ENERGY

Power, Gas, and LNG Trading: Racing to Compete in the Coming Decade

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This is the second article in a two-part series on how data, technology, and AI are reshaping commodity trading. The first article introduced a framework to help trading organizations improve their technology maturity. This article focuses on the power, gas and LNG trading market.

The times they are a-changin' for power and gas trading markets, and trading firms need to change with them. By 2035, trading leaders will look fundamentally different than they do today. They will have data-centric technology, integrated teams of traders, quants, and engineers, and operating models built around speed and systematic execution. Some hedge funds, tech-native traders, and advanced European utility traders are already there. Others need to urgently catch up.

Market volatility and shorter trading windows explain the need for these changes. In Germany and the Netherlands, for example, prices can spike at certain hours to hundreds of euros per megawatt-hour. But when a surge of renewable energy floods onto the grid, wholesale prices go negative. Roughly 8% of the time in these two countries, companies are being paid to consume or store power.

On the regulatory side, Europe now requires 15-minute settlement intervals in day-ahead markets for power. The US market, which is experiencing similar volatility, is moving more slowly and less uniformly in that direction, with the ramping up of so-called day-ahead, real-time (DART) trading.

As extreme episodic volatility becomes harder to predict and monetize, and as trading windows shrink, human-led trading has become impossible. Algorithms, short-term optimization, and systematic trading have gone mainstream.

Markets Are Moving Faster Than Incumbents Expected

The sources of profit in power and gas have shifted. As renewables grow at 8% to 12% per year globally, far faster than demand growth, market prices have become increasingly sensitive to intermittent supply and local grid conditions. The action—and the money—has moved to intraday markets, while it has become harder to monetize curve volatility.

In gas and LNG, the big shift is geographic. Gas, once a regional business, has become global. LNG has become the world's price-setting mechanism, and European and Asian prices now move much more in lockstep than they did five years ago. The reason: Europe has replaced Russian pipeline gas with internationally sourced LNG.

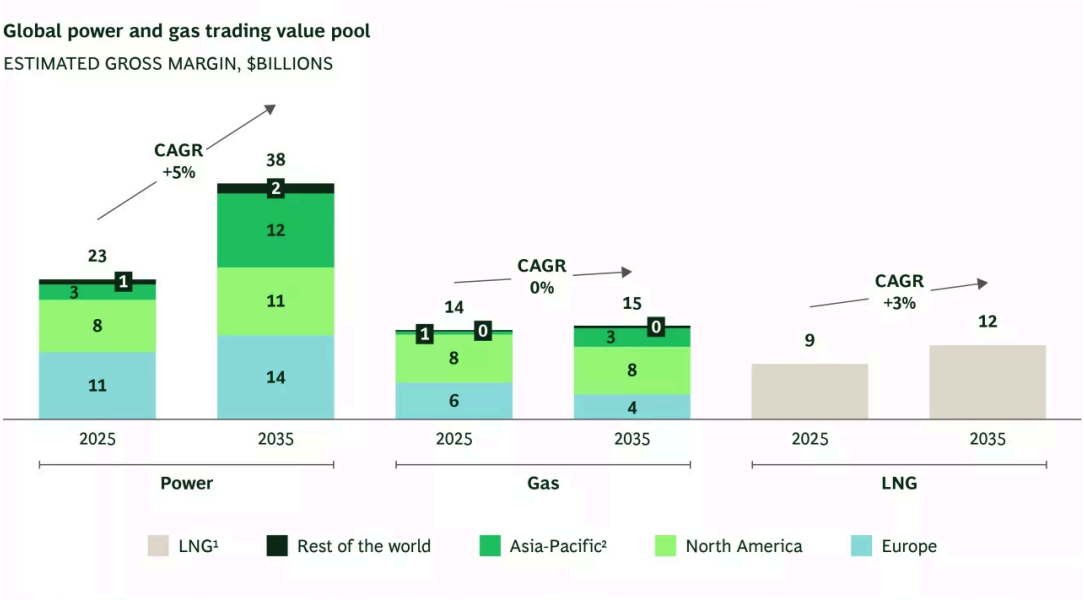
In Europe, the spreads that made storage and time arbitrage profitable have narrowed. Value has moved toward sourcing cargoes, managing portfolio optionality, and acting swiftly when dislocations appear, as they did early in 2026 at the start of the conflict in the Middle East. Market liberalization and LNG demand growth of 2% to 3% per year in Asia-Pacific and Latin America are opening new demand centers and hence new trading value pools. North America is

