



**IS YOUR BUSINESS STILL USING
A LEGACY MODEL TO BUY AND
BUDGET FOR ENERGY?**

**It's time to change the way you buy,
manage and plan for your energy.**



WELCOME

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As the energy market becomes more complex and new risks like Electricity Market Reform (EMR) emerge, stakeholders within your organisation may be asking searching questions about how your company should change its approach to energy.

Long gone are the days when energy prices were driven almost exclusively by the wholesale market. Energy budgets now depend on so many variable factors beyond wholesale prices. Regulatory changes like EMR, the price of carbon, the cost of the network, consumption patterns and self-generation all need to be taken into account when your business is budgeting for its energy spend.

Smart organisations should be able to identify their exposure to all these risks and have a plan to help avoid them or minimise their impact.

That's why we've put together this white paper on risk management. It's designed to help you make the case inside your business for moving to a fully risk-managed energy strategy.

It draws on the knowledge of the risk management and cost structuring team within EDF Energy, which has worked closely on risk-managed energy strategies with some of the biggest names in industry and government.

And what has our experience taught us?

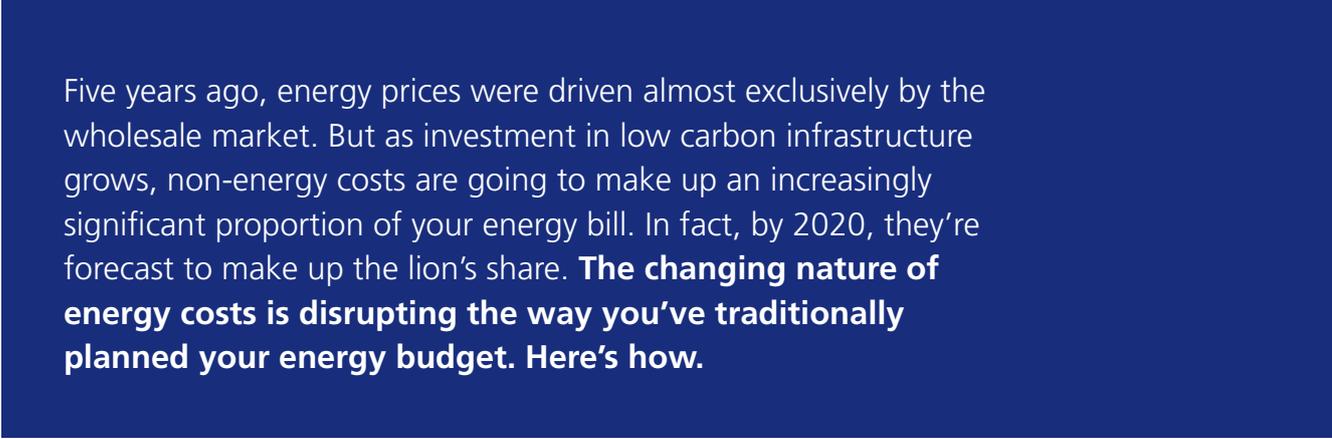
First, businesses need to make energy management a critical priority.

That means making it a board-level issue.

Second, they need to bring together stakeholders from different departments who have an involvement in energy – finance, procurement, engineering and technology – so that they have a holistic view of consumption, buying and generation.

And third, they need to have a robust risk management plan for limiting exposure to energy risks across a range of different scenarios.

For more compelling reasons to change your energy buying strategy, sector case studies and practical tips to make it happen, read on...



Five years ago, energy prices were driven almost exclusively by the wholesale market. But as investment in low carbon infrastructure grows, non-energy costs are going to make up an increasingly significant proportion of your energy bill. In fact, by 2020, they're forecast to make up the lion's share. **The changing nature of energy costs is disrupting the way you've traditionally planned your energy budget. Here's how.**

1. THE RISE AND RISE OF NON-ENERGY COSTS

The first costs from the Government's Electricity Market Reform (EMR) programme hit your business' electricity bill in April 2015.

They'll grow to be significant in themselves, but they also form part of a bigger picture that's much more important to understand: over the last five years, there's been a year-on-year increase in non-energy costs (the costs your business pays for transmission, distribution and new regulation).

