29-APR-2026

SPOT VS. FORWARD PRICING

UNDERSTANDING ENERGY MARKETS

OVERVIEW

1. The Two Sides of the Wholesale Market

Every unit of electricity traded in United Kingdom is priced in one of two broad regimes: the spot market, in which electricity is bought and sold for near-immediate delivery, and the forward market, in which delivery is agreed today but does not occur until a specified future date. Understanding the distinction between these two regimes is fundamental to any commercial energy procurement strategy, because the regime in which a shortfall or surplus is settled determines the financial exposure of the buying party.

Price volatility in the UK market is structural, not incidental. In the first half of 2025, average wholesale electricity prices in the UK reached approximately £91/MWh, a 40% year-on-year increase driven by cold weather, reduced wind output, and elevated gas-fired generation. Over the same period, System Prices during tight conditions reached £2,900/MWh in January 2025, illustrating the extreme tail risk that unhedged buyers face.

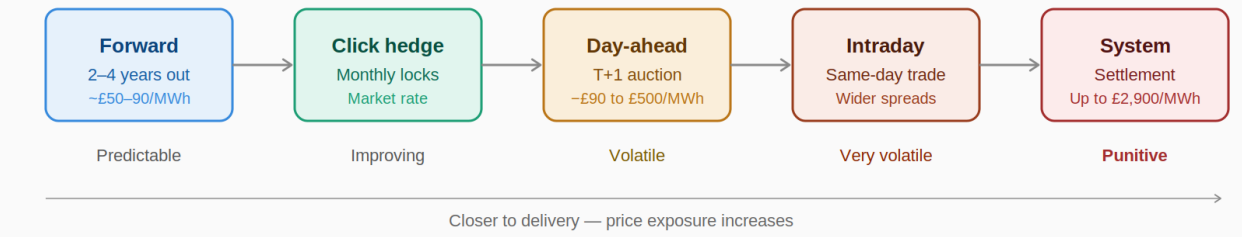

Figure 1. The price journey of a unit of electricity from forward contract to settlement. System Price peaks: £2,900/MWh (8th Jan 2025). Source: Elexon BSC.

SPOT MARKET

2. Spot Pricing

2.1 Mechanics

Spot trading in UK operates principally across two venues. The day-ahead auction, administered under N2EX (Nord Pool) and EPEX SPOT, clears bids and offers each afternoon for every half-hourly settlement period of the following calendar day. Intraday trading then allows participants to revise their positions on the day of delivery itself, typically up to one hour before gate closure.

2.2 Price Characteristics and Indicative Ranges

Spot prices in UK are characterised by substantial and asymmetric volatility:

— **Day-ahead prices** have ranged from approximately −£70/MWh (1st Oct 2025 low: −£69.49/MWh) to over £500/MWh during acute supply constraints. In 2023, UK day-ahead prices were negative for 176 hours, rising from just 7 hours in 2021 — a trend forecast to accelerate as renewable penetration increases.

— **System Prices:** the imbalance settlement price applied to deviations under the balancing and settlement code (BSC), are deliberately punitive. In September 2025, short-system prices averaged £102.70/MWh versus a long-system average of £36.30/MWh, a near-threefold spread. This is even more under stress, example being £2,900/MWh in January 2025.

— **Balancing costs** exceeded £1 billion in 2024, driven primarily by transmission constraint payments as renewable output from Scotland outpaced grid capacity southward.

2.3 Why Spot Is the Penalty Rate

The practical implication for commercial & industrial (C&I) buyers is that spot-related prices are the price of being wrong. When a flexible procurement contract's hedged volume diverges from actual consumption, the residual is settled at spot, either in the day-ahead or intraday markets, or directly at the system price under the BSC. Forecast accuracy therefore has a direct and quantifiable monetary value.

FORWARD MARKET

3. Forward Pricing

3.1 Mechanics

A forward contract is an agreement made today to purchase or sell a specified volume of electricity at a fixed price, for delivery at a defined future date or over a defined future period. In the UK, forward products are traded over the counter through brokers such as Marex, and on exchange through ICE Futures Europe.

