



Your budgeting companion

October 2018



Budget with confidence

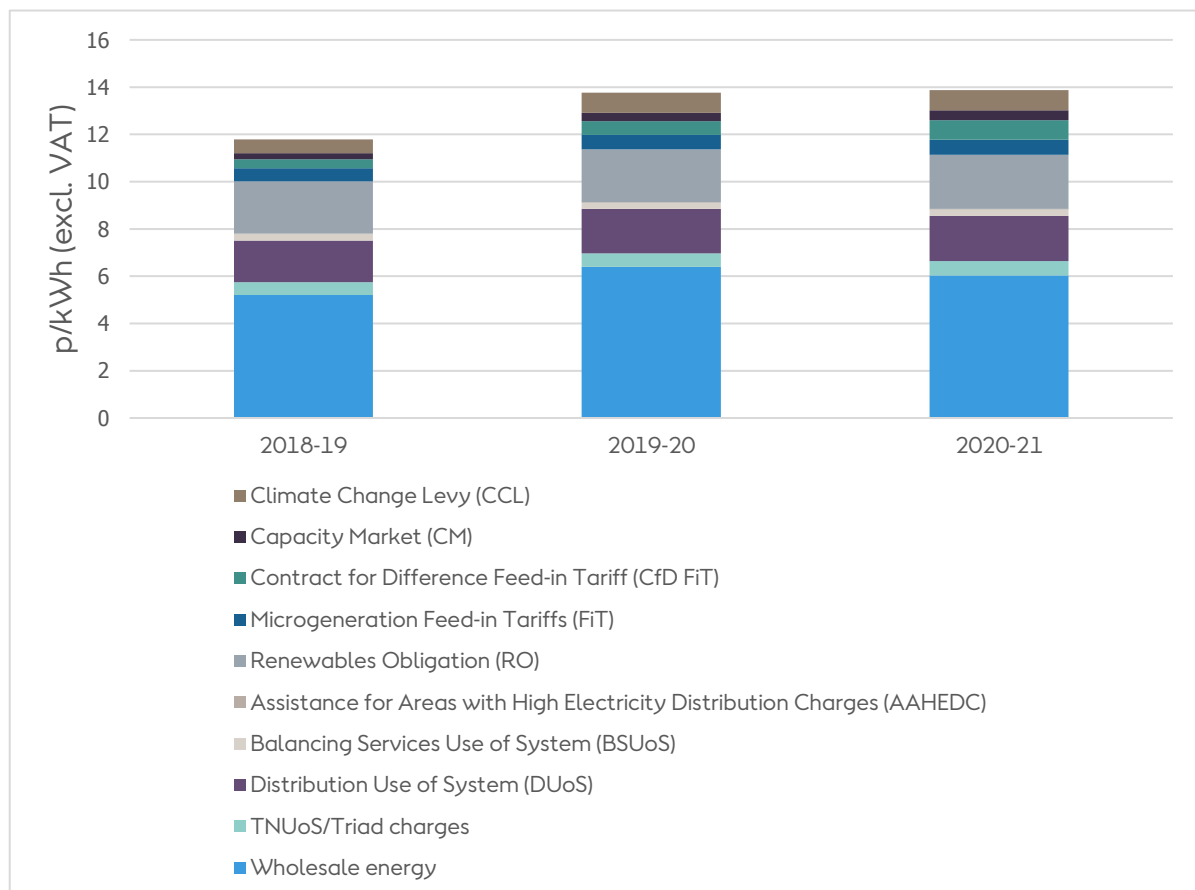
Inside this new report, you'll find up-to-date information to help you forecast with confidence and develop your energy strategy.

As well as forecasts of commodity and non-commodity elements of your invoice for gas and electricity, we've also included more information on each cost component and the factors driving changes.

