



Winter outlook:
Energy cost forecast
for 2018 and beyond

INTRODUCTION

Businesses are facing the tenth successive year of rising energy costs, largely due to the increase in taxes, levies and network 'non-commodity charges' that now make up 60% of a business' energy bill.

Over the past six months, volatility has returned to the wholesale market, pushing prices back to levels not seen for almost two years – in which time, non-commodity charges have risen by up to 25% for some organisations. Businesses now face the 'double whammy' of a rise on both sides of the bill.

As we approach a new year and the Brexit deadline looms, many businesses are concerned about the upcoming political and economic changes and how their bottom line will be affected. There is always an element of uncertainty in business energy, and fluctuating costs could be compounded by anything from changes to EII thresholds to currency fluctuations caused by the outcome of Brexit negotiations. However, the trend of rising costs shows no sign of slowing.

Faced with record-high costs and more uncertainty on the horizon, it pays for businesses to re-assess their energy risk management strategies to consider how the cost of energy for this winter and beyond will impact their organisation and what can be done to mitigate it.

This report provides a forecast of energy costs using scenarios for three different business profiles – a medium-sized user, a large energy user currently in the CRC, and a major energy user with and without Energy Intensive Industries exemptions. The differing future energy costs between each profile shows the impact of differing non-commodity charges and exemptions, along with a demonstration of the steep curve that continues to rise.

WHAT'S DRIVING UP ENERGY COSTS?

Commodity costs

After a period of relatively flat wholesale costs, 2018 has seen volatility return to the markets, driven by a number of factors including European gas demand, rising carbon prices and bullish oil markets.

Gas – the primary price driver in UK energy markets – has been particularly turbulent. Last winter, the prolonged cold snap (culminating in the 'Beast from the East') drained gas storage levels across Europe – having a bigger effect than usual on a UK market experiencing its first winter without Rough storage. Prices peaked during the summer months, as huge demand for gas injections to restore storage levels coincided with gas infrastructure maintenance. Oil prices have also rallied during 2018, fuelled by geopolitical factors such as OPEC controls and US sanctions on Iran (direct – LNG). European gas storage levels are healthy in time for Winter18/19, but as usual, much will depend on the weather.

A high carbon price continues to contribute to firm power prices for the foreseeable future. The EU Emissions Trading Scheme (EU ETS) has risen to ca. £15/teCO₂ which, when combined with the UK's Carbon Price Support of ca. £18/teCO₂, has added significant cost to the price of fossil fuel generation. Despite predictions that the UK Government would reduce the Carbon Price Support in Budget 2018 to reflect the sustained ETS price, the rate has been frozen until 2021/2. This could keep power prices firm for the foreseeable future, as the Government has confirmed that the UK would leave the EU ETS in the event of a 'no deal' Brexit, but a carbon tax would be introduced.

Looking beyond the short to medium term, a number of factors will influence how the wholesale markets behave. The scenarios in this report consider whether gas-fired generation will continue to be a key price driver, or whether improved interconnector flexibility or greater small-scale renewable plants will have a bearing on commodity costs. Increased use of electric vehicles and progress in efficiency will also affect the balance between supply and demand. New infrastructure such as faster offshore wind development and the new fleet of nuclear power stations will also have major impacts on the cost businesses pay for each unit of energy they consume.



Non-Commodity Charges

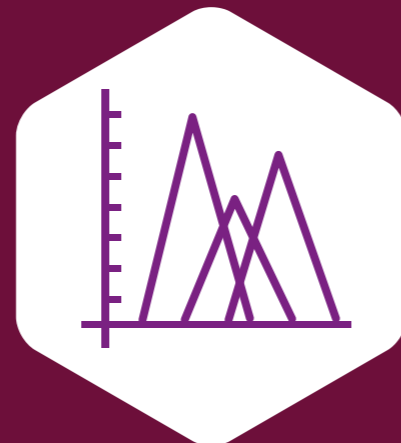
Non-commodity charges have continued to rise year- on-year, as the cost of supporting renewable technologies and upgrading infrastructure to accommodate a changing energy system is passed through to end users' bills.

This year, the cost of the Contract for Difference levy, Renewable Obligation and Feed in Tariff have all risen at rates that are well above inflation, despite the fact that the RO scheme closed to new entrants in 2017. Next year will also see big increases in the Climate Change Levy, a 45% increase for electricity and a 67% increase for gas. In the following years there will be further significant increases in this levy for gas.