Rewind five years and non-energy costs made up **less than 30%** of your total energy bill.

That was a time when energy buyers could keep a laser focus on the wholesale market to bring the cost of energy to their business down.

But today the landscape is different: non-energy costs now make up a **staggering 42%** of your total energy bill.

What's more, our market analysis suggests that the share of the bill from regulated or policy driven items could rise to **at least 60% by 2020** (assuming stable wholesale prices).



2. THE NARROWING OF MARKET HIGHS AND LOWS

The ability to control your energy budget by focusing on the commodity price of energy is further limited by the relatively low volatility we now see in the wholesale market.

2008 saw the largest spread between the highest and lowest prices, a massive £41.80/MWh, which provided ample opportunity for energy buyers to outperform the market.

But between 2011 and 2014, the spread between the highest and lowest price for the front two seasons was less than £10/MWh. In fact, in 2013, the maximum range was only £3.55/MWh over the whole year for the front two seasons. And this trend of a narrowing spread will continue under EMR.

TIGHTENING SPREADS ON THE WHOLESALE MARKET

Spread between highest and lowest price over the front two seasons.



Embrace energy risk management

The narrowing of market highs and lows, coupled with the rise of non-energy costs means the way your business approached energy buying five years ago is not fit for purpose now.

It's time to rethink the way you budget for and buy your energy: away from a simple cost negotiation exercise to a strategy that's fully risk managed, just like any other core business risk.

The goal is to get more certainty over your energy costs and to plan for, reduce or eliminate risks.

OLD VS NEW

THE OLD MODEL TRYING TO BEAT THE WHOLESALE MARKET

The original focus of the energy buyer was on two things: price and accuracy of volumes forecast. This made it relatively simple to discern the best supply deal. And as prices became ever-more competitive, price-focused energy buyers were able to reduce their costs.

If you bought your energy through a flexible contract, you could negotiate with your supplier on management fees, calculate what the fixed costs would be, then devote your attention to managing the commodity cost of the electricity. (In fact, this advice came from a *Dummies Guide to Buying Energy* written by EDF Energy back in 2009!)

Perhaps you signed contracts covering about 85% of your anticipated power consumption. That meant you eliminated the uncertainty regarding 85% of your needs, and thus eliminated a big portion of your risk.

Put simply, if you bought smart and forecast well, you could achieve lower costs at low risk.

THE NEW MODEL A FULLY RISK-MANAGED ENERGY STRATEGY

Today's energy buyer has to shift focus. Buying smart and forecasting well just isn't enough anymore.

The risks for business are more varied, and potentially serious, than just the wholesale price of electricity.

Consider this example, which illustrates the impact of one of the biggest risks in the energy market right now: a lack of capacity. A manufacturing business has an £8m energy budget. Some forecasts predict that, by 2018, EMR will add around 5% to that figure. That's an extra £400k a year. But, if there's a two-day electricity outage, that business could face a £1m loss in business. Focusing on costs alone means that you may be missing part of the story.

A fully risk-managed strategy fit for today's market should take into account all the levers that have an effect on energy budgets: not just commodity price, but also non-commodity prices, volume, assets, operations, carbon and regulation (see over for examples). Your risk management strategy should start with assessing the risks and opportunities associated to all these levers, prioritising them according to your energy goals and then defining a response for each scenario.

To support your risk management journey, we've mapped out the key steps and checks over the next few pages.



WHAT RISKS SHOULD MY ENERGY STRATEGY CONSIDER?

A risk-managed strategy takes into account all the factors that might have an effect on the amount your business spends on electricity.

<p>Carbon</p> <p>EU Emissions Trading Scheme Carbon Reduction Commitment Certified Emission Reduction EU Emissions Allowance</p>		<p>Assets</p> <p>Load shifting Demand turndown Short Term Operating Reserve Power Purchase Agreements</p>	
<p>Regulation</p> <p>Contracts for Difference Capacity Market Energy Savings Obligation Scheme</p>		<p>Volume</p> <p>Accurate forecasting Tolerance structuring Reforecasting Volume variance Energy reduction</p>	
<p>Price</p> <p>Commodity price Non-commodity prices (Transmission, Distribution, Balancing)</p>		<p>Operations</p> <p>Processes Business continuity</p>	

WHAT DOES A RISK-MANAGED STRATEGY LOOK LIKE?

