

# National Grid Metering Charges

From 1 April 2016









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# Foreword

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This booklet sets out the metering charges that National Grid (NG) will apply for services provided under the Network Code and NG's Metering Contracts<sup>1</sup> from 1 April 2016.

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It also sets out the methodology used to derive the charges, as required by NG's Gas Transporters Licence in respect of its retained networks (RDNs). These metering charges will apply to NG meters within RDNs and under the Network Metering Equipment Agreement (NMEA) to NG meters in the independent networks (IDNs).

The level of NG's metering charges is regulated by a price control set by Ofgem, the gas industry regulator. To achieve price control, Ofgem has set tariff caps for four key metering services<sup>2</sup>. NG's charges for these services must not exceed the tariff caps, which are adjusted each year by inflation.

Each year we assess the costs for providing non domestic metering services and, where necessary, make adjustments to achieve better cost reflectivity in our charges. In parallel we now offer an alternative contract for non domestic metering services with different commercial terms which may include lower rental rates. We have also made significant investments in systems and processes to improve the quality and range of services provided.

Transactional charges for meter works have also been reviewed and to take account of increased costs. Only one activity, the customer requested exchange of a credit meter for a prepayment meter, is subject to a tariff cap.

<sup>1</sup> Agreement and General Conditions of Contract for; The Provision and Maintenance of Metering Equipment Contract, Transactional Meter Works not exceeding 7 barg, Above 7 barg Transactional Meter Works, Adversarial Meterworks, Rainbow System User Agreement and Network Metering Equipment Agreement (NMEA).

<sup>2</sup> Tariff caps apply to domestic credit meter rental, prepayment meter rental, domestic customer requested exchange and daily meter reading services.

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# 1. Introduction

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NG provides gas transportation, metering and daily meter reading services throughout Great Britain for the companies that supply domestic, industrial and commercial consumers.

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NG is an Ofgem Approved Meter Installer (OAMI) and registered Meter Asset Manager (MAM) and provides a range of meter provision, installation and maintenance services. For further details of these services please contact the National Grid Metering (NGM) commercial team via e-mail at [metering.contracts@nationalgrid.com](mailto:metering.contracts@nationalgrid.com)

We would welcome your views on any aspect of our metering service, our charges or the contents of this statement. Please send your comments via e-mail to [metering.contracts@nationalgrid.com](mailto:metering.contracts@nationalgrid.com).

This publication sets out NG's charges from 1 April 2016 for its metering services provided under the Provision and Maintenance of Metering Equipment Contract, Transactional Meter Works not exceeding 7 barg Contract, Transactional Meter Works exceeding 7 barg Contract, Adversarial Meterworks Contract, Rainbow System User Agreement, Network Code and the Network Metering Equipment Agreement (NMEA). NG offers contracts with alternative terms and conditions for domestic size meters<sup>3</sup> and non domestic meters<sup>4</sup>. Details of these contracts, including the relevant charges, are available via e-mail to [metering.contracts@nationalgrid.com](mailto:metering.contracts@nationalgrid.com).

<sup>3</sup> Where the meter capacity is less than 11 standard cubic meters per hour (scmh).  
Agreement (New Alternative) and General Conditions of Contract for the Provision and Maintenance of Legacy Metering Equipment, Agreement (Alternative) and General Conditions of Contract for the Provision and Maintenance of New / Replacement Metering Equipment.

<sup>4</sup> Where the meter capacity is more than 11 standard cubic meters per hour (scmh).  
Meter Services Agreement for Industrial and Commercial Premises.

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# 2. Charges from 1 April 2016

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## 2.1 Introduction

This section sets out the charges for NG's Network Code and NG's Metering Contracts<sup>5</sup>. This document does not override or vary any of the statutory, licence or Network Code or other contractual obligations upon NG. For more information on these charges, please e-mail [\*\[metering.contracts@nationalgrid.com\]\(mailto:metering.contracts@nationalgrid.com\)\*](mailto:metering.contracts@nationalgrid.com)



### 2.1.1 Service and transactional charges

Annual charges apply in respect of all metering equipment provided and maintained by NG on a per meter basis. The rental charge is determined in respect of the whole meter installation.