Businesses will also feel the brunt of a significant increase in the cost of the Capacity Market, from around £40/MWh in 2017/18 to almost £100/MWh for winter 2018/19 and 2019/2020 due to high outturn costs from previous auctions (note these charges apply to consumption between 16:00 and 19:00 on weekdays between November and February).

Another significant cost increase this year was caused by the changes to Distribution Network Use Of System Charges (DUoS), where peak charges were reduced, but night and weekend charges were increased to levels that are close to weekday charges. Good news for enterprises that use lots of electricity on weekday evenings, but bad news for businesses with a 24/7 operation.

Whilst the anticipated 10% rise in Transmission Network Use Of System charges (TNUoS) this year has been removed due to Ofgem curbing National Grid's investment projects for 2018/19 – and the outcome of the next price control frameworks could limit network operator profit margins –the latest National Grid 5-year forecast shows that most regions will continue to see annual increases of more than double the rate of inflation for the foreseeable future.



ENERGY COST FORECASTS

To create our future energy cost predictions, Inenco's analysts have used internal forecasts and external data sources, including network operators, National Grid and other industry intelligence.

To demonstrate the impact of exemptions and charges on different types of business energy users, the forecast looks at three different types of organisation, and applies low, medium and high scenarios to take into account fluctuations in the wholesale cost of power and gas.

1. A medium-sized energy user: a retailer on low voltage supply
2. A large energy user: a retailer on high voltage supply
3. Manufacturer 1: A manufacturer in a Climate Change Agreement (CCA)
4. Manufacturer 2: A manufacturer both in a CCA and with Energy Intensive Industries (EII) exemptions

Location also plays a part in determining energy costs, with distribution network operators setting individual rates for the regions in which they operate. For the purposes of this forecast, each of the organisations are connected to the East Midlands network. All costs include inflation (which is assumed to be 2.5% for long-term forecasts).

These forecasts serve as an illustration of the pressures facing business energy users. Whilst we have used our industry intelligence to make our predictions as accurate as possible, but with Brexit negotiations still ongoing and future costs such as Capacity Market costs and wholesale prices difficult to predict, there is some inevitable uncertainty around what future energy costs may be.

Scenarios applied:

We've predicted energy costs based on three potential scenarios, including:

A low scenario forecast

- Gas, coal and carbon prices are low
- Offshore wind power has developed quickly
- Improved flexibility through interconnectors

A normal scenario forecast

- A base gas, coal and carbon price
- Limited improvements to energy efficiency
- Gas-fired generation is driving prices

