection Point) on an LDZ;
- (b) consumption excludes LDZ shrinkage, and demand includes LDZ shrinkage;
- (c) information as to:
 - (i) annual demand is to be provided for a calendar year and (where so provided) a Formula Year; and
 - (ii) peak-day demand is to be provided in relation to a Gas Year;
- (d) peak-day and daily demand is to be stated in MWh/day, and annual demand is to be stated in GWh/year;
- (e) "**weather-correction**" means adjustment to given weather conditions, and weather-corrected shall be construed accordingly;

¹ Implementation of modification 0432 effective 05:00hrs on 01/10/2016, will amend this document in whole or in part.

- (f) references to interruptible demand (or loads) are to be construed in accordance with TPD Section O2.1.3(a), and references to firm demand (or loads) are to be construed accordingly;
- (g) load bands are bands (of annual consumption, in MWh/year) in which loads (or loads within categories) are to be segregated for purposes of information provision; and
- (h) categories are categories of load, comprising:
 - (i) daily metered (DM) or non-daily metered (NDM);
 - (ii) firm or interruptible (which category is also referred to as 'supply type'); and
 - (iii) any other category under a revised information specification provided by National Grid NTS under paragraph 2.2.

1.3 Peak day demand

- 1.3.1 Forecasts of peak day load shall be calculated in a manner consistent with the principles laid down by the British Gas document TD76, Report of the Steering Group on Temperature/Demand Relationships (or any modification of such document approved by the Offtake Committee under Section N1.2) (being the methodology referred to in GT Section C2.6.6).
- 1.3.2 National Grid NTS shall publish on its website an outline of its application of these principles in the form of a gas demand forecasting methodology document.

1.4 Nature of information

- 1.4.1 The Parties acknowledge that information provided by National Grid NTS to a DNO concerning an LDZ will be prepared (inter alia) on the basis of information provided by that DNO (as well as by Users and others), and National Grid NTS has no direct knowledge of the loads on that LDZ.
- 1.4.2 Without prejudice to any Legal Requirement, neither Party shall be bound nor entitled to rely for any purposes by or on information provided by the other under this Section H, but either Party may require the other to meet for the purposes of discussing any discrepancy between the information provided by each of them.

1.5 Consistency with Transportation Principal Document

- 1.5.1 The Parties intend that the preparation and provision of information under this Section H should be consistent with and should facilitate the preparation and publication by National Grid NTS of planning and other information under TPD Section O.

1.6 Further provisions

- 1.6.1 The DNO shall, at National Grid NTS's request:
 - (a) provide National Grid NTS with any additional information or forecasts relating to demand on its LDZ(s) reasonably required by National Grid NTS, and
 - (b) in particular, shall allow National Grid NTS access to consumption data (by load-band and for individual daily-metered loads) of end-users connected to the relevant LDZ(s)

for the purposes of enabling National Grid NTS to comply with any provision of its Transporter's Licence which requires or necessitates long-term demand forecasting.

- 1.6.2 National Grid NTS shall be entitled to publish the forecast information provided to it by the DNO, provided that such information is published on an aggregated basis which does not disclose demand information relating to individual loads.

2 Provision of information

2.1 Calendar

2.1.1 In each Gas Year (the "**planning year**"), by the relevant date in accordance with paragraph 2.1.2:

- (a) National Grid NTS shall provide the specification (subject to and in accordance with paragraph 2.2) of, and the specific dates (in accordance with paragraph 2.1.2) for the provision of, pre-forecast and forecast information;
- (b) the DNO shall provide pre-forecast information relating to the preceding calendar year (year -1) and calendar years 0 to 9 in accordance with paragraph 2.3;
- (c) National Grid NTS and the DNO shall meet to discuss the pre-forecast information provided under paragraph (b);
- (d) the DNO shall provide forecast information relating to calendar years and Gas Years 0 to 9 in accordance with paragraph 2.4;
- (e) if either Party requests, National Grid NTS and the DNO shall meet to discuss the forecast information provided under paragraph (d);
- (f) National Grid NTS shall provide forecast information relating to calendar years, Gas Years and (as appropriate) Formula Years 0 to 9 in accordance with paragraph 2.5;
- (g) National Grid NTS shall provide CV and Wobbe Index forecast information relating to Gas Years 0 to 9;
- (h) the DNO shall provide forecast offtake information relating to Gas Years 1 to 5 in accordance with paragraph 2.7; and
- (i) following receipt of the information provided by the DNO in accordance with paragraph (h), National Grid NTS shall provide forecast NTS Exit Capacity amounts and Assured Offtake Pressures relating to Gas Years 1 to 5 in accordance with paragraph 2.8.

