

Your guide to Third Party Costs

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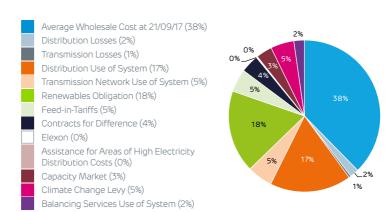
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Electricity's only half your power bill

The electricity industry faces numerous challenges, with many set to continue for years to come. Volatile power prices, lack of spare capacity, rising policy costs, regulatory changes and the impact of both increasing volumes of renewable energy and generation types are creating greater uncertainty for customers and suppliers alike.

In recent years, we've all seen significant cost increases in the non-energy parts of our bills: Third Party Costs (TPCs) currently represent over 60%. That's why it's so important to understand the nature, role and purpose of TPCs and their impact.

Cost Breakdown for 2018/19



Industry Changes

UK General Election, June 2017

Even though the Conservative Party retained the most seats in the House of Commons, it didn't win an overall majority. After prolonged negotiations, the Prime Minister now leads a minority Conservative government with the support of the Democratic Unionist Party (DUP).

In the autumn Budget the Government fixed the Carbon Price Floor, saying it will seek a similar price until unabated coal is no longer in use. This should give businesses greater clarity on the total price they'll pay.

On the same day as the autumn Budget, the government published their new "Control for Low Carbon Levies" replacing the Levy Control Framework (LCF) with a new set of controls that will help reduce the cost of low carbon subsidies. Businesses breathed a sigh of relief as the Government announced it will not introduce any new low- carbon electricity levies until existing costs fall – in around 2025. This will help businesses when forecasting costs, although existing levies continue to rise.



Energy Intensive Industries (EII)

State Aid Approval was received for the exemption for Energy Intensive Industries (EII) for the Contracts for Difference (CfD) scheme in December 2015, and for the Renewables Obligation (RO) in June 2017. We're still awaiting news on State Aid Approval for the Small Scale Feed-in Tariff (ss-FiT) scheme.

The aim of these changes is to protect Ell operating in international markets (e.g. steel producers) from the increasing costs of energy and climate change policy.

The Department for Business, Energy & Industrial Strategy (BEIS) recently confirmed that the RO exemption will start 1st January 2018, and we understand the CfD Exemption will go live in autumn 2017. Both are subject to parliamentary approval for the new legislation required.

BEIS expects the measures to save around £100m a year in energy costs for over 130 companies within EII. The total energy exempt volume will be around 12TWh per annum. In contrast, the exemption - once implemented - will mean those not classed as EII will face additional charges: an extra £0.25/MWh to the ss-FiT, £0.75/MWh for RO and around £0.15/MWh for CfD (based on the current CfD Interim Levy Rate).

Transmission Network Use of System (TNUoS)

TNUoS charges recover the cost of installing and maintaining the transmission system in England, Wales, Scotland and offshore.

National Grid - The System Operator - owns and operates the electricity transmission system in England and Wales.

TNUoS is charged against demand used during the Triads (the three half hour settlement periods with the highest average demand that are at least 10 days apart). Charges are finalised each January for the following year (April-March) for each of the UK's 14 distribution areas (see "Distribution Use of System").

In 2017/18, average Half Hourly (HH) TNUoS charges increased by 1.2% and average Non Half Hourly (NHH) charges increased by around 1.7%

The Triad dates for winter 2016/17 were all in settlement period 35 (5:00pm to 5:30pm) on Monday 5th December 2016, Thursday 5th January 2017 and Monday 23rd January 2017.

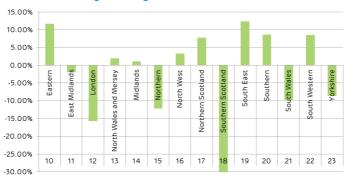
The Office of Gas & Electricity Markets (Ofgem) has published its Targeted Charging Review and is currently considering a Significant Charging Review. This will consider a variety of issues in the current electricity transmission and distribution network and, in particular, how residual charges are recovered.

In addition, there are several modifications under review that - if agreed - could have an impact on future TNUoS costs.

Percentage Change HH TNUoS 16/17 to 17/18



Percentage Change NHH TNUoS 16/17 to 17/18



Balancing Services Use of System (BSUoS)

BSUoS charges are imposed on generators and suppliers (50:50 share) and paid to the System Operator, National Grid. The aim is to recover the cost of operating and balancing the electricity system.

BSUoS charges - which are calculated half hourly - continue to be volatile. Particularly when demand is low and the impact of intermittent generation (e.g. wind turbine output) is greatest. Wind generation remains the largest driver of BSUoS charges throughout the year.

