The Directors' Energy Report 2017

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Risk and reward?

This report aims to outline the key utility risks – and opportunities – for businesses over the next 12-18 months.

From an energy perspective, the warnings are clear: Wholesale costs are likely to increase significantly, driven by volatility both within short and long term markets, and by swings in Sterling.

While there is an abundance of gas from a global perspective, Brexit related volatility is likely to compound micro issues, such as a shortage of storage due to technical problems with Rough, which provides the lions' share of UK storage capacity.

Meanwhile, after a two-year decline in electricity prices, markets began to turn in 2016. Along the way they took in lows of £30.15/MWh and highs of £170/MWh. Such volatility is "unprecedented", according to traders, who predict a bumpy path ahead for at least two years.

At the same time, non-commodity elements of the power bill have overtaken wholesale cost for the first time in history. The consensus from third party intermediaries (TPIs) is that non-energy costs will this year make up 55% of the total electricity bill, rising to around 65% by 2020.

So what can businesses do to mitigate cost?

Peak cost avoidance or load shifting will deliver electricity bill savings of around 10-15%, possibly more, according to suppliers, provided organisations can actually restructure operations. Energy efficiency "will always deliver the best outcomes", say consultants. Others tout on-site generation, demand-side response and battery storage as opportunities for revenue generation. But in many cases the rewards, particularly for the latter two, are simply not enough, according to end users.

At the extreme end, some market actors predict power bill hikes – due to environmental levies, security of supply policies, network charge and wholesale market increases - of up to 25% over the next two years.

Despite those warnings, facilities management companies say energy cost increases are simply not an agenda item for many of the UK's largest corporates. They believe it will take price shocks similar to the 1970s oil crisis to make directors and procurement departments take note.

But companies surveyed for this report appear more engaged. That could be due to sample bias, given *The Energyst's* readership is generally attuned to energy related issues. Nevertheless, the survey, completed by both large and small commercial companies, as well as industrial and public sector organisations, provides an interesting snapshot of the state of pay.

Roughly half of respondents surveyed said they have budgeted for energy bill increases relating to government policy, while a similar percentage said they were at least considering demand-side response or battery storage.

Meanwhile ahead of water retail market opening in April, most firms polled have considered switching supplier - and almost nine in ten would buy utilities from a single source if it cost less.

How much less is a moot point. While, according to the survey, cost is king when it comes to utilities procurement, experts interviewed for the report believe firms are missing a trick when it comes to understanding data and bill validation. That is, businesses might be cost focused from a procurement perspective, but they could actually save much, much more by fully understanding both their consumption and their bills.

While the next few years may not deliver price shocks of the magnitude of the 1970s, the political and economic climate is far from certain.

As brokers interviewed for this report have warned: Businesses should brace for two years of volatility – and quite possibly more.

Tim McManan-Smith, editor, the energyst

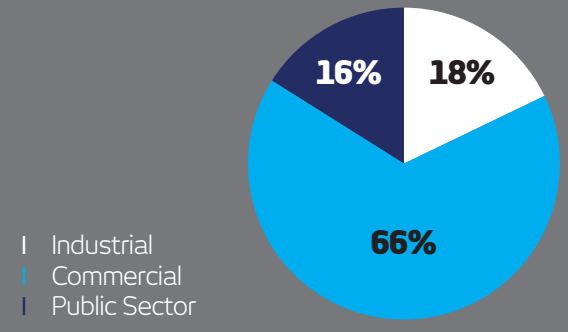
Which industry sector do you operate in - and what is your organisation's energy spend?

While roughly a third of responses came from the public and the industrial sectors, the majority of respondents (66%) operate within the commercial sector, which may skew survey data and qualitative responses.

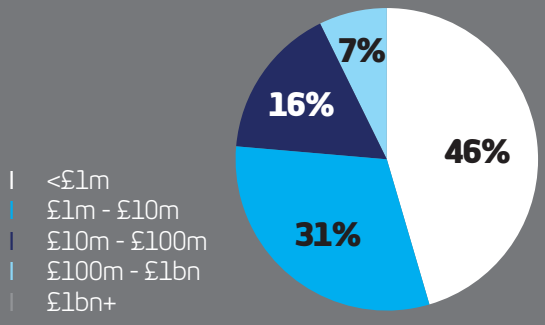
There were 56 complete survey responses in all.

Almost half of organisations have an annual energy spend of less than £1m withjust over half spending more than £1m. The commercial sector makes up the vast majority (88%) of those spending less than £1m. Of those spending more than £1m, the commercial sector makes up 46%, the industrial sector 25% and the public sector 29%.

Industry sector



Annual energy consumption



Breakdown of job titles

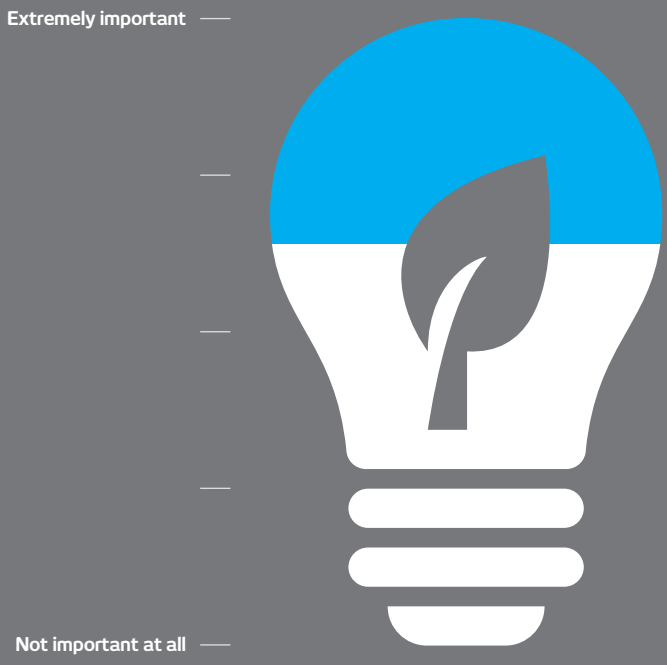
Directors: 59%

Managers: 33%

Consultants: 7%

On a scale of 1-5, how much of a priority is energy efficiency for your business? (1, not important at all and 5 extremely important)

Energy efficiency is on the agenda at most respondents' workplaces and appears to be reasonably important. Across all sectors, it is viewed as marginally more of a priority within the commercial sector.

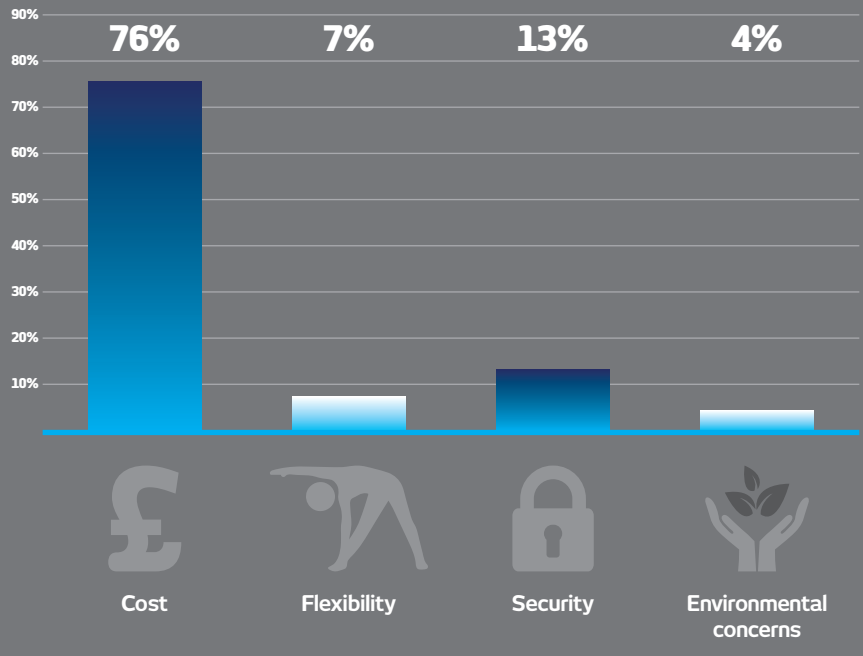


When buying energy, which of the following is most important?

Cost is the key consideration for the vast majority (76%) of respondents. Environmental concerns barely register (although 20% of respondents say they purchase renewable energy, see p10).

Breaking down responses by sector, cost is even more critical for commercial operators, with 83% of respondents citing it as the key consideration.

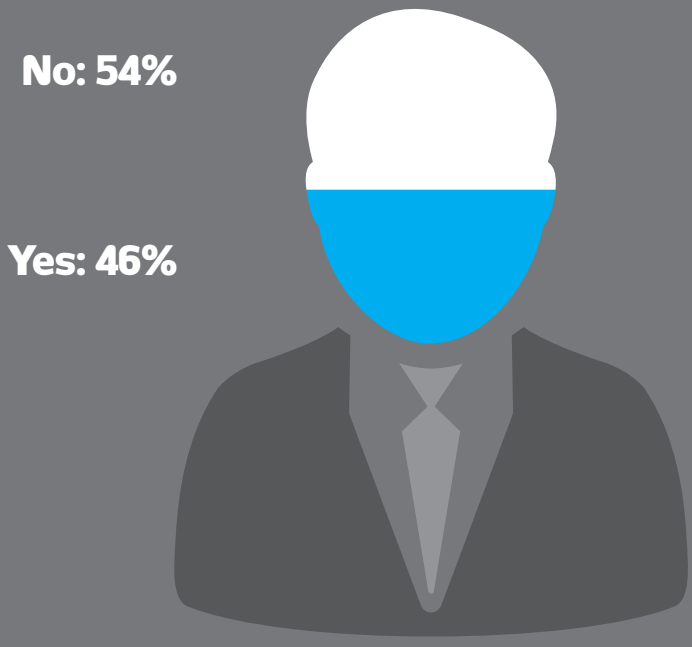
Within the industrial sector 67% of respondents cite cost as king, but there is also some concern over security of supply (cited by 22% as their key concern). In the public sector, cost is the number one priority, but to a lesser extent (56%).



Do you have a dedicated energy manager?

Just over half of those surveyed (54%) do not have a dedicated energy manager. Of those spending less than £1m, firms without an energy manager rises to 76%. Of those spending more than £1m, 62% have a dedicated energy manager.

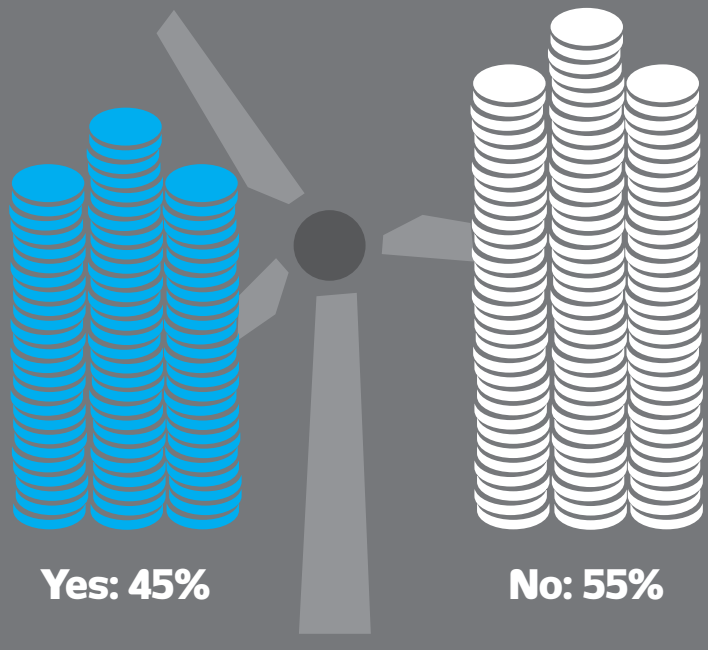
Overall, just over half (54%) of organisations with a dedicated energy manager said they were set specific annual or ongoing targets for energy or carbon reduction.