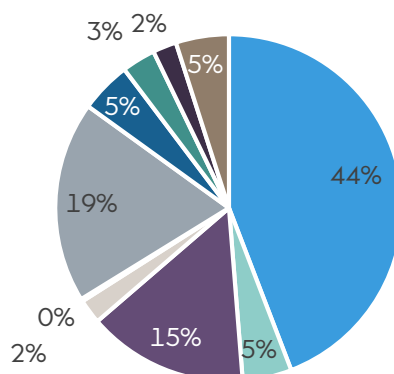
We hope you find this useful, but if you have any feedback or questions, please let us know. You can either contact your Account Manager directly, or email: sales_uk_marketing@orsted.co.uk

Your forecasts for electricity in a nutshell

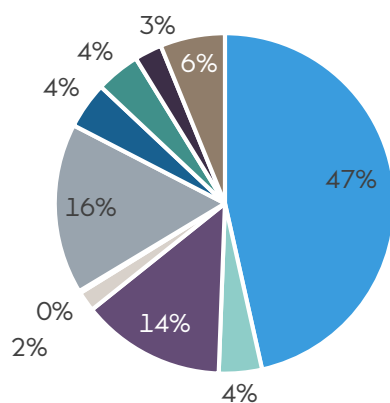
Forecast delivered electricity costs 2018-19 to 2020-21



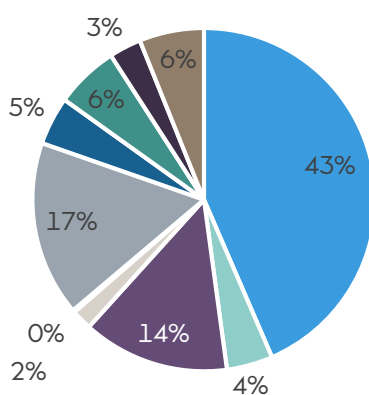
A percentage breakdown of forecast delivered electricity costs 2018-2019



A percentage breakdown of forecast delivered electricity costs 2019-2020



A percentage breakdown of forecast delivered electricity costs 2020-2021



Note: Percentages have been rounded to the nearest whole number. Please refer to the legend on page 3 to identify the cost.

The headlines

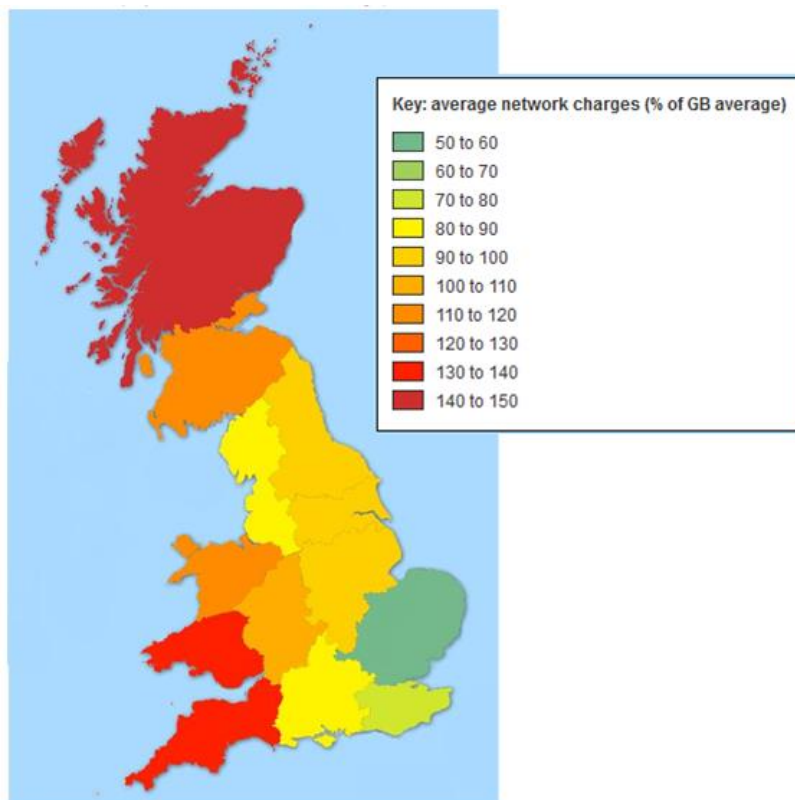
- Delivered electricity costs are forecast to increase by **4%** in 2019-20 against 2018-19 figures. Whilst wholesale costs decrease by **3%** for this period, non-commodity costs are set to rise by **12%**
- Delivered electricity costs are set to fall by **1%** in 2020-21 against 2019-20. This is if forward wholesale markets stay the same. Wholesale markets are priced lower for delivering energy in 2020-21 than today and if things stay the same, this will offset a forecast annual increase in non-commodity costs of almost **7%**.
- In April 2019, Climate Change Levy (CCL) is due to rise by about **45%**. This is because Carbon Reduction Commitment (CRC) costs will be recovered through CCL.