A full risk strategy will help you put plans in place to mitigate unwanted exposure to changing energy policies and government targets. It'll help you make controlled decisions and set meaningful parameters based on your business' individual situation. It's a strategy that's driven by setting the levels of comfort and certainty that your business needs, rather than purely trying to beat the market. It enables you to ensure senior management understands the energy risks facing the business and how you'll respond if they materialise.

To be able to plan for, reduce or eliminate risks, you'll need to clearly understand:

- All the factors that determine your energy costs
- The events that cause costs to change and the consequences for your budget
- The likelihood of each event arising and the impact of these events
- Your options to keep within budget when any change occurs

You'll need to ask yourself:

- What price is my business comfortable paying?
- Over what period of time?
- How is this price made up?
- What are the uncertainties in this price?
- How can I control these uncertainties?
- What's my appetite for risk?
- What are my business goals and tolerances?
- Which risks and opportunities add value to my business?
- Which risks and opportunities are my priorities?

WHAT ARE THE 10 KEYS TO SUCCESS?

Effective risk management encourages decision-makers to examine their business process across the board to identify the various risks that can affect it, and to begin thinking about how the exposure to these risks can be best mitigated or minimised. Here are 10 keys to making it a success.

1. **Ask the right people the right questions** to identify all the factors that affect your energy budget
2. **Make a list of all the events that can upset your energy budget** and evaluate which risks pose the biggest threats to your business
3. **Define clear strategies to mitigate or react** to each of those risks
4. **Assign clear responsibility and targets** for energy management, consumption and efficiency
5. **Make energy and carbon an issue for senior management** through regular engagement and reporting
6. **Conduct an energy audit** to gain a head start on energy efficiency
7. **Monitor your energy use** more tightly
8. **Introduce systems to more smartly control energy consumption or shift load at times of peak demand** to lower or reduce commodity and delivery costs
9. **Explore the possibility of producing renewable energy on site** – and find out about government incentives for this
10. **Make sure you have the resource to manage risk** – and, if you don't have this in-house, outsource it

HOW CAN YOU WIN THE SUPPORT OF YOUR BUSINESS?

The risk management process requires involvement and cooperation of many different departments, which often have different reporting lines and stated objectives. They may see their involvement in the process as a distraction.

Gaining buy-in from the relevant teams and senior managers is crucial to the success of any energy risk management strategy. Here's how to win their support.

1. **Get all the right people in the room** - senior management, stakeholders, finance and operations leaders
2. **Engage with them** and report to them often
3. **Communicate with different function teams** to understand their needs and gain their commitment too
4. **Explain how energy savings can be reinvested across the business** - to areas including theirs
5. **Use a risk dashboard** to show senior colleagues that you've identified all your risks and worked up plans to respond

HOW WELL ARE YOU MANAGING YOUR ENERGY RISKS TODAY?

How well does your risk management strategy actually help you manage risk day to day?



Give a yes or no answer to these seven questions to see how urgently you need to update your energy risk management strategy.

- | | | | | |
|---|-----|--------------------------|----|--------------------------|
| 1. Do you have a risk log? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |
| 2. Do you have a committee structure to provide sound governance? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |
| 3. Is your energy risk strategy aligned to your wider business operations? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |
| 4. Do you regularly review activity and modify targets? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |
| 5. Is your risk strategy focussed only on commodity cost risk or does it account for risks relating to volume, your assets and regulations? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |
| 6. Is it focussed only on limiting cost increases, or does it look for cost saving opportunities too? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |
| 7. Is it a documented strategy that can be audited by your business? | YES | <input type="checkbox"/> | NO | <input type="checkbox"/> |

ACT NOW

The more times you answered 'no', the more urgently your risk strategy needs an overhaul.

To get more control over your energy budget, request a Risk Workout with our risk management experts.