For 2016/17, the time-weighted BSUoS charge at National Balancing Point (NBP) outturned at £2.48/MWh - nearly £0.40/MWh higher than the previous year. This figure included the Black Start Income Adjustment Event announced in 2016 to cover the cost of two additional contracts agreed during the year. Black Start is the procedure to recover from a shutdown of the transmission system without requiring start up power from the grid.

Previously, National Grid used the Supplemental Balance Reserve (SBR) and Demand Side Balancing Reserve (DSBR) to balance the system when capacity margins were tight. Ofgem has decided to remove these arrangements for 2017/18, since the Capacity Market is due to start in winter 2017.

Despite the removal of SBR and DSBR, we believe that BSUoS will continue to increase, since wind and solar are relatively inflexible in their generation patterns. In periods of low demand, operators may need to be paid to limit the levels of electricity they produce.



Distribution Use of System (DUoS)

DUoS charges are paid to the 6 Distribution Network Operators (DNOs) that own and operate the networks of the UK's 14 distribution areas (see table, below). Each regional DNO hosts a large number of supply meters.

Area	Detail	Date of forecast	Forecast based on	
10	Eastern	Aug-17	DCP066 supplier briefing	
11	East	Aug-17		
12	London	Aug-17		
13	Manweb	Aug-17		
14	West	Aug-17		
15	Northern	Aug-17		
16	Norweb	Aug-17		
17	Hydro	Aug-17		
18	Scottish Power	Aug-17		
19	South East	Aug-17		
20	Southern	Aug-17		
21	South Wales	Aug-17		
22	South Western	Aug-17		
23	Yorkshire	Aug-17		

DUoS charges cover the cost of installing, operating and maintaining a safe and reliable electricity supply. DUoS rates for 2018/19 showed an average year-on-year increase of 14% for small non-domestic customers and 15% for large non-domestic customers. Domestic charges saw a slight fall of around 3%.

Much of the increase is due to Ofgem's "Revenue matching in the Common Distribution Charging Methodology (CDCM)" scheme. This changed the scaling methodology used to match tariffs to allowed revenues – resulting in reduced peak unit rates and increased off peak rates from April 2018.

For the years beyond 2017/18, we've used the DNOs' revenue estimates. and other data available from their DCP066 statements to project future increases (see table below: two righthand columns). Please note that Haven Power reviews the data in line with the DNOs' quarterly updates. Since the 14 DNOs cover a wide range of population densities and diverse geographies, there are likely to be large variations between the rates they publish. Historically, we've also seen changes between the publication of DCP statements throughout the year and the actual outturns.

Index	Unit	2018/19	2019/20
		-1.30%	9.40%
		5.00%	6.80%
	% change on index	1.70%	11.30%
		2.10%	4.00%
		6.00%	1.00%
		2.20%	8.80%
Latest Forecast 2017/18 Position		6.90%	-0.80%
Latest Forecast 2017/16 Position		0.40%	5.50%
		9.00%	2.30%
		-0.80%	4.30%
		0.70%	-2.00%
		6.00%	4.50%
		1.20%	3.00%
		5.30%	1.40%
Average % increase from provious v	2005	7 470/	A 250/

Average % increase from previous year

3.17%

1.25%

Levy Control Framework (LCF)

The government manages its support for renewable energy through charges in electricity bills, capping the amount of funding through a budget known as the Levy Control Framework (LCF). This limits the cost of schemes funded from levies on bills, while ensuring that renewable targets are met.

Spending under the LCF is expected to increase from £3.2bn in 2013/14 to over £7bn by 2020/21 in 2011/12 prices. It covers the costs of the Renewables Obligation (RO), Small Scale Feed-in-Tariff (ss-FiT) and the Contracts for Difference (CfD) Feed-in Tariff schemes.

Further information on each of these charges follows.

Renewables Obligation (RO)

Before the Renewables Obligation (RO) closed to all new generation earlier this year, it was the main support framework incentivising the generation of large-scale renewable electricity in the UK.

Eligible generators receive a prescribed amount of Renewables Obligation Certificates (ROCs) for every MWh of renewable energy they generate. Licensed suppliers are obliged to source an increasing proportion – the "Renewables Obligation" – of electricity from renewable sources.

The RO is specified at the beginning of October each year and applies to the Compliance Period (CP) that runs from April 1st of the following year through to March 31st of the year after that.

Suppliers fulfil their requirements by presenting ROCs to Ofgem, or by paying Ofgem a published Buy-Out price per ROC for any shortfall. After administration costs are deducted, the Buy-Out payment funds are distributed to eligible renewable generators.

The RO scheme closed to all new generating capacity on 31st March 2017 (excluding grace periods). Therefore, although there will be some increases for 2018/19 due to generation under grace periods, the cost of the RO will start to level out from 2019/20 onwards.