Has your organisation allocated capital budget for energy efficiency improvements in 2017

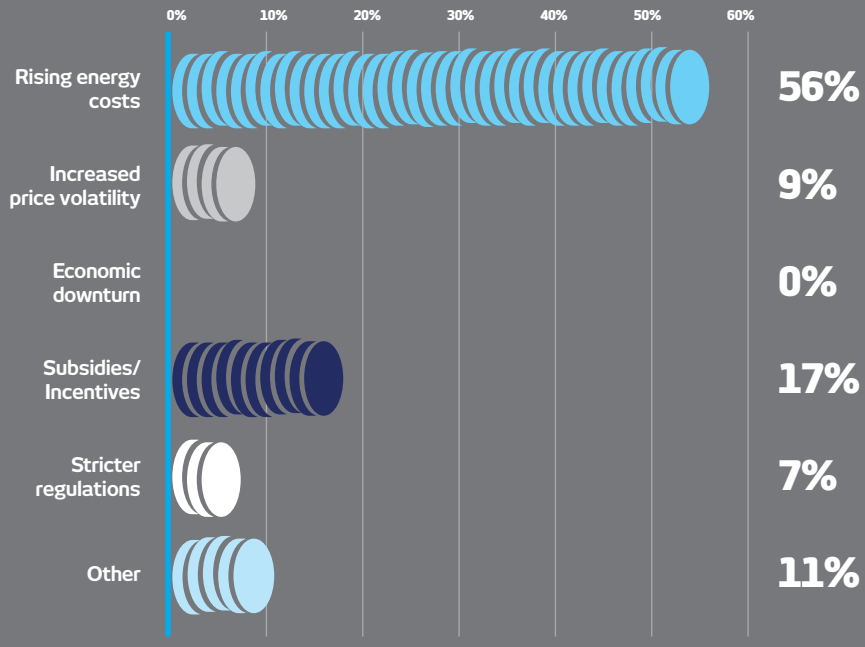
Almost half (45%) of respondents have set aside capital to invest in energy efficiency. In general, organisations spending more than £1m are more likely to have set aside budget (59%). Of firms that spend less than £1m, only 28% have set aside dedicated budget.

Across all sectors, of those that specified measures, LED lighting was the most common, featuring in roughly half of investment plans. Heating projects, including CHP featured in around a quarter of plans. BMS investment was cited in around 20% of plans, as was battery storage and/or renewables investment. Budgets, where specified, ranged from £80,000 to £2.5m.



What would make you spend more on energy efficiency?

Given cost is the key factor for most respondents when purchasing energy, it is unsurprising that the majority also cite rising costs as the main factor influencing energy efficiency investment. Some 17% think subsidies or incentives may unlock further investment, but it remains a minority view. Answers provided within the 'other' category mention security of supply and rising costs in tandem, credible verification and the need to have any capital left to invest after government energy taxes and levies.



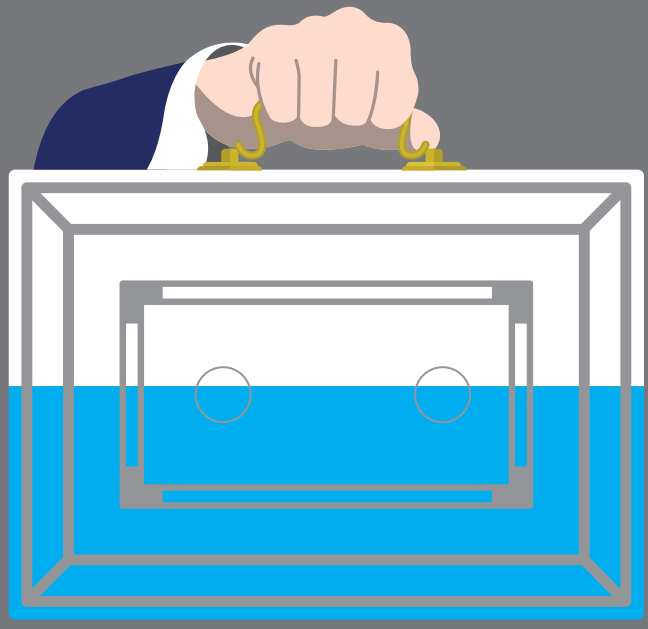
Have you budgeted for the impact of the capacity market charge on your power bill next winter?

Roughly half of respondents have budgeted for the capacity market charge, which will hit bills next winter. That half have not budgeted may suggest a need for suppliers and TPIs to redouble engagement efforts. It may also suggest that some firms face bill shock over the coming 12 months. Will it encourage investment in mitigation measures?

By sector, respondents in the industrial category appear best prepared, with 70% allocating budget for the capacity charge. Similarly those that spend more than £1m on energy are more likely (72%) to have allocated budget.
Of firms spending less than £1m, only 28% say they have budgeted for the capacity charge.

No: 48%

Yes: 52%

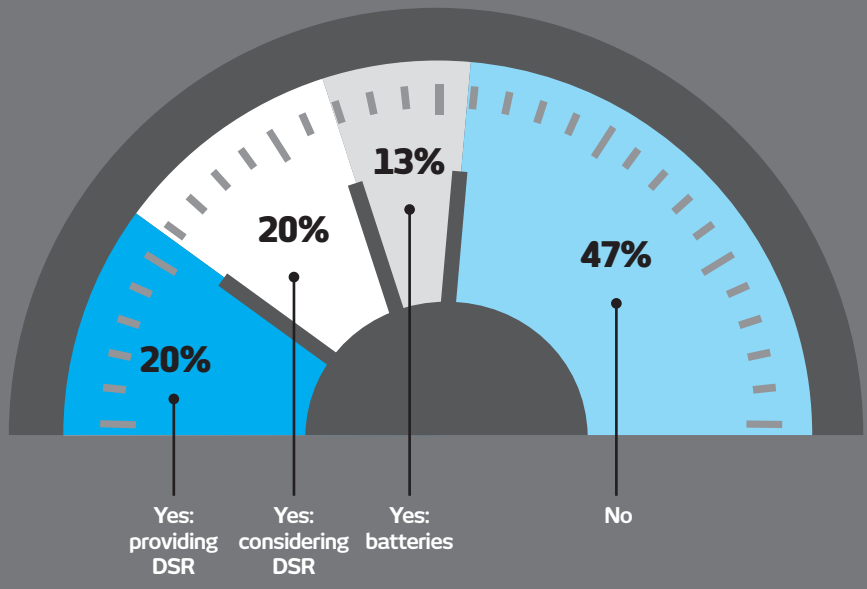


Is your business providing demandside response / considering provision / considering investment in battery storage?

Roughly half (53%) of respondents are at least considering demand-side response activities.

Across those spending more than £1m on energy, that rises to 72% (31% providing DSR, 34% considering DSR, 7% considering batteries, 28% neither considering nor participating).

For firms spending less than £1m on energy, that drops to 32%, with the majority of those (20%) interested in battery storage rather than providing DSR (8%) or considering DSR (4%).

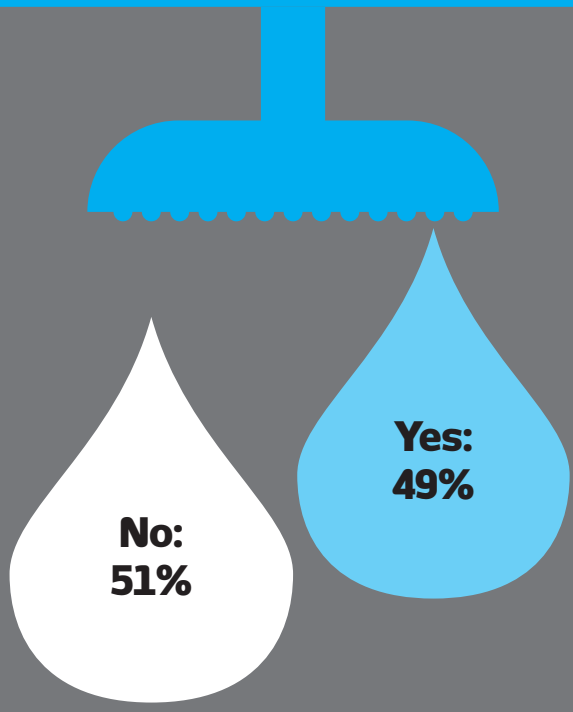


Are you considering switching water supplier when the retail market opens in April?

Half of firms are mulling whether to switch water supplier. By sector, the least likely are industrial firms (30% have considered switching). Conversely, in the public sector, 89% said they had considered switching. In the commercial sector, 44% have considered switching.

Of smaller firms (<£1m energy spend), 36% have considered switching.

62% of organisations that spend more than £1m on energy have considered switching water supplier.

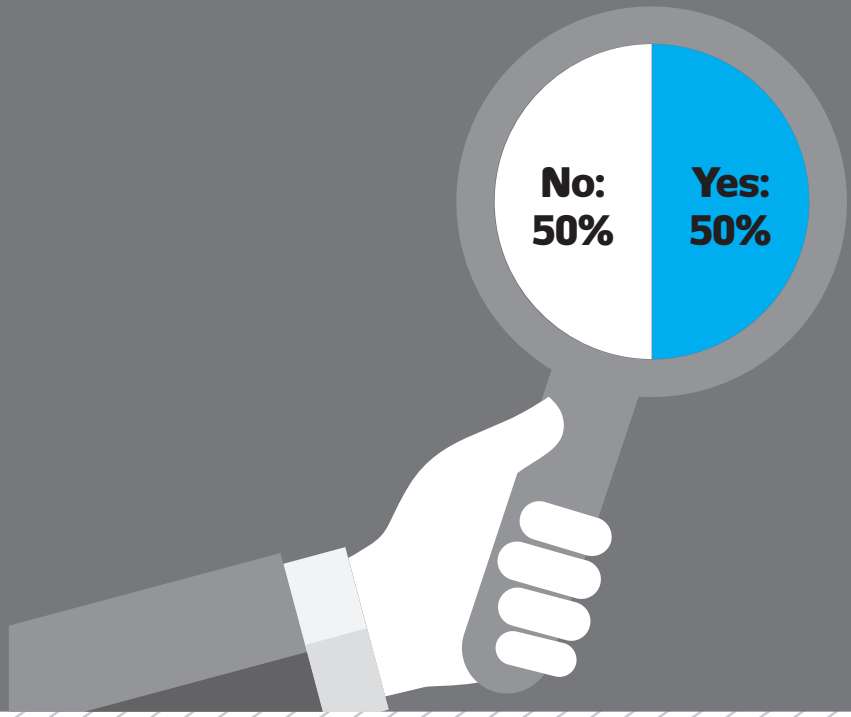


Have you conducted a water audit?

