

## In this issue...

- 1 Healthy supplies drag gas and power contracts lower
- 2 Wholesale market snapshot
- 3 Key market indicators
- 4 UK's energy supplies secure for the winter: National Grid
- 5 Report highlights potential of business demand reduction
- 6 UK needs 54% emissions cut by 2030

## Healthy supplies drag gas and power contracts lower

Seasonal gas and power contracts increased in early October, but later returned to their downward trends to reach record lows. Higher oil prices gave a boost to longer-term gas contracts at the beginning of the month. But an increasingly comfortable supply outlook later reversed the contract's upward movements. Seasonal power contracts followed gas and coal prices lower, with commodities remaining the dominant driver.

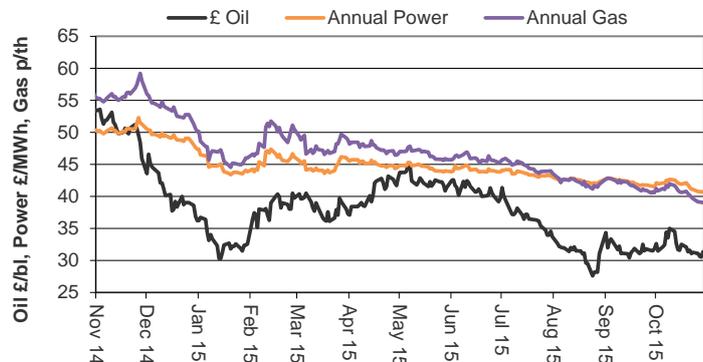
Annual April 16 gas fell 4.5% to average 40.6p/th, hitting a fresh low of 39.1p/th on 29 October. Rising LNG exports from Australia, the commissioning of the first wave of LNG units in the US and the restart of Japanese nuclear reactors pulled long-term gas prices down. Annual April 16 power followed gas and coal prices lower, slipping 2.4% to average £41.8/MWh, reaching a contract low of £40.7/MWh on 28 October. While commodity prices remain subdued, longer-term power contracts are unlikely to experience any significant gains.

Despite moving into the winter months, spot gas and power contracts also decreased. Day-ahead gas dropped 3.4% to average 39.7p/th. It hit a nine-week low of 38.4p/th on 29 October, as strong Qatari LNG deliveries and temperatures above the seasonal norm dragged prices down. The day-ahead power contract followed its gas counterpart, falling 3.8% to average £40.5/MWh, with prices being 10% lower than the same month last year.

### Oil prices gain support, while coal prices slip further

Brent crude oil rose 1.4% to average \$49.5/bl in October. Prices reached a five-week high of \$53.6/bl on 9 October as EIA data showed reduced US production

### Crude oil and annual wholesale gas and power prices

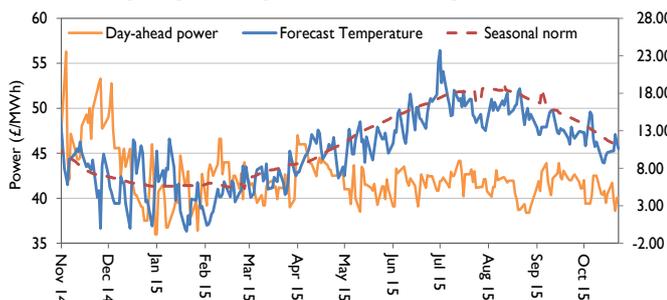


levels for September. In addition, Russia and several OPEC nations signalled possible action to support the market. However, prices later declined, hitting a six-week low of \$47.2/bl on 28 October. China's third quarter GDP data displayed the slowest growth since 2009, while data from the IEA's monthly oil report showed increased OPEC productions levels, adding to the problem of global oversupply.

API 2 coal continued to decline, tumbling 5.2% to average \$48.3/t, and hitting a low of \$47.2/t on 22 October. Prices were impacted by China's GDP data, with the nation's demand growth expected to slow. In addition, India - the world's second largest coal importer - has ramped up domestic production levels, halting the nation's import growth.

EU ETS carbon rose 3.1% to average €8.4/t, hitting €8.6/t on 29 October. This trend is expected to continue until the implementation of the Market Stability Reserve in 2019.