increasing its export capacity, further tying regional gas markets to the global market. All this adds complexity to an already global game.

Given more volatile power markets and further liberalization, as well as continued global growth of LNG demand, we expect power and LNG markets to drive long-term growth in energy trading, while gas value pools will be under pressure, especially in Europe. (See Exhibit 1.)

EXHIBIT 1

Power and LNG Will Drive Long-Term Growth in Energy Trading



Sources: US Energy Information Administration; Federal Energy Regulatory Commission; ASEAN Centre for Energy; Canada Energy Regulator; International Energy Agency; Independent Electricity System Operator (Ontario); Alberta Electric System Operator; ISO Newswire; Yes Energy; Diversegy; Enerdata; Ember Energy; International Gas Union; International Group of Liquefied Natural Gas Importers government publications; BCG trading benchmarks; BCG analysis.
Note: Asia-Pacific = Australia, China, India, Japan, Singapore, South Korea, and New Zealand; North America = Canada and the US; Europe = EU-27, Norway, Switzerland, and the UK. Because of rounding, not all dollar amounts add up to the totals shown.
¹LNG value pool estimate based on physical LNG optimization and trading on a global scale (financial trading profits assumed to be mostly covered in each regional market's value pool).
²Asia-Pacific value pool growth could be much larger or smaller; estimate is a a middle-of-the-pack assumption with trading picking up, especially in some areas of China and India.

Additional pressure comes from a changing competitive landscape: As our first article laid out, firms such as Citadel, Vitol, InCommodities, and Danske Commodities have expanded aggressively into power and gas. They treat data as a strategic asset and deploy probabilistic analytics and systematic signal generation at scale. They are also automating larger parts of the trade life cycle and have started to deploy agentic AI. In response, incumbents are running large-scale technology and AI transformation programs to shore up their legacy setups.

Value Pools Are Shifting Toward Flexibility and Systematic

Trading

Across the five core business models in power and gas trading, three traditional models are under pressure:

- *Asset-backed trading on the curve* remains a large pool, but its relative importance is expected to decline as renewables take a larger share of generation and value shifts away from longer-term forward optimization. Hydro portfolios and selected flexible assets will hold their value because traders can keep trading around them as forward prices shift.
- *Origination and structuring* remain relevant, but the products are changing. Growth is shifting toward products that price in flexibility: structured power purchase agreements, baseload products built from combining complementary renewable sources such as wind and hydro (so-called hybrid PPAs), and flexibility purchase agreements, where traders predominantly originate battery energy storage systems. FPAs allow traders to optimize flexible resources (such as batteries, but also small generators or offtake assets) from third-party parties across multiple markets. In Europe, these agreements covered more than 10 gigawatts of capacity contracted in 2025, compared with less than 5 gigawatts in previous years.
- *Customer flow business* remains a relatively small share, at around 5% of total value, and faces the greatest pressure. Margins are being squeezed by competition, regulation, and the price sensitivity of large offtakers.

Meanwhile, value is concentrating in proprietary trading and risk taking and short-term asset-backed trading. (See Exhibit 2.) In these areas, traders will need to combine data, analytics, automation, and integrated portfolio management.