This was the only question that received an exactly equal split.

By spend, 76% quarters of smaller firms (<£1m energy spend) say they have not conducted a water audit, whereas almost the opposite is true for organisations that spend more than £1m on energy, where 72% have conducted an audit.

Perhaps surprisingly of those considering switching water supplier across all industry segments and spend, almost half (44%) have not conducted a water audit.



Would you buy all of your utilities (water, gas, power) from one place if it provided an overall cost reduction?

The vast majority of respondents would buy all utilities from a single supplier if it delivered savings.

Of those that would not, the majority (78%) appear to be larger firms, those that spend more than £1m on energy. However, roughly half (44%) of those respondents are still considering switching supplier when the market opens in April.

Yes: 84%

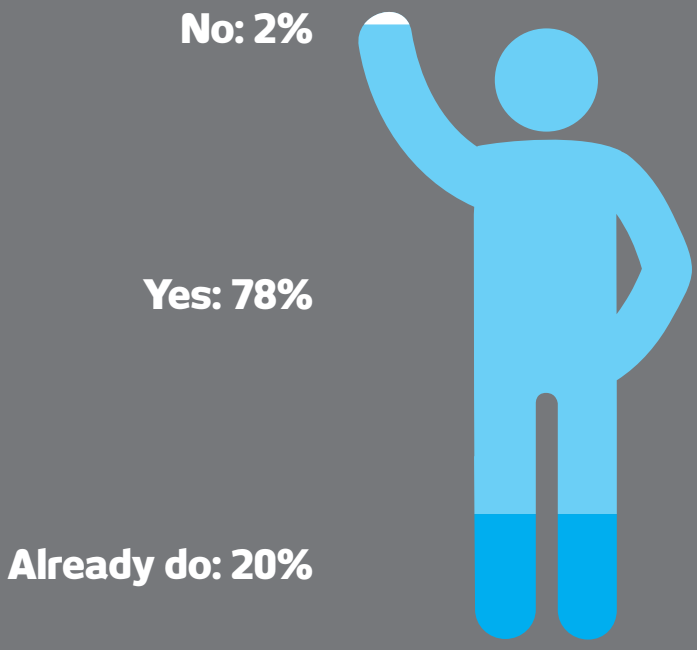
No: 16%

Would you buy renewable energy (power / gas or both) if it did not cost more than non-renewable energy?

More than 98% of respondents would buy renewable energy, or already do, if it did not carry a premium.

Of those that already do, the majority (64%) operate in the commercial sector and are predominantly larger organisations (>£1m energy spend).

While some suppliers offer renewable energy at broadly equivalent costs to non-renewable energy, changes to government policy have led some organisations to switch back to conventionally-sourced energy due to significant cost increases.

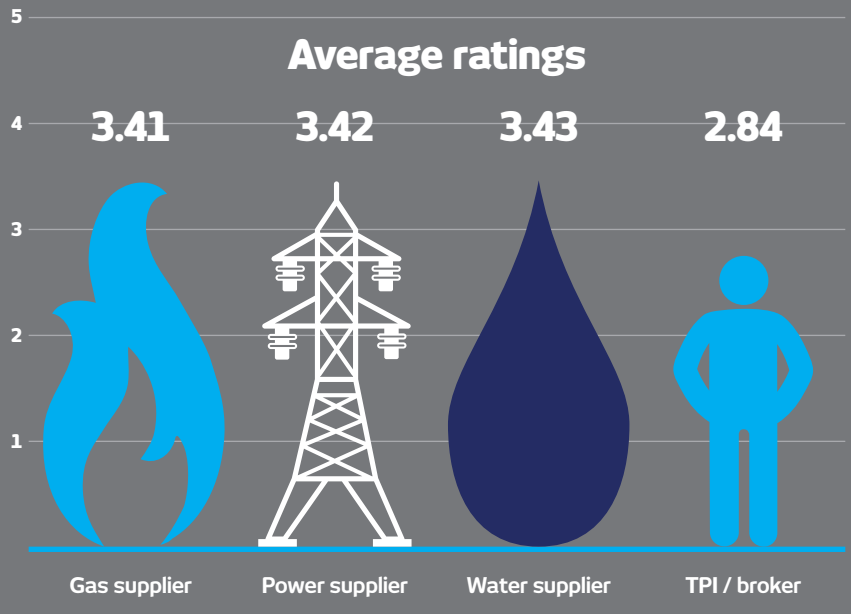


Who do you trust most?

Water suppliers appear to be most trusted, although on a weighted average basis, there was very little difference between utilities.

Water suppliers were rated at 3.43 overall, electricity suppliers at 3.42 and gas suppliers 3.41. TPIs were rated at 2.84.

While there are some extremely well regarded TPIs active in the utility market, the sector is not subject to the same regulation as suppliers. The survey data suggests TPIs continue to suffer trust issues due to sharp practices, or at least perception of them, in some sub sectors.



If BEIS or Ofgem did one thing...

The survey asked participants to suggest one action for government or regulator to take in 2017. 45 respondents offered a view.

Certainty was a common theme:

"Set a cross party 10-20 year plan for energy production / regulation / charges and to stick to it and not constantly alter policy," said one.

"Think holistically about the future and vision of the energy market, and stop wasting money on short-term fixes with very low value," said another.

"Have a strategy," was one succinct response. Several other respondents made comments in the same vein.

A number of respondents commented on energy efficiency and Esos legislation:

"Make energy efficiency a legal requirement for all businesses," said one. Several respondents called for energy efficiency to be subsidised or incentivised.

"Keep Esos but enforce the penalties," suggested one respondent. "Make Esos and acting upon Esos mandatory for all businesses (you could then cancel Heat Network regs)," advised another.

Related to that were calls for mandatory performance levels - or at least visibility of performance - in buildings.

"Set a new zero carbon target for new buildings. It is horrendous to see the shambles of new buildings that have very poor energy performance, often with BREAAM excellent ratings, using three times the design spec of energy and causing health problems to the occupants," was perhaps the most emphatic suggestion.

"Extend DECs to private sector," said another.

"Improve Building Regulation/ enforcement that requires buildings and their services to actually achieve improved performance. Non-compliance should incur penalties and require the developer etc. to rectify," suggested one respondent.

Several individuals called for the Carbon Price Support mechanism to be scrapped to increase competitiveness of UK firms versus overseas companies, and a handful of respondents urged the government to set out how supply will be secured and its mechanism for ensuring long-term energy security.

A number of respondents called for renewables support or subsidy, with support for batteries cropping up more often than other technologies, such as solar.

Others called for all subsidies to be scrapped and for government to let the market deliver at lowest cost. There were also calls for business energy and environmental taxes to be reduced (or scrapped, in one case) and reporting simplified.

One respondent called for TPIs to be regulated. One called for "free energy for all" on the basis of "don't ask, don't get".

If you were to scrap one EU-related energy law, what would it be?

35 respondents offered a view on this question, with two particular topics cropping up most often.

Around 20% of suggestions related to Esos.

"Esos - complete waste of time when there is no penalty for not implementing the recommendations," said one.

"Esos. We are in a CCA and it means duplication of work and cost," said another.

"Esos, as it came at considerable cost and provided nothing more than information, which may have already been known, but [some firms were] unable to act due to restricted cash flow. Esos funds could have assisted with energy reduction," suggested one respondent, and there were several variations on that theme.

A similar number of respondents called for the EU ETS to be scrapped, largely due to cost and competitiveness.

A handful of responses related to the CRC. Respondents described it as "unworkable", "too onerous for narrow emissions reporting benefit" and "not an effective reduction incentive".

Two respondents called for VAT to be scrapped or reduced on fuel/energy or energy efficiency related products.

Another suggested dropping renewable energy targets "as there are more efficient ways to decarbonise the economy, such as a mixture of nuclear, gas and energy efficiency", while another suggested allowing "man made waste heat" to qualify for renewable subsidy.

One respondent suggested "[removing the] €2.5 cap on generator TNUoS charges as it distorts the market."

One respondent would ditch the Energy Performance of Buildings Directive, "[as] the requirement has been badly implemented/managed and does not produce the desired improvements".

One respondent would get rid of the Heat Network (Metering & Billing) Regulations 2014 "[as it is] complex around who would qualify and very time consuming to work out if in scope or out of scope".

Prepare for two years of extreme volatility

Wholesale energy prices were relatively benign until the middle of last year. But average prices are now on the rise while swinging dramatically in the short term. That presents both risk and opportunity. But the importance of a watchful eye and a robust procurement strategy cannot be underestimated.

"The volatility we have seen within power markets in 2016 was unprecedented," according to Frank Rabusic, head of trading and risk management at third party intermediary, Amber Energy.

"We have never seen anything like this before, where you had in one year, a low on the day ahead market of £30.15/MWh on 8 September and a high of £170MW/h on 7 November."

Meanwhile, gas prices, low at the start of the year and forecast by many to drop further, doubled in the second half due to in part to reduced storage capacity at Rough and the impact of the Brexit vote on Sterling. Neither of those issues is expected to be resolved any time soon and Rabusic predicts a bumpy ride ahead for energy markets.

"I believe that over the next year we are going to see increased volatility in the market and reduced liquidity due to uncertainties around both the end products - wholesale electricity and natural gas - and also the components that drive the price," says Rabusic. "That is, the price of carbon, the price of coal and the price of renewables, plus currencies and the price of oil."

That means uncertainty lies ahead.

"The wholesale element of the final bill is roughly 50% for electricity and about 65-70% for gas. So the impact of volatile wholesale commodity prices on the final bill could be dramatic, considering prices have gone up by 50% from the lows we saw in the first quarter 2016," says Rabusic. "If the pound continues to weaken, then that could have quite a dramatic impact on energy prices."

So what does that mean for a procurement strategy?

"There are risks and there are opportunities. What we are advising clients is to have a very firm risk management policy, strategy and plan. We have seen the pound very volatile in recent weeks. If [a fall in Sterling] coincides with oil prices going the other way, we might see quite a rally in electricity and natural gas prices. So a clear policy is crucial."

What should the risk plan cover?

"Having in place a very firm budget, stop loss prices in place and cut prices in place, which would guard them against budgets being breached and against prices overshooting on the other side," Rabusic advises.

What are you advising clients in terms of contracts?

"It is essential that the product that they agree with the supplier is as flexible as possible, allowing them to trade their agreed volumes into different lot sizes for different delivery periods. It could be buying and selling seasons, quarters, months, day ahead and within month contracts."

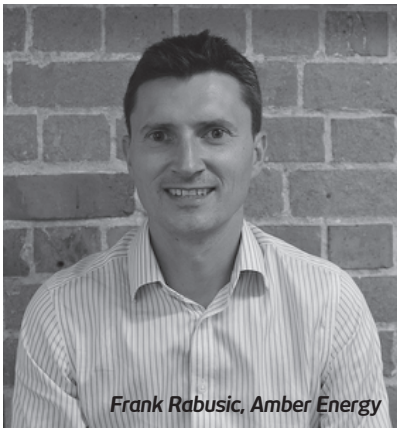
Perfect storm drives energy prices higher

Capacity margins at an all time low, French nuclear outages and Storm Angus taking out half of the UK-France interconnector have fueled power market concerns and pushed prices back to where they were two years ago.