### Spot power prices and temperatures

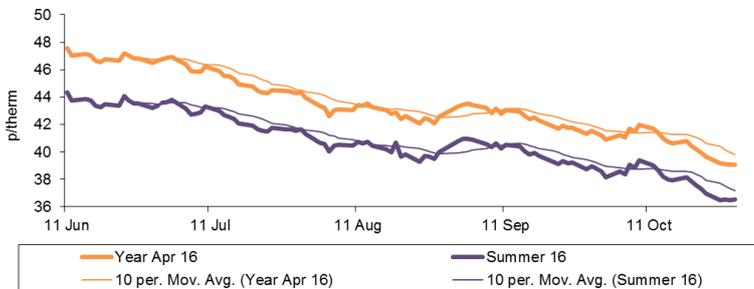


### The month ahead: National Grid's Winter Outlook

National Grid has said it expects its additional balancing services to help keep electricity margins "manageable" in the winter ahead.

Catalyst Commercial Services' independent approach enables clients to manage their exposure to energy price risk, while at the same time benefiting from a first class service from a range of major and independent suppliers. Catalyst Commercial Services' procurement solutions make it simple, so contact a member of the team to discuss requirements.

## Annual gas prices

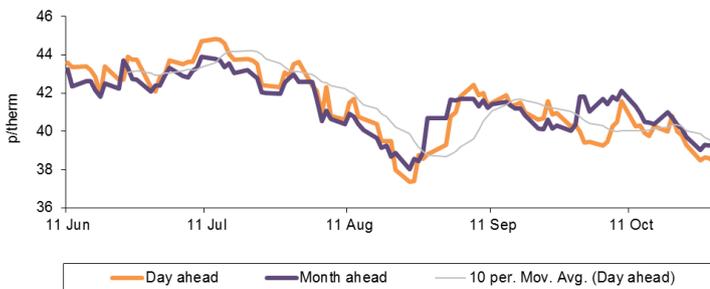


Seasonal gas contracts continued to decline in October as a comfortable supply outlook weighed on prices, despite a higher average price of oil.

The annual April 16 contract slipped 4.5% to average 40.6p/th, reaching a record low of 39.1p/th on 29 October, the lowest price of any annual gas contract since April 2010.

Summer 16 gas dropped 5.0% to average 37.9p/th, and the winter 16 contract decreased 3.8% to average 43.3p/th.

## Spot gas prices

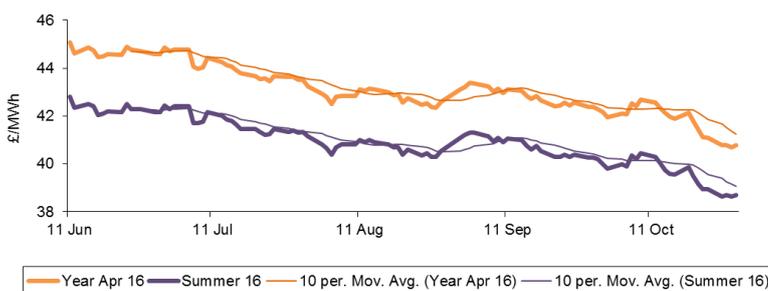


Day-ahead gas prices decreased in October, falling 3.4% to average 39.7p/th as strong Qatari LNG supplies pulled prices lower. The contract reached a nine-week low of 38.4p/th on 29 October as increased wind generation and milder than normal temperatures reduced gas for power demand.

The month-ahead contract slipped 5.7% to average 40.7p/th, finishing the month at 39.3p/th.

The amount of LNG regasified by European terminals this year has already exceeded the 2014 total, indicating the extent of recent higher LNG supplies.

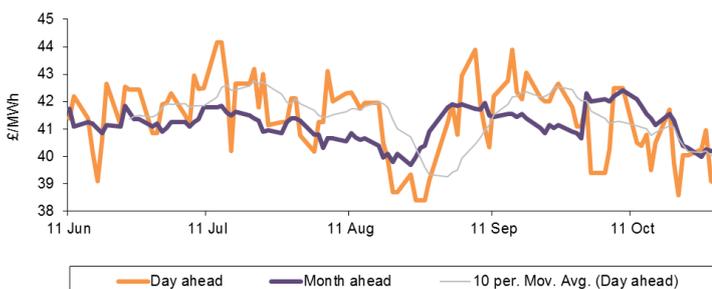
## Annual power prices



The annual April 16 power contract continued to decline in October, following its gas counterpart. In addition, lower coal prices provided additional pressure to the contract. While commodity prices remain at their currently subdued levels, the annual power contract is unlikely to make any significant gains in the near-term.