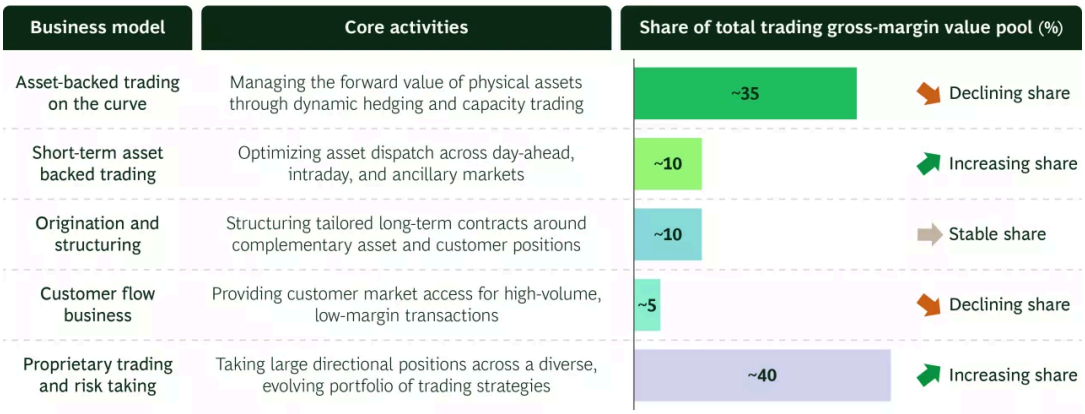
- *Proprietary trading and risk taking* already accounts for up to 40% of total power and gas trading value by all market participants, including hedge funds and global merchant traders. It is expected to grow further. First of all, proprietary trading will simply be necessary to provide market liquidity on the curve, since many banks are not active in power and gas trading, especially in Europe. Second, as volatility becomes more episodic and markets more data-driven, traders with stronger analytics, more systematic approaches, and a greater willingness to assume risk will also aim to capture disproportionate returns. Outsized gains and losses are both possible in major crises, as seen in early 2026.
- *Short-term asset-backed trading* is the fastest-growing segment, expected to increase from roughly 10% of total value today to 15% or more by 2035. The increasingly flexible demand and continuing construction of wind parks and other renewable sources of energy are shifting more trading into day-ahead, intraday, ancillary, and real-time markets. These markets now cover a much wider range of assets, from large, flexible power plants to

batteries, demand response, and small-scale, third-party capacity aggregated through virtual power plant models.

The shift in value pools explains why the technology race matters. Traders need the ability to optimize large mixed portfolios of gas, LNG, renewables, batteries, and distributed energy resources across markets and geographies.

EXHIBIT 2

Value Is Shifting to Short-Term Asset-Backed and Proprietary Trading



Sources: BCG trading benchmarks; BCG analysis.