Zoe Double, head of power at pricing firm ICIS, is reluctant to use the term "perfect storm" to describe the confluence of factors. "But, it's certainly a more alarming supply demand balance than we have seen for many years on the UK power market."

According to the ICIS Power Index, the Q4 2016 average value of £45.937/MWh was the highest since Q4 2014, up 7% from the previous quarter, and 16% year on year. Overall, the firm's Power Index finished 2016 32% higher over the year. Higher short-term prices, the firm notes, tend to have a bullish impact on longer-term supply contracts.

Meanwhile, from a gas perspective, "the impact of the Rough outage should not be underestimated," says Double, with ICIS predicting likely price rises next winter as a result of capacity being halved at the facility, along with more volatile price movements over the year due to fewer options to send gas that is not being used.



Frank Rabusic, Amber Energy

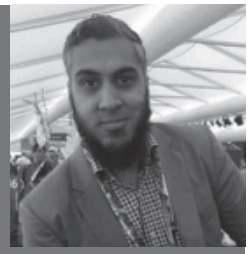
The long and short of it

Volatility is manifesting itself in both the short term and seasonal markets, according to Mike Winterton, energy trader & risk manager at Amber Energy.

"If you look over the year it is extremely volatile, but also on a day to day basis, there have been huge swings across the board," he says. "Swings of 3-4% have been quite common this year, whereas, from June onwards, with Brexit, the Rough issue and uncertainty around electricity supply margins, we were also seeing 3-4% swings on the [longer term] curve every day.

"That has not been too common in the past. So we are seeing both short term volatility and volatility over the yearly period."

Become market-driven, not calendar-driven



"The biggest risk facing firms in the year ahead is complacency," according to Omar Rahim, CEO of third party intermediary Energi Mine.

"Prices overall have been pretty soft over the last two years, so I think that there's a danger of procurement departments having a more short-termist view."

He thinks that could pose problems.

"It's very easy to assume that prices are going to continue to slide. But as we saw in the back end of last year, when we had a touch of cold weather, prices rose quite aggressively. But people have got a short memory."

Rahim says firms should place more emphasis on scenario planning and stress testing current procurement methodology. Meanwhile his advice to clients is to ensure they have a healthy hedge position for the next two years with sufficient contractual flexibility to react to market changes.

"We're seeing clients that are much too calendar-driven. We're trying to encourage them to be a lot more market-driven, to react to what the market's telling you to do as opposed to 'I have to hedge by this date'," says Rahim.

"Going into this year we're advising clients to have a fairly decent hedge two years out with the ability to layer in hedges as you approach. We've had three or four very mild winters and, statistically, the more we have in a row the less likely we are to have another one," he suggests.

"If we start to get into trouble going in to summer, winter prices could escalate very quickly."

Assess consumption, review risk strategy

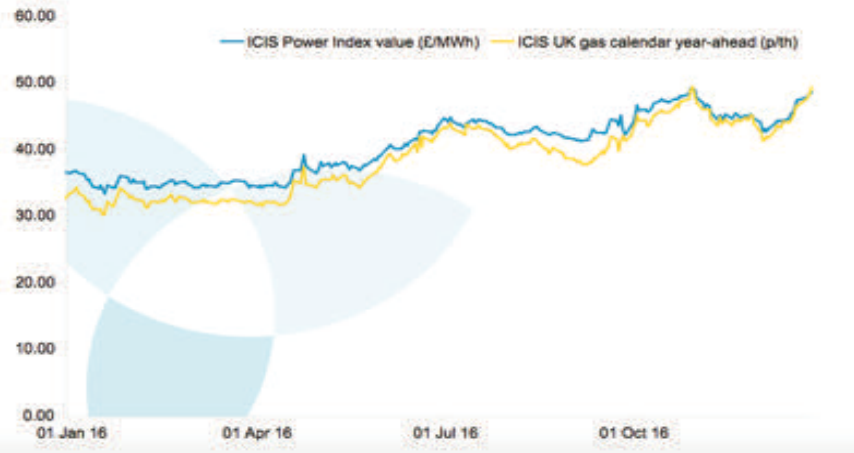
"Some firms, if they have been protected by a long-term fix within their energy contracts may not even be aware of all this volatility," says James Summerbell, a director at Noveus Energy. "Either way, for me the key message for any end user, from board-level down, is if you've not reviewed your risk strategy recently, then definitely, definitely do it."

He says planning ahead is key. "Three years as a minimum and five years is I think the right timescale to consider," says Summerbell. "But do consider how your business is changing and what your consumption needs might be."

Equally critical is determining exactly how the business is consuming energy.

"It's not just the absolute amount of energy anymore, it's the time of day, at least for power," says Summerbell. "It's becoming increasingly important to try and manage the shape of your consumption during the day. Because the commodity price is actually only half of what you pay – and in the next year or two, it will be the minority share."

For more on non-commodity cost risks and opportunities, see p14-19.



Those companies with neither the appetite nor resource to manage energy risk can still opt for a fixed price contract, but will pay a risk premium. But Rabusic thinks flexibility can pay dividend.

"A lot of SMEs and even smaller industrial clients believe that flexible products are too risky. All we say is a fixed product is a sub group of a flexible product. Perhaps prices are already on the high side and there may be a correction. By being on an extremely flexible contract, they can take that opportunity."

Whether companies view market flux as opportunity or risk, the current environment is unlikely to change soon, says Rabusic. "We are looking at two years of extreme instability."

From an energy procurement perspective, there will be winners and losers over that period and beyond. But the biggest losers may well be those that fail to grasp the nettle.

"Where all of this starts is around policy, around strategy and then around plan," says Rabusic. "You define the rules and you play the game. But you have to be protected - and the protection is absolutely crucial."

Non-commodity costs: Why your bill increases regardless of power prices

Wholesale power prices fell for much of the last two years. Yet power bills did not. So what is driving up electricity costs for businesses and how much more can firms expect to pay this year and next?

Non-commodity costs continue to rise. According to consultants Noveus Energy, they made up around 52% of total power bills in 2016. This year will be more like 55%. By 2020, according to the firm, 65% of the bill will be due to non-energy costs. So regardless of wholesale market conditions, businesses can expect bills to increase.

RENEWABLE SUBSIDIES

Of the policy costs, subsidy for renewable generation is by far the biggest single element – and it's increasing. The Renewables Obligation (RO) currently represents about 16% of the bill. Combined with the Feed-in-Tariff (FiT) for smaller-scale renewables (roughly 5% of bill), those subsidies make up more than a fifth of the final cost paid by power consumers.

While the Renewables Obligation closes to new projects this year, payments added to bills via the RO will be due until 2037. Meanwhile, costs of the replacement subsidy regime, Contracts for Difference (CFDs), will start to increase significantly next year when early projects begin to claim guaranteed prices for generating power.

Guaranteed generation rates differ for each technology, such as offshore wind, energy from waste, biomass and nuclear power. While there is no danger of new nuclear costs arriving on bills any time soon, wind and biomass projects will make the CFD charge more significant from 2017/18 onwards, adding perhaps 3-5% bills.

However, given the CFD guarantees a certain price for power, that levy will depend upon the wholesale market price, making it difficult to predict.

Given that renewables support is added as a pence per kilowatt hour (p/kWh) charge, companies can only reduce their overall power use in order to cut costs, rather than reduce exposure to renewables charges per se.

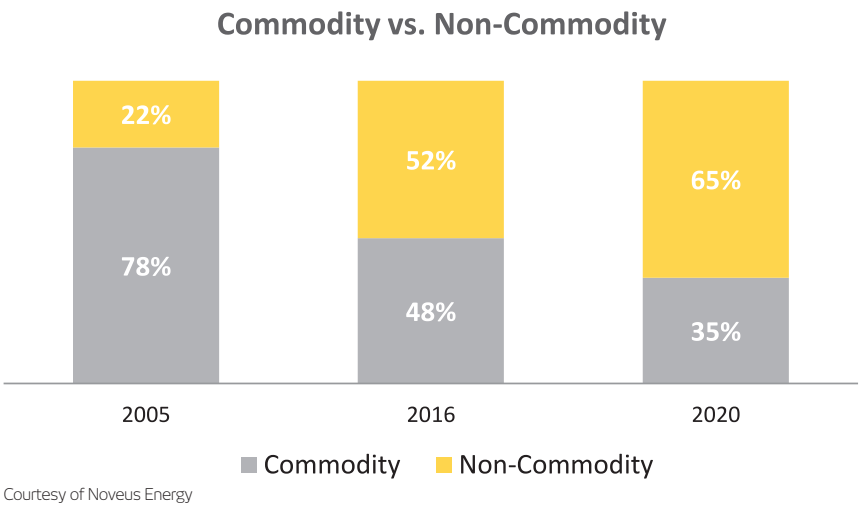
Including the cost of exempting the most energy intensive industries from renewables costs, business energy supplier and aggregator SmartestEnergy predicts RO costs will increase around 20% in 2017/18 to £19.63/MWh (1.96p/kWh), which it calculates would add £30,000 to a 10GWh annual power bill.

Noveus Energy's predictions are broadly similar. The firm estimates the RO charge will increase around 16% to 1.83p/kWh, adding around £26,000 to a 10GWh annual power bill.

Meanwhile SmartestEnergy predicts small-scale FiT costs will increase around 14% in 2017-18, and rise 8% further in 2018-19.

The firm also anticipates CFD costs rising from £0.76/MWh (0.08p/kWh) in 2016 to £3.78MWh (0.38p/kWh) in 2017/18. It says that would add £30,000 to a 10GWh annual power bill. SmartestEnergy estimates the CFD charge will rise to £6.01MWh (0.6p/kWh) in 2018-19 and £9.10MWh (0.9p/kWh) in 2019-20.

As such, the firm advises businesses that set longer-term energy budgets to account for this new charge – and the same applies to the incoming capacity market charge.



Courtesy of Noveus Energy

CAPACITY MARKET

The capacity market (CM) charge for winter 2017 will be lower than many feared after the early auction, held in February, cleared at a fraction of the rate predicted by analysts. Most of the UK's generation fleet, around 54GW, accepted a payment of £6.95 per kilowatt of capacity to make themselves available over winter – against market predictions ranging from £13-£45 per kilowatt.

That outturn will bring relief for businesses that had been warned to brace for six and seven figure cost increases and as much as 7% added to bills from the CM charge alone.

TPI Inprova Energy now estimates the 2017/18 CM will add 1% to business power bills, or 0.129 pence per kWh. However, that figure is a national average and the true cost will primarily be dependent upon peak power usage.

Noveus Energy calculates a slightly higher figure of 0.134 p/kWh, including a small provision for the 300 MW DSR auction to take place in March.

For larger power users, consuming around 100GWh SmartestEnergy estimates that the 2017/18 CM charge will add around £200,000 to this year's bill and around £600,000 the following year. That figure is based on roughly 3-4% of demand taking place in the evening winter peak.