Key drivers for 2019-20

- Increases for network costs are close to inflation, reflecting Ofgem's long-term price controls. However, there is potential for regional variations if use of system structures are changed.
- There will be a **16%** increase in policy costs. Policy costs come from government programmes to deliver low carbon electricity and ensure security of supply.
- There may be changes in the medium term to the structure of network tariffs and policy costs as the electricity generation mix becomes more intermittent and dispersed. These changes include:
 - **Ofgem and BEIS Targeted Charging Review Significant Code Review (TCR SCR)** which is reviewing the long-term structure of network costs.
 - **The Charging Futures workstream programme** which is coordinating significant reform of electricity access and charging arrangements across the GB network.
 - **New investments in long distance power links** which aims to lower balancing BSUoS cost.

Network costs - regional trends

Average network charges for large electricity users (expressed as a % of the GB average)



- Network costs for distribution and transmission average **2.60p/kWh** across GB. This is equivalent to around **20%** of the total invoice (before VAT).
- Transmission costs average **0.55p/kWh**. These are highest in South England and South Wales.
- North Scotland has the highest distribution costs but South Wales and South West England also have costs over **1p/kWh** above the GB average.
- Load switching and avoiding peak periods can help mitigate costs. We can help with this - please speak to your Account Manager for more information.

Your forecasts of wholesale electricity costs



Wholesale cost includes the market value of electricity for a period, costs for system losses, plus the supplier's costs and margin.

What's driving it?

- Wholesale electricity markets have surged. This is due to tightening global oil and coal markets, global trade and political tensions and 10-year high carbon prices.
- The market is in backwardation. This means that prices are decreasing the further into the future the electricity is to be delivered (e.g. 2020-21 vs 2019-20). In other words, costs for the current year are higher than those for future years.

Forecast electricity wholesale costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
Wholesale costs (p/kWh)	6.68	6.49	5.82
Change (%)	-	-3%	-10%

Your forecasts of electricity network costs



Transporting energy across electricity and gas public networks to a customer meter incurs a cost. Suppliers recover these costs from their customers, as 'network costs'.

For electricity, network costs include:

- Transmission Network Use of System (TNUoS or Triad)
- Distribution Use of System (DUoS)
- Balancing Services Use of System (BSUoS)
- Assistance for Areas with High Electricity Distribution Costs (AAHEDC)

Ofgem sets price controls for networks to beyond 2020. These controls are linked to inflation but can vary year-on-year if new investments are commissioned, tariffs are rebalanced or if other one-off events occur.

Forecast Transmission Network Use of System (TNUoS)/Triad costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
Triad costs (p/kWh)	0.54	0.56	0.60
Change (%)	-	4%	7%

Forecast Distribution Use of System (DUoS) costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
DUoS costs (p/kWh)	1.76	1.88	1.92
Change (%)	-	7%	2%

Forecast Balancing System Use of System (BSUoS) costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
BSUoS costs (p/kWh)	0.27	0.26	0.27
Change (%)	-	-3%	6%

Forecast Assistance for Areas with High Electricity Distribution Costs (AAHEDC) costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
AAHEDC costs (p/kWh)	0.03	0.03	0.03
Change (%)	-	0%	0%

Note: AAHEDC costs will increase in line with inflation each year, but annual increases are not significant enough to affect the data.

