NetworkRail Energy Link

Online Energy Management System

Energy-Link User Guide

April 2016

Contents

Introduction

This is a guide to using the NR Energy-Link Web Reporting System, which is designed to help you view NR utility supplies, monitor the consumption of electricity, gas and water at your premises and keep track of costs.
The system fulfils two main functions:

1. It provides information on Network Rail's utility supplies.
2. It provides a clear set of reports showing utility consumptions and costs.
3. It allows you to enter your own meter-readings.

Reports:

A variety of reporting options allow you to view consumption and cost data for all utilities in tabular and graphical form. The graphs show a monthly breakdown of figures and thus highlight seasonal trends in consumption.
Reports may be for a single supply, or may aggregate multiple supplies to give site-wide data. There is also the facility to compare this year's consumption with a previous year, to examine longer-term variations in usage.
The reporting feature is user friendly and provides reports on-demand using a standard Web browser.

Meter Readings:

It is an unfortunate fact that a large percentage of utility bills are still based on estimated meter readings. As such, they are potentially hugely inaccurate and give you no reliable information on your pattern of energy consumption (or whether your attempts at making savings have been successful!)
By taking your own meter-readings, you will be able to achieve a much better quality of information for yourself and your energy manager. Entering data is straightforward and each entry is validated by the system. Additionally, readings can be submitted as often as you wish, so whilst you may only be billed every quarter, there is nothing to stop you entering readings every week to build up a truly accurate record. Meter readings are particularly helpful on supplies where proportions are off-charged to TOCs or third parties, helping to recover costs more accurately.
In the past, manual systems such as meter-reading cards or faxes may have been used for this purpose. The Web Reporting System makes the process simpler and quicker by giving you on-line access to the database.

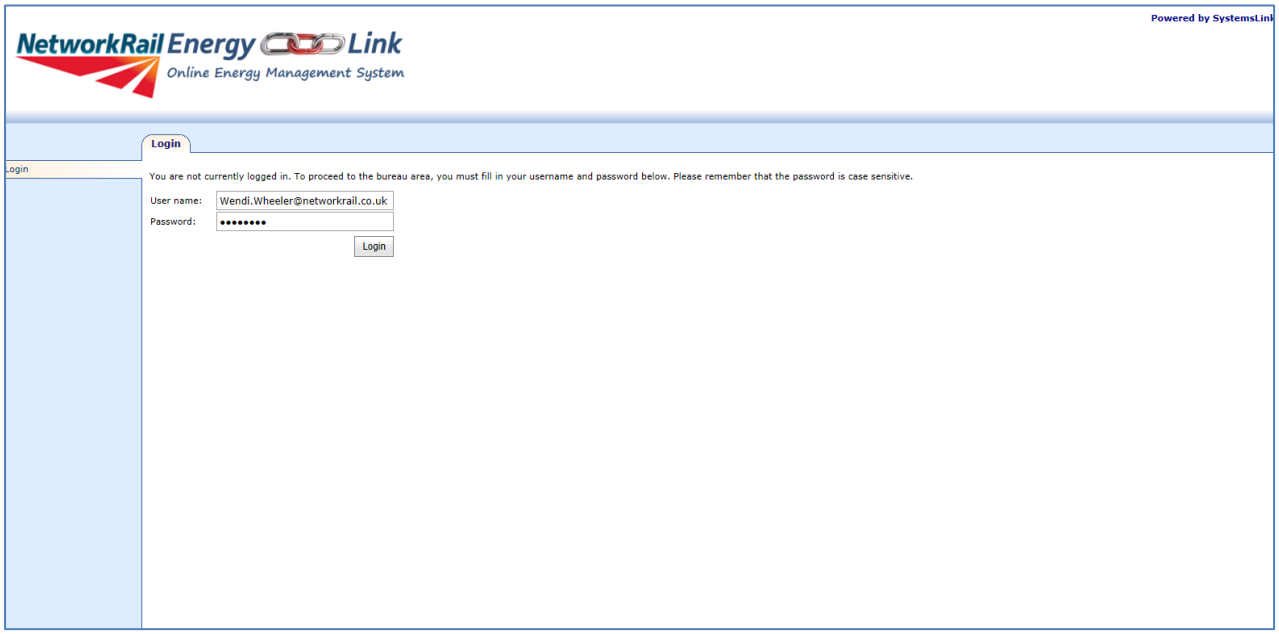
Dashboards:

In addition to the standard reporting functions, information dashboards may be configured by your system administrator to present multiple data display elements on a single screen. This provides the ability to bring together a number of key measures and comparisons with regard to utility consumptions and costs and thereby allow a quick evaluation of current performance from a visit to a single web page.