Annual April 16 power reduced 2.4% to average £41.8/MWh. The summer 16 contract fell 2.9% to average £39.6/MWh, while the winter 16 contract trimmed 2.1% to average £43.0/MWh.

## Spot power prices



Spot power prices also dropped in October, mainly due to lower spot gas prices.

Day-ahead power fell 3.8% to average £40.5/MWh, reaching an eight-week low of £38.6/MWh on 21 October. The contract is now 10% under its level in the same month last year (£43.1/MWh).

The month-ahead contract declined 5.2% to average £41.4/MWh, and is now 13.8% below the equivalent contract last year (£48.0/MWh).



# Energy Element / November 2015

## Key market indicators: 29/10/2015

		Gas (p/th)		Electricity (£/MWh)		Coal (\$/t)	Carbon (€/t)	Brent crude (\$/bl)
		Day-ahead	Year-ahead	Day-ahead	Year-ahead			
This month	29 Oct 15	38.40	39.06	39.02	40.78	47.70	8.62	48.49
Last month	30 Sep 15	40.00	41.38	41.10	42.28	48.60	8.11	48.23
Last year	30 Oct 14	51.40	57.31	43.20	51.30	72.65	6.42	86.40
Year-on-year % change		(25%)	(32%)	(10%)	(21%)	(34%)	34%	(44%)
Year high		60.20	59.47	56.30	52.53	73.40	8.62	86.40
Year low		37.35	39.06	36.00	40.70	47.15	6.33	43.33

<p>This table shows the price at the end of this month compared with prices from the previous month and year. The graphs show the position of this month's prices with a red X and the range of prices over the year is represented by the black line.</p>	62	61	60	54	74	9	90
	58	59	56	52	70	8.62	80
	54	57	52	50	66	8	70
	50	55	48	48	62	7	60
	46	53	44	46	58	6.33	50
	42	51	40	44	54	8.11	40
	38	49	36	42	50	8.62	
34	47	32	40	46	6.33		
	45						
	43						
	41						
	39						

### Commodities

**Carbon:** EU Emissions Trading Scheme carbon is quoted as over-the-counter (OTC) latest opening prices. All carbon prices are in euros per tonne (€/EUA).

**Coal:** Coal is quoted as OTC latest opening prices. All coal prices are in US dollars per tonne (\$/t).

**Electricity:** UK power base-load and peak-load are quoted as OTC latest opening prices. All UK electricity prices are in pounds per megawatt hour (£/MWh).

**Gas:** UK National Balancing Point (NBP) gas is quoted as OTC latest opening prices. All UK gas prices are in pence per therm (p/th).

**Oil:** Brent crude oil is quoted as OTC latest opening prices. All Brent crude oil prices are in US dollars per barrel (\$/bl).

### Language/ terms

**Bearish:** A bearish market shows a general decline in prices over a period of time.

**Bullish:** A bullish market shows a general increase in prices over a period of time.

**Curve:** A graph of forward prices over a future time period.

**Margin:** The indicated UK imbalance of a given settlement period. It is the difference between the sum of the indicated generation available, and the national demand forecast made by National Grid.

**Over-the-counter (OTC):** The trade of a commodity directly between two parties, often on standardised terms.

**Spark/ Dark spread:** The theoretical net income of a gas-/ coal-fired power plant from selling electricity having purchased the necessary fuel. The clean spark/ dark spread is this net income adjusted for the cost of carbon.

### Disclaimer

This monthly news and pricing bulletin is produced by Cornwall Energy in conjunction with Catalyst Commercial Services exclusively for the customers of Catalyst Commercial Services and provides general information and commentary on energy market trends. The opinions contained in this bulletin constitute the current opinions of Cornwall Energy and/or Catalyst Commercial Services and are produced for informational purposes only. This bulletin should not be construed as an offer, recommendation or solicitation to buy, sell or deal in any commodity, product or security or to enter in to any trading or investment activity whatsoever. Any use by you or any third party of any information or other material contained in or associated with this document signifies agreement by you or them to these conditions. The report makes use of information gathered from a variety of sources that have not been subject to independent verification. Neither Cornwall Energy nor Catalyst Commercial Services gives any representation or warranty as to the accuracy or completeness of the information collected from market participants or from sources in the public domain. Neither Cornwall Energy nor Catalyst Commercial Services make any warranties, whether express, implied or statutory regarding or relating to the contents of this report and specifically disclaim all implied warranties, including, but not limited to, the implied warranties of satisfactory quality and fitness for a particular purpose. While Cornwall Energy and Catalyst Commercial Services consider that the information and opinions given in this bulletin and all other documentation are sound, all parties must rely on their own skill and judgment when making use of it. While every effort is made to ensure the accuracy of any information or material contained in or associated with this document, neither Cornwall Energy nor Catalyst Commercial Services, their affiliates and employees, either individually or collectively accept any responsibility for any loss, damage, cost or expense of whatever kind arising directly or indirectly from or in connection with the use by any person whomsoever of any such information or material; neither do they make any representation or warranty as to the accuracy or completeness of the data, information or statements contained herein.