Annualised installation charges also apply on a per meter basis where an upfront installation charge was not originally levied.

Transactional (one-off) charges are made in respect of specific meter work activities carried out by NG, as set out in section 2.3, including the installation of metering equipment.

Continuing the approach adopted with effect from 1 January 2011, transactional charges are not levied for the standard elements of New Large Diaphragm installations. Instead the annualised installation charge will continue to be recovered via the rental as described above. All charges are shown exclusive of VAT.

### 2.1.2 Domestic meter installations

Annual charges for domestic size meter installations<sup>6</sup> vary with payment mechanism; that is whether the meter is a credit or a prepayment meter. This approach reflects some of the additional costs of providing prepayment metering services compared to credit meters.

### 2.1.3 Larger meter installations

Annual charges for industrial and commercial size meter installations<sup>7</sup> vary with the method of flow measurement (diaphragm, rotary or turbine) and the inlet and outlet pressure tier at which the gas

is measured. The pressure premium classifications (for medium pressure, intermediate pressure and high pressure installations) are all based on the inlet pressure. The outlet pressure of the gas metering installation is measured immediately downstream of the gas meter and always upstream of the gas metering installation outlet valve. Where there is a difference in the inlet and outlet pressure, the site is classified as having a pressure differential and higher charges may apply.

Annual charges for meter provision, installation and maintenance also vary with the meter's 'badged capacity' or Qmax<sup>8</sup>, since meter capacity is the main cost driver for a given meter type. For high pressure capacity bandings, the badged capacity is calculated using the following formula, which adjusts for the operating pressure at the outlet:

**Badged Metering capacity m3/hr \* (1+Outlet Pressure)**

Separate charges apply for metering installations connected to high-pressure systems<sup>9</sup> and for the provision, installation and maintenance of daily read equipment (dataloggers) and volume converters (correctors).

### 2.1.4 Invoicing

NGM produces and issues the invoices derived from the charges shown in this publication. If a gas supplier has an invoice query, this should normally be submitted via SAP Rainbow or Phoenix<sup>10</sup> using the relevant Transaction Type Reason Code as detailed in the Query Submission section of the MAM Manual.

<sup>6</sup> Agreement and General Conditions of Contract for:

The Provision and Maintenance of Metering Equipment Contract, Transactional Meter Works not exceeding 7 barg, Above 7 barg Transactional Meter Works, Adversarial Meterworks, Rainbow System User Agreement and Network Metering Equipment Agreement (NMEA).

<sup>7</sup> Where the meter capacity is less than 11 standard cubic meters per hour (scmh).

<sup>8</sup> Where the meter capacity is greater than or equal to 11scmh.

<sup>9</sup> An indication of the upper limit of a measuring device's accuracy envelope.

<sup>10</sup> Operating at pressures greater than 7 barg.

<sup>10</sup> The Phoenix system supports the management of the I&C assets, in the same way as SAP Rainbow now supports only domestic metering assets.



## 2.2 Annual charges

The tables in this section show the annual charges, expressed both in £ sterling per annum for general purposes, and in pence per day for billing purposes.

### 2.2.1 Low-, medium- and intermediate-pressure metering installations (≤7 barg)

#### Domestic-sized meters\*

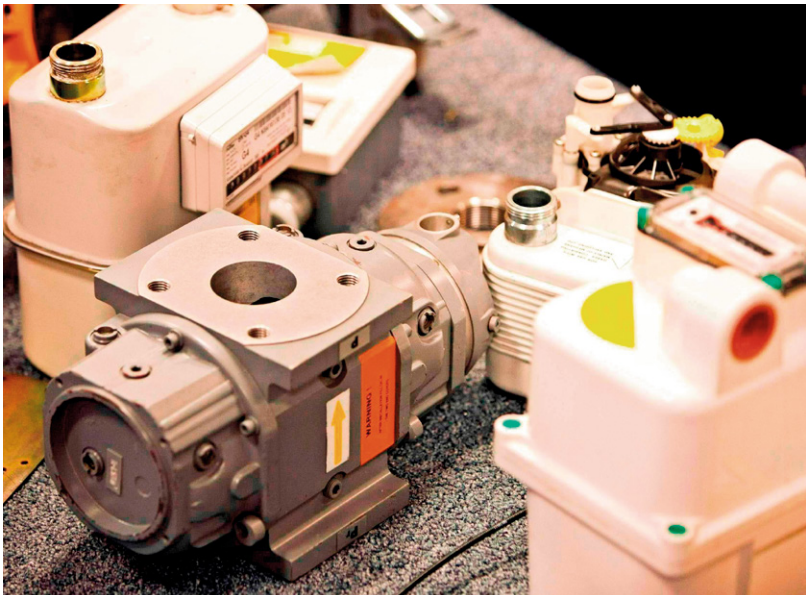
	Charge where installation costs have been recovered in a transaction fee		Charge where installation costs are recovered via the rental	
	Pence per day	£ per annum	Pence per day	£ per annum
Credit meter	2.4164	£8.82	4.2822	£15.63
Prepayment meter	8.8438	£32.28	10.7096	£39.09