The actual CM charge for individuals depends upon how many companies manage to successfully reduce demand over the evening winter peak. The greater the avoidance, the smaller the cost base from which to recover the charge - and the bigger the tab for those

Breakdown of an Electricity Bill

Courtesy of Noveus Energy

Costs are Scaled to 100GWh | 55-60% Load Factor | Customer in London

DESCRIPTION	£'s	%	Forecast
Energy (incl. Losses)	£4,570,086	48.0%	→
Supplier Costs (incl. Margin & Risk)	£180,000	1.9%	→
Transmission Charges (TNUoS)	£826,175	8.7%	↑
Distribution Charges (DUoS)	£971,486	10.2%	↑
Balancing Use of System Charges (BSUoS)	£252,388	2.7%	↑
Renewables Obligation	£1,558,000	16.4%	↑
Feed-in-Tariff Charge	£520,000	5.5%	↑
Climate Change Levy	£559,000	5.9%	↑
Contracts for Difference (CfD)	£38,977	0.4%	↑
Capacity Market (CM)	£5,552	0.1%	↑
Other Charges (BSC, AAHEDC, Metering)	£30,074	0.3%	↑
TOTAL ESTIMATED COST	£9,511,738	100.0%	

unable to turn down or turn off.

The overall cost of the scheme for next winter came in at £378m. Some may argue that the low rates accepted by generators in the auction imply that the early auction was unnecessary, or 'money for nothing', given winter peak demand has not gone much beyond 50GW for some years.

However, given the political fallout that would follow any loss of supply, policymakers may see it as money well spent.

TRIAD

Transmission network charges (TNUoS) currently make up around 9% of the electricity bill. They vary by location, but in the main, bar Scotland and the far north of England, are also expected to rise.

They are charged based on average demand during the three periods of highest national demand between November – February, occurring at least 10 days apart. Typically, but not always, these periods, known as Triads, occur between 5pm-6.30pm Monday to Thursday in December and January.

Because the Triad mechanism is mature, the number of companies that power down/turn off or generate during potential Triad periods has increased. That leaves a smaller base to collect the revenue earned by National Grid for operating the transmission system, so companies that fail to curtail consumption during the winter evening peak will end up paying more.

Meanwhile, the affect of the capacity market charge, which also applies to the evening winter peak, may have a significant impact upon the level of Triad charges paid by individual businesses, as well as the mechanism itself.

LOCAL GRID CHARGES

Distribution network charges (DUoS) also vary by location, but on average account for around 10% of the total power bill.

As with Triad and the CM charge, DUoS charges can be mitigated by consuming less power from the grid during peak periods, known as red bands, which can be hundreds of times higher than off peak charges (green bands) in some locations.

Those multiples will change from April 2018 under new rules (called DCP 288) that flatten distribution charges so that red band prices are far less expensive. However, prices will rise for off-peak times, so that businesses could well end up paying more to use the local grid.

OTHER CHARGES

Of other non-commodity charges, the Climate Change Levy is the most significant, making up around 6% of the bill. The CCL is intended to provide an incentive to increase energy efficiency and to reduce carbon emissions, although changes to the scheme have arguably rendered it a confused tax. Prior to August 2015, businesses that used renewable power could claim an exemption from the tax. However, changes announced in the summer Budget that year removed that exemption, adding significant cost to some end user bills.

The cost of balancing the system makes up around 3% of the typical business power bill. Called BSUoS, the charge is also set to rise – by 10% next year and a further 5% in 2018/19, according to Noveus Energy – as the cost of system balancing increases. That is due to loss of inertia provided by thermal plant, and increased actions required to balance renewable generation.

Controlling non-commodity costs

TPIs and energy suppliers outline the risks faced by UK firms – and the opportunities to mitigate them

Some parts of the power bill are unavoidable. But others, such as network costs and the capacity charge, can be mitigated through load shifting. So if businesses did everything right, how much could they avoid?

"In theory, if you actively engaged with [peak charge avoidance], you could reduce your bill by 10-15%, possibly more," says Smartest Energy head of pricing Gavin Baker.

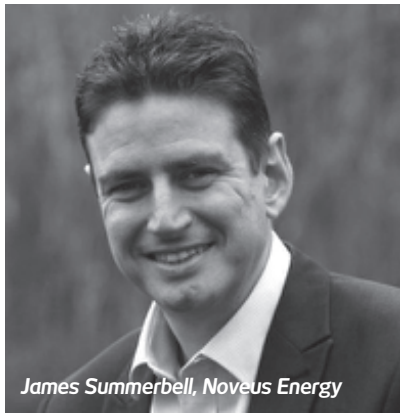
"Typically, because you're avoiding that bit of expensive non-commodity, you'll also get some benefit in terms of the commodity cost."

Alternatively, if everyone else is shifting demand out of peak and policy charge periods, "the risk is that you have to pick up increasingly large proportions of the [overall] bill," says Baker.

"It's an unfortunate aspect of the way policy mechanisms work."

Equally unfortunate, suggests Baker, is that some firms may be stung through ignorance of policy mechanisms, such as the capacity charge.

"The general outlook is one of significant rises in energy costs," says Baker. "The [capacity market] policy



James Summerbell, Noveus Energy

measure is expensive," he adds, "and I'm not sure that has necessarily been communicated at the outset".

Meanwhile, falling wholesale prices over the last couple of years have masked the speed at which non-commodity costs are rising. With both commodity costs and non-commodity costs increasing, many firms may this year face a double digit hit.

ENERGY EFFICIENCY

So how best to avoid the avoidable? Baker believes the signals for demand reduction and load shifting are now so strong that firms may consider "the outright restructuring of business opening hours across the winter". That is, "Getting everyone in earlier and shutting up shop earlier in the evening just to mitigate energy consumption at that time of the day".

But that is not an option for many businesses. James Summerbell, a director at Noveus Energy, agrees most firms can still make significant cost reductions through peak charge avoidance. However, he believes overall demand reduction trumps all other measures.

"The ability to reduce your consumption during those peak charge periods is becoming more and more important in terms of controlling your costs," says Summerbell.

"But I can't stress enough that it shouldn't be a case of shifting capacity versus energy efficiency.

"Energy efficiency will always get you the best outcome," he says. "It will always make sense, because if you reduce your baseload – your permanent demand – you get the benefit at all times of the day. So I don't believe there is a conflict between energy efficiency and load shifting."

Magnus Walker, director of trading and risk at Inprova Group, agrees.

Non-commodity risks

Risk: Can you afford to operate between 4pm-7pm?

Smartest Energy's Gavin Baker is not alone in questioning whether loading costs into peak periods could change working hours at some UK firms.

Nick Proctor, CEO at Amber Energy, holds similar views. He says some of his clients will simply shut down if there is a risk of a Triad being called, let alone the incoming capacity charge.

"There is so much pressure during that 4pm-7pm winter period. For some businesses, I don't think it will be profitable to use energy during that period," says Proctor.

"The tax is becoming so bad that is not just a case 'can we avoid it?' For some firms, it is more a case of 'we can't physically produce and make a profit with that much risk exposure during those hours of the day'," he says.

"So I think some businesses will try and switch away from [peak consumption] completely."

Proctor accepts that might be the intent of policy, but feels businesses have not been properly engaged or given adequate warning.

"I do think [policy costs] have come in aggressively. You look to make promises [in terms of decarbonisation targets] and what ends up happening is that ... a lot of taxation comes in. And those taxes are coming in bigger and bolder then some businesses thought," says Proctor.

"They are not all ready for a 20-25% hike in their [energy] price and I think it will cause a number of issues and a lot of pressure on some businesses going through 2018 and 2019 in particular."

Those trying to fix energy budgets against 2016 prices – which were based on soft wholesale markets and minimal capacity and CfD charges - should take note, Proctor warns.

Risk: Changes to peak network charging

While some businesses have set up shop around peak network charge avoidance, changes to the rules around distribution charging could alter those economics.

The change to the charging methodology is called DCP288 and it will come into force from April 2018. It will effectively rebalance how network charges are applied. Currently, network operators make much of their revenue from red bands. As such, red band charges can be several orders of magnitude higher than green band, or off-peak charges. Ofgem believes that by rebalancing those charges – that is, making green and amber bands more expensive and red bands slightly cheaper - the charging rules will be more reflective.

However, the change will mean businesses that rostered operations around red zone avoidance could see savings dwindle.

"It will have an impact and it will reduce the benefit," says SmartestEnergy's Gavin Baker. "But with the capacity market charge also being loaded into those [peak] times, the benefit of load shifting is not going to go away."

What is more, he says, while distribution benefits may be diluted, other opportunities to monetise flexibility are emerging.

"Some suppliers are now offering fairly sophisticated products that enable customers to benefit from half hourly wholesale market pricing during peak times," he says. "So there are new opportunities coming in to play."

Utilitywise strategy director Jon Ferris agrees that businesses that are already load shifting to avoid peak charges will continue to do so, despite a degree of dilution.

But he thinks demand reduction may climb the corporate agenda as a result of DCP288.

"Businesses that have looked more recently at demand shifting are probably going to look again at energy efficiency and pure demand reduction," Ferris says. But, he adds, they should be doing that anyway.

"There is an underlying need to understand where and when electricity is consumed in the business in order to eliminate waste. DCP228 is not going to do anything to make that less important."

Risk: Changes to network capacity charging

Excess capacity charges could add percentage points to half hourly business energy bills from next year.

Under the current use of system agreement, businesses are not penalised for breaching their agreed capacity on the distribution network, paying the same rate for excess capacity as they do under normal use. But from 1 April 2018, firms that breach their agreed capacity will pay a penalty rate.

According to Orchard Energy that penalty charge could be two to three times the standard rate and the firm says if a supply regularly exceeds its assigned available capacity, overall electricity costs could increase by 1-2%, possibly more, depending on the consumption profile.

That may mean firms must refocus on capacity management, something they have not had to do for some years under the current charging regime.

However, SmartestEnergy's Gavin Baker says some might opt to simply pay for more headroom rather than take a penalty hit – although he warns that it is not an overnight process.

"For a relatively small breach you can quickly start to see big increases in capacity [costs], because it is already quite a substantial part of half hourly charging," says Baker.

"So businesses will need to be more conscious about how much capacity they have, and if they need more, figure out how long it takes to get a capacity increase. It could be cheaper to up the standing charge to avoid breaching it."

If directors did one thing...

If company directors were to do one thing this year, "they need to appreciate the magnitude of the changes [taking place] in the market and to formulate a plan," says Inprova's Magnus Walker. "They need to work with experts to understand what they can do to mitigate those costs".

According to The Energy Brokers' David Peake, the simplest approach is to take a long-term view.

"You have to look longer-term rather then six months prior to contract renewal. That has to change," he says. "I think with education over the next year or so, we will see that happen in the mid-market and in time, within the smaller SME market."

Do non-energy costs make the case for hiring energy managers?

If non-energy costs are now the bulk of the bill, does that improve the business case for dedicated energy managers?

The Energy Brokers' David Peake says it hinges on economics.

"It can do. Our largest customers have three or four stakeholders involved – energy managers, procurement managers, facilities managers – and generally the solution needs to touch all of them.

"With the mid market, it is one person that spends two weeks on [energy procurement] every two years. Justifying and energy manager on that basis is a tall order – but some of those smaller multi-site organisations should consider it."

"The prime driver for buyers of energy should be: forget where you best price will be, because that is at the behest of the market and the non-commodity price," he says. "You have got to drive your energy efficiencies, reduce your overall consumption and [focus on] where you are using that consumption."