2.1.2 The calendar for the provision of information and meetings under paragraph 2.1.1 is as follows:

| Paragraph | Step | Relevant date in Gas Year 0 |
|------------------|--|---|
| 2.1.1(a) | National Grid NTS provides dates and specification | The end of November |
| 2.1.1(b) | DNO provides pre-forecast information | The end of the second full week of February |

| | | |
|----------|--|--|
| 2.1.1(c) | Parties meet to discuss pre-forecast information | The end of the fourth week after the DNO pre-forecast information was provided |
| 2.1.1(d) | DNO provides forecast information | The end of the second full week of March |
| 2.1.1(e) | On request, Parties meet to discuss DNO forecast information | As soon as possible after request |
| 2.1.1(f) | National Grid NTS provides forecast information | The end of the first full week of May |
| 2.1.1(g) | National Grid NTS provides CV and Wobbe forecast | Two months after the National Grid NTS forecast information was provided |
| 2.1.1(h) | DNO provides forecast offtake information | The end of July |
| 2.1.1(i) | National Grid NTS provides forecast NTS Exit Capacity and pressure information | The end of September |

2.2 Specification

- 2.2.1 Subject to paragraph 2.2.2, National Grid NTS will, in each planning year, provide the specification (as to timetable, demand, load bands, categories, weather-correction and other information) of information to be provided by either Party under this Section H, in accordance with paragraph 2.1.1(a).
- 2.2.2 The specification in paragraph 2.2.1 and Annex H-1 shall apply until and unless National Grid NTS provides a different specification (and any specification may be provided in the form of a variation from paragraph 2.2.1 or Annex H-1).

2.3 Pre-forecast information

- 2.3.1 Subject to paragraph 2.2.1, the pre-forecast information to be provided by the DNO is the following information:
- (a) actual consumption and LDZ shrinkage in the LDZ in the preceding calendar year (year –1):
 - (i) weather-corrected in accordance with the specification pursuant to paragraph 2.2;
 - (ii) segregated in each of the load bands and categories in which (for the purposes of paragraph 2.4) forecast information (for years 0 to 9) is required to be provided by the DNO in year 0; and
 - (iii) including adjustments in respect of Individual Reconciliation and Aggregate NDM Reconciliation, including where appropriate re-phasing of such adjustments into calendar years prior to calendar year –1;

- (b) the number of new loads connected to the LDZ in calendar year –1, and the number of loads in aggregate at the end of calendar year –1, each segregated into domestic and non-domestic loads;
- (c) details (as provided in paragraph 2.3.2) of each load greater than 58.6 GWh/year:
 - (i) connected to the LDZ in calendar year –1; or
 - (ii) expected to be connected to the LDZ in any of calendar years 0 to 9; and
- (d) information concerning any known or expected changes in the details referred to in paragraph 2.3.2 relating to any existing loads greater than 58.6 GWh/year.

2.3.2 The details referred to in paragraph 2.3.1(c) and (d) are expected 1-in-20 peak day demand, annual demand, category of load, date of first gas flow and any associated phasing or build-up of demand.

2.4 DNO forecast information

2.4.1 Subject to paragraph 2.2.1, the forecast information to be provided by the DNO is forecast information as to consumption and demand (in load bands and categories) as specified by National Grid NTS in relation to calendar years and Gas Years 0 to 9.

2.5 National Grid NTS forecast information

2.5.1 Subject to paragraph 2.2.1, the forecast information to be provided by National Grid NTS is forecast information as to:

- (a) annual and 1 in 20 peak day consumption and shrinkage;
- (b) daily and monthly demand profiles;
- (c) load duration curves;

(in load bands and categories) as specified in Part 2 of Annex H-1; and

- (d) storage simulation model input data as so specified;

and in relation to any new load(s) (ie. loads first connected in any of calendar years 0 to 9, and included in the forecast information) greater than 58.6 GWh/year, an overview of the contribution of those load(s) to overall annual and 1-in-20 peak day demand.

2.6 CV assumption

2.6.1 All forecast information provided by the DNO or National Grid NTS shall be accompanied by a statement of the assumption(s) made as to calorific values in the preparation of such information.

2.7 Forecast Offtake Information

2.7.1 The information to be provided by the DNO is the forecast rate of volume flow (MCM per day), peak rate (MCM per hour) and Offtake Flexibility Quantity (MCM per day) in respect of each of its NTS/LDZ Offtakes at various levels of demand as specified in Part 3 of Annex H-1.

