

## RIIO-ED1 glossary of terms

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### A

#### Administrative burden

Things that business must do or other administrative costs that businesses sustain due to a requirement from regulation. This may include keeping records or responding to information requests.<sup>1</sup>

#### Allowed revenue

The amount of money that a network company can earn on its regulated business.

#### Arithmetic mean

A simple average. The sum of all observations divided by the number of observations.

#### Asset Replacement

An activity undertaken by the DNOs to remove existing assets and install a new asset. The driver for this replacement may be due to poor asset condition, obsolescence or environmental or safety liabilities.

The principal assets replaced as part of a replacement project are captured as primary assets. Where associated assets are also replaced to facilitate the primary asset replacement, these are counted as consequential assets

#### The Authority/Ofgem/GEMA

Ofgem is the Office of Gas and Electricity Markets, which supports the Gas and Electricity Markets Authority (GEMA), the body established by section 1 of the Utilities Act 2000 to regulate the gas and electricity markets in Great Britain.

#### Average time to connect incentive

A proposed new price control incentive for RIIO-ED1 that aims to improve the average overall time taken to connect customers to the distribution system.

### B

#### Benchmarking

The process used to compare a company's performance (e.g. its costs) to that of best practice or to average levels within the sector.

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<sup>1</sup> <http://www.berr.gov.uk/whatwedo/bre/policy/simplifying-existing-regulation/administrative-burdens/page44061.html>

## Better regulation and better regulation principles

Established principles of better regulation state that regulation should be transparent, accountable, proportionate, consistent, and targeted only at cases where action is required.

Ofgem has interpreted better regulation to mean only regulating where necessary whilst designing rules that support competition and protect the customer. As part of our better regulation work Ofgem develops an annual Simplification Plan to help reduce the burden of administration while ensuring consumer protection.<sup>2</sup>

## Black Start

The series of actions necessary to restore electricity supplies to customers following a total or widespread partial shutdown of the GB Transmission System. Black Start requires distribution substations to be re-energised and reconnected to each other in a controlled way to re-establish a fully interconnected system.

## Black Start Resilience

Refers to resilience of both the distribution network assets and the key telecommunications systems, essential to DNOs for the organisation and coordination of resources, to a prolonged loss of supply in order to implement restoration plans under Black Start conditions. The required level of resilience shall meet the recommendations of the Electricity Task Group sub-committee of the Energy Emergency Executive Committee (E3C).

## Bond

A type of debt instrument used by companies and governments to finance their activities. Issuers of bonds usually pay regular cash flow payments (coupons) to bond holders at a pre-specified interest rate and for a fixed period of time.

## Broad Measure of Customer Satisfaction (BMCS)

A composite incentive consisting of a customer satisfaction survey, a complaints metric and stakeholder engagement. It was introduced for DPCR5 and is designed to drive improvements in the quality of the overall customer experience by capturing and measuring customers' experiences of contact with their DNO across the range of services and activities the DNOs provide.

## Building blocks approach

Building block reviews focus on determining appropriate values for each company's own capital asset values, weighted average cost of capital (WACC), capital expenditures and operating expenditures for the upcoming price control period.

## Business Support Costs (BSCs)

The indirect operating costs required to support the overall business. For more information on what this includes, see the Regulatory Instructions and Guidance (RIGs) Glossary:

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<sup>2</sup> Further details can be found at the following link:  
<http://www.ofgem.gov.uk/About%20us/BetterReg/Pages/BetterReg.aspx>

[http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5\\_Glossary\\_of\\_Terms\\_clean\[1\].pdf](http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5_Glossary_of_Terms_clean[1].pdf)

BT 21st Century (BT21CN)

21CN refers to the roll out of BT's next generation communications network which replaces Public Switched Telephone Network (PSTN) with a Digital Internet Protocol (IP). Whilst effectively changing the communications protocol used on the existing network assets, it also accelerates the replacement of copper communications circuits with non-metallic optical fibre.

## C

### Call Centre

Responding and managing the main telephone lines for the business. Where reports or queries require further investigation by another division of the business these costs are not included except to the extent that a member of the Call Centre team responds after obtaining additional information.

### Capital Asset Pricing Model (CAPM)

A theoretical model that describes the relationship between risk and required return of financial securities.

The basic idea behind the CAPM is that investors require a return for the rate of interest, and a return for the level of risk in their investment.

### Capital expenditure (capex)

Expenditure on investment in long-lived assets. For more information on what this includes, see the RIGs Glossary:

[http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5\\_Glossary\\_of\\_Terms\\_clean\[1\].pdf](http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5_Glossary_of_Terms_clean[1].pdf)

### Capitalisation policy

The approach that the regulator follows in deciding the percentage of total expenditure added to the RAV (and thus remunerated over time) and the percentage of expenditure remunerated in the year it is incurred.

### Carbon footprint

Total amount of greenhouse gas emission caused directly and indirectly by a business or activity.

### Chief Executive Officer (CEO) and Other Corporate Functions

Combines the activities of:

- Non-executive and group directors labour and Board meeting costs
- Management charges from Affiliates of a general non-specific nature
- Corporate communications/Community Awareness
- Legal services
- Company secretarial services.

For more information on what this includes, see the RIGs Glossary:

[http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5\\_Glossary\\_of\\_Terms\\_clean\[1\].pdf](http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5_Glossary_of_Terms_clean[1].pdf)

#### CI- Customers interrupted per year

The number of customers interrupted per year (CI). This is the number of customers whose supplies have been interrupted per 100 customers per year over all incidents, where an interruption of supply lasts for three minutes or longer, excluding re-interruptions to the supply of customers previously interrupted during the same incident.

#### CI/CML Schemes

Any discretionary schemes primarily aimed at improving CI and/or CML performance.