Walker also thinks business energy bills should be made clearer in terms of cost breakdown so that consumers can see precisely where their money is going. Otherwise, the incentive to action is muddied.

PENNY DROPPING?

David Peake, sales and marketing director at The Energy Brokers, says many firms have begun to appreciate the need to focus as much on the non-commodity element as procurement. But he sees a distinct divide between corporates and smaller companies.

"Of the last ten tenders we have had from large corporates, probably 70% are as much interested in what we can do to help them avoid non-energy charges [as price]," he says. "So it is clearly on the boardroom agenda more than it has been in the past."

However, the SME market is perhaps less aware of the rises they face due to non-energy costs, Peake suggests.

"Their contracts have less visibility, so now, when they are coming to renewals, there is a sharp intake of breath. We try to address that by sending them a monthly update in plain English outlining the changes and why they are occurring," he says.

"But as much as I would love to say the SME space is engaged with demand strategies and energy efficiency, it is less so [than the I&C market]. Certainly in our experience, price is the biggest driver 75% of the time for those SME customers."

As larger SMEs are rolled onto half hourly metering via P272, might engagement increase?

"It's a grey area. We have an I&C business and an SME business. But there is an intermediate market, which is where P272 will mostly come in. A year ago, they were perhaps unaware of half-hourly metering or how any of this worked. Now, the larger ones are. So awareness is changing."

However, he says it's a different story for most single-site SMEs affected by P272.

"It is still fairly new and not all of them have historic data, so the options on the table when tendering are still fairly limited," Peake says.

David Brown, Sodexo

CORPORATE DISENGAGEMENT

David Brown, head of energy and utilities at FM firm Sodexo suggests it is no surprise that SMEs are struggling to understand assets and energy costs.

While TEB's David Peake believes the non-commodity penny is beginning to drop, Brown says even some of the largest corporates remain disengaged. He says energy costs way down the board agenda with the situation unlikely to change until a price shock of 1970s proportion occurs (see p25).

BACK TO BASICS

Brown thinks many clients have to revisit the basics of procurement and bill validation before they can clearly understand how to mitigate non-energy costs.

"Often a central procurement team will go to market and get two or three fixed price quotes. But unless they have an expert in terms of the markets, or a relationship with a broker, they often don't understand the various ways you can save on costs, be it on DUoS or kVA capacity," says Brown (see boxouts on network charge risks).

"It becomes beyond what a normal person would have the capacity to look into. So you need to have specialists reviewing that, because there is no guarantee that you are going to get those savings," he adds.

"Having a team of experts to do that efficiently, as opposed to learning how to do bill validation internally [is crucial]," he says. "Because if it is self-delivered, it is usually a case of 'does the meter reading match what the invoice says?' That is about as far as most clients go when they self deliver.

"Therefore most clients are still missing a trick when it comes to procurement and bill validation," says Brown. Regardless of non-commodity cost avoidance, "That is a really big opportunity".

Non-commodity opportunities

Opportunity: Energy storage

While costs have some way to fall, battery storage is seen by many as 'the next big thing'. Centrica has predicted a battery storage investment 'boom' from as early as June this year. Meanwhile, in the last 15 months, UK Power Networks has received connections applications for more than 12GW of battery storage projects.

For companies seeking to mitigate spiky energy costs and shift loads out of peak times, battery storage could prove attractive in the short-to-medium term.

"I think the biggest story of 2017 will be making storage viable for businesses," says Energi Mine's Omar Rahim.

"Most businesses, particularly large I&C firms, will be looking at onsite generation in one form or another and if you are already investing in that infrastructure, you may as well stick a battery onsite and avoid peak charges as well as earn other revenues," he says.

Once there is sufficient battery volume in the UK market, Rahim believes it could ultimately benefit all power users by changing market dynamics and associated costs to bill payers.

"Storage coming into play will fundamentally change where the peaks occur in the market and could smooth out a lot of that volatility of intraday prices," he suggests.

Amber Energy's Nick Proctor also sees demand for batteries over the next 12 months, driven initially by retailers.

"Because of the inflation in energy prices, the return for batteries going to be there from year two onwards," he says. "Where previously it might not have made sense [to invest in batteries], when businesses look at their contract renewals prices, they may now think again."

Additionally, he says batteries may be attractive to companies that have taken a robust approach to demand reduction and avoidance and have no other viable measures to implement.

"We have spoken with a number of retailers over the last year and they were asking a lot of questions around batteries. They normally lead on the market, so I think batteries – along with behavior change – will be the areas of focus for this year and next."

Opportunity: Harness your data

Energi Mine CEO Omar Rahim says companies need to stop wasting their energy data and start using it to avoid cost.

"Businesses need to get a lot smarter with their data. Lots of businesses have the data but they don't do anything with it," he says. "That has to change because, with non-commodity charges going in one direction, the only two options that businesses really have are to generate themselves or to change the way they use energy."

While ongoing energy reduction is challenging, "consuming the same amount of energy but at different times is where incremental benefit is to be had", he says.

"To unlock that benefit, you need not just to have the data, but to understand it. And if you've not got a good understanding of your data, you're going to fall behind quite quickly."

Opportunity: Get paid to use power in summer

While most charges and levies are based on winter peaks, National Grid will also pay firms to use more power or turn off generation in summer when the system is overloaded with renewables via a scheme called Demand Turn-Up. Recent rule changes make it one of the simplest demand-side response (DSR) programmes to access, while allowing companies to participate in other balancing schemes. National Grid wants to expand the programme, and has warned that too much power on the system over summer months will become a significant issue in the years ahead.

Opportunity? Demand-side response

Businesses with a combination of on-site generation and flexible consumption are in demand. They are being courted by suppliers and aggregators and increasingly, distribution network operators. There have never been so many options, and so many suitors, for firms that can shift loads and fire-up on-site generation for a fee, representing a significant opportunity for businesses.

Aggregators, which bid businesses' flexible consumption and onsite generation into balancing markets as well as the capacity market, now face increasing competition from energy suppliers and generators, which have to pay much more stringent penalties for getting their demand-supply balance forecasts wrong.

While companies with flexible consumption cannot yet name their price, the demand for their services does provide a significant bargaining chip: Flexibility is a seller's market. That is, provided you have enough spare power to interest buyers.

Small firms, while making up the bulk of the UK market in volume terms, may find selling their wares more difficult in the immediate term.

"We have 1,600 clients, from SMEs to large blue chips," says Orchard Energy MD Amar Hussain. "But the SMEs say DSR or Triad avoidance is always aimed at larger firms with greater consumption."

While rising non-commodity costs may lead more companies to examine selling flexibility back to the grid, Amar thinks only bigger firms will play in those market, at least in the medium term.

"Of our 1,600 clients, only a handful are taking part [in DSR] and they are the larger organisations," he says. "But if the market can be made more accessible, there is significant volume in the SME market. And if they could be incentivised to manage their loads better, then everyone would benefit."

Water market: Big savings or damp squib?

The water market for non-domestic customers in England opens in April. But can businesses expect to save much by switching supplier and how can they ensure any savings are maximised?

The retail water market is deregulating in April. That means firms in England will be able to choose their supplier.

Scotland's retail market liberalised nine years ago, and in many cases has brought about benefits such as lower bills and charges, improved customer service and administrative efficiency through consolidated billing for multi-region organisations.

However, a survey commissioned in January this year by water regulator Ofwat suggests that only one-third of businesses are currently aware they can switch supplier.

Businesses surveyed by *The Energyst* for this report suggest a higher degree of engagement, with half considering switching as soon as the market opens.

Yet, the vast majority (84%) said they would buy water and energy from a single supplier if it delivered an overall cost reduction. That half are not considering switching supplier may suggest a degree of scepticism, or at least uncertainty, regarding the potential for bill savings.

The question for water suppliers is whether those concerns are justified.

At the time of going to press there were 17 companies licensed to operate in the open market but more are applying each week.. Ofwat anticipates around 40 new retail applicants to eventually emerge and the influx of competition has led incumbents to brace themselves for change. Some have exited the non-domestic market entirely while others have created new business units.

Giuseppe Di Vita, SES Business Water

"The path to 'open water' has been littered with mergers, acquisitions and internal restructures for most of the industry players, both large and small," comments Giuseppe Di Vita, managing director of SES Business Water, the business retail component that emerged from Sutton and East Surrey Water last autumn. But Di Vita is optimistic that the change will make water suppliers themselves more efficient and robust, as well as delivering efficiencies for customers.

HOW MUCH CAN BUSINESSES EXPECT TO SAVE?

The consensus is that initial bill savings are likely to be low- to mid single digit percentages. But longer term, if suppliers and their customers are serious about driving down consumption, some market participants believe savings of up to 20% can be achieved.

New models: self-supply

Water consultancy Waterscan has been providing water management and bill validating services to large firms since the mid-nineties. But the firm has recently secured a Water Supply and Sewerage Licence (WSSL) to bring a 'self-supply' service model to market. That means its larger customers can buy direct from a wholesaler, should they wish to do so, a route that pubco Greene King recently announced it is going to take.

Waterscan thinks the model will give customers control over their water consumption and cost; enable greater savings by paying direct wholesale costs as well as ensuring billing accuracy.

"Holding a WSSL will support us in maximising the many opportunities that the open market presents for our clients," says MD Neil Pendle. Crucially for Waterscan, he adds, it will enable access to real-time market intelligence. By integrating its Waterline software system with the Central Market Operating System (CMOS), the core IT system that underpins the Open Water programme, the company says it has the capability to supply and receive accurate client data and to interrogate wider market data to drive savings.

Time to switch? Quality audit key to assessing suppliers

Water Plus' Tony McHardy says it is vital "to get a full inventory and accurate consumption data for all sites to be correctly compare offers from water suppliers". Good data, he says, is the key to a quality audit.

"We start with reviewing customers' existing data including their historic bills and meter readings or collecting new data on meter readings during a set period. This helps establish the baseline usage. Where automatic meter reading (AMR) meters data is available, we would access and analyse the daily usage, looking for any unusual consumption patterns," he explains.

"Once the baseline is established, we can begin the water efficiency work." McHardy says while different audits are tailored to different sectors, "it usually starts with a site-based audit and can lead to a visit from a leakage engineer to locate and repair below ground leaks".

The firm can also carry out a site inspection, which examines all water-related equipment "to identify any issues and non-compliance as well as opportunities for water efficiency savings".

Business Stream's Cardwell-Moore agrees benchmarking is key to maximising returns.

"It is crucial to benchmark any organisation's water and wastewater use against similar operations. An effective audit will analyse the water use and waste disposal of businesses across multiple sectors, giving us vital insight. Once we can see the whole picture, we're able to create bespoke handling plans to help businesses streamline their water use," he says.

"Through effective implementation a business can substantially reduce its operating costs, improve its environmental compliance, modernise the waste water handling process, save on waste water charges and effluent disposal and make significant year-on-year savings," says Cardwell-Moore. "The use of AMR and sub-metering will allow for these improvement to be measured, monitored and recorded."

Once all inventory has been accurately itemised and accurate data gathered, Water Plus' McHardy says firms should ask potential suppliers to quote on a standardised basis so that they can compare offers. Then they should carefully assess suppliers.

"Ofwat has a list of all licensed suppliers on their website. It's important to carry out due diligence to ensure the potential supplier has the financial standing, expertise and service offering required by the customer."