\*Meter capacity up to 11 scmh.

### 2.2.2 Dataloggers

	Charge where installation costs have been recovered in a transaction fee		Charge where installation costs are recovered via the rental	
	Pence per day	£ per annum	Pence per day	£ per annum
Datalogger	91.2521	£333.07	143.7918	£524.84

Datalogger charges apply to all dataloggers at daily metered supply points, as defined by NG's Network Code. Note that this rental charge excludes the daily meter reading (section 2.3).





## 2.3 Transactional charges

Any work downstream of the outlet of the meter is excluded unless specifically mentioned. In all cases, service pipe installation, alteration and disconnection will be subject to additional charges.

### 2.3.1 Domestic-sized meters

The following charges relate to domestic-size meter installations, i.e. where the meter capacity is less than 11 standard cubic metres per hour (scmh).

#### Installation of domestic meters

Title	Description	Charge
Install domestic credit meter	Includes time and materials (pressure controlling equipment, flexible connector, etc) required to install a domestic credit meter. Excludes the cost of the meter itself.	£103.72
Install domestic prepayment meter	Includes time and materials (pressure controlling equipment, flexible connector, etc) required to install a prepayment meter. Excludes the cost of the meter itself. Includes commissioning of the meter module in current (TGB) format and the use of a blank gas card where no Supplier gas card is on site.	£115.68

#### Customer-requested domestic meter exchange

Title	Description	Charge
Customer-requested exchange	Includes time and materials required to exchange a credit meter to prepayment or a prepayment meter to credit on a like for like exchange i.e. exchange credit for credit including an exchange to a semi concealed credit meter or prepayment for prepayment. Excludes the cost of the meter itself. Includes up to 1 metre of additional inlet pipework and up to 2 metres of additional outlet pipework where a prepayment meter cannot be installed in the place of an existing credit meter. Includes testing (excludes any trace and repair work), purging and re-lighting.	£83.72

#### Ofgem domestic meter accuracy test

Title	Description	Charge
Ofgem accuracy test	Includes, transportation of the meter and time and materials required to exchange a meter. Includes secure transportation box. Excludes the cost of the meter itself. Includes testing (excludes any trace and repair work), purging and re-lighting.	£119.09

#### Exchange damaged meter

Title	Description	Charge
Exchange damaged meter	Includes time and materials required to exchange a damaged meter. Excludes the cost of the meter itself. Includes testing (excludes any trace and repair work), purging and re-lighting.	£98.72

### Large diaphragm meter accuracy tests

Capacity (scmh)	≥11 <21	≥21 <29	≥29 <51	≥51 <79	≥79 <121	≥121
Ofgem accuracy test*	£201.74	£208.20	£298.92	£340.68	£468.78	£509.39

\* Includes, transportation of the meter and time and materials required to exchange a meter. Includes secure transportation box. Excludes the cost of the meter itself. Includes testing (excludes any trace and repair work), purging and re-lighting.

All other charges for work on industrial and commercial size meter installations, dataloggers and volume converters will be quoted on an individual basis.