#### Closely Associated Indirect Costs (CAIs)

The indirect operating costs that support the operational activities of the DNO. For more information on what this includes, see the RIGs Glossary:

[http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5\\_Glossary\\_of\\_Terms\\_clean\[1\].pdf](http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5_Glossary_of_Terms_clean[1].pdf)

#### CML- Duration of interruptions to supply per year

The duration of interruptions to supply per year (CML). This is the average customer minutes lost per customer per year, where an interruption of supply to customer(s) lasts for three minutes or longer.

#### The Competition Commission (CC)

An independent public body which conducts in depth inquiries into mergers, markets and aspects of regulation of the major regulated industries.

#### Competition Test

The Competition Test involves an assessment of whether there is effective competition in a relevant market segment. It is set out in Distribution Price Control 5 Final Proposals – Incentives and Obligations and referenced in CRC12.

#### Composite Scale Variable (CSV)

A method of combining a number of different cost drivers in to a single driver for regression analysis using fixed pre-determined weights.

#### Connection Boundary

The connection charging boundary describes the split of connection costs between the DNO and the connecting customer. The costs allocated to the connecting customer are recovered via a connection charge and the costs allocated to the DNO will be recovered from all network users via use of system charges.

#### Connection Quotation

The notice required to be given by an electricity distributor in accordance with section 16A(5) of the Electricity Act 1989.

## Connection Completion

The completion of electrical works to the point that, subject only to the fitting of an appropriate meter where necessary, energisation would be possible.

## Connections

Within the reporting for DPCR5, the term connection refers to the provision of exit points. All provisions of new exit points or upgrades of existing exit points should be referred to as connections within the annual reporting for connections.

## Consumer

In considering consumers in the regulatory framework we consider users of network services (for example generators, shippers) as well as domestic and business end consumers, and their representatives.

## Consumer Challenge Group

The consumer challenge group comprises of members appointed by Ofgem on the basis of their expertise in the interests of present and future consumers and energy sector knowledge. Their role in the price control review process is to provide Ofgem with advice on consumer priorities for the price control. To help achieve this the group seeks to identify the main questions that consumers have about the price control and what needs to be addressed in the various documents published by Ofgem in the price review process.

## Consumer First Panel

The Panel, set up by Ofgem, consists of 100 domestic customers, recruited from five locations across Great Britain. The Panel meets at least three times a year to discuss key issues related to energy. It was first established in July 2008.

## Contestable Activities

Connections activities that can be carried out by a non-affiliated third party with relevant accreditation.

## Control Centre

Operational management and control of the network, outage planning and management. Relates to both the short term and long term outage planning and management that is carried within the Control Centre, at all voltage levels, prior to the undertaking of planned incidents.

## Cost of capital

This is the minimum acceptable rate of return on capital investment. It includes both the cost of debt to a firm, and the cost of equity.

## Cost of debt

The effective interest rate that a company pays on its current debt. Ofgem calculates the cost of debt on a pre-tax basis.

### Cost of equity

The rate of return on investment that is required by a company's shareholders. The return consists both of dividend and capital gains (e.g. increases in the share price). Ofgem calculates the cost of equity on a post-tax basis.

### Credit rating

An evaluation of a potential borrower's ability to repay debt. Credit ratings are calculated from financial history and current assets and liabilities. There are three major credit rating agencies (Standard & Poor's, Fitch and Moody's) who use broadly similar credit rating scales, with D being the lowest rating<sup>3</sup> (highest risk) and AAA being the highest rating (negligible risk). The companies regulated by Ofgem typically have a credit rating of BBB, BBB+, A- or A.

### Critical National Infrastructure (CNI)

Critical National Infrastructure (CNI) refers to sites designated as CNI by DECC.

### Customer Contributions

Revenue recovered from connecting customers via connection charges.

## D

### De minimis

Any business conducted or carried on by the licensee, or by an Affiliate or a Related Undertaking of the licensee in which the licensee holds shares or other investments, other than:

- the Distribution Business
- any other business or activity to which the Authority has given its consent under paragraph 4 of standard condition 29 (Restriction of activity and financial ring-fencing of the Distribution Business).

### Dead-band

In the context of the tax trigger, the dead-band is a fixed percentage of base demand revenue outside of which, if positive, licensees will receive additional revenues, or, if negative, incur a clawback of base demand revenues that were set at the price control, arising from the activation of the tax trigger and the charge restriction conditions.

### Demand connection

A new or modified connection that enables the premise to receive a supply of electricity from the electricity distribution system.

### Demand side management (DSM)

Demand side management (or load management) is any mechanism (both social and mechanical) that allows a customer's demand to be intelligently managed in response to events on the power system. Such events would include lack of network capacity or insufficient generation.

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<sup>3</sup> The lowest credit rating on Moody's scale is C.

Department of Energy and Climate Change (DECC)

Depreciation

Depreciation is a measure of the consumption, use or wearing out of an asset over the period of its economic life.

Direct Activities

Those activities which involve physical contact with system assets. For more information on what this includes, see the RIGs Glossary:

[http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5\\_Glossary\\_of\\_Terms\\_clean\[1\].pdf](http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/DPCR5_Glossary_of_Terms_clean[1].pdf)

Direct Expenditure

Expenditure incurred undertaking Direct Activities.

Design Life

The period over which an asset is designed to last.

Dismantlement

Dismantlement is the activity of de-energising, disconnecting and removing (where appropriate) network assets where the cost of dismantlement is not chargeable to a third party and no new assets are to be installed.

Distributed Generation (DG)

Any generation which is connected to the local distribution network, as well as combined heat and power schemes of any scale. The electricity generated by such schemes is typically used in the local system rather than being transported across the UK.

Means an installation comprising any plant or apparatus for the production of electricity that is directly connected to the licensee's Distribution System or is connected to that system through one or more electricity networks (other than an onshore Transmission System) that is or are directly connected to it.

Distributed Generation (DG) Forum

A series of regional events held by Ofgem in 2011 and 2012 to discuss explore the experience of connecting distribution generation to the distribution network.