Business Stream has the benefit of almost a decade of liberalised experience in Scotland.

Competition usually drives down prices, says James Cardwell-Moore, the firm's commercial director. But with wholesale prices set by the regulator out to 2020, margins are expected to be tight.

Cardwell-Moore predicts initial bill savings of 1-3%. However he says focused suppliers will help customers reduce their wholesale charge, which is driven by consumption levels, if the market in England and, for larger businesses in Wales, mirrors his experience in Scotland.

Cardwell-Moore claims Business Stream has delivered £160m in savings to customers since 2008. Of that, some £99m is from price discounts. However, £53m has been driven by reducing consumption (some 24 billion litres of water) with customers driving £7m in energy savings as a result.

James Cardwell-Moore, Business Stream

"Deregulation does drive down price and increases competition in the industry, which is a real positive for customers," he says. But he adds that price is not the only benefit. "It's been an incredible evolution in Scotland, which had been a traditional and fairly conventional utility sector. The market used to be all about unit cost but competition has changed that completely with more focus on a balance between price and service."

SES Business Water's Di Vita agrees that initial bill reductions will be modest, although slightly higher than some suggest.

"In the first few years of the open water market, businesses can expect to see initial discounts of up to 5%," he says. "Customers already on large user tariffs should expect a smaller discount level. In Scotland, discounts have risen over the past eight years and are now at 10 - 25%."

Whether that level of saving can be achieved south of the border over a similar timescale remains to be seen.

"But the most important point is that benefits can be accessed from day one of the open water market," says Di Vita. "It's not like the energy market where it took around 18 months for prices to fall."

Stick or twist: TPI views on switching

David Peake, sales and marketing director with The Energy Brokers, says customers have "come around to the view that they will not make a significant saving [from switching] first time around".

For larger firms, he says "the real value" lies in consolidated billing while intermediate-sized business may be "under the illusion that they will receive greater bill savings than they will actually get".

Meanwhile, for "single site customers with a small level of consumption, it is going to be a negligible saving".

For those that do want to switch supplier, Peake advises a layered approach.

"Rather than try to get a 2-5% saving from day one, we are advising clients to go shorter and also out of sync to the main round.

"Everyone is going to submit to an early [switching] round, assuming the market is ready," he says. "But [instead switching all sites at once], we think it might be better to split portfolios, take some contracts out on a year, take some out on 18 months, some out on three years. That way, as the market develops greater liquidity, you start to see the benefit sooner," he says.

"The lesson from Scotland is don't take a 3% saving and lock out with that provider for three years. You would probably received better value going shorter," suggests Peake. "So we are looking at whether we can devise a solution on that basis."

Magnus Walker, director of trading and risk at Inprova Group, agrees bill consolidation is likely to be the initial main attraction. However, he points out that simply verifying the accuracy of existing metering and billing can deliver substantial savings, whether or not businesses actually switch supplier.

"We hear lots of stories where people have been significantly over charged - and they have no way of knowing if that is the case without accurate data," he says.

Amar Hussain, incoming managing director at Orchard Energy, says the broker has been active in the water market in Scotland for a number of years, and will start to action deals in England as soon as Ofwat releases retail prices.

However, Hussain says firms south of the border should "forget Scotland" in terms of percentage savings. He agrees 2-3% is more likely in the near term. Whether many companies will bother to switch for that saving is debateable, he says, and may depend upon the relationship they have with their broker.

"My advice would be, if you trust [brokers] to handle it for you and it will not cost you any time and money, then why not?"

He agrees with The Energy Broker's David Peake that greater savings may materialise as the market develops, but is not convinced that splitting portfolios will make much difference.

"If you were to follow what happened in Scotland, it took more than 18 months before businesses really started benefitting from substantial savings. I think locking in 12-24 months isn't going to be that detrimental," says Hussain.

"It is a big unknown, but 12 months isn't going to make or break anyone if the savings are 3%."

Tony McHardy, corporate director at United Utilities and Severn Trent joint venture, Water Plus, thinks larger, multi-region companies may initially find reduced administration as a key driver to switch.

"Due to the margins that business water retailers will be operating under, prices will not vary dramatically," he says.

"Businesses with multiple sites can save on administration by moving to a single supplier and a single consolidated bill for all of their sites, removing the need to deal with multiple water companies."

By way of example, he points to David Lloyd Leisure, which switched all 84 sites to Water Plus "enabling it to move from dealing with 15 water suppliers and 15 bills, to one supplier and one bill for all sites." That kind of consolidation can lead to "significant" administrative savings, McHardy suggests.

SUPPLIERS AS SERVICE COMPANIES?

As with any utility, procurement can only achieve so much. Tackling inefficiency will drive the largest bill savings, suppliers agree.

"To really benefit from the switching, customers need to find a supplier that can help them reduce and manage their water and waste water more efficiently," says Cardwell-Moore.

"The bottom line still matters, but our customers are placing a lot more emphasis on service and help to reduce consumption and be more efficient."

Di Vita agrees. "The new open market is about so much more than discounted prices. Suppliers should be focused on providing the very best service bundles, with packages that can be tailored around the needs of their business customers; whether that's online services, new ways of driving

End users tepid on switching

Paul Garland, UK energy manager for Vodafone (right), says "there is no large-scale jump to one [water] provider that we anticipate for our business" upon market opening.

While the telco may undertake some regional switching, he believes the water industry "needs to up its game substantially in terms of use of technology" to deliver genuine efficiency to customers.

"When it comes down to it, there is very little room for improvement in the margins in terms of cost," he says. "The wholesale margin is 6%. Most of it is regulated cost."

Garland believes the performance improvement "should be around what we can do to learn more about our consumption and how we can reduce it. That is what I have been trying to get to the bottom of. But it seems to be very difficult to get traction in the industry about electronic meters and automation of flows."

On the flip side, Garland agrees new market entrants that harness technology to increase water productivity "could in theory disrupt" the status quo.

Sean Midgley, (below left) energy and environment manager at SIV, the operational arm of Sheffield City Trust, looks after 17 of the city's sports and leisure venues. He says the trust is highly unlikely to switch supplier in the short term.

"We've listened to all the various water companies, we're being bombarded by TPIs wanting to take on our water procurement and we've come to the conclusion that, at present, what we've got isn't broken," says Midgley. "So we're not going to try to fix it, because there are other risks out there."

Despite some "administrative issues" with its current supplier as a result of changes ahead of retail market opening, Midgley says overall, "we get a reasonably good deal at present with Yorkshire Water".

Whereas some companies "are going to jump for the sake of saving a couple of thousand pounds a year", Midgley notes the lessons learned from liberalisation of the energy market. "A lot of people back then got their fingers' burnt."

water efficiency, or implementing new technology on site to monitor and rationalise water consumption."

That suggests water companies, like energy companies, are switching their focus from pure retail to services business models. Does that suggest water consultants may find themselves under threat?

"The offering from brokers and water suppliers can vary in range and depth so customers need to do their due diligence and make sure they are procuring the services they need for their business," says McHardy.

"As a water supplier, we have our customer's water usage data at our finger-tips on a daily basis," he says. "So we are ideally placed to spot usage changes and, as water experts, we have a proven track record of delivering self-funding projects to deliver water efficiency savings."

However, he says third party intermediaries (TPIs) will remain part of the mix.

"Water Plus is already dealing with all the major brokers in the market through our broker management team and we often work in partnership with brokers to identify opportunities to save money on water bills."

Di Vita agrees. "Third party intermediaries who already have established relationships with businesses around their energy consumption will be instrumental in driving engagement in the water market."

Cardwell-Moore says water firms still require a broad range of market expertise.

"We have a technical arm of

Water2business: Think value over price

"Customers should review value and not just the price when switching," says Geoff Smith, director of business retail at water2business, one of the co-sponsors of this report.

"While price is an important factor, most people are familiar with the old adage "you get what you pay for". That doesn't always mean the most expensive is the best quality or, visa versa, that cheapest is the worst. I'd recommend all customers considering switching take a balanced view of price along with other areas including the quality of customer service, ease of doing business with a new supplier, simplicity of switching, ability to fully their supply requirements and what value added services the new supplier can offer," says Smith.

"At water2business we have strong offerings in all of these areas and work with our customers on value across three key areas service, sustainability and savings. In recent Ofwat surveys customers in our region were those most satisfied with the overall levels of service. Whilst we believe our pricing is competitive across the market we also provide a simple switching process and can demonstrate through case studies many instances where our customers achieve far greater savings through working with our teams and following sustainability and water efficiency advice than those customers that focus solely on the unit price."

our business that delivers water efficiency, waste water minimisation and trade effluent management projects for our customers," says Cardwell-Moore, "We typically work with a range of specialists to ensure we provide the right technical solution for our customers."

WHO CAN MAKE THE BIGGEST SAVINGS?

"All businesses stand to benefit from the new open water market. Multi-site businesses probably have the most to gain from the option to consolidate invoices and data," says Di Vita.

McHardy suggests that both SME and large corporates can gain.

"In our experience, savings can be made across all businesses and public sector organisations – from the corner shop, to a school or a large manufacturing business with complex water or waste water processes."

Cardwell-Moore agrees. Larger firms, by their nature, use more water and can therefore potentially save more, he says, but the SME sector is also core market.

"A large part of our efforts in the years leading up to market deregulation in England has been engaging with the SME community, many of which are not aware of competition, the savings on offer, or the benefits it could bring to their business."

AN ESOS FOR WATER?

Government has introduced energy efficiency legislation, called Esos, for larger firms. At present, it simply requires companies over a certain threshold or turnover to audit energy use. The idea is that businesses will be compelled to take action when areas of inefficiency are highlighted and efficiency measures recommended. Should the same kind of legislation be developed to encourage water efficiency? Suppliers think it may have merit – but views are mixed.

"While regulation in energy has been a burden, it has forced companies to review and reduce their carbon footprint and often costs," claims Di Vita. "On average water is 10% of a business' energy spend, but businesses will be getting their water data in order as part of the switching process, so now is a good time to understand, benchmark and develop an effective consumption reduction programme," he says. "However, a real cost/benefit analysis would be needed before any mandatory regulation was introduced into the market."

Cardwell-Moore says applying a one-size-fits-all approach to any such regulation "probably wouldn't work". If government wants to regulate efficiency, "we believe it should be linked to water scarcity". Equally, he says the firm is "keen that our customers are not tied up in extra bureaucracy and red tape."

However, McHardy thinks regulation might be an effective way to unlock savings.

"It would make sense to drive more focus on water resources and using water more efficiently," he says. "More efficient use of water has many benefits – including reducing costs."

FM view: Only serious spikes and shocks will stir clients

David Brown, head of energy and sustainability services UK & Ireland at Sodexo, says some clients are proactively driving down cost and shoring up their operations. But it may take a severe price shock to spur mainstream action

David Brown, head of energy and sustainability services UK & Ireland at Sodexo, believes rising energy prices may lead firms to refocus on energy efficiency.

However, he says energy still doesn't make it onto the top ten board priorities, and it may require shock therapy to change that majority mindset.

Nevertheless there are easy wins for businesses across all sectors, which should be a focus of cost control over the next 12 months.

"Most clients are still missing a trick when it comes to procurement and bill validation, particularly when they have large portfolios, maybe losing sense of the assets that they own," says Brown.