3.2 The Forward Curve and Risk Premium

Under normal market conditions, baseload forward prices have typically traded in the £50–90/MWh range. During the energy crisis of 2021–2022, however, Cal-23 baseload contracts briefly exceeded £400/MWh. The forward price reflects the market's collective expectation of the spot price at delivery, adjusted for a risk premium that compensates the seller for carrying price risk. Buyers who eliminate price risk pay this premium structurally over time in exchange for budget certainty.

In simple terms, when you buy forward, you're asking the seller to absorb the uncertainty of future spot prices. They might sell you power at £70/MWh today for delivery in 18 months. However, if spot ends up at £50/MWh at delivery, they've overcharged you (good for them); if spot hits £150/MWh, they've undersold (bad for them). In order to compensate for taking on that uncertainty, sellers embed a small premium above their expected spot price. Thus, the forward price ≈ Expected future spot + risk premium.

Over a long contract, a buyer consistently paying that premium will, on average, pay slightly more than if they'd just bought at spot each time. But that's the cost of certainty — stable, predictable energy bills regardless of what markets do. For most industrial buyers, that predictability is worth more than the expected saving from riding spot.

3.3 Flexible Procurement and 'Click' Contracts

The prevalent structure in the UK C&I market is the flexible procurement contract, in which a baseline load forecast is established at contract inception and the wholesale element is hedged progressively through discrete forward purchases — clicks. Monthly re-forecasting then reconciles the hedged position against the revised consumption estimate, with any residual deviation ultimately settled at spot-related prices.

COMPARISON

4. Comparative Summary

	Spot / Day-Ahead	Forward Contract	System Price
Delivery timing	Next hours / following day	Weeks to years ahead	Real-time settlement
Typical price range	−£90 to £500/MWh	~£50–90/MWh (normal market)	£30 to £2,900/MWh
Price certainty	Unknown until traded	Fixed at point of agreement	Unknown; set post-delivery
Volatility driver	Weather, renewables, gas prices	Forward curve + risk premium	NESO balancing actions
Typical use case	Residual top-up; imbalance cover	Baseload hedging; budget certainty	Mandatory — applied to deviations

RISK FRAMEWORK

5. The Central Procurement Trade-off

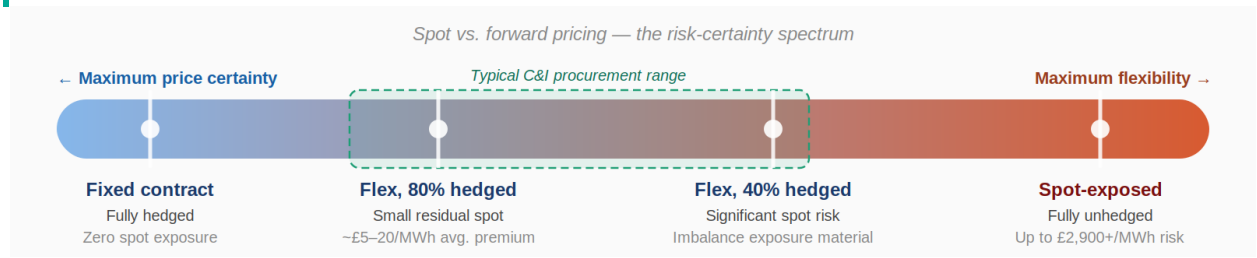

Figure 2. The risk-certainty spectrum across four procurement archetypes. The dashed zone reflects where most C&I buyers operate.

The choice between spot exposure and forward cover is not binary but a continuous risk-management decision. Most C&I procurement strategies seek an intermediate position, systematically building a forward hedge over time whilst retaining a managed residual exposed to shorter-dated markets.

At a 40% hedge ratio with annual consumption of 50 GWh, a 5% forecast error translates to a 2.5 GWh imbalance exposure. This volume settled at a moderate System Price of £100/MWh, represents a £250,000 cost differential versus the forward hedge. At the January 2025 System Price peak of £2,900/MWh, the same error would cost £7.25 million.

MARKET DATA

6. Summary

The dashboard below summarises the principal price data points referenced throughout this paper, together with the worked imbalance cost example.