Your forecasts of electricity policy costs



Policy costs include the following:

Subsidising renewable electricity	Ensuring security of supply	Reducing energy consumption
Renewables Obligation, Microgeneration Feed-in Tariff, Contracts for Difference Feed-in Tariff	Capacity Market	Climate Change Levy

- The Levy Control Framework sets an annual figure for the 'subsidy of renewable electricity' policy costs, including through to 2020-21, to a value of **£7.6bn** (in 2011-12 prices). This is equivalent to around **25%** of forecast consumer spend on electricity in that year.
- In June 2018, BEIS consulted on widening eligibility for the EII exemption. By allowing more businesses to become eligible, non-eligible consumers will be charged more. This means that small businesses and domestic consumers will see an increase in their electricity bills.

Forecast Renewables Obligation (RO) costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
RO (p/kWh)	2.21	2.23	2.29
Change (%)	-	1%	3%

Forecast Microgeneration Feed-in Tariff (FiT) costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
FiT (p/kWh)	0.56	0.61	0.63
Change (%)	-	9%	3%

Forecast Contracts for Difference (CfD) FiT costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
CfD FiT (p/kWh)	0.37	0.58	0.83
Change (%)	-	57%	44%

Forecast Capacity Market (CM) costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
CM (p/kWh)	0.26	0.36	0.42
Change (%)	-	38%	16%

The table below shows the main Climate Change Levy (CCL) rate at April 2018 and April 2019

Taxable commodity	Rate from 1 April 2018	Rate from 1 April 2019
Electricity	0.00583 (£/kWh)	0.00847 (£/kWh)
Natural gas	0.00203 (£/kWh)	0.00339 (£/kWh)
Liquefied Petroleum (LPG)	0.01304 (£ per kg)	0.02175 (£ per kg)
Any other taxable commodity	0.01591 (£ per kg)	0.02653 (£ per kg)

Forecast CCL costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
CCL (p/kWh)	0.58	0.85	0.85
Change (%)	-	47%	0%

CCL at the reduced rate

The table below shows the reduced CCL rate, at April 2018 and April 2019.

Taxable commodity	Rate from 1 April 2018	Rate from 1 April 2019
Electricity	10%	7%
Natural gas	35%	22%
LPG	35%	22%
Any other taxable commodity	35%	22%

More about electricity network costs



Transmission Network Use of System (TNUoS)/Triad costs

- TNUoS costs are for transmitting electricity around the country.
- Triad forms part of TNUoS costs. Each year, licenced suppliers must pay TNUoS costs to National Grid to cover its costs of delivering electricity across the network. For half-hourly meters, TNUoS costs are directly passed through to customers from suppliers as Triad charges.
- 'Triads' are the three half hour periods of peak system demand between November and February. The peaks typically fall between 4pm and 7pm on weekdays. This is the time that industrial consumption often coincides with higher domestic consumption. National Grid forecasts Triad charges up to five years in advance.

What's driving them?

- There have been reforms to transmission charging for embedded generators, which has halted a recent trend of cost increases that were above inflation.
- These reforms are cutting the amount that embedded generators will receive by a third a year, over the next three years.
- As a result, TNUoS/Triad charges have increased in line with inflation. This is despite increasing overall revenues allowed under the price controls.

Distribution Use of System (DUoS) costs

DUoS costs relate to the cost of maintaining the regional networks that transport electricity from the local sub-station to the end customer. This infrastructure is owned and operated by the Distribution Network Operator (DNO) in your area. DUoS are charged to generators and suppliers, and then recovered from electricity users. Each DNO publishes a forecast of costs in its region and suppliers use this as a basis for DUoS calculations.