A high scenario forecast

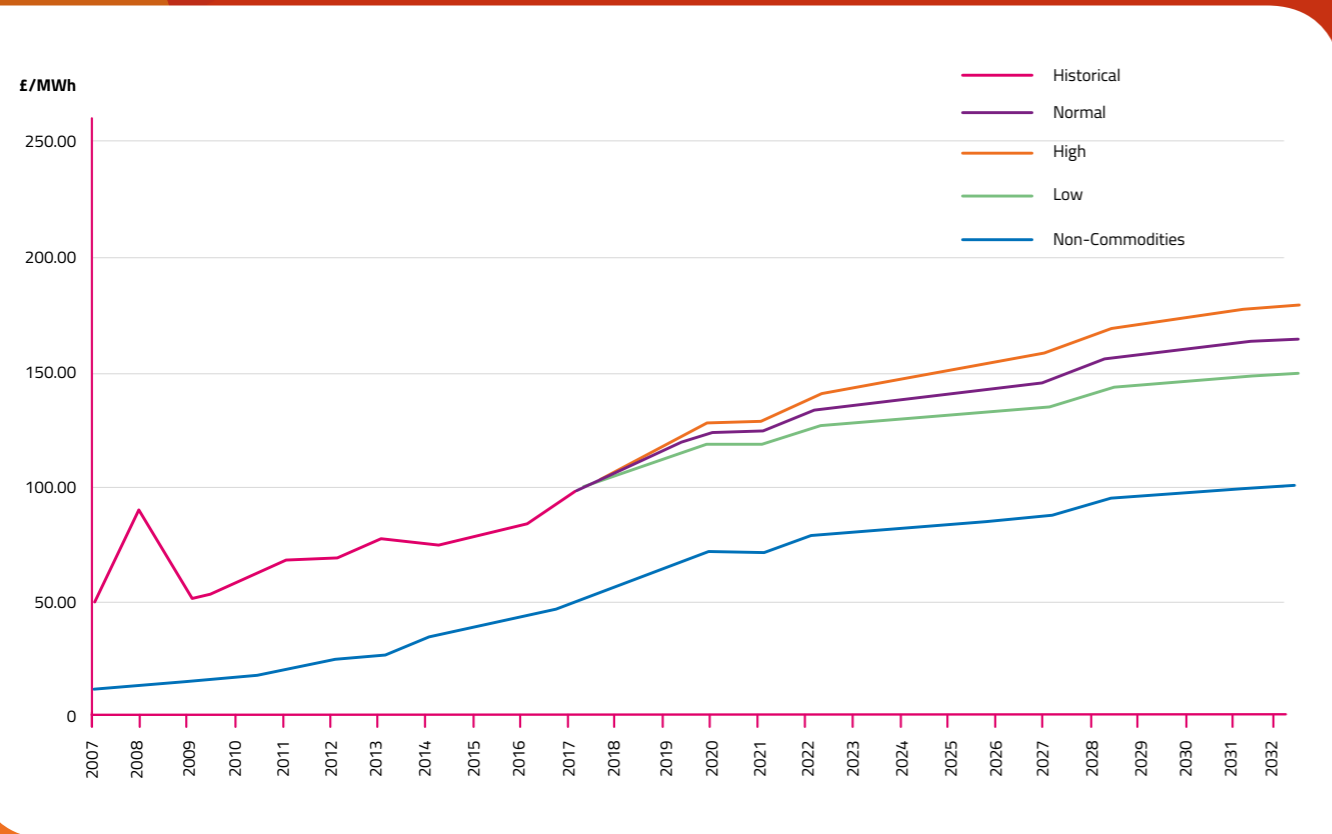
- Gas, coal and carbon prices are high
- More people are driving electric vehicles (EVs)
- Small scale renewable projects are a key supply source



1. SMALL RETAILER (MEDIUM-SIZED ENERGY USER)

In this scenario, we look at the impact of rising energy costs on a medium-sized energy user with relatively low demand requirements, with an annual consumption of 200MWh and on low voltage. This is below the threshold for the Carbon Reduction Commitment energy efficiency scheme (CRC), meaning it will feel keenly the resulting impact of the CRC ending in April 2019 (and the revenue this scheme brought to Treasury being recovered by an increase in the Climate Change Levy (CCL)).

**Up to 43%
increase
by 2020¹**



In 2016, this small retailer would have paid around £21k a year for their energy – but 2020, small retailers’ energy costs could rise by up to 40%. The impact of CCL rises in April 2019 alone will add over £500 to their annual energy bill – whereas the large retailer will see a small net benefit in the changes.

**Highest
unit cost of
all users²**

	2016 cost	2018	2020
Low scenario		£25,608/pa (£128.64/MWh)	£28,590/pa (£142.95/MWh)
Medium scenario	£106.13/MWh	£26,166/pa (£130.83/MWh)	£29,536/pa (£147.68/MWh)
High scenario		£26,500/pa (£132.50/MWh)	£30,344/pa (£151.72/MWh)