## UK's energy supplies secure for the winter: National Grid

System operator National Grid has eased concerns about the “lights going out” this winter, saying the UK's energy supplies remain secure.

### Manageable margins

The company published its *Winter Outlook 2015-16* report on 15 October, which confirmed that electricity margins during the winter ahead would be “tight but manageable”.

The report said that the “de-rated” margin - the buffer between controllable generation and expected peak demand - would be 5.1%. However, this relatively comfortable margin has been achieved through the use of National Grid's additional “balancing tools”, which allow the company to pay sources of capacity to be available at times of peak demand in return for a payment. This includes 133MW of capacity from businesses who have signed up to reduce their electricity use in peak periods if necessary.

Gas supplies are expected to be comfortable, owing to stable flows from the North Sea and Norway, and increasing capacity for the import of Liquefied Natural Gas (LNG).



### Blackouts unlikely

National Grid's forecasts were reinforced on 12 October by a report by The Energy and Climate Intelligence Unit (ECIU), a London-based think tank. It sought to challenge the idea that the integration of growing levels of renewables on the system was set to result in widespread blackouts in the UK; it was able to identify only one example, in the past decade, of a power cut that had been related to problems with generation. Instead, power cuts were mainly attributable to distribution problems, like severed cables and extreme weather.

The report said that the growing penetration of renewables did not therefore necessarily imply an increased risk of power cuts, and that this was exemplified by the performance of the systems in Denmark and Germany. These nations have the most reliable networks in the world, but a high percentage of renewables generation relative to the UK. While the ECIU expected a narrower capacity margin in the winter of 2016-17, it said that the situation would thereafter improve, with more interconnector capacity becoming available and a fall in demand anticipated.

**The reports reinforce the view that supply shortages are unlikely this winter. But this does not detract from the possibility of price volatility, if there is a tightening of supplies.**

National Grid

ECIU

---

## Environment Agency eases compliance requirements for energy savings scheme

The Environment Agency has extended the window in which businesses can ensure compliance with a key energy efficiency programme.

On 9 October, the organisation released updated guidance on the Energy Savings Opportunity Scheme (ESOS). This is a mandatory energy assessment programme for all UK organisations that employ more than 250 people, or that have an annual turnover of more than £39.938mn. It was implemented by the government to comply with EU regulations, and requires businesses to perform energy audits every four years.

The guidance confirmed that the Environment Agency would “not normally” take enforcement action for companies failing to meet the deadline of 5 December - provided that notification was made by 29 January 2016 of the steps that they were taking towards ensuring compliance. The government hopes that ESOS will deliver £1.6bn in overall benefits to the UK, mostly in the form of energy efficiency savings to businesses.

Environment Agency

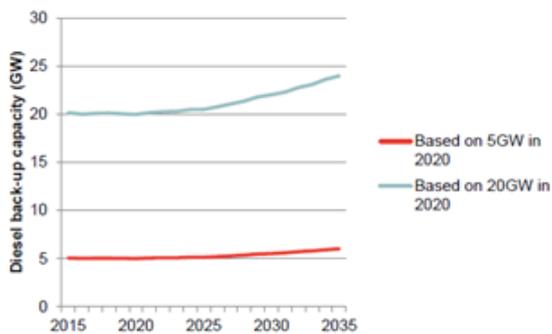


## Report highlights potential of business demand reduction

**New research, commissioned by the government, has found considerable potential for the future roll-out of demand-side response (DSR) technologies in the UK.**

DSR provides consumers with the opportunity to sign up to special tariffs and schemes that reward them for changing how and when they use electricity. It is seen as a key plank in the development of a more flexible energy system, which can more closely align the level of power generation on the system with the amount being used.