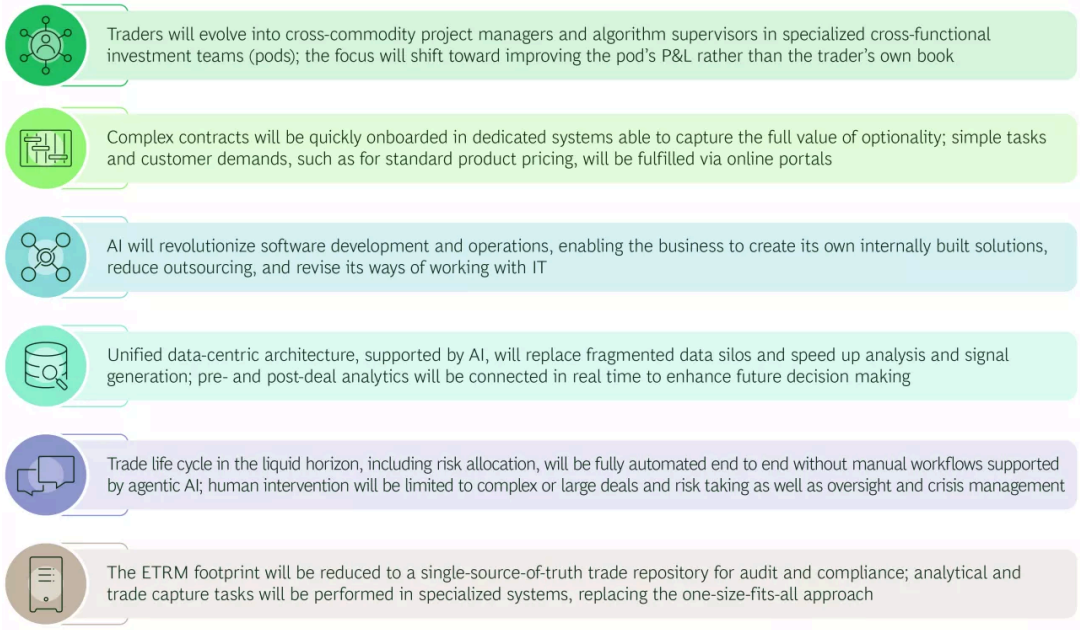
A Vision for 2035

What will a best-in-class trading organization look like in 2035? (See Exhibit 3.) It will be built around a unified, real-time data foundation—not a heavily customized energy trading and risk management system with analytics bolted on, but a platform that treats data as the primary productive asset. Cross-functional teams of traders, quants, and engineers will replace siloed desk structures, and common-team trading intelligence will replace the outdated "in my head" mentality of single traders. AI will be embedded across the trade life cycle, with more autonomous systems handling execution and midoffice processes.

EXHIBIT 3

Vision 2035: What Leading Traders Will Look Like

Changing ways of working are as important as upgrading technology



Source: BCG analysis.
Note: Traders evaluating and taking risks only on macro-level information could look very different and continue using spreadsheets; others should aim for this vision.

That is the destination. The question is how a company gets there from where it stands today.

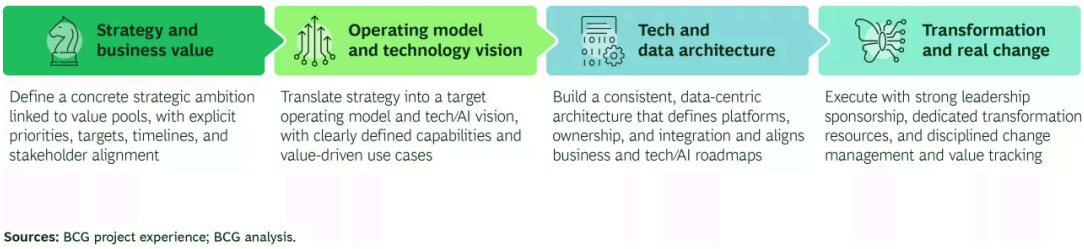
How to Get There

There is no single transformation path to prepare for a fundamentally different trading world in 2035. The right approach depends on an organization's strengths, strategic ambition, and required capabilities. As the first article in this series argued, transformation needs to address the full operating model, not just the technology. How you sequence that work depends on the firm's starting position: whether it is a new or smaller entrant, a legacy incumbent, or a leading player.

In all three cases, senior leaders must make clear choices upfront and insist that the transformation extends beyond technology to full process redesign. They should focus on where automation, analytics, and AI create business value and promote the strategic vision for the business. (See Exhibit 4.)

EXHIBIT 4

Winning Trading Transformations Align Strategy, Operating Model, Technology, and Execution



Sources: BCG project experience; BCG analysis.

New or Smaller Entrants. These firms can design their technology stack from scratch. But they must make a fundamental choice. The first option is to build a fully integrated, data-centric platform capable of automation, real-time analytics, and systematic trading at scale. Traders can then deploy and access advanced AI capabilities right away. This approach avoids mixing and matching old and new technology and can be more cost-efficient over time. But it requires a large upfront transformation.

The second option is a leaner, more standardized setup built largely with off-the-shelf solutions. The organization can go to market faster with less complexity and start trading earlier. But it will eventually have to transform, and introducing the advanced capabilities needed to stay competitive will take longer and be more costly.