What's driving them?

- In 2019-20, DUoS costs are expected to rise over the level of inflation.
- Latest revenue statements from DNOs indicate that in 2020-21, DUoS costs will increase in line with inflation. This is consistent with Ofgem's price controls.

Balancing Services Use of System (BSUoS) costs

BSUoS is a charge that National Grid levies to balance the electricity system and recover the costs incurred as the system operator. National Grid publishes BSUoS forecasts for the current and next charging year.

What's driving BSUoS costs?

- BSUoS costs are forecasted to average just over **0.25p/kWh** annually through to 2020-21.
- Pressure for rising costs from higher commodity prices and lower than forecast transmission demand is expected be offset by the start-up of the Western Link High Voltage Direct Current (HVDC) project in 2019-20.
- The Western Link will enable more renewable power to flow from Scotland into England and reduce constraint costs recovered through BSUoS.

Assistance for Areas with High Electricity Distribution Costs (AAHEDC)

- The AAHEDC scheme is administered by National Grid and provides financial assistance to areas of the country with high distribution costs. Currently, the North of Scotland is the only area specified to receive assistance. All electricity suppliers are charged an amount by National Grid, and this is passed to Scottish Hydro Electric Power Distribution Ltd to allow a reduction in costs for this area.
- Suppliers must pay National Grid a published amount based on total supplied volume. The cost is then passed on to all customers as a £/MWh charge.
- Draft AAHEDC costs are published in March (ahead of the start of the charging year) and finalised in July.

What's driving AAHEDC?

- For 2018-19, AAHEDC is tasked with raising **£61.3m** and this amount will be linked to inflation for future years.
- If demand is higher or lower than forecast, the unit cost will fall (as a higher demand base lowers the average cost) or rise (as a lower demand base increases the average cost).

More about electricity policy costs



Renewables Obligation (RO)

- RO is a government policy to encourage the development of renewable electricity generating capacity in the UK. It is now closed to new capacity.
- RO places an obligation on electricity suppliers to source an increasing proportion of the electricity they supply from renewable sources. This is measured through the expected production of tradable Renewables Obligation Certificates (ROCs) each year.
- Exemptions are available for some energy intensive users.

What's driving it?

- RO closed to all new generating capacity on 31 March 2017 but will continue to support existing schemes for their allowed period, which is normally 20 years.
- Capacity supported under RO is forecast at 31.6GW by the end of 2018-19.
- RO values increase in line with inflation and forecast total production of certificates.

Microgeneration Feed-in Tariff (FiT)

- FiT is a government programme to support the uptake of a range of small-scale renewable and low-carbon generation technologies. The tariff is then paid to anyone who installs a renewable energy system producing electricity. Tariffs are paid for electricity that is generated with a bonus for any energy exported to the grid.
- FiT costs vary by quarter with unit rates typically higher in the summer than the winter. This reflects higher solar output and a lower demand base from which to recover costs.
- Exemptions are available for some energy intensive users.

What's driving it?

- Costs are stabilising to inflation linked increases, as no new capacity is being accredited under the scheme after 31 March 2019.

Contract for Difference Feed-in Tariff (CfD FiT)

- CfD FiT is a subsidy for large-scale low carbon generation projects introduced after 2015. This tops up wholesale power prices to a target level for different generation projects.
- Costs vary by quarter depending on the volume of generation to be subsidised and the amount needed for top-up payments.

What's driving it?

- Unit rates are rising as new capacity joins the scheme.
- If wholesale costs fall from current levels, unit scheme costs will increase as greater top-up payments will be required.

Capacity Market (CM)

- Capacity Market is a government scheme to ensure security of electricity supply. It is intended to incentivise investment in more sustainable, low-carbon electricity capacity at the least cost for energy consumers. This is needed to help secure electricity supplies for the future.
- Generators are paid a 'per MW price' for the capacity they can provide to the market. This capacity needs to be available when providers are called upon by National Grid at any time during the contracted period.
- Capacity is procured in technology neutral auctions four years and one year ahead of delivery. Contracts are available for one year, three years for refurbishing work and 15-years for new builds.