Distributed Generation (DG) Information Strategy

A strategy set out by the distribution network operator and approved by the Authority that outlines how the distribution network operator intends to ensure that all existing and potential DG connection customers of its distribution system are able to receive an adequate level of information and a satisfaction standard of service.

Distributed Generation (DG) Connections Guide

A common set of documents produced by the DNOs and approved by the Authority that provides guidance on:

- The details of the statutory and regulatory framework (including health and safety considerations) that apply to DG connections
- The likely costs, charges, and timescales involved in the application process.
- The details of the arrangements and opportunities available for competitive activity in the provision or procurement of a connection.
- Engineering and other technical matters relevant to the commissioning, energisation, and maintenance of such connections.

#### Distribution billing (DUoS)

For the purposes of the IT and Telecoms Systems Overview worksheet of the Cost and Revenue RIGs, are IT systems that assist with DUoS billing.

#### Distribution Network Operators (DNOs)

Holders of electricity distribution licences. Licences are granted for specified geographical areas in Great Britain. Currently there are 14 DNOs owned by six different groups.

#### Distribution Price Control Review 3 (DPCR3)

The price control review for the electricity distribution network operators covering the period from 1 April 2000 to 31 March 2005.

#### Distribution Price Control Review 4 (DPCR4)

The price control review for the electricity distribution network operators covering the period from 1 April 2005 to 31 March 2010.

#### Distribution Price Control Review 5 (DPCR5)

The price control review for the electricity distribution network operators covering the period from 1 April 2010 to 31 March 2015.

#### Distribution network

The distribution system is a network of wires, transporting electricity from the transmission system or distribution connected generation to domestic, commercial and industrial electricity consumers.

The electricity distribution network includes all parts of the network from 132kV down to 230V in England and Wales. In Scotland 132kV is considered to be a part of transmission rather than distribution.

#### Diversions (conversion of wayleaves to easement)

Costs involved in retaining assets by way of the purchase of land or easements and the cancellation of terminable agreements, for example in response to injurious affection claims.

#### Diversions (non-fully rechargeable)

Diversions activity that is not fully recharged to any third party or agent.

#### Diversions due to wayleave terminations

The raising or rerouting of a circuit and/or the relocation of plant following the termination of a wayleave or lease.



## Diversions for Highways

The raising or rerouting of a circuit or repositioning of plant associated with new roads or streetworks. Such costs represent the DNO proportion of the costs. The proportion that is charged to the customer is reported under ES2.

## E

### Early Retirement Deficiency Contributions (ERDC)

Cost of providing enhanced pension benefits granted under severance arrangements which have not been fully matched by increased contributions.

### Earthing upgrades

Where earthing, at a substation site with a primary voltage greater than HV, has been upgraded by the installation of additional earth electrodes to mitigate against a high earth potential rise (EPR) or step and touch potentials in excess of tolerable limits. This excludes sites where earthing has been replaced due to fault or theft.

### Easements

An entitlement to retain assets in a location for a determined period of time or in perpetuity without risk of interference from the owner.

### Economic Life

The period over which an asset performs a useful function.

### EHV (Extra High Voltage)

Voltages over 20kV up to, but not including, 132kV.

### EHV end connection involving only EHV work

A demand connection at EHV level where the only voltage of the assets involved in providing such connection, and any associated works, is EHV.

### Electricity Distribution Price Control Review 1 (RIIO-ED1)

The price control review to be applied to the electricity distribution network operators, following DPCR5. This price control will run from 1 April 2015 to 31 March 2023.

### Energisation

The insertion of a fuse or operation of a switch that will allow an electrical current to flow from an electricity distributor's distribution system to the customer's installation, or from the customer's installation to that distribution system.

### Energy Ombudsman/Ombudsman Services (EO)

Ombudsman Services provides an independent dispute resolution service for the communications, energy, property and copyright licensing sectors.

### Engineering Management and Clerical Support

The office-based activities of engineering and clerical support staff (i.e. depot clerical staff, managers, work planners, etc) managing or assisting employees undertaking direct activities and wayleave administration.

### Equity beta

The equity beta measures the covariance of the returns on a stock with the market return. The weaker this co-variance, the greater the contribution that the stock could make to reducing the exposure to systematic risk, and hence the lower the return that investors would require on that stock.

### Equity risk premium

A measure of the expected return, on top of the risk-free rate, that an investor would expect for a portfolio of risk-bearing assets. This captures the non-diversifiable risk that is inherent to the market. Sometimes also referred to as the 'market risk premium'.

### Excluded Market Segment

Any of the excluded market segments that are described in or determined in accordance with Appendix 1 of Charge Restriction Condition 12 (CRC 12). In DPCR5 Final Proposals Ofgem considered that competition was not viable in these market segments at that time or in the foreseeable future.

## F

### Fault

Any incident arising on the licensee's distribution system, where statutory notification has not been given to all customers affected at least 48 hours before the commencement of the earliest interruption (or such notice period of less than 48 hours where this has been agreed with the customer(s) involved).

### Fault Level Reinforcement

Work carried out on the existing network where the prime objective is to alleviate fault level issues associated with switchgear or other equipment.

### Fault Rate

A Fault Rate is the incidence per unit of unplanned incidents for a specific category of distribution assets.

Fault Rates form part of the DPCR5 Network Output Measures.

### Finance and Regulation

Performing the statutory, regulatory and internal management cost and performance reporting requirements, and customary financial and regulatory compliance activities for the DNO.

### Financeability

Financial models are used to determine whether the regulated energy network is capable of financing its necessary activities and earning a return on its regulated asset value

(RAV) under the proposed price control. This financeability is assessed using a range of different financial ratios.

### Financial structure

The way in which a company finances its assets, for example through short-term borrowings, long-term debt and shareholder equity.

### Fuel poverty

A fuel poor household is defined as one that needs to spend 10% or more of their household income on all fuel use in order to maintain a satisfactory heating regime. DECC's latest fuel Fuel Poverty review (Hills Fuel Poverty Review) recommends that any household that requires fuel costs above the median level and, if they were to spend that, are left below the official poverty line, should be defined as fuel poor.