### Potential capacity of diesel back-up generation



Source: Frontier Economics

### Supply and demand

Published on 15 October, a report by Frontier Economics said that, as reliance on intermittent generation sources like wind increased over the next 20 years, the need for DSR technologies would grow.

Frontier suggested that industrial and commercial (I&C) sectors had significant potential for the deployment of these solutions across a range of end-uses. In particular, it said that water pumping, industrial refrigeration and – to a lesser extent – hot water could potentially supply hundreds of megawatts of DSR each. Another “highly significant” source could be the dimming of lighting, which has already been demonstrated in the US.

It has also been suggested that there is up to 20GW of I&C back-up generation currently installed within the UK. However, not all of this is available to demand response aggregators – who can enlist

end users to participate in schemes to curtail their demand – given the largely fixed costs of acquiring a site for DSR.

### Revenue impacts

Most sources of industrial DSR involve the postponement of demand to a later period. Therefore, a key element of understanding the technologies’ cost impacts is in the extent to which the “payback” energy – consumed after the postponed use – differs from that which would have been used during the downturn.

The report acknowledged that the deployment of DSR could have a direct impact on firms’ revenues. Companies told a recent survey that the lost production time caused by these technologies would lead to revenue impacts that were greater than the financial incentives currently on offer.

**The report’s key conclusion was that, while a number of DSR technologies possess very significant potential for businesses, the barriers to their deployment are substantial.**

### Government

---

## EDF signs agreement for new nuclear power project

EDF Energy confirmed on 21 October that it had signed an agreement with the China General Nuclear Power Corporation (CGN) to take forward the construction and operation of the Hinkley Point C nuclear power station.

Under the strategic investment agreement, EDF will take a 66.5% share in the Hinkley project, with CGN taking the other 33.5%. Without reducing this initial stake below 50%, EDF intends in due course to bring other investors into the project. EDF and CGN have also agreed to a wider UK partnership for the joint development of new nuclear power plants at Sizewell C in Suffolk and Bradwell in Essex.

The government regards the development of new nuclear power stations as important to its aim of providing “clean, affordable and secure energy” for UK homes and businesses in the long term.

Under an agreement signed between the government and EDF Energy in 2013, consumers will subsidise power from Hinkley Point through the UK’s new support regime for low-carbon technologies, known as “contracts for difference”.

### EDF Energy



## UK needs 54% emissions cut by 2030

The Committee on Climate Change (CCC) has said that the UK will need to cut its greenhouse gas emissions by 54% by 2030, if it wants to meet its long-term environmental aims.

In a report published on 13 October, the CCC examined the current international context for its advice to the government, later this year, on the level at which the UK's Fifth Carbon Budget should be set. This budget will place a limit on the amount of greenhouse gases that can be emitted by the UK between 2028-32.

The 54% estimate took into account the pledge, made by EU member states, to cut the bloc's overall emissions by at least 40% below 1990 levels in 2030. The UK has supported rules for dividing this reduction between member states, which implies a substantially higher level of effort from richer countries such as the UK, Germany and France.

### Subsidy-free renewables

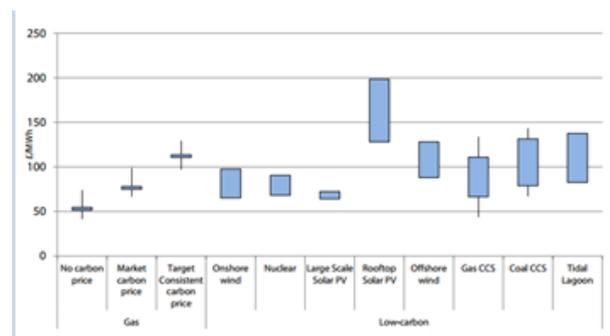
In a second report, issued on 22 October, the CCC detailed some of the key changes that will be necessary in the energy system over the next 15 years in order to keep the UK's low-carbon transition on track. The study suggested that it would be possible, by the early 2020s, for new onshore wind and solar projects to provide power for the system without requiring government subsidies – as long as fossil fuel plants faced the full cost of their emissions. Under the report's scenarios, offshore wind and nuclear power could also be subsidy-free by the late-2020s.