Visit:
edfenergy.com/risk-management

HOW RISK-MANAGED STRATEGIES CAN WORK FOR DIFFERENT INDUSTRIES

Retail £

Retailers are looking for opportunities to improve margins while building their brand through sustainability initiatives. They can leverage a risk management strategy to protect margins, reduce reputational risk and maintain competitiveness. But retailers often have many retail outlets spread nationwide, and controlling a multi-site energy portfolio can be very difficult.

The key to effective energy risk management is prioritising your investment based on a thorough analysis of the risk and potential reward.

One large retailer spent approximately £90k in optimisation of operational processes to reduce the volatility of energy consumption in their business and increase volume tolerance, but only reaped £7k of risk mitigation in return. That investment could have been more intelligently spent where there was more reward.

Another large retailer had been focusing their efforts on commodity risk mitigation until a risk management workshop revealed that a disruption in their sales call centre could lead to a loss of up to £4m a day. Price risk wasn't the biggest risk to the business – security of supply was. And disruption was more likely to come from local network issues than national supply shortages.

Water companies

A large part of water companies' income is regulated and fixed for five year periods. Energy is a high proportion of their operating costs. Even a relatively small change in energy costs could easily wipe out their permitted profits. So it often makes sense for water companies to fix their energy costs and lock in their regulated return.

What's more, responsibility is often dispersed across many departments. Indeed, a recent risk workshop with a water company showed that the 6 energy management levers were managed across 13 different departments, with limited internal discussion. Water companies should consider putting in place a light touch committee structure to mobilise value across all teams; ranging from accurately forecasting the cost of change to shifting activities away from periods of peak demand in the network (reducing consumption during red DUoS banding).

Public sector

Following the recession and subsequent spending cuts, the public sector is under huge budgetary pressure. In this context, public sector organisations should be using risk management strategies to give certainty of spend and lock-in annual budgets.

But they should also be open to looking beyond simple procurement of electricity from the grid. They may be able to use on-site generation assets to reduce exposure to the markets at times of high prices. One public sector organisation calculated they could save up to £10k on every MWh by switching to their own generation asset during red DUoS periods (times of peak demand). In addition, there could be scope to use the generation asset to avoid TNUoS and Capacity Market charges to come.

Manufacturing

Manufacturers are energy intensive and have a range of options to manage risk. Most importantly, they need to align their risk management strategy with their order book.

Then they need to align different departments within their business. For example, manufacturers often have segregated responsibility for physical hedging, financial hedging and operations. Connecting the dots could enable them to unlock internal problem solving ability.

Manufacturers also need to look at load shifting or demand response in the Capacity Market. For example, a plastics manufacturer calculated a £78,000 saving on DUoS costs by shifting a 2MW process 4 hours earlier in the day.

And finally, manufacturers should consider how on-site generation can bring in extra revenue or reduce exposure to the market at times of peak demand.



RISK MANAGEMENT FROM EDF ENERGY

So what's next?

As the energy market changes, our relationship with you will change too. We'll still supply you with the energy your business needs, but we're also here to help you find solutions to the energy challenges your business faces.

That's where our risk management expertise comes in.

We can help you build your business's energy risk strategy using a thorough tried and tested method. And we'll give you the tools to apply your strategy with confidence.

Our risk management tools will:

Bring you up-to-date market intelligence and analysis

Help you justify the rationale behind your decisions

Give you the expertise of risk professionals

Put in place appropriate controls in the event of extreme scenarios

Build a customised risk profile for your business

Forearm you - both for the market and for the boardroom

Create a roadmap for taking positions in the market

Help you apply a disciplined, rational, non-emotive approach to hedging

Show you the potential outcome of your decisions before you make them

Support your business' financial and operational goals

Our models quantify the outcomes of different actions in different scenarios to help your business find its appetite for risk and create strategies that support it.

In a changing energy market, where the wholesale price is only one of many risks to consider, we can help your business take a more holistic approach to budgeting, planning and buying your energy.

A mature risk-managed approach will help your business avoid losses, maximize opportunity and ensure profitable growth.

To get more control over your energy budget, request a Risk Workout with our risk management experts.

Visit:
edfenergy.com/risk-management

BOOK A RISK MANAGEMENT WORKSHOP TODAY

To organise a risk management workout for your business – and get the level of certainty over energy budgets that your business needs:



edfenergy.com/risk-management



or call your account manager today.