## G

### Gas and Electricity Markets Authority (GEMA)

(See the Authority/Ofgem)

### Gearing

A ratio measuring the extent to which a company is financed through borrowing. Ofgem calculates gearing as the percentage of net debt relative to the Regulatory Asset Value (RAV).

### General Reinforcement

Work carried out on the network in order to enable new load growth (both demand and generation) which is not attributable to specific customers.

#### General reinforcement (EHV & 132kV N-1)

Work carried out on the network required to maintain or restore compliance with ER P2/6 or avert future non-compliance for first circuit outages.

#### General reinforcement (EHV & 132kV N-2)

Work carried out on the network required to maintain or restore compliance with ER P2/6 or avert future non-compliance for second circuit outages (a fault outage following an arranged outage).

#### General reinforcement (EHV & 132kV Other)

Work carried out on the network which falls outside of General Reinforcement (EHV and 132kV N-1) and General Reinforcement (EHV and 132kV N-2) such as:

- Reinforcement to correct potential voltage non-compliance
- Reinforcement to correct issues at a lower voltage where it is the most efficient and economic solution.

It excludes work associated with High Impact, Low Probability (HILP) expenditure.

### Generation connection

A new or modified connection that enables the electricity distribution system to receive a supply of electricity from the premises.

### Geometric Mean

A measure of the average value of a set of numbers, sometimes viewed as a better measure of the true average than the arithmetic mean. It is calculated as the  $n$ th root (where  $n$  is the number of observations) of the product of all observations.

### Gigawatt Hour (GWh)

Equal to one million Kilowatt Hours.

### Greenhouse gas (GHG)

A collection of gases which absorb infrared radiation and trap its heat in the atmosphere.

### Guaranteed Standards of Performance

A set of service levels that must be met by each distribution company. These standards have been set to guarantee a level of performance that is reasonable to expect companies to deliver in all cases.

If the distribution company fails to meet the level of performance required, it must make a payment to the customer subject to certain conditions.

There are two sets of Guaranteed Standards of Performance, one for connections and one for reliability.

Payments under the guaranteed standards compensate for the inconvenience caused. They are not designed to compensate customers for subsequent financial loss.

## H

### Health Index (HI)

The Health Index (HI) is a framework for collating information on the health (or condition) of Distribution Assets and for tracking changes in their condition over time. The HI will be used to inform an assessment of the efficacy of the DNOs' asset management decisions over the price control period. Under the HI framework, each relevant asset is assigned a ranking by the DNO based on the DNO's assessment of its overall health or condition, and for the forecast period based on the DNO's views about future degradation, the options for Intervention and their impacts.

Health index arrangements were introduced as a part of DPCR5. Also see Network Output Measures.

### The Health and Safety Executive (HSE)

A public body responsible for regulating health and safety in Great Britain with the primary function to secure the health, safety and welfare of people at work and to protect others from risks to health and safety from work activity.

### Health and Safety and Operational Training

Health and Safety is the activity of promoting and maintaining health and safety of employees, contractors, customers and the public.

#### High Impact Low Probability (HILP)

These are extreme events that could result in the prolonged loss of supply to localities that have a high gross [economic] value added (GVA). HILP activity relates to increasing the security of supply, to localities that have a high GVA, to levels that exceeds P2/6 recommended levels.

#### High Value Projects (HVPs)

Schemes specified and agreed with individual DNOs to be undertaken during the DPCR5 period as laid out by Ofgem in the DPCR5 Final Proposals document.

#### HV (High Voltage)

Voltages over 1kV up to, but not including, 22kV.

#### HV end connections involving EHV work

A demand connection at HV level where the highest voltage of the assets involved in providing such connection, and any associated works, is extra high voltage.

#### HV end connections involving only HV work

A demand connection at HV level where the only voltage of the assets involved in providing such connection, and any associated works, is high voltage.

#### HV network

The DNO network that operates at all voltages above 1kV up to and including 20kV.

#### HV or EHV end connections involving 132kV work

A demand connection provided at either HV or EHV, where the highest voltage of the assets involved in providing such connection, and any associated works, is 132kV.

#### Human Resources and Non-Operational Training

The personnel management of all staff, and the provision of non-engineering training to office-based staff.

## I

#### IDNO (Independent Distribution Network Operator)

Any Electricity Distributor in whose Electricity Distribution Licence the requirements of Section B of the standard conditions of that licence have no effect (whether in whole or in part).

#### Incentive rate (efficiency)

The percentage of underspends/overspends against expenditure allowed at the price control review that is kept by the company responsible. The remaining savings/losses are passed through to consumers.

#### Independent Connection Providers (ICPs)

An independent connections provider not affiliated to a distribution network operator.

#### Indexation

The adjustment of an economic variable so that the variable rises or falls in accordance with the rate of inflation.

#### Incident

An incident is defined as any occurrence on the DNO's Distribution System or other connected distributed generation, transmission or Distribution System, which:

- results in an interruption of supply to customer(s) for three minutes or longer, or
- prevents a circuit or item of equipment from carrying normal load current or being able to withstand "through fault current" for three minutes or longer.

#### Indirect Activities

Those activities which do not involve physical contact with system assets. For more information on what this includes, see the RIGs Glossary:

[http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/DPCR5\\_Glossary\\_of\\_Terms\\_clean\[1\].pdf](http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/DPCR5_Glossary_of_Terms_clean[1].pdf)

#### Indirect Costs

The costs incurred undertaking Indirect Activities.

#### Inflation index

This is a measure of the changes in given price levels over time. A common example is the Retail Prices Index (RPI), which measures the aggregate change in consumer prices over time.

#### Inspections and Maintenance

Is the overall activity that encompasses Inspections, Shrouding of LV overhead line conductors and Repairs & Maintenance.

This excludes site surveys in relation to areas at risk of flooding.

#### Interconnector

Equipment used to link electricity systems, in particular between two Member States.