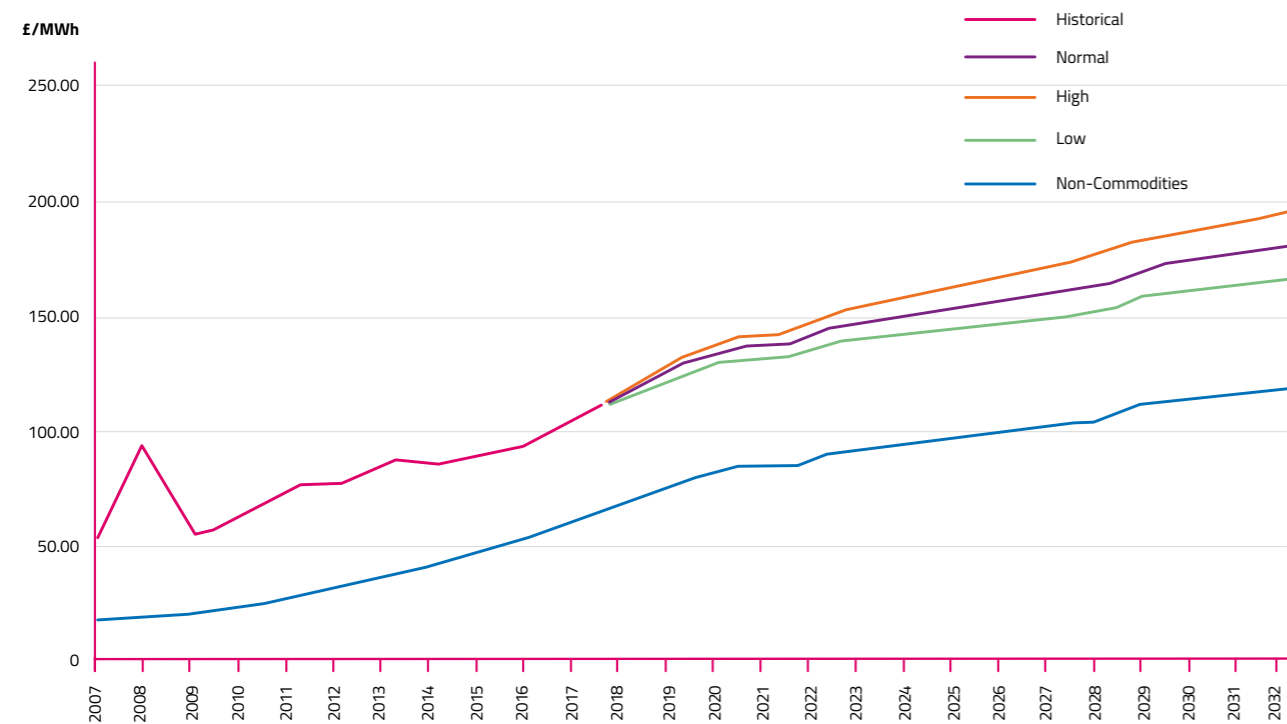
¹ compared to 2016 levels

² example £/MWh rate compared to all other scenarios

2. LARGE RETAILER (COMMERCIAL ENERGY USER)

This scenario provides an example of how large commercial energy users are impacted by rising energy costs. The 'large retailer' consumes 1GWh each year, placing them in the Carbon Reduction Commitment energy efficiency scheme (CRC). Whilst the end of the CRC in April 2019 (and the subsequent increase in CCL to recover revenues) has an adverse effect on smaller business energy users, those in the CRC will be slightly better off. However, commercial energy users will still find their energy costs rise significantly, by up to 45% by 2020.

Up to 45%
increase
by 2020¹



	2016 cost	2018	2020
Low scenario		£118,890/pa (£118.89/MWh)	£132,220/pa (£132.22/MWh)
Medium scenario	£97.44/MWh	£121,090/pa (£121.09/MWh)	£136,950/pa (£136.95/MWh)
High scenario		£122,750/pa (£122.75/MWh)	£140,990/pa (£140.99/MWh)