Login

The system may be accessed from an Internet-connected PC using any standard Web Browser, either via the Energy Management connect pages or access directly at https://nr.systems-link.com/default.aspx

The first screen you will see is as follows:



The system is secure and you will need to log in with:

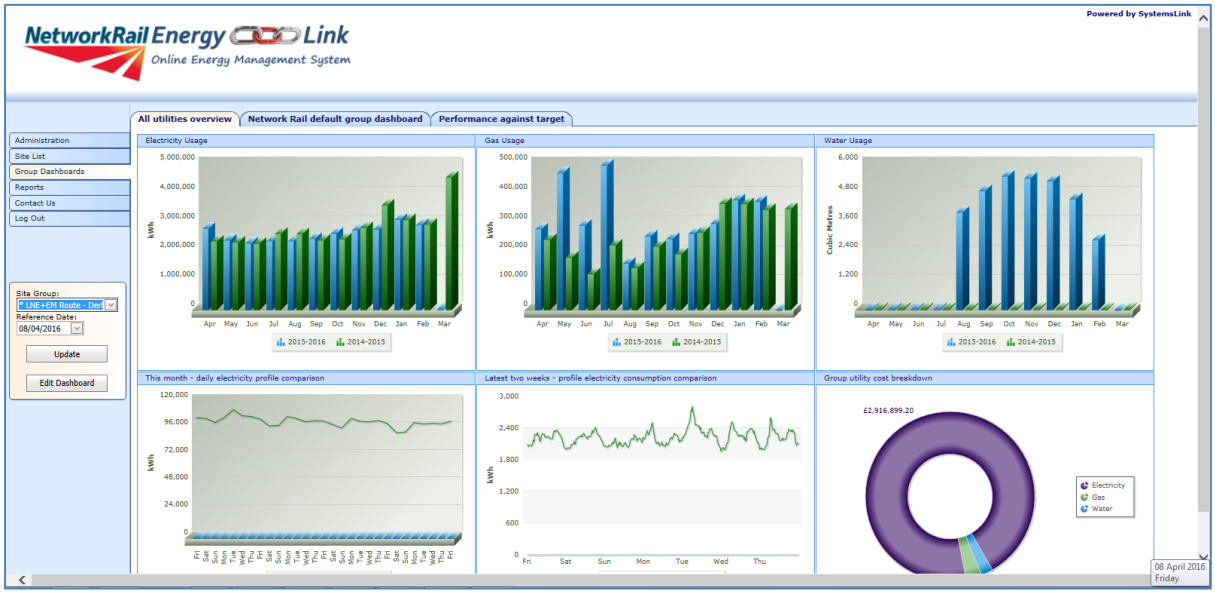
- a user name (commonly your e-mail address)
- a password (note that this is case sensitive)

These log-in credentials will be provided by your system administrator.

After logging-in, depending on how your system is set up, you will be directed to one of two screens. This will be either the Dashboards screen, Site List screen or Data Sets screen as described in the following sections.

Dashboards

After logging-in, the main menu is displayed on the left of your screen. If configured for your system, you will see "Dashboards" selected in a view similar to that below:



The Dashboards screen will have been set up by your administrator to show a number of different display elements. Together, these provide a single point of reference for the most relevant indicators of current performance for your site. Amongst the types of display element available are:

- A league table comparing usage or cost between sites.
- A graphic to show energy consumption in equivalent everyday terms.
- A gauge comparing actual performance with target for a chosen utility.
- A Display Energy Certificate (DEC).
- A message.
- A pie chart showing a breakdown of usage or cost by utility.
- A site description.
- A "Footprint" report showing a heat map style presentation of half-hourly data.
- A graph comparing actual performance with target.
- A year-on-year comparison graph.