## 2.4. Other metering charges

### 2.4.1 Transfer of in-situ ancillary equipment

Where a NG meter is removed and replaced by a meter belonging to another operator the supplier may elect for the transfer of title to the relevant Supplier of the NG in-situ ancillary equipment in accordance with contract. Conditions apply regarding the components that may be retained in-situ. For clarification this charge excludes the meter.

### Standard low-pressure domestic-sized meters

Standard charge for installation kit (excludes meter)*	£4.85
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\* No charge applies for title transfer where the meter installation is exempted from the 'install' component of annual rental charges.

### Standard low-pressure large diaphragm meters – transfer of ancillary equipment

Standard low-pressure diaphragm meter installations are subject to published charge. All other I&C installations are subject to quotation. Charges exclude the meter. No charge applies for title transfer where the meter installation is exempted from the "install" component of annual rental charges.



Original year of installation	≥11 <21	≥21 <29	≥29 <51	≥51 <79	≥79 <121	≥121
1974/75 or earlier	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
1975/76	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
1976/77	£11.39	£14.59	£20.57	£46.44	£49.49	£102.17
1977/78	£18.54	£23.74	£33.47	£75.57	£80.53	£166.25
1978/79	£25.93	£33.21	£46.81	£105.68	£112.63	£232.52
1979/80	£33.39	£42.77	£60.30	£136.13	£145.08	£299.50
1980/81	£40.93	£52.43	£73.91	£166.86	£177.83	£367.11
1981/82	£48.57	£62.21	£87.70	£198.00	£211.01	£435.62
1982/83	£56.06	£71.80	£101.23	£228.53	£243.55	£502.79
1983/84	£63.55	£81.39	£114.75	£259.06	£276.09	£569.97
1984/85	£71.12	£91.10	£128.43	£289.94	£309.00	£637.91
1985/86	£78.66	£100.75	£142.03	£320.65	£341.73	£705.48
1986/87	£83.42	£106.85	£150.64	£340.08	£362.44	£748.22
1987/88	£86.11	£110.29	£155.49	£351.04	£374.12	£772.34
1988/89	£88.80	£113.73	£160.34	£361.98	£385.78	£796.40
1989/90	£93.05	£119.18	£168.01	£379.31	£404.25	£834.53
1990/91	£96.80	£123.99	£174.80	£394.62	£420.56	£868.21
1991/92	£99.36	£127.26	£179.41	£405.04	£431.66	£891.13
1992/93	£101.40	£129.87	£183.09	£413.35	£440.52	£909.42
1993/94	£103.86	£133.03	£187.55	£423.41	£451.24	£931.55
1994/95	£106.91	£136.93	£193.05	£435.83	£464.48	£958.87
1995/96	£110.54	£141.58	£199.60	£450.62	£480.24	£991.42
1996/97	£111.42	£142.71	£201.19	£454.20	£484.06	£999.30
1997/98	£112.30	£143.83	£202.78	£457.79	£487.88	£1,007.19
1998/99	£113.18	£144.96	£204.36	£461.37	£491.70	£1,015.08
1999/00	£114.06	£146.09	£205.95	£464.96	£495.52	£1,022.96
2000/01	£114.94	£147.21	£207.54	£468.54	£499.35	£1,030.85
1 Apr 2001 to 31 Dec 2010	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
1 Jan 2011 to 31 Mar 2012	£163.27	£209.11	£294.81	£665.56	£709.31	£1,464.31
2012/13	£169.11	£216.60	£305.37	£689.40	£734.72	£1,516.77
2013/14	£174.90	£224.01	£315.81	£712.98	£759.85	£1,568.63
2014/15	£180.39	£231.05	£325.73	£735.37	£783.71	£1,617.90
2015/16	£191.47	£245.24	£345.74	£780.54	£831.86	£1,717.29
2016/17	£197.30	£252.71	£356.27	£804.32	£857.20	£1,769.60

## 2.4.2 Quotation charges for title transfer of ancillary equipment at I&C installations

NG will provide quotations, on an individual basis, for the title transfer to the relevant supplier of in-situ ancillary equipment for all medium and high-pressure meters as well as for low-pressure rotary and turbine meters. The charges for making such quotations are:

Service	Charge per quotation
Quotations based on details of equipment as provided by customer.	£53.21
Quotations based on a National Grid site survey carried out on request for installations <7 barg.	£168.00

In the case of ancillary equipment with an inlet pressure of 7 barg and above, the cost of the quotation will be on the basis of NG's cost of preparing such quotation. NG will endeavor to provide a best estimate of such costs in advance.