#### Interruption

An interruption is defined as the loss of supply of electricity to one or more customers due to an incident but excluding voltage quality and frequency abnormalities, such as dips, spikes or harmonics.

#### IT and Telecoms (IT&T)

The purchase, development, installation, and maintenance of non-operational computer and telecommunications systems and applications.

## K

### Key Performance Indicator (KPI)

A set of benchmarks to be met by DNOs; they are not backed up with any specific licence conditions or financial incentives.

### Kilowatt Hours (KWh)

A unit of energy equal to the work done by a power of 1000 watts operating for one hour.

## L

### Large User Group (LUG)

A key forum for engaging with business customer representatives. The LUG is open to large sized users of energy, for example metal manufacturers such as Corus.

### Legal and Safety

Investment or intervention where the prime driver is to meet safety requirements and to protect staff and the public. This does not include assets replaced because of condition assessment or to meet ESQCR regulations 17 and 18.

### Licence conditions (obligations)

An obligation placed on the network companies to meet certain standards of performance. The Authority (GEMA) has the power to take appropriate enforcement action in the case of a failure to meet these obligations.

### Load Index (LI)

The Load Index (LI) is a framework for collating information on the utilisation of individual substations or groups of interconnected substations and for tracking changes in their utilisation over time.

The LI will be used to inform an assessment of the efficacy of the DNOs' general reinforcement decisions over the price control period. Under the LI framework, each Demand Group is assigned a ranking based on the loading and firm capacity at the site, and for the forecast period based on the DNO's views about future load growth, the options for Intervention and their impacts.

The Load Index was introduced as a part of DPCR5. Also see Network Output Measures

### Load Related Capex

The installation of new assets to accommodate changes in the level or pattern of electricity or gas supply and demand.

### Load Related Expenditure (LRE)

LRE refers to expenditure relating to the following activities:

- Connections
- Diversions and Wayleaves/Easements
- General Reinforcement
- Fault Level Reinforcement
- Relevant High Value Projects (HVPs).

### Logging up

A type of uncertainty mechanisms, logging up is a provision that a company will be compensated for all, or part, of its actual expenditure on a particular activity or area, through the revenue allowance set at the next price control review.

### Long Term Development Statement

A document that sets out the use and likely development of the distribution network and the distribution network operator's plans for modifying the distribution system for the following two years. The document should also cover the parts of the distribution system that are likely to reach capacity during the next five years, the distribution network operator's plans to reduce any shortcomings in operation/capacity and (where applicable) how actual developments have compared to the distribution network operator's plans under the previous statements. All distribution network operators must produce and maintain a LTDS.

### Losses

Is defined in CRC7 as the difference between units entering and units exiting the DNO network through different connection points.

### Low carbon economy

An economy which has a minimal output of greenhouse gas emissions.

### Low Carbon Networks Fund (LCN Fund)

A mechanism introduced under the fifth distribution price control review to encourage the DNOs to use the forthcoming price control period to prepare for the role they will have to play as GB moves to a low carbon economy. The fund will see up to £500m made available for DNOs and partners to innovate and trial new technologies, commercial arrangements and ways of operating their networks.

### Lower Quartile (LQ) Cost Benchmarking

For the purposes of this document LQ cost benchmarking refers to the approach of setting the benchmark at the 75<sup>th</sup> percentile (ie the highest) of DNOs' costs. This approach has typically been proposed for areas of expenditure where there is a high degree of variability across different DNOs' expenditure.

*See also Upper Quartile Cost Benchmarking*

### LV (Low Voltage)

This refers to voltages up to, but not including, 1kV.

### LV end connections involving EHV work



A demand connection provided at LV where the highest voltage of the assets involved in providing such connection, and any associated works, is EHV.

#### LV end connections involving HV work

A demand connection provided at LV where the highest voltage of the assets involved in providing such connection, and any associated works, is HV.

## M

### Market-to-Asset Ratio (MAR)

The ratio between a company's market value and its Regulatory Asset Value (RAV). This can be estimated from transactions (eg sale of a network) or, for companies listed in the stock market, from market capitalisation data. An MAR value greater than one might indicate that investors value a company above its RAV.

### Metered Connection

A connection that has a meter to measure consumption of electricity

### Modern Equivalent Asset (MEA)

This is the current replacement value of an asset.

## N

### National Grid Electricity Transmission (NGET)

The electricity transmission licensee in England & Wales.

### National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS)

As referred to in the electricity Transmission Licence Standard Conditions C17 and D3, this is the standard in accordance with which the electricity transmission licensees shall plan, develop and operate the transmission system.

### Net Present Value (NPV)

NPV is the discounted sum of future cash flows, whether positive or negative, minus any initial investment.

### Network charges

These are charges set for the use of network services.

### Network Design and Engineering

All processes and tasks involved in the:

- Strategic planning of the distribution network at all voltages; and

- Detailed engineering design of new connections, extensions and changes to the distribution network at all voltages.

### Network Investment

Includes all costs associated with the following activities:

- Metered demand connections (Use of System funded)
- Core Network Investment
- Non-Core (ex-ante)
- Non-Core (reopener/logging up)
- Standalone funding (RAV)
- Standalone funding (not RAV)
- High Value Projects (HVPs).

### Network Operating Costs (NOCs)

Collectively includes the activities of:

- Trouble Call
- Atypicals – Severe Weather one-in-twenty Events
- Inspections and Maintenance
- Tree Cutting
- NOCs Other

### Network Output Measures

The Network Output Measures were introduced in DPCR5 and consisted of the Health Index, Load Index and Fault Rates. This framework ties the DNOs in to the delivery of specified network improvements by linking activities to allowed revenues. The arrangements are comparable to RIIO Secondary Deliverables.

### Network Policy

The development and review of environmental, technical and engineering policies, including all research and development apart from any defined as IFI.

It includes evaluating the impact of changes in relevant legislation; and development, regular review and updating of engineering policies.

### Network users

Companies along the gas and electricity supply chain (i.e. producers/generators, transmission and distribution networks, and energy suppliers).