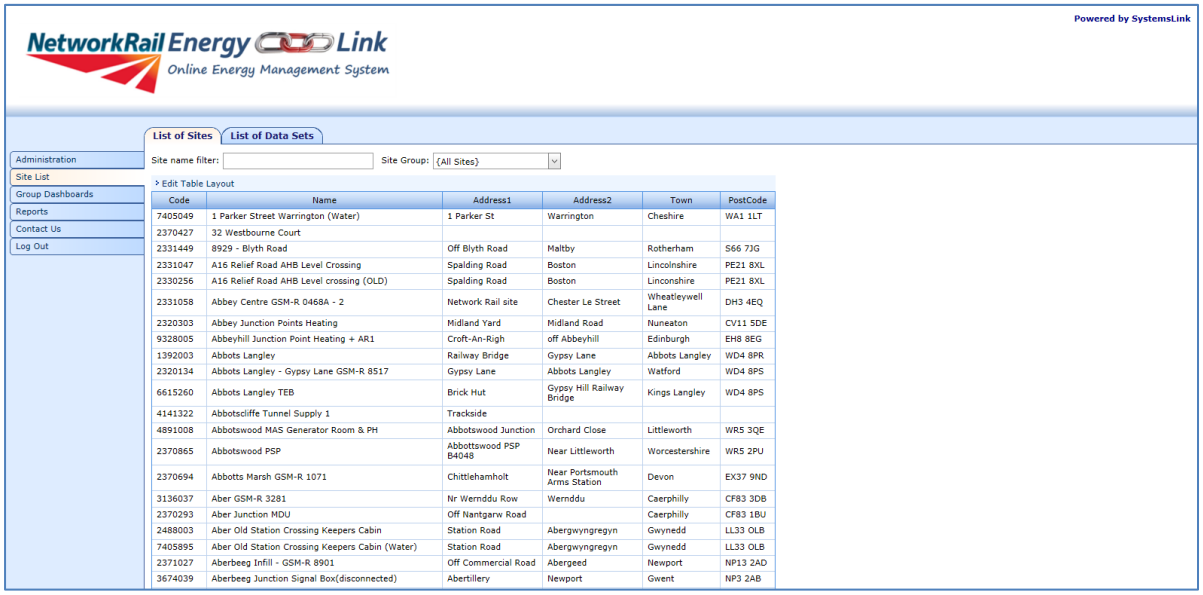
There are also widgets available that allow the user to click through and drill down on the data, these are:

- Two week profile comparison graph
- Four week profile comparison graph

Dashboards can be configured to show the elements that you need. Please contact the Energy Bureau to arrange your tailored dashboard.

Site List

After logging-in, the main menu is displayed on the left of your screen. You will see “Site List” at the top of the window, and selecting this will present a view similar to that below.