## 2.4.3 SAP Rainbow or Phoenix system access

Suppliers previously granted historic "free" web access to NG are charged the annual maintenance and administration charge shown in the table below. In addition there are a limited number of new accesses available to Suppliers and the initial access charges are also shown in the table below.

	Initial access charge (£)	Annual maintenance and administration charge (£)
Read/write access	£427.52	£85.50
Read only access	£213.77	£49.87

## 2.5 Daily meter reading

The tariff cap for this activity continues to be subject to adjustment in line with inflation (0.94%) so the charge that will apply with effect from 1 April 2016 will be £532.22.

	Pence per day	£ per annum
Daily meter reading charge	145.8137	£532.22



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# 3. Metering charging methodology

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In addition to publishing its charges, NG's Gas Transporters (GT) Licence requires it to publish an explanation of the methods by which and the principles on which its charges are calculated.



### 3.1 Regulated metering charges

NG’s metering charges are set so that they are in line with the price control set by Ofgem, the gas and electricity market regulator. To achieve price control for metering services, Ofgem has set tariff caps for four key services. The level of these was recently reviewed through Ofgem’s Review of Metering Arrangements

and NGM’s subsequent Pricing Consultation process. NG’s charges for these services must not exceed the tariff caps, which are adjusted each year by inflation calculated in accordance with the methodology set out in NG’s Gas Transporters licence.

**Metering tariff caps from 1 April 2016**

Service	Tariff Cap
Provide, install and maintain domestic credit meter	£15.63 p.a.
Provide, install and maintain prepayment meter	£39.09 p.a.
Domestic credit to prepayment meter exchange	£83.72 p.a.
Daily meter (DM) reading	£532.22 p.a.

**Charges for domestic meter types**

For the 2016/17 formula year, domestic credit and prepayment meter rental charges have been set so that they are equal to the tariff caps. The tariff capped rentals take into account a cross-subsidisation between credit and prepayment meters.<sup>11</sup>

<sup>11</sup> If the tariff caps are removed by Ofgem then the respective rental charges for prepayment meters and domestic credit meters may be adjusted. National Grid would anticipate the adjustment to be on an NPV-neutral basis.



## 3.2 Charges for non-domestic meter types

Annual charges for I&C meters vary with meter type and capacity. NG's pricing structure differentiates by pressure and additional equipment, as well as by meter size and type.

The matrix of charges relating to high pressure sites reflects the fact that the sites vary in size and complexity, resulting in a large variation between maintenance and replacement costs for these sites. Charges for high pressure sites takes into account

different pressure bandings (above HP), capacity bandings and pressure differentials (sites with a difference in inlet and outlet pressure that require additional pressure reduction equipment). Additional, site-specific charges are made for equipment such as flow computers and pre-heating.

The remainder of this section explains the rationale for NG's charging structure and for the choice of capacity bands.

### 3.2.1 Non-domestic meter types

There are presently three main types of I&C meters – diaphragm, rotary and turbine. Other meter types, such as orifice plate meters, are used for specialist applications.

Installations connected to high-pressure systems operating above 7 barg are considerably more complex. They typically include a flow computer and may comprise additional equipment, such as multi-stage pressure reduction, slam shut discrimination and pre-heaters.

Separate charges apply for metering installations connected to high-pressure systems<sup>12</sup> and these are categorised in three groups as follows:

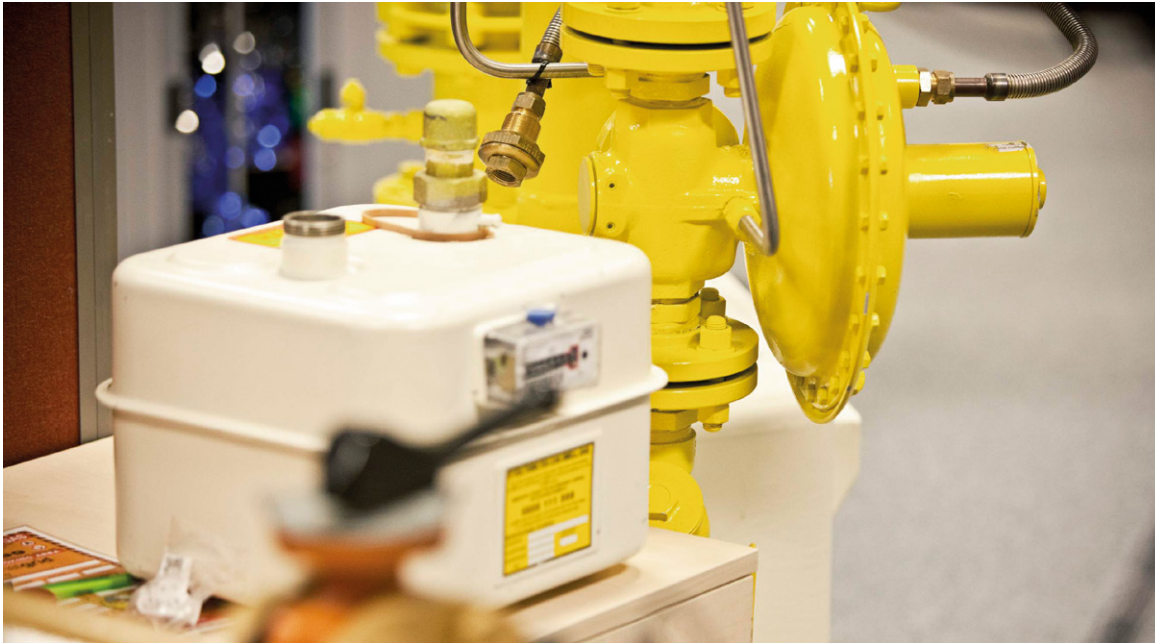
- **High Pressure Installation** – a site is classified as 'HP' ('High Pressure') where the gas pressure at the inlet of the gas metering installation, upstream of any provided pressure control equipment, is greater than 7 barg and less than 29.9 barg ('Gauge' Pressure)
- **Quite High Pressure Installation** – a site is classified as 'QHP' ('Quite High Pressure') where the gas pressure at the inlet of the gas metering installation, upstream of any provided pressure control equipment, is equal or greater than 29.9 barg and less than 39.9 barg ('Gauge' Pressure)

- **Very High Pressure Installation** – a site is classified as 'VHP' ('Very High Pressure') where the gas pressure at the inlet of the gas metering installation, upstream of any pressure control equipment, is equal or greater than 39.9 barg (Gauge Pressure).

The outlet pressure of the gas metering installation is measured immediately downstream of the gas meter and always upstream of the gas metering installation outlet valve. Where there is a difference in the inlet and outlet pressure, the site is classified as having a pressure differential and higher charges may apply. Higher charges may also apply in respect of sites that have regulators that are medium pressure and above as these sites are likely to incur higher replacement costs and undergo more frequent maintenance visits than low pressure sites.

Different meter types have different costs, particularly with respect to purchase price and maintenance costs. For example, rotary meters tend to have higher purchase prices than the equivalent turbine meter. Diaphragm meters do not usually need regular maintenance, unlike rotary and turbine meters, which need to be serviced according to manufacturer's specifications.

<sup>12</sup> Operating at pressures greater than 7 barg.



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### 3.2.2 Meter capacity and capacity bands

Meter capacity is a significant cost driver for a particular meter type. Larger meter installations have higher purchase prices and typically take longer to install. Larger, higher capacity metering installations also have larger, more costly regulators, valves and connecting pipe work. They may include additional equipment, such as pressure protection systems and filters.

Charges reflect the forward-looking costs of providing, installing and maintaining a representative range of meter models of each type.

Section 3.3 explains how the component costs of providing, installing and maintaining meter equipment are determined and Section 3.4 describes how transactional charges are calculated. Section 3.5 describes how DM daily meter reading charges are calculated.

### 3.3 Cost components

This section explains how NG has determined the forward-looking annual costs of providing, installing and maintaining meter installations, dataloggers and volume converters.