Due to the uncertainty about the implementation date for Energy Intensive Industries (EII - see section in "Recent Industry Changes") exemptions, BEIS has published two possible ROs for 2018/19. The first, 46.8%, includes EII. The second, 45.2%, excludes the exempt volumes in case Parliament fails to approve the measure in time. This is a large increase from the 2017/18 figure of 40.9%, which was itself an increase on the previous level of 34.8%.

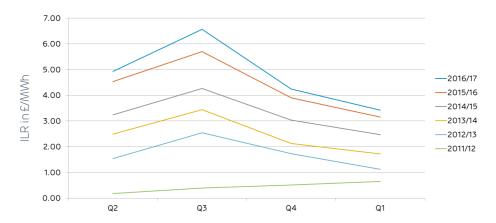
As previously noted, the EII ruling (subject to parliamentary approval) will exempt qualifying industries from up to 85% of the RO charges from January 2018. If this comes into force as expected, we believe the current obligation of 40.9% will rise to 42.3% (based on the recent consultation response published by BEIS).

Ofgem will confirm the Buy-Out in February 2018. For 2017/18, it was published at £45.58 and it's worth noting the amount has increased each year in line with inflation.

Small Scale Feed-in-Tariffs (ss-FiT)

ss-FiT is a subsidy recovered from suppliers and paid to smaller generators of eligible low carbon and renewable power. For 2016/17, the payments to generators ranged from £4/MWh to £140/MWh, depending on the type and size of generation. The scheme will close to new applications in March 2019.

The scheme includes generation from residential properties as well as businesses. The ss-FiT scheme is largely made up of Solar PV installations so the biggest factor affecting the cost is the amount of sunshine in any one year. Due to this seasonality, quarterly costs differ considerably with summer quarters outturning higher than in winter.



Ofgem administers the ss-FiT scheme, collecting a sum from each supplier based on its market share in each quarter. Following the end of the financial year in April, there's also an annual reconciliation in September based on the extra information available at that time. The principal factors affecting the charges are the amount of sunshine hours and installed solar photovoltaic (PV) capacity.

Previously, ss-FiT costs increased well above levels anticipated by the government due to implementation costs dropping. In December 2015, it was announced that the scheme would continue, but include a budget cap for new installations and reduced tariff bands.

Scheme costs for 2016/17 outturned £200m above the projected £2.4bn, despite the reduction in ss-FiT tariffs previously implemented. However, it is expected this will be the last year of significant increases, as take-up of the scheme has begun to slow down.

Until now, suppliers have been able to use Guarantees of Origin (GoOs) for exempting demand from FiT costs. A GoO is an instrument that guarantees that 1 MWh of electricity has been produced from a renewable energy source within Europe (excluding the UK).

Previous years have seen the annual reconciliation cost of ss-FiT increase by as much as £0.20/MWh. However, 2016/17 was the first year Ofgem implemented a cap on the number of GoOs possible to deduct from the overall eligible supply volumes.

Accordingly, although 20.7TWh of GoOs were submitted to Ofgem, the cap of 8.1TWh considerably reduced the effect of GoOs. This is reflected in the annual FiT cost outturn of £4.80/MWh, only increasing the average quarter costs by around 5p.

Contracts for Difference Feedin-Tariff (CfD FiT)

The CfD FiT scheme is the main framework to encourage new low carbon power generation in the UK. It replaces the Renewables Obligation (RO, see earlier section) mechanism - now closed for new generation - as the main vehicle for long-term investment into renewable electricity.

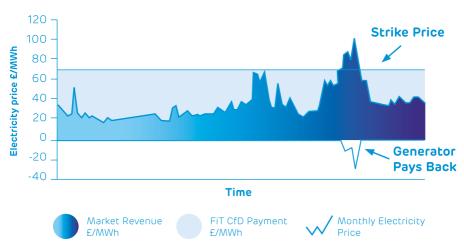
Generators contract with the Low Carbon Contracts Company (LCCC) and agree a "strike price" for the electricity they generate and want to sell back to the market. If the wholesale price is less than the agreed "strike price", the generator will receive a "top up" price for its energy. If the market price is higher than the "strike price", a payment is made back to suppliers. This means that the generator is guaranteed a certain amount per MWh, and this makes funding projects easier.

The LCCC sets an Interim Levy Rate (ILR) for each quarter, and suppliers are billed on this rate. At the end of each quarter, the LCCC reconciles the difference between each supplier's daily outturn and the actual ILR.

The scheme's first generation was in summer 2016 and, since then, both generation levels and costs have increased considerably, with other sites due to come online soon. Published recently, the second CfD auction secured 3.3GW of capacity for delivery years 2021/22 and 2022/23. Strike prices for the 10 successful projects were considerably lower than the previous auction.