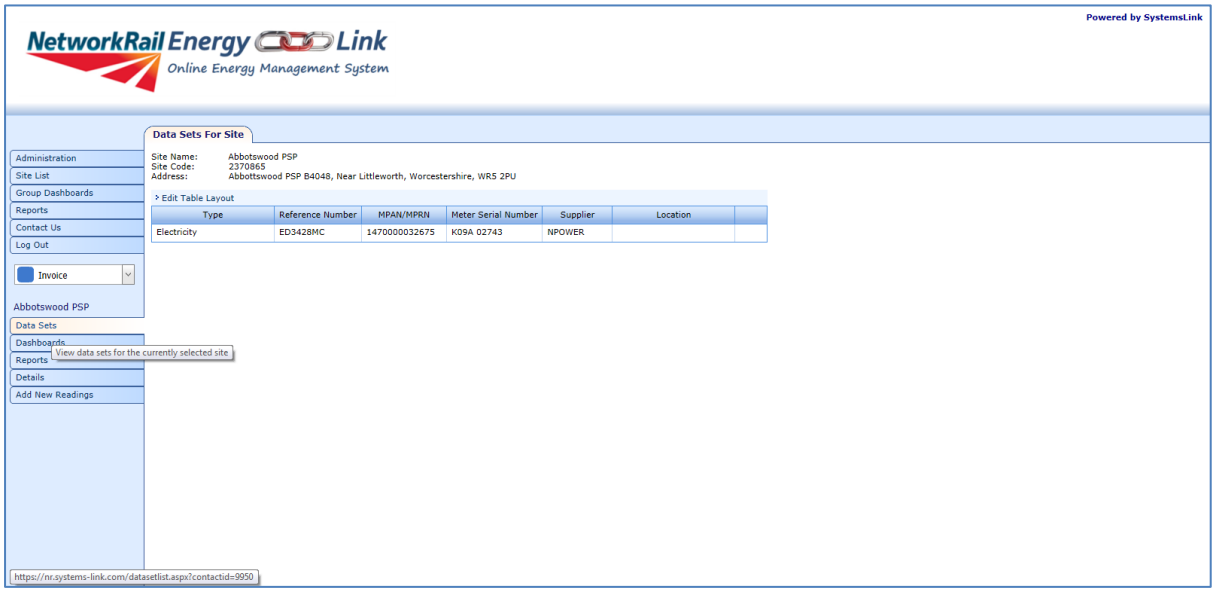
Code	Name	Address1	Address2	Town	PostCode
7405049	1 Parker Street Warrington (Water)	1 Parker St	Warrington	Cheshire	WA1 1LT
2370427	32 Westbourne Court				
2331449	8929 - Blyth Road	Off Blyth Road	Maltby	Rotherham	S66 7JG
2331047	A16 Relief Road AHB Level Crossing	Spalding Road	Boston	Lincolnshire	PE21 8XL
2330256	A16 Relief Road AHB Level crossing (OLD)	Spalding Road	Boston	Linconshire	PE21 8XL
2331058	Abbey Centre GSM-R 0468A - 2	Network Rail site	Chester Le Street	Wheatleywell Lane	DH3 4EQ
2320303	Abbey Junction Points Heating	Midland Yard	Midland Road	Nuneaton	CV11 5DE
9328005	Abbeyhill Junction Point Heating + AR1	Croft-An-Righ	off Abbeyhill	Edinburgh	EH8 8EG
1392003	Abbots Langley	Railway Bridge	Gypsy Lane	Abbots Langley	WD4 8PR
2320134	Abbots Langley - Gypsy Lane GSM-R 8517	Gypsy Lane	Abbots Langley	Watford	WD4 8PS
6615260	Abbots Langley TEB	Brick Hut	Gypsy Hill Railway Bridge	Kings Langley	WD4 8PS
4141322	Abbotscliffe Tunnel Supply 1	Trackside			
4891008	Abbotswood MAS Generator Room & PH	Abbotswood Junction	Orchard Close	Littleworth	WR5 3QE
2370865	Abbotswood PSP	Abbottswood PSP B4048	Near Littleworth	Worcestershire	WR5 2PU
2370694	Abbotts Marsh GSM-R 1071	Chittlehamholt	Near Portsmouth Arms Station	Devon	EX37 9ND
3136037	Aber GSM-R 3281	Nr Wernddu Row	Wernddu	Caerphilly	CF83 3DB
2370293	Aber Junction MDU	Off Nantgarw Road		Caerphilly	CF83 1BU
2488003	Aber Old Station Crossing Keepers Cabin	Station Road	Abergwyngregyn	Gwynedd	LL33 OLB
7405895	Aber Old Station Crossing Keepers Cabin (Water)	Station Road	Abergwyngregyn	Gwynedd	LL33 OLB
2371027	Aberbeeg Infill - GSM-R 8901	Off Commercial Road	Abergeed	Newport	NP13 2AD
3674039	Aberbeeg Junction Signal Box(disconnected)	Abertillery	Newport	Gwent	NP3 2AB

Click the site that you wish to view, or use the search or page forward > and page back < buttons to navigate to the site that you wish to view.

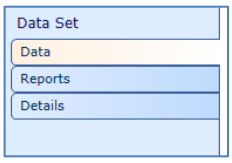
Data Sets

Each utility supply is held in its own data set.

On the main menu on the left of your screen you will see “Data Sets” shown once you have selected a site, in a view similar to that below.

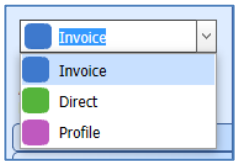


The page shows the “Data Sets” associated with the site.
Each row in the main table corresponds to a utility account or meter.
Clicking on one of the rows will link to another page showing more details and the list of reports available for the chosen Data Set.