What's driving it?

- Charges are increasing as the scheme becomes fully established.
- The first four-year auction is to take effect for winter 2018-19.

Climate Change Levy (CCL)

CCL is a government environmental tax on energy delivered to non-domestic energy users. HMRC requires all suppliers to pay a levy to fund CCL. This cost is then passed on to all electricity customers through their invoices. The CCL rate goes up in line with inflation every year and is chargeable on a consumption basis per £/kWh.

Who pays CCL?

The following sectors must pay CCL:

- Industrial
- Commercial
- Agricultural
- Public services

The following are excluded from paying CCL:

- Businesses that use a small amount of energy
- Domestic energy users
- Charities engaged in non-commercial activities

Reduced rate

You can get a reduction on the main rates of CCL if you're an energy intensive business and have entered into a Climate Change Agreement (CCA) with the Environment Agency.

There will be an increase to the Climate Change Levy (CCL) from April 2019

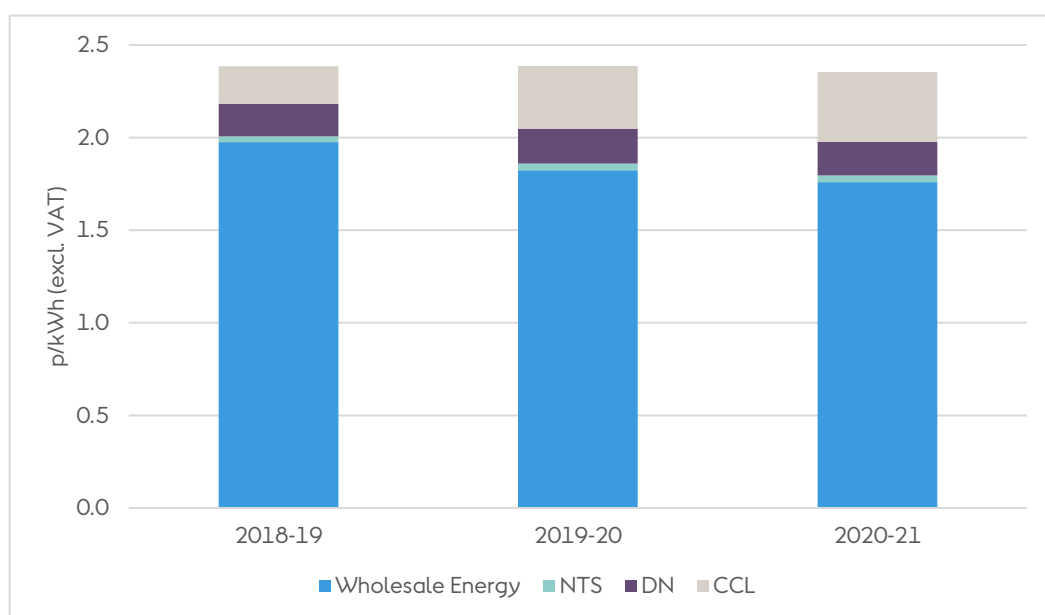
As part of the 2016 Budget, Government announced that from April 2019, the current Carbon Reduction Commitment (CRC) scheme will be closed and replaced by CCL. This means that tax which is usually recovered through CRC will instead be collected through CCL.

How this will affect your electricity invoice

If you pay CCL, you will notice an increase of **47%** from April 2019. If you currently pay CRC, this will not appear on your invoice from April 2019.

Your forecasts for gas in a nutshell

Forecast delivered gas costs 2018-19 to 2020-21



Headlines

- No changes are forecast for delivered gas costs in 2019-20 on 2018-19. This is because an **8%** fall in wholesale costs will be offset by a **67%** increase in CCL.
- If forward wholesale markets retain their current levels, and National Transmission System (NTS), Distribution Network (DN) and CCL costs revert to long-term trend of inflation-linked increases, delivered costs look set to remain steady again in 2020-21.

