

## Glossary of terms: RIIO-T1 and GD1 review

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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.

#### 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.

### B

#### Benchmarking

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

#### 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>

#### Biogas

Biogas typically refers to a gas produced by the biological breakdown of organic matter such as manure, sewage, green waste, and crop residues in the absence of oxygen (anaerobic digestion). Raw biogas produced from digestion is roughly 60% methane (CH<sub>4</sub>) and 29% carbon dioxide (CO<sub>2</sub>) with trace elements of hydrogen sulphide (H<sub>2</sub>S) and

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

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

other contaminants, so it is not high quality enough to sell or use as fuel for machinery. The corrosive nature of H<sub>2</sub>S alone is enough to destroy the internals of an engine. The solution is the use of a biogas upgrading process whereby contaminants in the raw biogas stream are absorbed or scrubbed, leaving 98% methane per unit volume of gas (bio-methane).

### Biomethane

Biomethane or renewable gas is a gas mixture that is predominantly methane and is sourced from organic material (biomass). This gas has similar thermal characteristics to natural gas and may be cleaned and injected in to the natural gas network.

### 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.

### Breakeven inflation

The difference between the percentage yield on nominal gilts and the percentage yield on index-linked gilts of a similar maturity. Breakeven inflation, therefore, represents the level of inflation expected by investors that is priced into nominal gilt yields.

### 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.

## C

### Capacity (gas)

The amount of natural gas that can be produced, transported, stored, distributed or utilised in a given period of time under network design conditions.

### 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 'riskless' element of their investment, and a return for the level of risk.

### Capital expenditure (capex)

Expenditure on investment in long-lived network assets, such as gas pipelines or electricity overhead lines.

### 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.

## 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.

## 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.

## Connect and Manage

Under this regime generators can connect to the transmission network in advance of all the necessary upgrades and reinforcements to the wider transmission system being put in place.

## 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.

## 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 (CCG)

The CCG comprises eight 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 control 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.

## 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. 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.

## D

### 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 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.

### Department of Energy and Climate Change (DECC)

DECC takes the lead in energy policy and tackling climate change. This reflects the fact that climate change and energy policies are inextricably linked since two third of our emissions come from the energy we use.

### Depreciation

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

### Design Life

The period an asset is designed to last for.

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

## Distributed Generation

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.

## Distribution Network Operators (DNOs)

Holders of electricity distribution licences. Licences are granted for specified geographical areas. Currently in Great Britain there are seven corporate groups owning the fourteen licensed distribution areas.

## Distribution Price Control Review 5 (DPCR5)

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

## 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.

### Economic Life

The period over which an asset performs a useful function.

### 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 would be expected to run from 1 April 2015.

### Electricity transmission system

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

### 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'.

**F****Financeability**

Financial models are used to determine whether the regulated energy network is capable of financing the necessary activities of its network business 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. This includes financial relationships within its corporate structure.

**Fuel poverty**

A fuel poor household is defined as one that needs to spend 10% or more of its household income on all fuel use in order to maintain a satisfactory heating regime.

**G****Gas Distribution Networks (GDNs)**

GDNs are eight gas network areas, known as East of East of England (EoE), North West (NW), West Midlands (WM), London (Lon), Northern Gas Networks (No), Scotland (Sc), Southern (So) and Wales & West (WW).

**Gas Distribution Price Control Review (GDPCR/GDPCR1)**

The review of the price control applying to gas distribution networks. The latest GDPCR covers the period from 1 April 2008 to 31 March 2013.

**Gas and Electricity Markets Authority (GEMA)**

(See the Authority/Ofgem)

**Gas Distribution System**

The distribution system is a network of pipelines operating at pressures below seven bar, transporting gas from the local transmission system (LTS) and delivering it to domestic, commercial and industrial gas consumers.

**Gas Transporter (GT)**

The holder of a Gas Transporter's licence in accordance with the provisions of the Gas Act 1986.