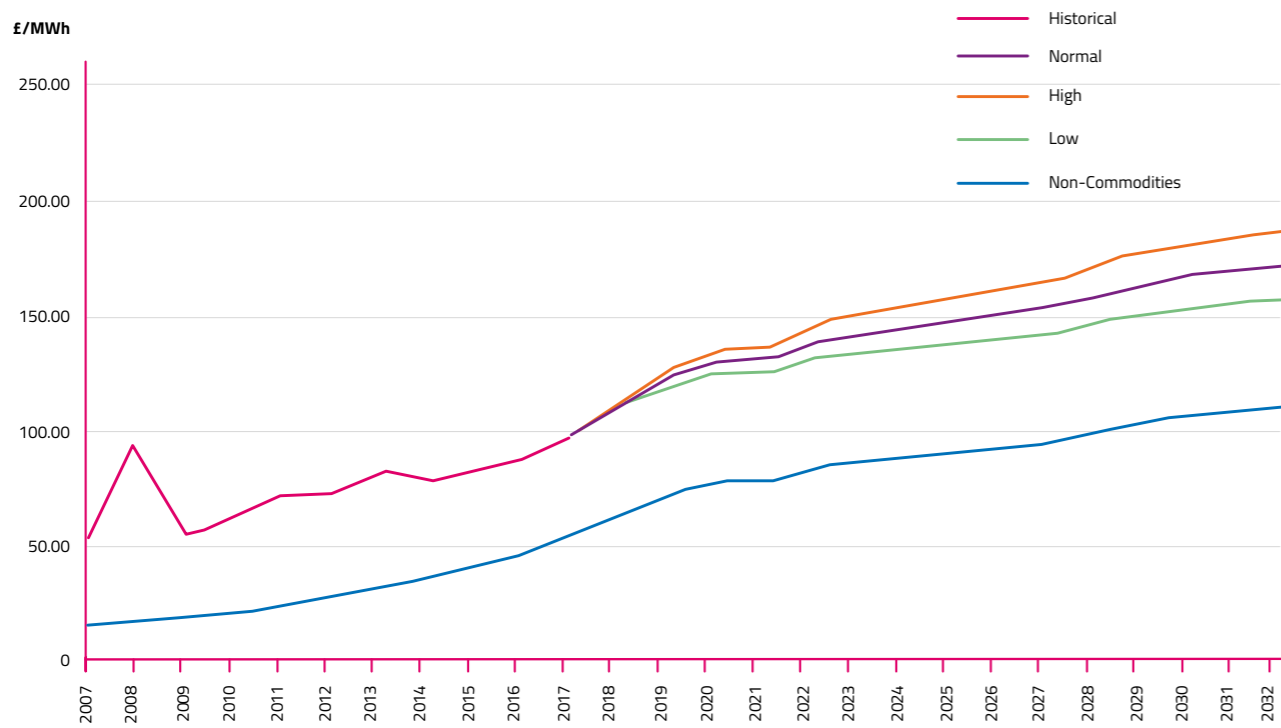
¹ compared to 2016 levels

3. MANUFACTURER 1

This scenario considers how a major energy user will fare over the coming months, with an annual consumption of 10,000MWh.

Like many manufacturers, this scenario assumes that the user has a Climate Change Agreement to exempt them from 90% of the Climate Change Levy. However, the user is not eligible an Energy Intensive Industries (EII) exemption – either because total energy costs do not exceed the current eligibility threshold of 20% of total site costs, because their sector is not one of the 50 specified industries able to apply for the support, or because the user is not currently aware that they are eligible for the exemptions.

Up to 50% increase by 2020¹



In 2016, this manufacturer would have paid around £844,000 a year for their energy, but by 2020 this could have risen by between 40% and 50% despite protection through the Climate Change Agreement.

	2016 cost	2018	2020
Low scenario	£84.40/MWh	£ 1,082,700 (£108.27/MWh)	£ 1,182,600 (£ 118.26/MWh)
Medium scenario		£ 1,104,600 (£110.46/MWh)	£ 1,229,900 (£ 122.99/MWh)
High scenario		£ 1,121,300 (£112.13/MWh)	£ 1,270,300 (£ 127.03/MWh)