### Non-contestable activities

Connection activities that cannot be carried out by a non-affiliated third party with relevant accreditation.

### Non-Load Related Capex [Electricity]

The replacement or refurbishment of assets which are either at the end of their useful life due to their age or condition, or need to be replaced on safety or environmental grounds.

### Non Load Related Expenditure (NLRE)

The installation of new assets and the planned installation of replacement assets for reasons other than load-related reasons.

#### Non Quality of Service Occurrences

Any occurrence logged on the enquiry service operated by the licensee under standard condition 8 (Safety and Security of Supplies Enquiry Service) which is not an incident.

#### Non-Operational Capex

Expenditure on new and replacement assets which are not system assets.

## O

#### Operating Expenditure (Opex)

The costs of the day to day operation of the network such as staff costs, repairs and maintenance expenditures, and overhead.

#### Operational Information Technology and Telecoms (IT&T)

IT equipment which is used exclusively in the real time management of network assets, but which does not form part of those network assets.

#### Operational training

Includes the activities of:

- Classroom training and
- On the job training
- Trainer and course material costs (classroom training)
- Training centre building & grounds and training admin
- Recruitment - operational training

For the following purposes

- Training Workforce renewal new recruit
- Operational upskilling.
- Operational refresher training

#### Outcomes (objectives of new regulatory framework)

What the network companies are expected to deliver. The outcomes that we expect from the new framework are that network companies play a full role in the delivery of a sustainable energy sector and deliver value for money network services for existing and future consumers.

#### Outputs

Output information is to be used to assess network company performance against the outcomes within a control period. This information may be both qualitative and quantitative in nature.

## P

#### Pass through (of costs)

Costs for which companies can vary their annual revenue in line with the actual cost, either because they are outside the DNO's control or because they have been subject to separate price control measures.

#### Pension protection fund (PPF)

The Pension Protection Fund was established to pay compensation to members of eligible defined benefit pension schemes, when there is a qualifying insolvency event in relation to the employer and where there are insufficient assets in the pension scheme to cover Pension Protection Fund levels of compensation.

#### Post Maintenance Interest Cover Ratio (PMICR)

A financial ratio used by rating agencies when determining credit ratings. It measures the amount of cash a company generates from the revenues it brings in, excluding costs associated with long-term investment (capex) relative to the interest paid on the company's debt.

#### Price control (control)

The control developed by the regulator to set targets and allowed revenues for network companies. The characteristics and mechanisms of this price control are developed by the regulator in the price control review period depending on network company performance over the last control period and predicted expenditure in the next.

#### Priority Service Register

A register of all customers in an electricity distribution area that are of pensionable age, disabled, chronically sick, require special communication needs, depend on electricity for medical reasons, or require certain information and advice about supply interruptions. The electricity distribution network operator must provide all customers on their PSR with prior advice and information about planned interruptions and appropriate information and advice about what precautions to take in the event of an unplanned supply interruption.

#### Profile classes

Profile classes are used to differentiate between customer types. This differentiation is based on the when customers consume electricity across the day. A profile is made of up of estimated consumption in each half hour across a 24 hour period based on generic customer characteristics and the tariff which a customer is on. For instance, a domestic customer is more likely to have higher consumption on weekday mornings and evenings and lower during the day time. A non domestic customer is likely to have higher consumption in the daytime but lower (or none at all) in the morning and evening.

The eight generic profile classes were chosen by industry as they represented large populations of similar customers. The eight profile classes are as follows:

- Profile Class 1 Domestic Unrestricted Customers
- Profile Class 2 Domestic Economy 7 Customers
- Profile Class 3 Non-Domestic Unrestricted Customers
- Profile Class 4 Non-Domestic Economy 7 Customers
- Profile Class 5 Non-Domestic Maximum Demand (MD) Customers with a Peak Load Factor (LF) of less than 20%
- Profile Class 6 Non-Domestic Maximum Demand Customers with a Peak

- Load Factor between 20% and 30%
- Profile Class 7 Non-Domestic Maximum Demand Customers with a Peak Load Factor between 30% and 40%
- Profile Class 8 Non-Domestic Maximum Demand Customers with a Peak Load Factor over 40%

A Peak Load Factor is the ratio, expressed as a percentage, of the number of kWh supplied during a given period compared to the number of kWh that would be supplied at times of maximum demand.

The profile classes are monitored and updated if consumption patterns amongst customers change. They are used by all industry parties to help estimate consumption at certain times.

### Project Management

Project management costs from authorisation through preparation, construction and energisation to completion.

### Property Management

The costs of providing, managing and maintaining all non-operational premises (with the exception of operational training centres).

## Q

### Quality of Service (QoS) costs

Costs where the prime purpose is to improve performance against the IIS targets or to improve the overall fault rate per km of the distribution network.

## R

### Real Price Effects (RPE)

Expected changes in input prices, eg wages, relative to the Retail Price Index (RPI).

### Regulatory Asset Value (RAV)

The value ascribed by Ofgem to the capital employed in the licensee's regulated distribution or (as the case may be) transmission business (the 'regulated asset base'). The RAV is calculated by summing an estimate of the initial market value of each licensee's regulated asset base at privatisation and all subsequent allowed additions to it at historical cost, and deducting annual depreciation amounts calculated in accordance with established regulatory methods. These vary between classes of licensee. A deduction is also made in certain cases to reflect the value realised from the disposal of assets comprised in the regulatory asset base. The RAV is indexed to RPI in order to allow for the effects of inflation on the licensee's capital stock.

### Regulatory burden

A term used to describe the cost – both monetary and opportunity – of regulation.

## Regulatory Instructions and Guidance (RIGs)

A document that is published as part of the price control settlement which sets out further detail on how the price control is to be implemented and how compliance with it will be monitored.