**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).

## 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 or one thousand Megawatt hours.

## Gilts

The name given to bonds issued by the British government. Most gilts do not compensate the bond holder for actual changes in inflation, and are referred to as 'nominal' or 'conventional' gilts. Gilts that compensate their holder for actual movements in inflation, as measured by the Retail Price Index (RPI), are referred to as 'index-linked' gilts (ILGs).

## Governors [GD1]

Pressure reduction equipment installed on the gas distribution network. Alternatively known as Pressure Reduction Stations (PRSs).

## H

### The Health and Safety Executive (HSE)

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

## I

### iBoxx

A data service for bonds traded in financial markets. iBoxx provides detailed information on each bond, including its price, coupon, current yield, remaining maturity and credit rating. iBoxx is published by Markit.

### 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.

### Index-Linked Gilts (ILGs)

Bonds issued by the British government that compensate the bond holder for changes in inflation, as measured by the Retail Price Index (RPI).

### Indexation

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

## 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.

## Interconnector

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

## K

### Key Performance Indicator (KPI)

A set of benchmarks to be met by GDNs; 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. Retail electricity customers are charged for consumption in Kilowatt hours (units). Natural Gas is generally priced per Therm, which is 29.3071 kWh.

## 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.

### 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.

### Liquefied Natural Gas (LNG)

Liquefied natural gas or LNG is natural gas (predominantly methane, CH<sub>4</sub>) that has been converted temporarily to liquid form (at around minus 162 degrees centigrade) for ease of storage or transport.

Cooling and liquefying the gas reduces its volume by 600 times.. LNG may be stored or transported by special tanker.

### Load Related Capex

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

### Local Distribution Zone (LDZ)

LDZs are twelve independent geographically defined gas network supply areas. These zones exist for gas accounting purposes only.

### Local Transmission System (LTS)

The pipeline system operating above seven bar that transports gas from national transmission system offtakes to distribution systems. Some large users may take their gas directly from the LTS.

### Logging up

A type of uncertainty mechanism, logging up is a mechanism under which 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.

### Low carbon economy

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

### Low Carbon Networks Fund (LCN Fund)

A mechanism introduced under DPCR5 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.

## M

### Modern Equivalent Asset Value (MEAV)

This is the current replacement value of an asset.

## N

### National Grid Gas plc (NGG)

The licensed gas transporter responsible for the gas transmission system, and the gas transporter licence holder for East of England, London, North West, and West Midlands gas distribution networks.

### National Grid Electricity Transmission plc (NGET)

The electricity transmission licensee in England & Wales.

### National Transmission System (NTS)

The high pressure gas transmission system in Great Britain.

### 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 licensee must 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 users

Companies along the gas and electricity supply chain.

### Non-Load Related Capex [Electricity]

The replacement or refurbishment of assets for reasons other than accommodation of changes in the level or pattern of supply and demand (see also load related capex), ie assets either at the end of their useful life due to their age or condition, or need to be replaced on safety or environmental grounds.

### Northern Gas Networks Ltd (NGN)

The gas transporter licence holder for Northern gas distribution network.

## O

### Operating Expenditure (Opex)

Expenditure on the day to day operation of a network such as staff costs, repairs and maintenance and business overheads.

### 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

### 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 Ofgem to set targets and allowed revenues for network companies. We develop the characteristics and mechanisms of a price control taking account of network company performance over the last control period and predicted expenditure in the next.

### Primary outputs

Under RPI-X@20 recommendations, primary outputs concern aspects of the services that network companies provide to consumers (including network users such as generators and shippers). Primary outputs also cover network companies' impact on the environment and compliance with safety obligations.

### Pressure Reduction Stations (PRSs) [GD1]

Pressure Reduction Stations are installed on gas networks to reduce and control gas pressures. On the gas distribution system they are usually referred to as governors.

### Project TransmiT

Ofgem's independent and open review of transmission charging and associated connection arrangements.

### Public Reported Escape (PRE)

Public Reported Escapes are gas emergencies reported to the National Gas Emergency Service.

## 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. This also sometimes referred to as 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 administrative– 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.