Once a Data Set has been selected, additional menu items then become visible:
Data – this enables you to view the stored data for the chosen Data Set.

Reports - this shows the list of graphical reports available for the Data Set (see next section).
Details – shows the details stored for the Data Set such as who is the supplier, whether billing is monthly or quarterly, the meter serial number, and so on.



A drop-down selector higher up the page allows you to choose between the following data types (where available):

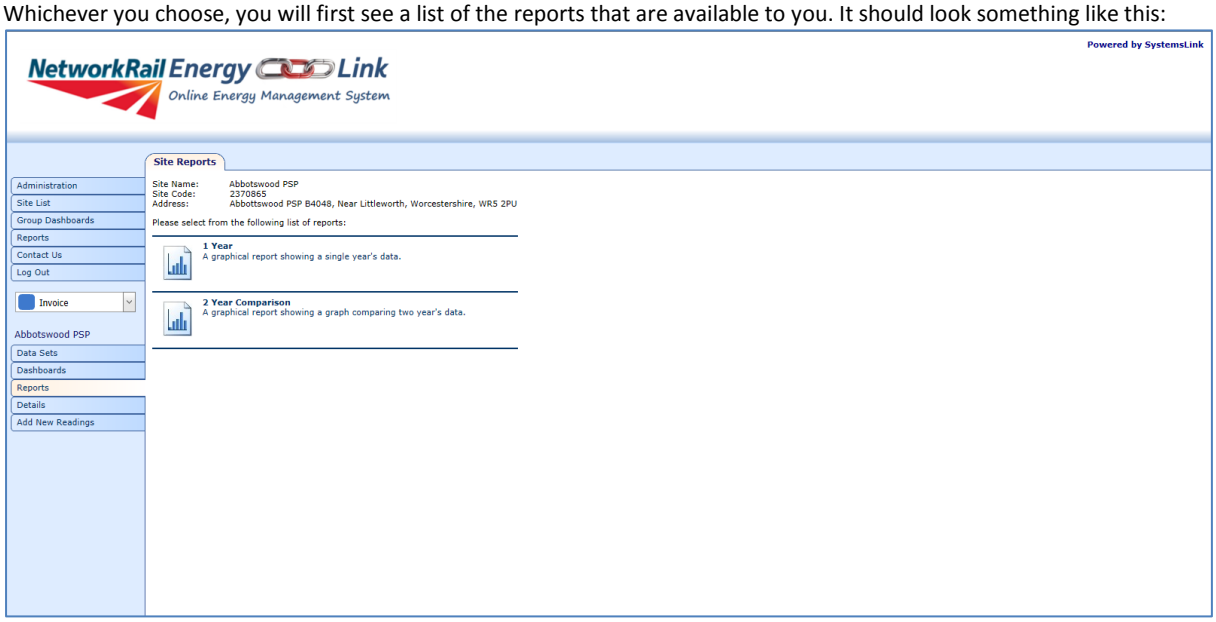
- Invoice – values taken from invoices from the utility supplier.
- Direct – values calculated from your own readings.
- Profile – half-hourly values from AMR or “smart” meters.

Reports

Report selection

Depending on your menu choice (as described above), graphical reports may be produced either for a selected single Data Set or for the whole site, in which case the consumptions from all Data Sets in the dataset table are aggregated.