## Relevant Market Segments

Any of the relevant market segments that are described in or determined in accordance with Appendix 1 of Charge Restriction Condition 12 (CRC 12). In DPCR5 Final Proposals Ofgem considered that competition is viable in these market segments. DNOs currently charge a four per cent margin on contestable services provided in these market segments.

## Remote Location Generation

Remote location generation relates to the cost of fuel and contribution to maintenance to run and test diesel generation that provides permanent emergency backup in remote locations including islands.

## Re-openers

A process undertaken by Ofgem to re-set the revenue allowances (or the parameters that give rise to revenue allowances) under a price control before the scheduled next formal review date for the relevant price control.

## Repex or replacement expenditure

This is expenditure in relation to the replacement or decommissioning of iron gas mains.

## Replacement Expenditure (Repex) [GD1]

The replacement or refurbishment of assets which are at the end of their useful life due to their age or condition, or need to be replaced on safety or environmental grounds. A significant component of Repex is the HSE enforced gas mains replacement programme on the gas distribution networks.

## Retail Prices Index (RPI)

The RPI is an aggregate measure of changes in the cost of living in the UK. It differs from the CPI in that measures changes in housing costs and mortgage interest repayments, whereas the CPI does not, they are calculated using different formulae and have a number of other more subtle differences.

## Return on Regulatory Equity (RORE)

The financial return achieved by shareholders in a licensee during a price control period from its out-turn performance under the price control. The return is measured using income and cost definitions contained in the price control regime (as opposed to accounting conventions) and is expressed as a percentage of (share) equity in the business. Importantly, in the calculation the gearing (proportions of share equity and debt financing in the RAV) and cost of debt figures used are those given as the 'assumed' levels in the relevant price control final proposals. The aim of the RORE measure is to provide an indication of the return achieved by the owners of a licensee which can be compared to the cost of equity originally allowed in the price control settlement and to the return achieved by other licensees on an equivalent basis.

## Revenue driver

A means of linking revenue allowances under a price control to specific measurable events which are considered to influence costs. An example might be to allow a specified additional revenue allowance for each MW of new generation connecting to the network. Revenue drivers are used by Ofgem to increase the accuracy of the revenue allowances.

## RIIO (Revenue = Incentives + Innovation + Outputs)

Ofgem's new regulatory framework, stemming from the conclusions of the RPI-X@20 project, to be implemented in forthcoming price controls. It builds on the success of the previous RPI-X regime, but better meets the investment and innovation challenge by placing much more emphasis on incentives to drive the innovation needed to deliver a sustainable energy network at value for money to existing and future consumers

## RIIO-Transmission Price Control Review 1 (RIIO-T1)

The price control review to be applied to the electricity and gas transmission network operators, following the TPCR4 rollover. This price control would be expected to run from 1 April 2013 and will be the first transmission price control review to reflect the new regulatory framework, RIIO, resulting from the RPI-X@20 review.

## Rising and Lateral Mains

Individual DNO owned 3 phase cable or busbar, not laid in the ground, which runs within or attached to the outside of a multiple occupancy building for:

- More than 3m vertically or
- More than 3m horizontally
- And to which a number of individual services are connected, usually via a distribution board.

## Risk-free rate

The rate of return that an investor would expect to earn on a "riskless" asset. Typically, government-issued securities are considered the best available indicator of the risk-free rate due to the extremely low likelihood of the government defaulting on its obligations.

## Rolling average

An average of a specified number of data points which is updated continuously to reflect the most recent data.

## RPI-X

The form of price control currently applied to network monopolies. Each company is given a revenue allowance in the first year of each control period. The price control then specifies that in each subsequent year the allowance will reduce by 'X' per cent in real terms.

## RPI-X@20

Ofgem's comprehensive review of how we regulate energy network companies, announced in March 2008. Its conclusions published in October 2010 resulted in the implementation of a new regulatory framework, known as the RIIO model.

**S****Secondary deliverables**

Indicators of performance which may be used in support of the companies' required primary outputs

**Settlement data**

Data arising through the Balancing and Settlement Code (BSC) settlement processes.

**Severe weather 1-in-20 events**

Events which gives rise to more than 42 times the mean incidents at HV and above, give rise to more than the threshold for customer interruptions or customer minutes lost.

**Small and Medium User Group (SMUG)**

A key forum for engaging with business customer representatives. The SMUG is open to small and medium sized users of energy, for example consumer groups such as the Federation of Small Businesses or the British Chambers of Commerce.

**Small tools & equipment (& other non-op Capex)**

Expenditure on new and replacement Small Tools & Equipment assets which are not system assets.

**Smart grid**

An electricity network that can intelligently integrate the actions of all the users connected to it - generators, consumers and those that do both - in order to efficiently deliver sustainable, economic and secure electricity supplies.

**Span**

Relates to overhead lines and is the term used to describe the portion of overhead line between two overhead line supports (i.e. poles and towers). The number of spans associated with a double circuit line

**Spans Cut**

Relates to overhead line spans that are inspected in a reporting year in order to assess the need to undertake tree cutting to meet the requirements of ENATS 43-8 and where tree cutting is undertaken during the reporting year.

**Spans Inspected (but not cut)**

Relates to overhead line spans that are inspected in a reporting year in order to assess the need to undertake tree cutting to meet the requirements of ENATS 43-8 and where no tree cutting is undertaken during the reporting year.

**Spans Managed**

Is the sum of "Spans Cut" and "Spans Inspected (but not cut)"



## Stakeholder

Stakeholders are those parties that are affected by, or represent those affected by, decisions made by network companies and Ofgem. As well as consumers, this would for example include Government and environmental groups.

## Storage

Storage refers to any mechanism which can store energy which has been converted into electricity. This can be primary (super-conducting and capacitor technologies); mechanical (pumped hydro, compressed air, flywheels); and electrochemical (batteries).

## Stores

The activity of managing and operating stores

Includes:

- Delivery costs of materials or stock to stores
- Labour and transport costs for the delivery of materials or stock from a centralised store to a satellite store (and vice versa)
- Quality testing of materials held in stores
- The value of losses on materials held in stores
- The costs of membership of the "ngt spares club".

