**How Network Rail buys utilities**

Network Rail has contracts in place for all utilities except for water in England and Wales. Water will be contracted in England during 2017 as the water market will only be de-regulated from 1st April 2017. There are currently no plans to de-regulate the water market in Wales.

The contracts are put in place for the whole of Network Rail to obtain economies of scale and reduce the number of contractual meetings. National contracts also allow the supplier to provide one summary bill, usually per calendar month, together with electronic back-up detail which allows costs to be allocated to Routes or Projects via Energy-Link.

The contracts cover:

[Traction Electricity](#_Traction_Electricity)

[Non-traction Electricity](#_Non-Traction_Electricity)

[Mains Gas](#_Mains_Gas)

[Water (Scotland)](#_Water_(Scotland))

[Water (other)](#_Water_(other))

[Metering](#_Metering)

**Traction Electricity**

The Traction Electricity contract was signed with EDF Energy in January 2013 and runs for 10 years from 1st October 2014 to 30th September 2024. The scope includes all imported electricity through traction supply points (around 120) and the export of surplus regenerated electricity. It is a flexible contract and the only element fixed at the outset was the management fee. All other cost elements are passed through by EDF Energy once the actual rates are known.

Total Consumption in 2016-17 is around 3,400,000,000 kWh (3,400GWh) and will cost around £300m.

Some of the “traction” electricity is used for non-traction purposes (Non-Traction from Traction NTfT): signalling on the West Coast route & in South East & Wessex Routes, Euston Station and Merseyside underground stations. It is good to use traction derived electricity because the supply is more secure but the offtakes **must** be metered.

Appendix A shows a breakdown of the various cost elements. The commodity or power station gate price now makes up less than half of the total cost. The price must be locked ahead of the month of delivery. Network Rail has passed responsibility for locking the price to the train operators (except for the NTfT portion). The commodity price can be locked up to the end of the contract.

The rate paid to EDF Energy is the same for each hour in any calendar month but will vary from month to month. The only other time variation in the rate is for the period between 16:00-19:00, Mon-Fri, Nov-Feb, when the Capacity Market and Transmission costs are charged. The majority of Distribution charges are fixed for the year or related to the agreed capacity.

New Traction connections or changes should be discussed with Alan Bullock in the central Energy Management Team.

**Non-Traction Electricity**

The Non-traction Electricity contract is with npower and runs from 1st April 2015 to 31st March 2020, with options to extend up to 31st March 2023. The scope includes all supplies to all operational sites and directly managed offices. It does not yet include most Commercial Property sites.

Total Consumption in 2016-17 is around 440,000,000 kWh (440 GWh) and will cost around £48m.

The portfolio is split into 2 portions: sites that are Half-Hourly (HH) metered (around 500 sites) and non half-hourly (NHH) metered (7,300 sites).

Rates for Half-hourly metered sites vary each quarter and for day (07:00-24:00) and night. Many other cost elements are passed through as for Traction including Transmission and Capacity (see appendix A). Distribution charges include Capacity charges and “peak” unit rates.

NHH rates are dependent on the metering classification for the site, i.e single rate, Day/Night, Evening Weekend or Evening Weekend Day/Night. With the installation of smart meters, the tariffs available may change to encourage energy reduction at certain times of day.

New Connection or supply change requirements should be discussed with the Route Utilities Specialists before following the Utilities Change Standard.

**Mains Gas**

The Mains Gas contract is also with npower and runs from 1st October 2016 to 30th September 2021, with options to extend up to 30th September 2024. The scope includes all supplies to all operational sites and directly managed offices. It does not yet include most Commercial Property sites, though the requirement is small.

Consumption is around 60,000,000 kWh (60 GWh) and costs around £1.5m though it is very dependent on winter temperatures.

Rates are relatively simple: A commodity rate (p/kWh), delivery rates that vary with location (p/kWh and p/day) and climate change levy (p/kWh).

New Connection or supply change requirements should be discussed with the Route Utilities Specialists before following the Utilities Change Standard.

**Water (Scotland)**

Water in Scotland was the first area to become fully de-regulated for all business supplies. NR signed a contract with Business Stream that ran from 1st March 2012 to 28th February 2017 but has been extended to 30th November 2017 to align with contracts being put in place for water in England.

**Water (other)**

The water market in England becomes fully de-regulated from 1st April 2017 and NR is in the process of putting in place contracts to cover England and Scotland.

The Welsh Assembly has not yet agreed to Welsh sites being included in the de-regulated market.

Water bills generally consist of four sets of charges: a metering charge (which varies depending upon the size of meter and pipework installed, a volumetric water charge, a volumetric sewerage charge and a fixed sewerage charge which can vary according to the size or value of the site.

**Metering**

The majority of Network Rail’s electricity metering service is undertaken by SMS under a contract that runs from 1st January 2016 to 31st December 2020 with options to extend to 31st December 2023. The scope includes meter provision and meter operation for all non-traction meters and non-managed stations submeters and data collection for all NHH meters and sub-meters (HH data collection is carried out by npower).

EDF EFS are contracted over the same period to provide Traction meters and meter operation services.

Gas metering is included within the npower gas contract and the introduction of automatic metering is being carried out as part of this contract.

Water metering will also be provided by the appointed water supplier(s) and it is intended to include automatic metering and water reduction services within the contract.

There are some other specialist contracts, for example: dc metering for conductor rail heating – PAD Technology Ltd.

Appendix A: Electricity Cost Breakdown

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost Element** | **Set By** | **Purpose** | **Non-Traction** | **Traction** |
| Total 17-18 Rate p/kWh |   |  | 12.577 | 9.798 |
| Commodity  |  TOCs | Market Pricing | 37.5% | 46.9% |
| Residual | EDF / NR | Additional cost of providing non baseload (24hrs const power) energy | 1.7% | 3.3% |
| Supplier Margin / Admin | EDF | Supplier's costs and profit | 0.6% | 0.4% |
| Balancing Services Use of System | National Grid | Cost of National Grid balancing the system in real time | 2.6% | 2.8% |
| Market Participation | Elexon | Cost of Elexon administering trades | 0.1% | 0.2% |
| Imbalance | EDF | EDF's view of the risk of NR not consuming when we forecast we will | 0.2% | 0.1% |
| Renewables Obligation | BEIS | Support for Renewables | 15.0% | 19.2% |
| Contracts For Differences CfDs | BEIS | Cost of Renewables Obligation replacement scheme | 3.0% | 3.2% |
| Capacity Mechanism Admin | Elexon | Cost of administering Capacity Market auctions | 0.1% | 0.2% |
| AAHEDC (Hydro Levy) | National Grid | Support for areas away from the main grid (i.e. Scottish islands) | 0.2% | 0.2% |
| FiT Levelisation | Renewable Users | Support for Renewables | 4.4% | 5.5% |
| Climate Change Levy | BEIS | Levy on Electricity & Gas | 4.5% | n/a |
| Carbon Reduction Commitment  | BEIS | Levy on larger consumers but Transport use exempt | 4.9% | n/a |
| Transmission | National Grid | Cost of Maintaining National Grid's network and, for some sites, cost of Distribution peak unit charges | 7.0% | 10.7% |
| Capacity Mechanism | Auction | Cost of ensuring capacity is available each winter | 1.3% | 1.6% |
| Distribution  | Distribution Co's | Cost of other fixed costs, such as maintenance of National Grid Connections, Distribution capacity costs and metering  | 16.9% | 5.6% |