2.8 NTS Offtake Capacity and Pressure Information

- 2.8.1 The information to be provided by National Grid NTS to the DNO is the forecast of the availability of NTS Exit (Flat) Capacity, NTS Exit (Flexibility) Capacity and Assured Offtake Pressures in respect of each of its NTS/LDZ Offtakes, where such information is not contained in the Offtake Capacity Statement or Offtake Pressure Statement provided to such DNO in accordance with TPD Section B3.7.1 or J2.5.2 or in any revisions thereto in accordance with TPD Section B3.7.5 to B3.7.11 (inclusive) or TPD Section J2.5.4 to 2.5.10 (inclusive).

Annex H-1

Information Specification
(Paragraphs 1.2.2 and 2.5.1)

Part 1 - Forecast information to be provided by DNO

| Forecast Item | Data Elements | Basis of Weather Correction to be Applied |
|----------------------|---|--|
| Peak Day Demand | NDM Firm consumption DM Firm consumption Total Firm consumption Total Interruptible consumption Total LDZ demand | 1 in 20 |
| Annual Demand | NDM Firm 0 to 73.2MWh p.a. NDM Firm 73.2 to 732MWh p.a. NDM Firm >732MWh p.a. Total NDM Firm consumption Total DM Firm consumption Total Interruptible consumption Total LDZ demand | Average (Seasonal Normal Composite Weather Variable) |

Part 2 - Forecast information to be provided by National Grid NTS

| Forecast Item | Data Elements | Basis of Weather Correction to be Applied |
|--|--|--|
| Peak Day Demand | NDM Firm 0 to 73.2 MWh p.a. NDM Firm 73.2 to 732 MWh p.a. NDM Firm 732MWh to 5860 MWh p.a. NDM Firm >5860 MWh p.a. Total NDM Firm consumption DM Firm consumption Total Firm demand Interruptible consumption Total Interruptible demand Total LDZ demand | 1 in 20 |
| Annual Demand | NDM Firm 0 to 73.2 MWh p.a. NDM Firm 73.2 to 732 MWh p.a. NDM Firm 732MWh to 5860 MWh p.a. NDM Firm >5860 MWh p.a. Total NDM Firm consumption DM Firm <1465 GWh p.a. DM Firm >1465 GWh p.a. Total DM Firm consumption Total Firm demand Interruptible <1465 GWh p.a. Interruptible >1465 GWh p.a. Total Interruptible consumption Total Interruptible demand Total LDZ demand | Average (Seasonal Normal Composite Weather Variable) |
| Monthly Demand Profile (Current calendar year plus two subsequent years) | NDM Firm 0 to 73.2 MWh p.a. NDM Firm 73.2 to 732 MWh p.a. NDM Firm 732MWh to 5860 MWh p.a. Firm 5860MWh to 1465 GWh p.a. Interruptible <1465 GWh p.a. Very Large User (>1465 GWh p.a.) Total LDZ consumption Total LDZ demand | Average (Seasonal Normal Composite Weather Variable) |
| Daily Demand Profile | NDM Firm consumption DM Firm consumption Total Firm demand Total Interruptible demand LDZ Demand | Average (Seasonal Normal Composite Weather Variable) 1 in 20 cold 1 in 20 warm |
| Load Duration Curves | NDM Firm consumption Total Firm demand Total Interruptible demand LDZ Demand | Average (Seasonal Normal Composite Weather Variable) 1 in 50 severe |
| Storage | <ul style="list-style-type: none"> Historical Composite Weather | |

| Forecast Item | Data Elements | Basis of Weather Correction to be Applied |
|-----------------------------|--|--|
| Simulation Model Input Data | Variable data in gas year format from 1928/29 to the immediately preceding year; and <ul style="list-style-type: none"> • Weather demand model covering the period beginning 1st October of the gas supply year immediately preceding the current year | |

Part 3 - Forecast Flow Information to be provided by DNO

| NTS/LDZ Offtake | Gas Year | Assumed calorific Value | Level of demand for gas | Data elements required per demand level |
|-----------------|----------|-------------------------|--|---|
| | | | (ref. Note 1) | |
| | | | 1 in 20 peak day demand | Forecast rate of volume flow (MCM/day) |
| | | | Day 13 of 1 in 50 load duration curve | |
| | | | Day 46 of average load duration curve | peak rate (MCM/hour) |
| | | | Day 150 of average load duration curve | Offtake Flexibility Quantity (MCM/day) |
| | | | Day 300 of average load duration curve | |

Note 1 – 1 in 20 peak day demand and Day 13 assume all interruptible load is not supplied. Day 46, Day 150 and Day 300 assume all interruptible is supplied.