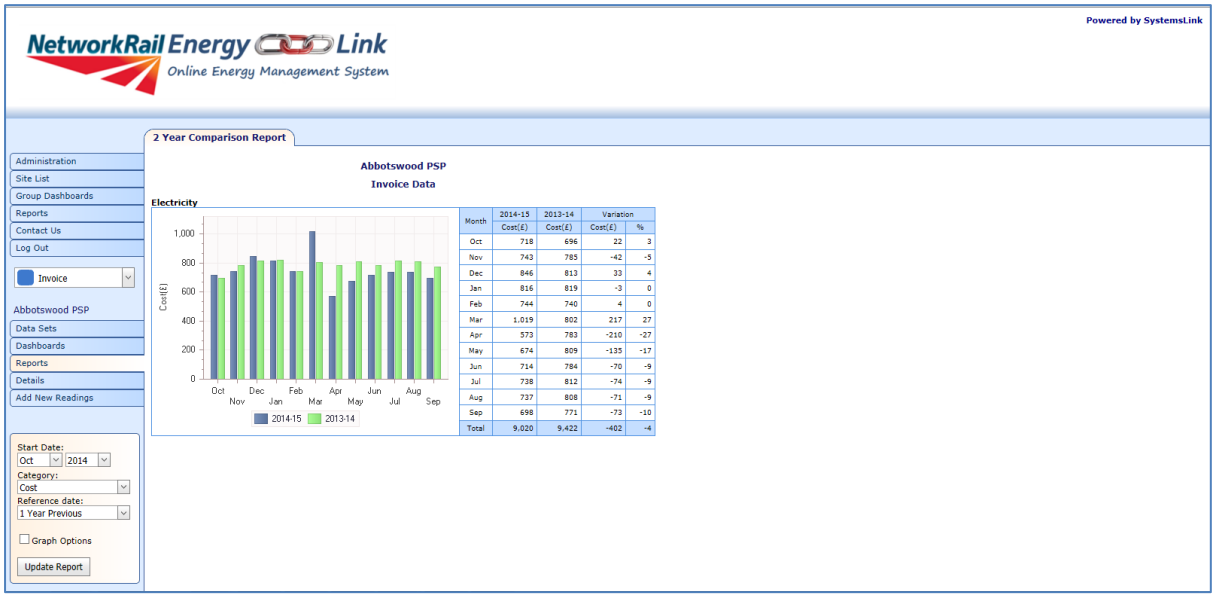
Whichever you choose, you will first see a list of the reports that are available to you. It should look something like this:



In this example, you can see that there are standard reports for 1 or 2 years' data. Additional reports output in Microsoft Excel may also be available.
From here you can select which report to view.

1 year & 2 year reports

The report screen will appear as shown below:



Month	2014-15 Cost(£)	2013-14 Cost(£)	Variation Cost(£)	Variation %
Oct	718	696	22	3
Nov	743	785	-42	-5
Dec	846	813	33	4
Jan	816	819	-3	0
Feb	744	740	4	0
Mar	1,019	802	217	27
Apr	573	783	-210	-27
May	674	809	-135	-17
Jun	714	784	-70	-9
Jul	738	812	-74	-9
Aug	737	808	-71	-9
Sep	698	771	-73	-10
Total	9,020	9,422	-402	-4

Excel reports

Note that if you choose an Excel report, you will be re-directed to another page. Here you will be prompted to enter any further information or choices that are needed before the report can be generated. Examples might be:

- The dates the report is to cover.
- Whether to base the report on invoice data or your own readings ("direct").
- Whether you wish to view or save the Excel file that will be generated.

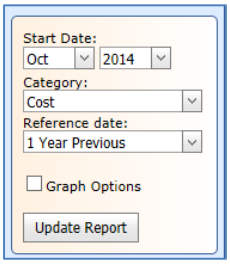
Multi Site Reports

Users can have reports that work on multi sites as well as single. Please contact the Energy Bureau to set up the reports that you need.

As with Data Set data, the highlighted selector higher up the page allows you to choose between the following data types (where available):

- Invoice – values taken from invoices from the utility supplier.
- Direct – values calculated from your own readings.
- Profile – half-hourly values from AMR or "smart" meters.

Further options are then available in the left-hand panel as follows:

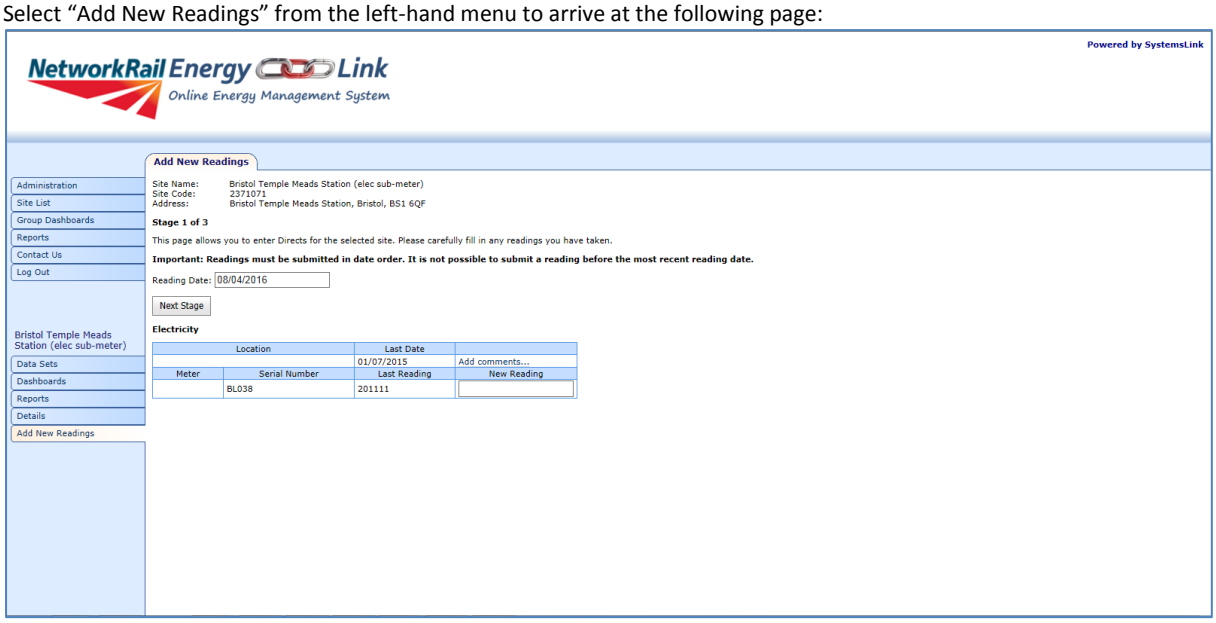


Start date - allows selection of the first month shown
Category – determines whether the graph shows usage or cost figures.
Reference date (2 Year Report only) – this allows you to compare your selected year with data from a previous year, up to 4 years back.
Graph options - ticking this box displays further options relating to the style of the graph:
Graph type – this allows you to choose bar, line or area formats.
Cumulative – shows the monthly data accumulating through the year
Note that after selecting any of the above options, you will need to click the "Update Report" button for them to take effect.

Entering Meter Readings

You can enter meter readings into the system if the record is enabled to do so. If you wish to record meter readings and the record is not enabled with this function, please contact the Energy Bureau who can enable this for you.

Select “Add New Readings” from the left-hand menu to arrive at the following page:



You must first enter the date on which the readings were taken in the “Reading Date” field shown here in the middle of the screen. You will then see a list of all the meters at your site. The page will show:

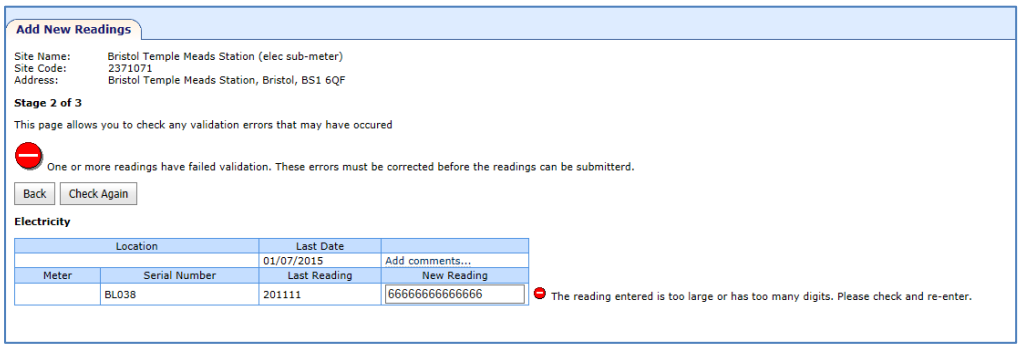
- the location of the meter
- the last date a reading was entered
- whether the meter records day or night units (for electricity)
- the meter’s serial number
- the last reading taken

You can then enter new readings through the “New Read” field for each individual data set and meter.

Clicking on the “Add comments…” link will open a new box under the meters which will allow you to record any notes or additional information relevant to the meter-reading.