Legacy Incumbents. These companies face a harder problem. Most are running multiple energy trading and risk management systems. Many of these setups have been heavily customized with analytics and optimization tweaks. Some firms still rely on spreadsheets. Again, there are two possible transformation paths.

Radical transformation means moving beyond incremental upgrades to build a unified data foundation connecting trading, analytics, and operations. The cost of this multiyear program could easily exceed $100 million. AI can reduce the risks and accelerate these programs, but the commitment is still substantial and requires bold leadership.

Incremental modernization—upgrading selected parts of the systems landscape step by step—delivers near-term improvements with less disruption, but it tends to reinforce fragmentation and limits the ability to scale advanced capabilities or fully embrace AI. The incremental path often leads to frustration within the organization.

Leading Players. These organizations are moving beyond classical trading setups, combining advanced analytics, automation, and integrated portfolio management within data-centric architectures. Their key challenges are managing data quality, extending automation into manual mid- and back-office functions, and shifting toward cross-functional teams with shared incentives. Agentic AI, systems that act autonomously within guardrails, will entirely change how middle- and back-office operations work. That shift is only just beginning.

When deploying new advanced analytics, AI-enabled algorithms, and agentic AI to run processes, many players tend to look for efficiencies and cost savings first. However, our experience shows that revenue gains are often easier to realize and larger than cost savings. With limited additional system costs, leading players can achieve gross margin improvements three to five times the size of potential cost savings in execution, mid- and back-office, IT, and support activities.

Culture and Operating Model Will Determine Who Wins

BCG's experience shows that successful technology and AI transformations follow the 10-20-70 rule: 10% of the value comes from new tools, 20% from modernizing technology, and 70% from changing the operating model and building new capabilities. The trading organizations that get this right have six practices in common.

They make transformation a front-office priority. Successful programs are business-led. In most cases, the chief commercial officer or head of trading acts as program sponsor and workstream owner. This individual establishes quantitative metrics and milestones for measuring the success of the program.

Executives should be especially vigilant about moving forward, even when change threatens existing profit centers or disrupts desks that are performing well. Capturing cross-portfolio value may require dismantling siloed desk structures, because fragmented organizations cannot scale advanced capabilities. Over time, they will lose competitiveness.

They align incentives before deploying tools. Adoption does not happen without incentives. Leading players link performance and bonus participation to the use of new shared tools and processes. Everyone in the trading cycle—traders, quants, analysts, and operations teams—is accountable. It's also essential to be explicit about how roles and career paths will be affected.

They design end-to-end, not use-case by use-case. Transformation works as a full reset: rethinking the complete trade life cycle, reinventing processes following AI-first principles, and aligning data, technology, and operations. Building in-house capabilities in data, analytics, and AI is essential.

A use-case by use-case deployment of new capabilities can seem attractive by starting small and showing first successes. Too often, however, the real transformation never happens. The program fades before real technological change, including AI adoption, occurs.

They explicitly include AI in their rethinking. AI does not solve all problems but it can help with a lot of them, and it will have the most impact when it is included in a complete redesign from the

beginning. For example, an AI-first back office will look very different from the one we know today. Another good example is the IT architecture, which will need to be adapted to securely work with numerous agents and with the acceleration possible from agentic software factories.

They create urgency, push for real change, and enforce adoption from day one. Trading organizations resist change, especially when general performance looks strong. Leading programs use clear top-down mandates and retire legacy tools early to prevent parallel ways of working.

They embed a dedicated, activist transformation management office. Transformations require a dedicated, empowered delivery team with tight governance, clear accountability, and rapid decision making. Leading programs establish an activist TMO that enforces priorities, manages risks proactively, tracks value delivery, and stays on track through stage-gated execution and regular senior-level reviews. Additionally, the TMO uses targeted communications on program progress, change management, and implementation success to shape a positive, value- and people-centered narrative.

A single blueprint to modernize power and gas trading does not exist. But there is a ticking clock. The traders investing in data platforms, AI, genuine operating model change, and new end-to-end capabilities are preparing to compete in the coming decade. Most everyone else is looking backward.

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