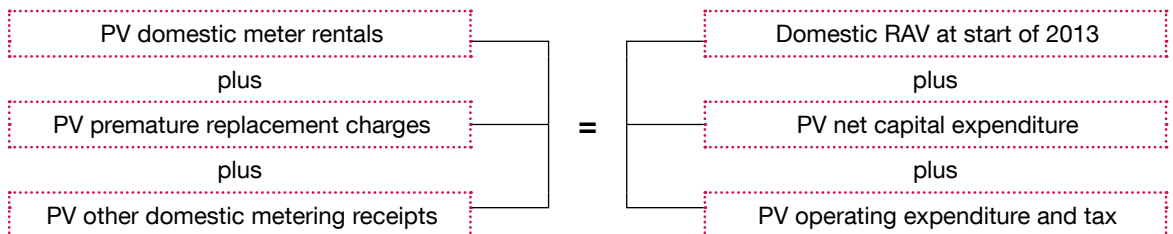
Domestic credit meter costs are based on U6 diaphragm meters or equivalent (including E6 ultrasonic meters), and prepayment meter costs are based on Electronic Token Meters.

Components of the total charge are derived on a cost reflective basis. However, the total charge and some or all of the components must be scaled to levels that are consistent with NG's price control formula.

#### 3.3.1 Annual provision, installation and maintenance costs

##### Domestic meters

Charges are calculated using a RAV-based approach that satisfies the revenue requirement Ofgem set out (below) in their Review of Metering Arrangements (RoMA).



Historically, domestic meters were assumed to have an asset life of twenty years, except for PPM meters where an asset life of 10 years was used. The transition to smart metering now means that many domestic meters will have a significantly shorter asset life, which Ofgem recognises. Traditional meter displacement rates (and consequently the calculation of resulting maintenance costs) are based on the DECC Consumer Engagement and Roll-out Group (CERG) projections. Calculations assume that costs associated with meter maintenance decline in line with average meter populations.

When calculating charges, NG has assumed that labour costs include some additional costs over and above direct labour costs, such as National Insurance and transport costs, but exclude support and sustaining costs.

Included in the rental are charges reflecting planned and unplanned maintenance costs and the costs associated with exchanging faulty meters. They reflect service provider and material costs, plus an uplift to account for support and sustaining costs. The rental charge excludes replacement of the meter and/or installation materials beyond the expected asset life.

##### Non-domestic meters

Replacement costs are assessed by meter size and type, taking into account differing pressures and additional equipment, enabling prices to be more cost reflective.

Charges reflect depreciation costs and an allowance for a return on the value of the meter asset on an average annualised basis. NG's non domestic meters are assumed to depreciate over twenty years.

Charges for installations that are operating at medium pressure and above reflect the higher costs associated with this type of installation, both for the installation and replacement costs and the associated maintenance activity. The rental charge therefore covers the same charge for the provision of a similar asset operating at low pressure but would also include additional costs recognising the provision of more complex equipment and maintenance required for higher pressure installations.



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## 3.4 Transactional charges

NG has amended transactional charges for meterworks to take into account latest cost estimates and, overall, meterwork charges for 2016/17 have risen as a result of this.

This section describes the methodology used to determine the transactional (one-off) charge for installation of domestic credit metering equipment. This charge reflects Service Provider and materials costs, an uplift for other work related costs and an allowance for profit:

Charge = (Materials cost + (Service Provider costs x (1 + overhead uplift))) x (1 + profit%)

Equivalent calculations determine transactional charges for installing other metering equipment and for other categories of meter work. Charges for work on larger I&C metering equipment, dataloggers and volume converters are quoted on an individual basis.

The charge for exchanging a domestic meter from a credit to a pre-payment meter is tariff capped and consequently the charge for this work has been amended to £83.72. NG also applies this rate to domestic pre-payment to credit meter exchange requests, although this transaction is not subject to regulatory control.

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## 3.5 DM (daily meter) reading

Charges reflect average costs of providing a DM daily reading administration service (including query management), an uplift reflecting support and sustaining costs, and the costs of line rental and

telephone calls between dataloggers and the central collection system. The DM meter reading charge has been set at the tariff cap of £532.22 p.a. from 1 April 2016.



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