Key drivers for 2019-20

- The wholesale market is in backwardation. This means that prices are decreasing the further into the future the gas is to be delivered.
- Increases in line with inflation, which reflect Ofgem's long-term price controls.
- **67%** increase in policy costs due to reformed CCL.

Your forecasts of wholesale gas costs



Wholesale energy includes the market value of gas for a period, plus the supplier's costs and margin in providing it to the customer.

What's driving it?

- Wholesale gas markets have increased strongly due to rising oil prices and the need to replenish gas in storage in Western Europe after the 'beast from the east' cold snap at the end of winter 2017-18.
- The wholesale gas market is in backwardation. This means that prices are decreasing, the further in to the future the gas is to be delivered (e.g. 2020-21 vs 2019-20).

Forecast gas wholesale costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
Wholesale energy (p/kWh)	2.44	2.38	2.15
Change (%)	-	-3%	-10%

Your forecasts of gas transportation costs



- Transportation costs are levied on users of the gas public networks to transport volumes to the customer's meter. Gas transportation costs relate to National Transmission System (NTS) costs and regional Distribution Network (DN) costs. The latter are also sometimes referred to as Local Distribution Zone (LDZ) costs.
- Transportation costs have **fixed daily**, **commodity** and **capacity** components. In this report, figures are presented on a volumetric, averaged basis.
- Commodity costs are based on the volume of gas consumed while capacity costs are based on the maximum amount of gas expected to be used by a site on any day in the year.
- Price controls for networks are set to beyond 2020 by Ofgem. They are inflation-linked but can vary year-on-year depending on the investment profile of the network company if tariffs are rebalanced or if other one-off events occur.

Forecast gas NTS costs 2018-19 to 2020-21

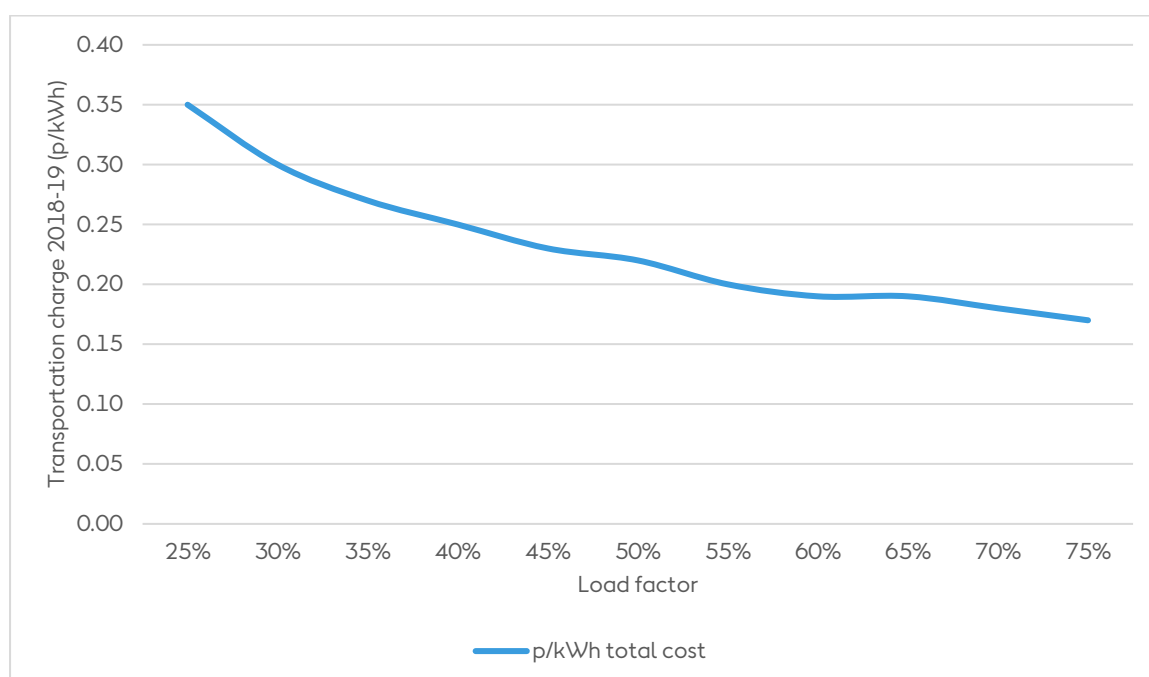
	2018-19	2019-20	2020-21
NTS costs (p/kWh)	0.03	0.04	0.04
Change (%)	-	15%	-1%