Excludes:

- Costs of oil or other insulation medium (report under the activity for which it is used, e.g. Maintenance, faults)
- IT and property costs associated with Stores.

## Straight line depreciation

Straight line depreciation depreciates the asset value in a linear fashion throughout its useful life. It is calculated by dividing the Gross Book Value of an asset by its expected useful life.

## Sulphur Hexafluoride (SF<sub>6</sub>)

A potent greenhouse gas frequently used in electrical equipment.

## SF<sub>6</sub> Leakage

Electrical plant utilising SF<sub>6</sub> for insulation purposes containing the gas in a gas tight enclosure. Loss of integrity of the enclosure leads to escape or leakage of the gas.

## Supply chain

Refers to all the actors involved in the delivery of electricity and gas to the final consumers - from electricity generators and gas shippers, through to electricity and gas suppliers.

## Sustainable development

Refers to economic development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

## Sustainable energy sector

A sustainable energy sector is one which promotes security of supply over time; delivers a low carbon economy and associated environmental targets; and delivers related social objectives (e.g. fuel poverty targets).

## System Mapping

The activity of mapping of the network and operational premises of the network to geographical locations.

## System Operator (SO)

NGG as the gas system operator has responsibility to construct, maintain and operate the NTS and associated equipment in an economic, efficient and co-ordinated manner. NGET as the electricity system operator has responsibility to construct, maintain and operate the NETS and associated equipment in an economic, efficient and co-ordinated manner. In their roles as SOs, NGG and NGET are responsible for ensuring the day-to-day operation of the transmission systems.

## T

### Technical Life

The estimated length of time from the date of commission to a point in time when on average the assets fall below minimum acceptable and / or safety performance levels.

### Terawatt (TWh)

Equals one thousand Gigawatt hours.

### Third Package (Third Internal Energy Market Legislative Package)

The third package is a key step in implementation of internal EU energy market. It recognises the need for better co-ordination between European network operators and continuing co-ordination between regulators at that level. It continues many of the internal market principles identified above in relation to the earlier First and Second Packages.

### Traffic Management Act (TMA)

Introduced in 2004 to tackle congestion and disruption on the road network. The TMA Act places a duty on local traffic authorities to ensure the expeditious movement of traffic on their road network and those networks of surrounding authorities. It gives authorities additional tools to better manage parking policies, moving traffic enforcement and the coordination of street works

### Total expenditure (Totex)

Totex generally consists of all the expenditure relating to a licensee's regulated activities but with the exception of some specified expenditure items. The annual net additions to RAV are calculated as a percentage of the totex.

Total capital expenditure (capex) plus operational expenditure (opex). It can be seen as the aggregate net network investment, net network operating costs and indirect costs, less the cash proceeds of sale of assets and scrap.

### Transmission Owners (TO)

Companies which hold transmission owner licenses. Currently there are three electricity TOs; NGET, SPTL and SHETL. NGG NTS is the gas TO.

### Transmission system

The system of high voltage electric lines providing for the bulk transfer of electricity across GB.

### Transmission System Operator (TSO)

See System Operator

### Tree Cutting

The activity of physically felling or trimming vegetation from around network assets.

### Trouble Call

The activity relating the resolution of Trouble Call occurrences.

## U

### Uncertainty mechanisms

Uncertainty mechanisms allow changes to the base revenue during the price control period to reflect significant cost changes that are expected to be outside the company's control. Examples include revenue triggers and volume drivers.

### Undergrounding

Is the process of replacing overhead power cables with buried electricity distribution cables.

### Unmetered Connection

A connection where the charges for electricity consumption are not measured via a meter. The Electricity (Unmetered) Supply Regulations 2001 describe the circumstances in which a supply of electricity may be unmetered, for example small electricity loads that have predictable consumption.

### Upper Quartile (UQ) Cost Benchmarking

For the purposes of this document UQ cost benchmarking refers to the approach of setting a benchmark at the 25<sup>th</sup> percentile (ie the lowest) of DNO costs. This approach has typically been proposed for areas of expenditure where there is a high degree of commonality across different DNOs' expenditure.

*See also Lower Quartile Cost Benchmarking*

**V****Vanilla Weighted Average Cost of Capital (Vanilla WACC)**

The weighted average cost of capital using a pre-tax cost of debt and a post-tax cost of equity.

**Vehicles and transport costs**

The activity of managing, operating and maintaining the commercial vehicle fleet and mobile plant utilised by the DNO or any other related party for the purposes of providing services to the DNO.

**Vertically integrated company**

A company that is active at more than one level of an industry's supply chain (e.g. a company that generates electricity and also operates electricity distribution networks).

**VIX index**

Chicago Board Options Exchange Volatility Index, a popular measure of implied volatility with high values implying pessimism and low values implying optimism.

**W****Wayleaves**

Access to property granted by a landowner including provision for constructing, retaining, using and maintaining an overhead line or underground cable

**Wayleaves and Easements/Servitudes Admin Costs**

Obtaining, managing and administering Wayleave, substation rents, easements and servitudes.

**Wayleaves Payments**

Annual payments made in advance to the owner and/or occupier to cover the financial impact of having equipment on their land

**Weighted Average Cost of Capital (WACC)**

The weighted average of the cost of equity and the cost of debt, where the weighting is provided by the gearing ratio. This represents the cost to a company of raising the funds for its activities (specifically, its capex programme). As part of the price control process, Ofgem sets an allowance for the expected WACC that its regulated companies pay.

**Workforce Renewal**

Workforce renewal involves the recruitment of training of new staff and upskilling of existing staff to replace leavers from the operational workforce (roles meeting definitions of "craftsperson", "engineers" and "non-engineering roles"). It includes learner costs associated with both classroom and new recruits and upskilling. It includes trainer and course material costs associated with classroom training. It also includes training centre

and training admin costs associated with new recruits and upskilling. It includes the recruitment costs associated with operational trainers.