As the scheme's costs are dependent on wholesale prices, predicting costs (or income) for generators is difficult. Should wholesale prices increase, scheme costs will fall as lower top-up payments are required, with the opposite holding true if prices fall.

The graph (below) illustrates how generators are compensated.



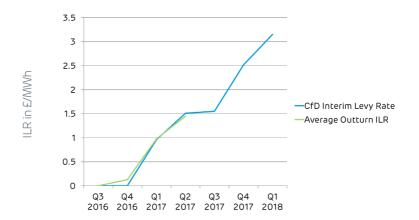
Source UK Government White Paper, July 2011, licensed under the Open Government License v1.0

Breaking down the costs

CfD costs comprise the Interim Levy Rate and Operational Costs. Every February, the Department for Business, Energy & Industrial Strategy (BEIS) publishes the Operational Costs Levy. BEIS set it at £0.0509/MWh for 2016/17 and increased it to £0.0524 for 2017/18.

Since generation started in July 2016, the Interim Levy Rate (ILR) - set by the Low Carbon Contracts Company (LCCC) - has increased from £0.005 to £3.149/MWh for Q1 2018. The graph (opposite) compares the ILR Published by the LCCC to a time-weighted average of the quarterly outturn based on the daily rates.





Capacity Market (CM)

The Electricity Market Reform (EMR) arrangements introduced a Capacity Market (CM) to ensure the UK has enough capacity on the grid to cover peak demands (historically on winter weekdays, between 4pm and 7pm).

Reliable generating sets that are not remunerated under any renewable schemes are eligible under the CM - alongside demand that can be reduced with notice. In return for a payment, set through an auction process, generators must commit to being available at peak times in the future.

Early in 2016, the government decided to bring forward the start of the CM scheme from October 2018 to October 2017. This was a response to short-term concerns over system capacity – the requirement to 'keep the lights on'.

In February 2017, the Early Auction (EA) to procure contracts for delivery year 2017/18 secured 54GW of capacity. It was surprising that the EA finished at £6.95/kW, given the extent of cost uncertainty before the auction. The industry forecast an outturn between £20/kW and £62/kW (the latter being the conservative estimate of the clearing price based on the Department of Energy & Climate Change's (DECC's) Impact Assessment).

While the charges falling under the Levy Control Framework (LCF) are spread across all periods, the CM supplier charge is a monthly payment to National Grid. The payments are based on each supplier's expected market share during periods of high demand (4pm to 7pm, Monday to Friday, November to February).

The charge will be reconciled with the actual amount (the outturn) supplied by each supplier, once that figure is known. The aim is to discourage usage in peak periods.

Like the Contracts for Difference (CfD), CM costs are broken down into parts: Operational Costs and Supplier Levy. Along with CfD, these charges form the EMR costs.

Climate Change Levy (CCL)

The CCL is a tax on energy that aims to encourage businesses to reduce carbon emissions and become more energy efficient. Until August 2015, Levy Exemption Certificates (LECs) supported generation from renewable sources (such as biomass or wind) and customers on renewable energy were exempt from paying the CCL. However, since that date, the charge has been applied to all business users.

CCL rates show modest increases until 2019/20, at which point they jump 46% to £8.47/MWh. This significant increase is due to the government seeking to make up a shortfall in revenue resulting from the end of the Carbon Reduction Commitment (CRC) scheme in 2019.

£/MWh	2016/17	2017/18	2018/19	2019/20
CCL	5.59	5.68	5.83	8.47

Actuals published by HMRC.

Glossary

BEIS The Department for Business, Energy and Industrial Strategy

BSUoS Balancing Services Use of System

CCL Climate Change Levy

CDCM Common Distribution Charging Methodology

CfD Contracts for Difference

CfD FiT Contracts for Difference Feed-in-Tariff

CM Capacity Market
CP Compliance Period

DECC Department of Energy and Climate Change

DNO Distribution Network Operator
DSBR Demand Side Balancing Reserve
DUoS Distribution Use of System
DUP Democratic Unionist Party
Ell Energy Intensive Industries
EMR Electricity Market Reform
GoOs Guarantees of Origin

HH Half Hourly
ILR Interim Levy Rate

LCCC Low Carbon Contracts Company

LCF Levy Control Framework

NBP National Balancing Point

NHH Non Half Hourly

Ofgem The office of Gas and Electricity Markets

RO Renewals Obligation

ROCs Renewables Obligation Certificates
SBR Supplemental Balance Reserve
ss-FiT small scale Feed-in-Tariffs

TNUoS Transmission Network Use of System

TPCs Third Party Costs

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