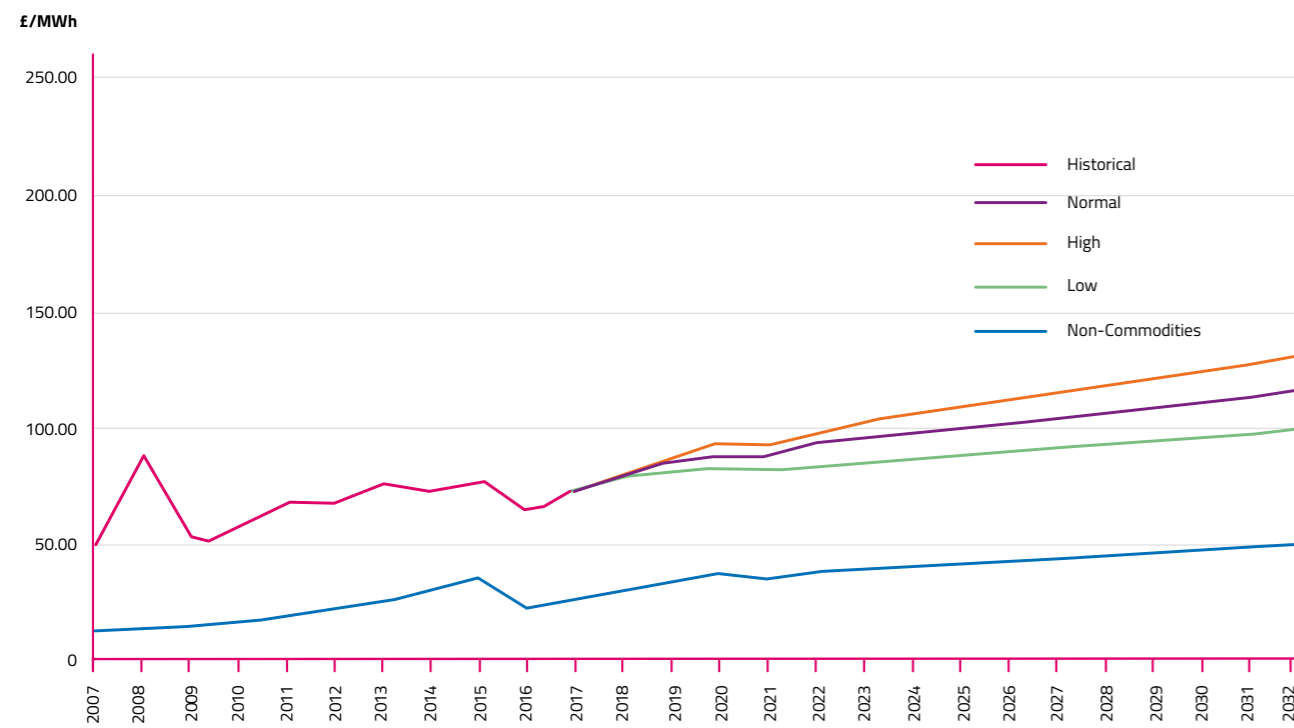
¹ compared to 2016 levels

4. MANUFACTURER 2

This scenario demonstrates the value of an EII exemption on a manufacturer's energy costs.

The user has a similar annual consumption and is in a Climate Change Agreement to exempt the organisation from much of the Climate Change Levy. However, by securing EII exemption on costs including Contract for Difference levy, Renewable Obligation and Feed In Tariff, the impact of rising costs will be less keenly felt.

Up to 41% increase by 2020¹



In 2016, this manufacturer would have paid around £661,000 a year for their energy. By 2020, this could rise by between 28% and 41% from 2016 levels – but their total energy costs will still be around a third lower than they would have been without the EII exemption.

By 2020, manufacturers that have an EII exemption and a CCA in place could see their energy costs rise by 22%-41% from 2016 levels.

36% saving through EII exemptions

	2016 cost	2018	2020
Low scenario	£66.19/MWh	£807,100 (£80.71/MWh)	£844,900 (£84.49/MWh)
Medium scenario		£829,000 (£82.90/MWh)	£892,200 (£89.22/MWh)
High scenario		£845,700 (£84.57/MWh)	£932,500 (£93.25/MWh)

¹ compared to 2016 levels

² example £/MWh rate compared to all other scenarios

THE IMPACT OF EXEMPTIONS

Whilst the outlook for all businesses is a continuing incline of energy costs, the apportionment of non-commodity costs across different users means the rate of the increase varies significantly. There is a marked difference between the unit costs of industrial users with an EII exemption and those users required to pay renewable levies in full.

The impact of exemptions

Whilst the outlook for all businesses is a continuing incline of energy costs, the apportionment of non-commodity costs across different users means the rate of the increase varies significantly. There is a marked difference between the unit costs of industrial users with an EII exemption and those users required to pay renewable levies in full.

While the EII organisation's costs are set to rise by a maximum of around £8.68/MWh between now and 2020, the smaller retailer could see their energy costs rise by up to £19.22/MWh in the same time frame. Even the manufacturer that isn't exempt under the EII, but does have a CCA in place, won't see their costs rise as substantially as the small retailer - by 2020, their costs are set to rise by a maximum of £14.90, which is only slightly higher than the minimum expected cost increase for the small retailer (£14.31).

