

NERDA^{BETA}

NEAR REAL-TIME DATA ACCESS

DATA DEFINITIONS

nerda.opengrid.com



Scottish & Southern
Electricity Networks

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1 Introduction

The Near Real-time Data Access (NeRDA) Portal is making near real-time data available to our stakeholders and interested parties.

We're helping the transition to a smart, flexible system that connects large-scale energy generation right down to the solar panels and electric vehicles installed in homes, businesses and communities right across the country.

In line with our Open Networks approach, our Near Real-time Data Access (NeRDA) portal is live and making available power flow information from our EHV, HV, and LV networks, taking in data from a number of sources, including SCADA PowerOn, our installed low voltage monitoring equipment, load model forecasting tool, connectivity model, and our Long-Term Development Statement (LTDS).

Making near real-time data accessible from DNOs is facilitating an economic and efficient development and operation in the transition to a low carbon economy. NeRDA is a key enabler for the delivery of Net Zero - by opening network data, it is creating opportunities for the flexible markets, helping to identify the best locations to invest flexible resources, and connect faster.

You can access this information via our informative near real-time Dashboard and download portions of data or connect to our API and receive an ongoing stream of near real-time data.

This document provides a dictionary of terms and definitions relevant to the NeRDA Portal.

2 NeRDA Data Definitions

Name	Definition
GSP /BSP Name	The full GSP or BSP (SEPD only) name, e.g. COWLEY (GSP), BASINGSTOKE (BSP)
BSP SCADA Line Current Value	The Scada Reading Type on the BSP-Primary 33kV feeder. For the NeRDA dashboard, this is currently limited to Line Current for BSPs. Other measurements where available (voltage, apparent power, active power, reactive power) can be accessed via the API. These are supplied by SSEN PI.
BSP SCADA Reading Name	The name of the feeder reading from the BSP to the Primary, normally the 33kV feeder. 132kV feeders start with A, 33kV Feeders start with C. The Reading Name consists of the BSP Site Name, Primary Feeder Code and Analogue eg COWLEY LOCAL C6L5 AMPS.
BSP SCADA Reading Timestamp	The timestamp of the SCADA 33kV feeder readings. These readings are at 3 min intervals for LineCurrent and supplied by SSEN PI
HV Feeder ID	Primary Feeder code, the HV or 11kV feeder from primary to secondary. 11kV Feeders start with E. eg E1S0 for busbar sections, E1L5 for lines, E1T0 for transformers; E1K0 for capacitor banks.
HV Feeder Reading Timestamp	Reading timestamp on the HV (usually 11kV) feeder from the Primary to the secondary substation. Derived from PI data and for analogue information updated every 3 minutes.
HV Feeder Reading Type	The HV Feeder Reading Type, derived ultimately from the type of PI tag and reading. These can be any of the following: SwitchPosition, LineCurrent, LineToLineVoltage, ThreePhaseActivePower, ThreePhaseReactivePower. Switch Position is a boolean value where 0=Closed, 1=Open. Although only SwitchPosition and LineCurrent are displayed on the NeRDA Portal, full information is returned in the API.
HV Feeder Reading Units	The Reading units eg Amps (A) Volts (V), Var, W.
HV Feeder Reading Value	Reading value on the HV (usually 11kV) feeder from the Primary to the secondary substation. Derived from SSEN PI data.
Latitude	a degree/fraction of degree measure used to identify the site location
Load Forecast Load Value	The Baseline Forecast Load in MW for the substation, as supplied by the Load Model

Name	Definition
Load Model Data Scenario	The total DFES load + baseline load for a given scenario, used by the Distribution Load Model as supplied to the NeRDA datasets. The Four Load Model Data Scenarios in the Load Model are: BASELINE_PLUS_LCT_STEADY_PROGRESSION, BASELINE_PLUS_LCT_LEADING_THE_WAY, BASELINE_PLUS_LCT_SYSTEM_TRANSFORMATION, BASELINE_PLUS_LCT_CONSUMER_TRANSFORMATION
Load Model Reading Half Hour	The Half-Hour period of the Load Model projection which is averaged as a profile across the forecast year, up to 2050.
Load Model Year	Load Model Scenario year. The four DFES scenarios map from 2019 through to 2050, with different assumptions about growth, industrial and societal drivers etc around LCN takeup.
Longitude	a degree/fraction of degree measure used to identify the site location
LV Circuit ENEIDA Identifier	The ENEIDA specific LV circuit identifier, eg 3600T1, 3581T1.
LV Circuit Identifier	The SSEN identifier for the LV circuit consisting of Pri+HVf+TX+LVf NRN plus the phase and measurement: eg 4902001020003.A kVA. Currently sourced from ENEIDA, but going forward will be sourced from iHost.
LV Feeder Head Reading Timestamp	The reading timestamp for the particular LV Feeder Reading Type. Derived from LV monitoring data.
LV Feeder Head Reading Type	The LV Feeder Head Reading Type. These can be any of the following: SwitchPosition, LineCurrent, LineCurrentFrequency, LineCurrentPhaseAngle, LineCurrentTHD, LineToLineVoltage, PhaseVoltage, PhaseVoltageFrequency, PhaseVoltagePhaseAngle, PhaseVoltageTHD.
LV Feeder Head Reading Units	The reading units which can be A, deg, Hz, V, VA, Var, Varh, W, Wh.
LV Feeder Head Reading Value	The reading value for the particular LV Feeder Reading Type and Timestamp. Derived from LV monitoring data and averaged over the last reading period
Primary Name	The full primary substation name eg BERINSFIELD
Primary NRN	Either the 4-char or full 10 char Network Reference Number. The Network Reference Number is made up of 4 sections (12 Digits): Primary Circuit Number (4 Digits) HV Feeder Reference Number (3 Digits) Transformer Reference Number (3 Digits) LV Feeder Reference Number (2 Digits)

Name	Definition
Secondary Name	The full Secondary Substation name. For phase 1 of NeRDA, there is a full list of the secondary & NRN pulled from SSEN South Load Data.
Secondary NRN	The Network Reference Number for the secondary substation, eg 4610003070 - Primary NRN + HVf + TX
Secondary SS Apparent Power	kVA, calculated value averaged over the last reading period
Secondary SS Current	Amps, measured RMS value averaged over the last reading period
Secondary SS Voltage	V, measured RMS value averaged over the last reading period

3 NeRDA Contacts



NeRDA Portal:

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For general enquiries and API access please contact:

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NeRDA page on SSEN website:

ssen.co.uk/our-services/tools-and-maps/nerda-portal