



# Grid Supply Point Boundary Flow Data

Technical Guide

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## Contents

1	Overview .....	1
2	Data Limitations .....	1
3	Data Format .....	1
3.1	GSP Circuits.....	2
3.2	GSP Current .....	2
3.3	GSP Voltage .....	2
3.4	GSP MW .....	2
3.5	GSP MVar.....	2

## 1 Overview

The Grid Supply Point (BSP) Boundary Flow data provides half-hourly average telemetry analogue data from all Electricity North West Ltd (ENWL) Grid Supply Point substations.

Grid Supply Points are defined as those substations where the ENWL network interfaces with the National Grid Electricity Transmission (NGET) network. For the purposes of this data set, substations which interface with networks owned by other Distribution Network Operators (DNOs) are excluded, regardless of the interface voltage.

Where the interface between ENWL and NGET is an infeed from a Super Grid Transformer (SGT) onto an ENWL circuit breaker which supplies an ENWL busbar, data is provided for each infeed circuit. Where a shared busbar exists (that is, there are outgoing circuits from the busbar serving networks owned and managed by other organisations), data is provided for each outgoing circuit.

The full range of current, power and voltage measurements is not available for all circuits, so where no data is available the data column is omitted.

## 2 Data Limitations

This data is provided ‘as-is’ from real-time data collected by ENWL and is not subject to any quality checks or data cleanse. The transducers used to collect this data are installed and maintained to provide real-time indication of power and current flow within the ENWL control system, and are not formally calibrated, and generally infer three phase measurement from measurement of a single phase only. In addition, equipment failure may result in missing or erroneous data within this data set.

Users of this data set should consider whether this data is of sufficient quality to support the intended application, and are encouraged to use formally published data sets, such as the Long-Term Development Statement (LTDS) available via the ENWL website if a quality assured data product is required.

## 3 Data Format

The Boundary Flow data is provided as a Microsoft Excel workbook with the following worksheets.

### 3.1 GSP Circuits

The GSP Circuits worksheet provides the following data for each Bulk Supply Point transformer:

- Structured Plant Number – This is the transformer unique identifier and is the reference used on other worksheets within the workbook
- Substation Number – The ENWL substation number within the which the transformer is situated
- Substation Name – The name of the substation within the which the transformer is situated
- Transformer Number – The local designation of the transformer
- Rating – The force cooled rating of the transformer expressed in MVA
- Easting & Northing – The Ordnance Survey grid co-ordinates (EPSG:27700) of the substation

### 3.2 GSP Current

The GSP current worksheet provides the average current for each circuit for each half-hourly period. All currents are expressed in Amps.

Raw current measurements are non-directional, but have been made directional based on the direction of the apparent power flow, where this measurement is available. A positive direction indicates flow NGET to ENWL.

### 3.3 GSP Voltage

The GSP voltage provides the average voltage for each circuit for each half-hourly period. All voltages are expressed in kilo Volts.

### 3.4 GSP MW

The GSP MW worksheet provides the average apparent power for each circuit for each half-hourly period, expressed in Megawatts.

Apparent power measures are directional and a positive direction indicates flow NGET to ENWL.

### 3.5 GSP MVA<sub>r</sub>

The GSP MVA<sub>r</sub> worksheet provides the average reactive power for each circuit for each half-hourly period, expressed in Mega Volt-Amps (reactive).

Apparent power measures are directional and a positive direction indicates flow NGET to ENWL.