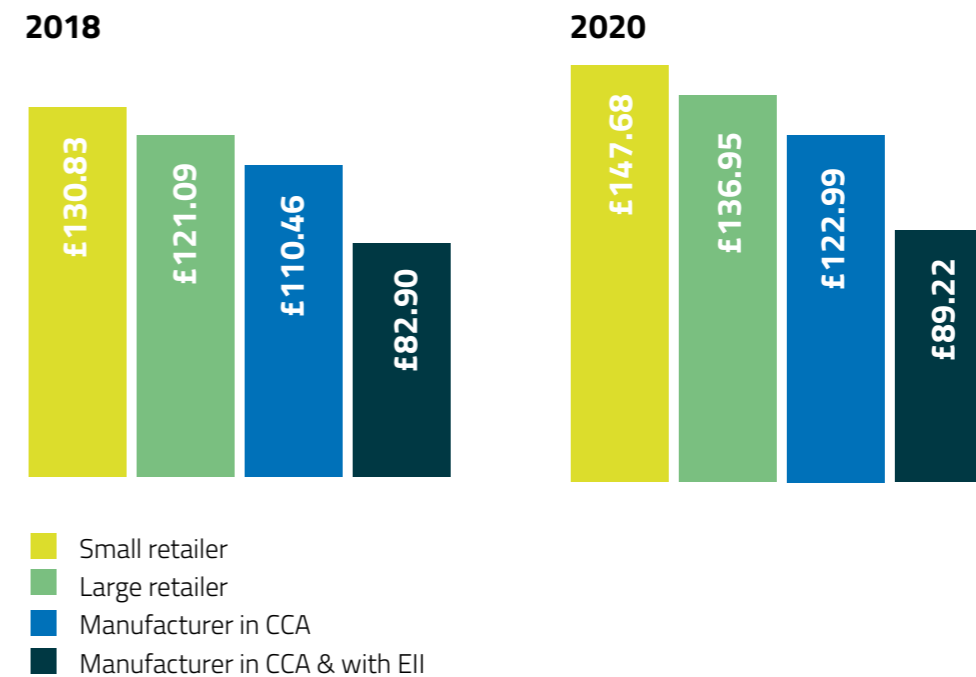
By 2020, the small retailer could be paying up to £58.46 more per megawatt hour than the EII exempt organisation, while the organisation with a CCA and no EII exemption will be paying up to £33.77 more per megawatt hour than the EII exempt organisation.

Of course, industrial users can use around 500% more than smaller users, making the impact of rising costs a big concern for the bottom line, particularly when margins are tight.



Forecast unit rates (£/MWh)

2018 forecast average energy costs, based on the 'medium' scenario for wholesale energy costs.



INENCO RECOMMENDS...

The impact of rising energy costs will have a very real impact on the bottom line of all businesses.

Regardless of your business' size, industry or eligibility for Government schemes, energy costs will almost certainly continue to rise in the coming years. Here are some key steps that we'd recommend for all businesses to ensure that their energy bills stay as low as possible:

Utilise Government support

If you think that you could be eligible for an EII exemption, but you haven't sought one yet, then you could be missing out on substantial savings. We know that determining your eligibility and applying for these schemes takes time and resources, but it pays to ensure that your organisation is getting all of the Government support you're entitled to. Seek external advice from one of Inenco's energy experts to make the process as hassle-free as possible.

Stay up to date

Energy policies, legislation and schemes are constantly changing, so it's important to stay up to date with industry news, as your eligibility for Government assistance may change from one month to the next. Schemes like the EII exemption can't be backdated, either, so you need to take advantage of them as soon as you can.

Refocus your energy strategy

Of course, there will be many organisations that aren't eligible for discounts on renewable levies, but that doesn't mean they should resign themselves to high energy costs. Every business should make sure that their processes are as energy efficient as possible, as this is the best way to ensure that you're not spending any more than you should be on your energy.

Organisations with over 250 employees or a turnover of at least €50 million (unless ISO 50001 accredited) will need to complete an Energy Savings Opportunity Scheme (ESOS) energy audit by the end of next year, to comply with Phase 2 of the scheme. Conducting a detailed investigation into energy usage in processes, buildings and transport will identify a number of ways to reduce energy, from demand management options to investing in new technology to reduce consumption. Inenco helped around 320 businesses achieve compliance in Phase 1 of the scheme.

Ready to take action?

Whether you're looking to find out whether you're eligible for an EII exemption or you'd like some guidance on improving your energy efficiency, Inenco's industry insiders are on hand to share their expertise.

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