### Cost impacts

But the report warned that, in the period through to the end of this decade, businesses would see higher electricity costs, owing to the need to subsidise low-carbon investment.

The CCC expected the overall level of subsidies paid by consumers for low-carbon generation to reach £9.2bn (in 2012 prices) by 2025; but said that this would begin to fall from the late-2020s as the subsidies paid to some older renewables projects expired.

Expected costs of generation by technology in 2030



Source: CCC

The CCC offered much encouragement about the pace of cost reduction in a number of low-carbon sectors. But it left no doubt that, for the next few years, green policy support costs would increase on consumers' bills.

## CCC

### Businesses losing confidence in energy efficiency policies

The latest *Energy Efficiency Trends* report, by analysts EEVS, has revealed a sharp fall in business confidence in the government's ability to administer energy efficiency policies.

Published on 12 October, the study analysed trends during the second quarter of 2015, surveying 63 organisations and suppliers of energy efficiency measures. Overall, confidence in the industry had roughly halved since the first quarter of the year, and there were also growing doubts over the government's overall management of the economy.

However, following a downturn since the second quarter of 2014, the number of organisations adopting energy efficiency projects rose to nearly 80%. By far the most popular measure was high-efficiency lighting. Public buildings (21%) and manufacturing sites (17%) overtook offices (15%) during the quarter as the principal property types to benefit from energy efficiency upgrades.

Looking ahead, EEVS said it would expect the outcome of any Treasury-led policy change to the energy efficiency framework to result in "an increase in the tax take and, consequently, greater commercial interest in saving increasingly expensive energy".

## EEVS



### UK needs framework for decarbonising heat, report says

Parliamentary think tank Policy Connect has pressed the government to adopt a long-term decarbonisation strategy for the UK's heat sector.

*Policy for Heat: Transforming the System* considered the policy options available to the government for steadily lowering emissions from the sector. These included improving building energy efficiency, the development of district heating schemes, and devolving responsibility for heat networks to local councils. Overall, the report placed emphasis on the need for a cross-party consensus to ensure long-term goals were established on what was a "vital national interest".

The report praised the progress made thus far under the Renewable Heat Incentive, which offers subsidies to households and businesses that deploy low-carbon heat technologies. But it said that the rules governing the scheme would need to change in order for it to truly foster widespread deployment of these technologies.

Policy Connect

---

### Ofgem CEO backs energy sector innovation

Dermot Nolan, CEO of the energy regulator Ofgem, has called for an increased focus on innovation in the energy sector.

In a speech delivered at the Energy UK annual conference on 21 October, Nolan pointed to smart meters as just one example of a technology with the potential to transform the energy market, as it would allow customers to understand their usage better and to therefore lower their bills. But Nolan warned that such technologies would only reach their potential if customers were fully engaged in the market and understood the opportunities available.

Nolan also confirmed that Ofgem was set to take a fresh look at the regulatory framework of the retail market. He said he was eager to provide suppliers with more flexibility to innovate in their offerings to consumers.

Ofgem

---

### Veolia supports corporate carbon tax

Global environmental services company Veolia has called for a global carbon tax on corporations.

Veolia CEO Antoine Frérot spoke at an event in London on 20 October, where he argued that such a tax should be set at €30-€40 per ton of CO<sub>2</sub>. He expressed hope that agreement on the tax would be among the key outcomes from the global climate summit in Paris later this year, which he described as very possibly the last chance to prevent global warming from reaching dangerous levels.

Frérot said: "The EU can, and must, lead on the issue by introducing its own carbon tax. Whilst a tax would make EU goods more expensive, negative effects could be offset by a carbon customs duty on goods entering the EU."

Veolia

---

### Businesses regard supply security as top priority

Businesses consider the resilience of supply the foremost priority for the energy sector, a new survey by the CBI and AECOM has found.

The organisations published their *Annual Infrastructure Survey* on 29 October. It showed that nearly three quarters (74%) of businesses regarded energy security as crucial, with just over four in 10 (43%) saying the same about affordability and 30% prioritising the lowering of carbon emissions. The report showed that almost nine in 10 (88%) businesses wanted to see the government simplifying the energy efficiency policy landscape, while 32% of manufacturers saw simplification as very significant.

Almost all (97%) businesses wanted the government to take action to ensure investment in a diverse and secure energy system. Energy costs also "remain high" on the business agenda, with 91% of companies expecting the government to play a role in managing them.

CBI

---