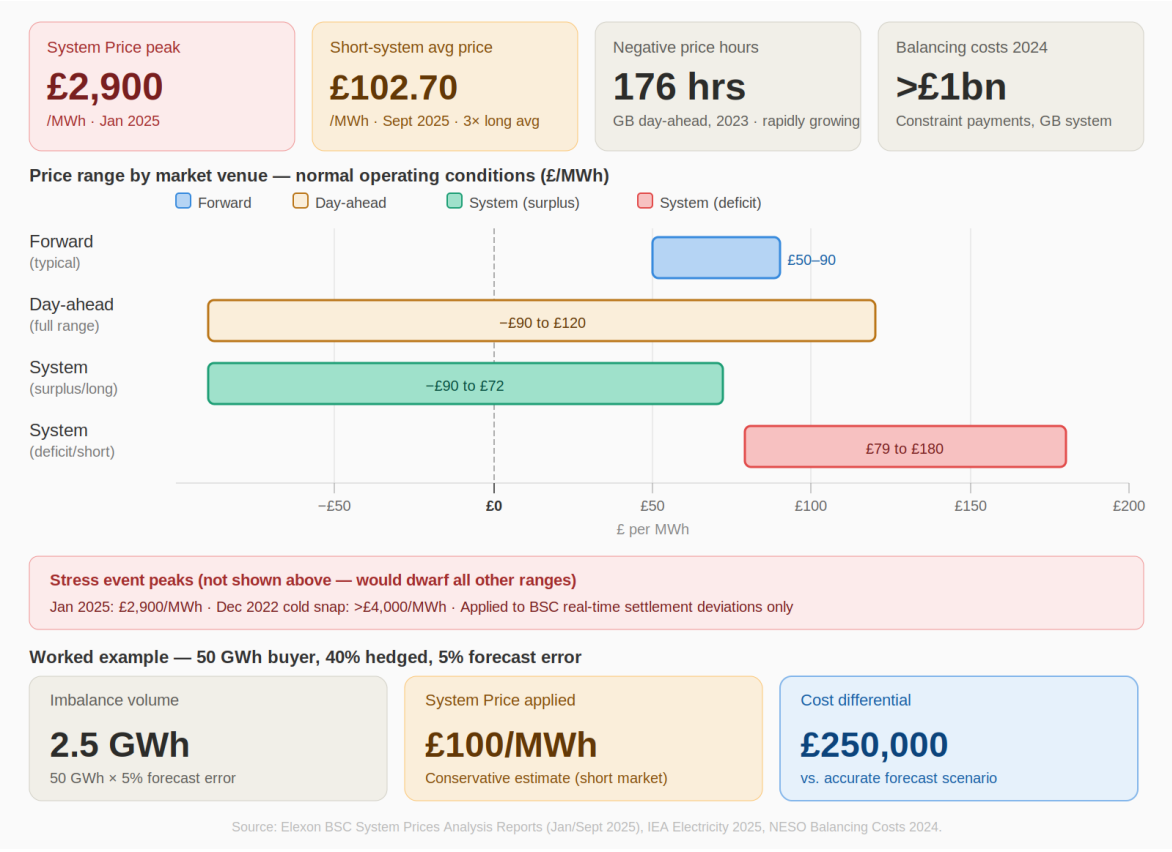

Figure 3. Key UK electricity market statistics. System Price data from Elexon BSC. Balancing costs from NESO. Ranges are indicative of normal operating conditions.

DATA SOURCES

7. Key Data Sources for Price Analysis

The following publicly available sources provide the underlying data required to model spot and forward price exposure, plot risk distributions, and benchmark procurement outcomes.

Source	Coverage & URL
Elexon BMRS	Real-time & historical system prices — bmrs.elexon.co.uk/system-prices
Elexon Data Portal API	Bulk CSV downloads — developer.data.elexon.co.uk
Elexon monthly reports	Monthly System Prices Analysis — elexon.co.uk/bsc/data/system-prices-analysis-report
ONS system price dataset	Daily GB system price & 7-day avg — ons.gov.uk (search: system price of electricity)
NESO balancing costs	Annual, winter & summer reports — neso.energy/industry-information/balancing-costs
NESO Data Portal	Generation, demand & forecasts — neso.energy/data-portal
Nord Pool N2EX GB	Day-ahead auction results — nordpoolgroup.com/en/Market-data1/GB
Ofgem wholesale indicators	Wholesale market data portal — ofgem.gov.uk/energy-data-and-research/data-portal/wholesale-market-indicators
IEA Electricity 2025	International benchmark prices — iea.org/reports/electricity-2025/prices
Modo Energy	GB market analytics (free charts) — modeenergy.com