"There is still a wealth to be done on consolidating and fully understanding that portfolio to then put the best energy strategy in place in terms of procurement," he says. "That is a really big opportunity."

ASSET MANAGERS 'GET' ENERGY EFFICIENCY...

Having a detailed knowledge of assets and energy use helps build a more robust energy efficiency strategy, he says, at least for those with appetite. Proactive clients tend to be portfolio and property managers, according to Brown.

"The asset management segment of the finance sector really understands the risk of the exposure in their portfolios and has focused on increasing EPC ratings," says Brown.

"Those type of clients 'get' energy efficiency to a greater extent than other clients, because ultimately, it is part of their overall cost. If a building is increasingly expensive in comparison to a competitor's, it becomes less attractive."

...MANUFACTURING LESS SO

Conversely, Brown has experienced lag in the manufacturing sector.

That is, "more car manufacturers and parts manufacturers than on the consumer goods side: [Automotive] is a challenge because they often have very old assets. Keeping them running at all times is seen as a priority because it is very difficult to replace a piece of German kit built 30 years ago specifically for that company," Brown says.

"But if a client feels a piece of kit has to be running 24/7 because of the risk [of failure], it probably has more fundamental problems than just energy management. So, where possible, we tie it up with broader asset management and integrate it within a hard FM service," says Brown.

APPETITE FOR DEMAND RESPONSE

He thinks another opportunity for businesses is demand-side response (DSR). He sees increasing demand from clients for DSR provision - but as part of a security strategy more than monetising assets.

"DSR appetite is increasing. But instead of talking about 'the smart grid' and maybe even the financial benefits, clients are talking about building it into continuity planning."

However, the "frustrating" process around connecting to the grid "can be a limiting factor", says Brown.

BOARD APATHY

While suppliers and brokers warn of price volatility and potential hikes over the next couple of years, Brown thinks it will take a significant shock to drive energy up the agenda.

"Energy would be lucky to get into the top ten [board items]. It is quite far down the list." He says while some more complex FM tenders are asking deeper questions, "the reality of approving the contract usually comes down to how cheaply you can deliver the overall service."

If that is the case, does it not follow that rising wholesale costs will sharpen that focus?

"If energy prices go up or down 5%, most clients' perception of energy would not change much," says

David Brown, Sodexo

Brown. "It is only when you get to 1970s oil shock levels that you see a fundamental shift in attitudes – and we haven't had that for 40 years. Until we get to that point, I don't think it will be high enough a priority for clients."

Even in tandem with rising non-commodity costs?

"Potentially, if you are in a position to explain that breakdown of where the energy costs come from," says Brown.

"The complexity of energy prices ... is often beyond the time limit that a person with responsibility for the energy budget will have – unless they are an energy manager," says Brown. "Most clients do not have a dedicated energy manager – and large organisations that do have one certainly don't have enough for the size of their portfolio."

ENERGY APPS THE ANSWER?

Lack of resource has been the lament of the profession for 30 years. But Brown thinks that technology, particularly smart phones and the internet of things, could potentially act as a counterbalance.

"[Comms innovation] is actually driving things a lot more than some of the fundamental conversations around bill validation, efficiency and demand-side response," says Brown.

"It is a lot easier for people to pick up an app and control things from it – and that is where we see the space going over the next couple of years from a broader FM consideration."

End user view: Ring the changes to remain resilient

Vodafone UK energy manager, Paul Garland, outlines the telco's key energy challenges for the year ahead

While energy prices fell over the last two years, in reality rising non-commodity cost cancelled out final bill savings, according to Vodafone UK energy manager, Paul Garland.

Policy costs continue to rise and energy prices are both on an upward trend and increasingly volatile. Moreover, the energy system is undergoing systemic change. "At some point in time, this will all come to a crunch," says Garland.

Maximising energy productivity is therefore a key focus for the year ahead.

RESILIENCE IS KING

Vodafone spends "tens of millions" on energy per annum and Garland is acutely aware of the need to mitigate rising costs. But, as with every going concern, core business comes first.

"Increasing performance of our already strong mobile and fixed networks is the prime mission," says Garland. "Energy is a big number but it is not the main factor.

"What we deliver for people is an incredibly important part of national infrastructure, including the infrastructure of the energy system itself. Therefore we need energy - and we have to be über secure and reliable."

The company therefore locks in plenty of power and maintains lots of back-up. But Garland says it has also developed a "programmatic" approach to exploiting energy trading opportunities as they arise.

RAPID RESPONSE

That translates to embedding pre-defined rules of engagement throughout the company and executing at speed, he explains.

Given wholesale markets are illiquid and can give off "strange" signals, the ability to take action at speed can often trump other hedging factors, says Garland.

"While you can make the best decision at a point of time, you are equally likely to benefit from serendipity - just from actually being able to execute at a point in time," he suggests.

Paul Garland, Vodafone UK

"Lack of speed can reduce benefits. So we have had to improve the organisation's flexibility and awareness: If you need a rapid decision, you need people warmed up and ready to execute, because those things have been pre-thought out and agreed."

ENERGY PRODUCTIVITY

Garland says the telco is also working to add intelligence and automation to its operations to extract the maximum from the energy it buys – and avoid addressable non-commodity costs.

He says the firm is reducing demand where possible and applying artificial intelligence to manage thermal environments for its technology. That is, "a self-learning [algorithm] that anticipates and does the best it can," to maximise available resource.

Many people would define that as being energy efficient. But Garland thinks energy productivity is a better yardstick. Maximising productivity, says Garland, enables firms to eliminate excess cost, which should be a key focus for any organisation. He thinks government should prioritise energy productivity over efficiency and improve its visibility.

"Energy productivity with measurement of excess cost leads to improving competiveness for the business and customer satisfaction," he says. "If you can bring those things together you are sure to deliver good outcomes for both customers and the business."

Garland acknowledges that may sound "a little bit like corporate speak". So he unpicks the measurement aspect using an analogy from the TV show Bullseye.

"Basically saying 'this is what you could have had' if you had worked differently. I find that a very good way of putting across the lost value in the business," says Garland.

"I use it a lot where suppliers are performing less efficiently then they should: 'We have incurred this excess cost compared to what we should have had; it is not our fault, what are you going to do about it?'"

Garland says the same rules are applied within Vodafone.

"Most people use the term benchmarking, I prefer to cut to the chase and use the term excess cost, because it is above what it could, or should, have been."

SECURITY THREAT?

Ultimately, says Garland, all of these improvements and efficiencies are subservient to the core business – delivering a robust and resilient communications infrastructure.

Meanwhile, although National Grid has played down the risk of supply interruptions, that confidence is not necessarily reflected in market sentiment. Garland says Vodafone has a duty to prepare for all eventualities.

"We would be foolish if we were not concerned - because we have to cater for such contingencies," he says.

"There is a massive change happening in grid and generation, so it would be wrong not to be concerned", says Garland. "We have resiliency plans in place, but you have to worry; you can't afford not to."

Systemic changes mean businesses must reevaluate whether those plans remain fit for purpose, says Garland.

"You constantly have to review resilience; to test what is in place will deliver within the environment that is coming into play, not just what has been," he says. "It would be wrong for us to put our heads in the sand."

End user view: Policy costs putting public services at risk

TPIs and suppliers talk up cost avoidance strategies, but some organisations have little choice over rising energy costs. Could one small rule change prevent them shutting down?

Sean Midgley energy and environment manager at SIV, the operational arm of Sheffield City Trust, has responsibility for 17 of the city's sports and leisure venues.

The venues use around 22GWh of electricity per year, which makes up the lion's share of the overall utilities bill, which is roughly £3.5m.

Acutely aware of rising wholesale and on-commodity costs, Midgely says there is very little he can do to mitigate rate rises.

From a commodity perspective, suppliers are now asking for collateral before offering an energy contract. As a charitable trust, they view SIV as a credit risk. But the trust can neither provide a seven-figure deposit nor parent company guarantees. Midgley says that leaves it unable to access competitive contracts, driving up overall energy costs.

Meanwhile, non-commodity costs are starting to bite hard. Midgley is concerned that the trust will have to close down venues as a result of operating costs, depriving the city of much needed public sports and leisure facilities.

While suppliers and TPIs advise load-shifting strategies, Midgley's sites are severely limited in their ability to avoid consumption during evening peaks, where the bulk of network costs and the capacity market charges are applied.

"Between 4-7pm is our busiest period because it's when people finish work and want to go to the gym," says Midgley.

Sean Midgley, SIV

That will burden SIV with significant additional cost from the capacity market charge next year, on top of a projected 20% increase in the cost of the RO. A similar increase is projected for FiT CFD from 2018. Meanwhile, the cost of small-scale renewables is set for a double-digit rise, not to mention increasing network charges.

"If that happens, it will kill us," warns Midgley. "Venues are already shutting."

While councils are under severe budgetary pressure, and energy costs are not the sole contributor, "energy is our second largest cost after salaries," says Midgley.

"So we're really struggling at present because the council can't afford to keep [venues] open. But they're under pressure from central government to provide local health outcomes. One way to deliver that is through local sports and leisure centres. But now they're having to streamline, so you will see, certainly within local towns and cities, that your smaller health clubs, and your smaller swimming pools, will start to close."

Midgley also works with Sporta, the national association that represents charitable social enterprises within the cultural and leisure sector. He says all of the association's 220 members are in the same boat.

DEMAND-SIDE RESPONSE?

Midgely says the trust has looked into demand-side response – and has one CHP unit bidding in to the capacity market. But on the whole has found that aggregators too prescriptive in terms of systems. He is also interested in demand-turn up, National Grid's summer solution for excess generation, but ruled out of the first iteration of the scheme because it required at least 1MW to come from a single supply point. That has now changed, and Midgely says he will reexamine the scheme.

Meanwhile, he says he is "inundated" with enquiries from battery storage companies that want to put units on venue car parks.

"But I can't give up parking spaces to put batteries there at the risk of losing patrons, because parking's already an issue," says Midgely.

Surely that is better than shutting venues? Midgely says it's "a heavy choice"; lose parking and potentially revenue from visitors, or close down sites altogether.

"It's bleak times," he says.

ENERGY EFFICIENCY

Midgley says he has "beat budget by around £1m" through energy efficiency initiatives over the last four years. As a result, he managed to secure a £500,000 energy efficiency budget for this year. But he says, "it never really materialised, because it was absorbed by other energy costs". So he is now fighting fires.

"Energy accounts for about 11% of our gross annual turnover. If we were a private individual, we would be classed as being in fuel poverty."

SALIX SOLUTION

So what is the solution? Midgley says there are some straightforward policy interventions that could make an immediate difference to trusts.

Not-for-profits cannot access Enhanced Capital Allowances. But if government reduced VAT on certain proven technologies to 5% "that could really help as a lever to get things across the line", says Midgley.

Alternatively, revisiting rules around the government's interest-free Salix loan scheme might help.

"Salix funding is open to the NHS and local authorities – but not to trusts that have been set up by the LAs," says Midgley, even though they are "effectively arms-length councils set up to operate the buildings".

While councils themselves could technically solve that issue, Midgley believes it should be implied within Salix rules that trusts set up by councils should automatically qualify for finance.

"If government could revisit that," he says, "then yes, absolutely it would make a difference."

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