Forecast gas DN costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
DN costs (p/kWh)	0.17	0.18	0.17
Change (%)	-	4%	-6%

Note: The original data has been rounded to two decimal places as shown above. Percentage changes are based on the original data.

Average transportation costs by load factor



Your forecasts of gas policy costs



Forecast gas CCL costs 2018-19 to 2020-21

	2018-19	2019-20	2020-21
CCL (p/kWh)	0.20	0.34	0.38
Change (%)	-	67%	11%

More about gas transportation costs



National Transmission System (NTS) costs

- NTS costs account for the costs of shipping gas around the country. They include **commodity** and **capacity** elements.
- National Grid Gas Transmission (NGGT) produces an annual statement of costs for the coming year and forecasts the revenues it expects to earn from its costs in the years after this.

What's driving them?

- NGGT's long-term revenue statement, issued in March 2018, suggests NTS costs will increase **15%** by 2019-20 and fall just over a percentage point in 2020-21.
- NTS costs will still only account for around **1.5%** of delivered gas costs even after this increase.

Distribution Network/Local Distribution Zone (LDZ) costs

- These costs are levied on suppliers to cover the costs of the lower pressure gas Distribution Networks (DNs) to flow gas to the customer's meters.
- Each of the four distribution companies publishes annual charging statements covering the eight DNs they own collectively. They also provide annual forecasts of expected revenues in future years.

What's driving them?

- DN costs are expected to rise to a level above inflation in 2019-20, before falling in 2020-21 according to the DN companies' long-term forecasts.
- There will be significant regional variations in annual charge changes reflecting the investment profiles of the different networks. For example, a decrease of **10%** is projected for South West and North Wales in 2020-21.

Load factor and average transportation

- Gas transportation costs comprise capacity costs (related to peak daily consumption) and commodity costs (related to annual volume).
- The relationship between peak daily consumption and annual consumption is known as the 'load factor' and is expressed as a percentage. The higher the load factor, the more consistent the use of gas through the year: higher load factors tend to reflect a process use (heat to change the state of matter) while lower load factors tend to reflect space heating, where the requirement is primarily temperature related.
- Lower load factor sites tend to attract higher average costs for transportation, meaning that reducing gas consumption peaks may yield a saving in these costs.

More about gas policy costs



Climate Change Levy (CCL)

What is it?

- CCL is administered by HM Revenue & Customs and is designed to incentivise businesses to consume less energy and therefore reduce greenhouse gas emissions.
- CCL is charged to most non-domestic consumers of energy in the UK.
- Discounts and exemptions are available for very small users and certain manufacturing processes.
- CCL costs are provided up to four years in advance by HMRC.

What's driving it?

- CCL costs have increased in line with inflation since the scheme started.
- April 2019 will see a revamped CCL rise **67%** as CRC energy efficiency scheme costs will be recovered through it.

Wholesale market forecasts are provided by Ørsted. These are based on the market value of baseload electricity/market value of gas in early October 2018, covering the following periods:

- 2018-19: the year from 1 November 2018 to 31 October 2019
- 2019-20: the year from 1 April 2019 to 31 March 2020
- 2020-21: the year from 1 April 2020 to 31 March 2021

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