## Reinforcement

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

## 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 [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 iron 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 Consumer Price Index (CPI) in that it includes 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-Gas Distribution Price Control Review 1 (RIIO-GD1)

The price control review to be applied to the gas distribution network operators, following GDPCR1. 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.

### 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.

### Risk-free rate

The rate of return that an investor would expect to earn on a 'riskless' asset. Typically, a country's 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

### Scotia Gas Networks plc (SGN)

The holding company for Southern Gas Networks plc and Scotland Gas Networks plc.

### Scotland Gas Networks plc (SGN)

The gas transporter licence holder for Scotland gas distribution network.

### Scottish Hydro Electric Transmission Limited (SHETL)

The electricity transmission licensee in northern Scotland.

### SP Transmission Limited (SPTL)

The electricity transmission licensee in southern Scotland.

### The Secondary Deliverables

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

### Shrinkage

Shrinkage is a term used to describe gas either consumed within or lost from a transporter's system. For example shrinkage can result from gas transmission companies using gas within their transportation systems to fuel gas compressors. At the distribution level, the majority of shrinkage results from gas escaping from old iron gas mains during transportation. Shrinkage also occurs when gas is stolen or not charged for in error.

### 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.

### 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.

### Southern Gas Networks plc

The gas transporter licence holder for Southern gas distribution network.

### 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

Installations owned by gas transmission and distribution networks companies and contracted storage capacity from third parties, eg salt cavities, liquified natural gas (LNG), storage vessels and gas holders. Gas storage is required to balance diurnal and seasonal variations in supply and demand.

### 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.

## Supply chain

Refers to all parties 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 (eg fuel poverty targets).

## System Operator (SO) [T1]

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 hours (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.<sup>4</sup>

### Transmission Investment Incentives (TII)

TII is a framework for providing interim funding, within the current transmission price control period (TPCR4), for the critical large-scale investments that the Transmission

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<sup>4</sup> See Directive 2009/72/EC of the European Parliament and of the Council and Directive 2009/73/EC of the European Parliament and of the Council

Owners (TOs) (National Grid Electricity Transmission plc (NGET), SP Transmission Ltd (SPTL) and Scottish Hydro Electric Transmission Ltd (SHETL)) identify as being required to support achievement of the Government's 2020 renewable energy targets.

#### Transmission Investment for Renewable Generation (TIRG)

This is a mechanism for funding transmission projects specific to connecting renewable generation. The mechanism was implemented during TPCR4, outside of the price control allowance, to minimise delays. TIRG is comprised of four projects: Beaulieu Denny, Sloy, South West Scotland, and the Anglo Scottish Interconnector.

#### 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.

#### Transmission Access Review (TAR)

Following the publication of the Energy White Paper 2007, the government and Ofgem convened a joint review of the current framework for access to the GB transmission system. The review explored a range of issues associated with the technical, commercial and regulatory arrangements, with the chief aim being to better support the delivery of the government's aspiration of 20 percent of electricity supplied by renewable generation by 2020 and any targets that may be agreed at European Union level.

#### 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 Investment Incentives (TII)

Formerly known as TO incentives which provide an appropriate funding framework for anticipatory investment.

#### Transmission Price Control Review 4 (TPCR4)

TPCR4 established the price controls for the transmission licensees covering the years 2007-2012. The review applies to the three electricity transmission licensees, National Grid Electricity Transmission plc, SP Transmission Limited, Scottish Hydro Electric Transmission Limited and to the licensed gas transporter responsible for the gas transmission system, NGG.

#### Transmission System Operator (TSO)

See System Operator.

## 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.

### Uniform Network Code (UNC)

As of 1 May 2005, the UNC replaced National Grid Gas's Network Code as the contractual framework for the NTS, GDNs and system users.

## 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. Ofgem sets a vanilla WACC allowance for the network companies.

### Vertically integrated company

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

## W

### Wales and West Utilities Ltd (WWU)

The gas transporter licence holder for Wales and West gas distribution network.

### 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.

## X

### xoserve

A transporter agency which provides a single, uniform interface between the IT systems of relevant GTs and shippers.