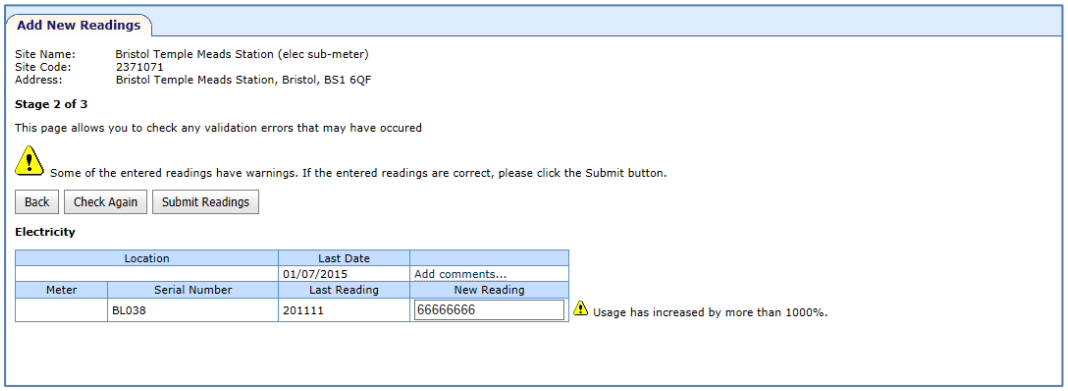
Once you have finished entering the readings and any comments, click the “Next Stage” button.

At this point the system will run a number of checks to validate the readings you have entered. If there is a problem, you may see a screen displaying a “No Entry” sign, similar to the one below:



In this example, the reading does not match expected results. At this point you may correct or add your entries and click the “Check Again” to re-run the validation. Please refer to the notes in the Appendix A for further notes on reading meters.

Sometimes the validation checks will generate warning messages as indicated by a yellow triangle:



These warnings, such as the ones above, are for information only and do not prevent you from entering the readings.

Having made any corrections necessary in light of the validation checks and any warnings, you should then click the “Submit Readings” button to save the readings in the database. The system will reply with a message to confirm that this has been successful.

Your readings will be further validated and checked by the Energy Bureau team before they are accepted into the live database.

Contacting the Administrator

If the “Contact Us” option appears in the main menu panel on the left, then clicking this allows a message to be forwarded to the Administrator in the Energy Bureau. This may be used where help is required.

Appendix A: Taking a meter reading

Electricity meters

Single rate digital meters

To read a single rate digital meter, write down the numbers shown from left to right. If the last figure is marked “0.1” or is in red, ignore it. Record only the whole number of units used.

Code 5 ‘half-hourly’ digital meters

(These are found in buildings with larger electricity supplies, which demand more than 100kW)

Remember that most ‘Code 5’ electricity meters suffer from an inconvenient design feature: they show, by default, the number of units used for the active rate at the time of reading, and not the total units. On this type of electronic multi-rate electricity meter, use the button provided to step through the available readout registers and take a reading for each of the rates. (Day/night charging will have 2 rates but, depending on your tariff, there may be more.)

Economy 7 meters

With the special Economy 7 meter there are 2 rows of figures. One is for the lower priced night-rate electricity in the top line - it is marked “LOW”. The other is for the day rate - it is marked “NORMAL”. When you read this meter, always record both rows of figures.

Dial or “clock” type meters

When reading a dial meter please note that dials next to each other go round in opposite directions. Ignoring any red dials, read the dials from left to right and note the following points:

Always write down the number the pointer has just passed - this is not necessarily the nearest number to the pointer. If the pointer is anywhere between, say, 4 and 5, write down 4.

If the pointer is directly over a figure, say 5, write down that figure and underline it: 5. For example the full meter reading might be 45928.

This reading now needs adjusting to account for small variations in the pointer positions. Look at each figure underlined. If the following figure is a 9, reduce the underlined figure by 1. So the correct meter reading of the dials shown is 44928 units.

Note - Before you read your dial meter, check the direction of the dials.

Gas meters

Digital meters

To read a digital type meter, use only the white figures. Ignore any numbers in red or surrounded by a red border. Ignore any numbers after a decimal point. There may be up to 7 white digits to read, and if the first digit(s) are zero(s) please note these too.

Dial or 'clock' type meters

Proceed as described for electricity dial meters above.