STEPHENSON HARWOOD

ENERGY TRANSITION INSIGHTS

February 2026

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WELCOME

We are delighted to share our Energy Transition Insights for 2026. Building on last year's reflections, colleagues from across our international Energy Transition and Infrastructure Group have contributed perspectives on the key themes they saw in their sector areas in 2025, and what they see on the horizon for the year ahead.

This year's briefing brings you a selection of insights from some of our core practice areas, including energy and infrastructure, nuclear, maritime decarbonisation, aviation sustainability and the built environment. It also features regional spotlights on energy and infrastructure in the Middle East, key issues from our energy trilemma roundtable series held in Singapore, Jakarta, Hong Kong and London, and maritime decarbonisation in France.

It has been another year of growth for the group, as we continue to build on the recent expansion of our international energy transition and infrastructure practice, one of five areas of strategic focus for Stephenson Harwood.

We have further strengthened our capabilities across our three pillars – energy and infrastructure; transportation and trade; and the built and natural environment – with a number of expert hires, welcoming:

+ **John Danahy:** real estate, energy and infrastructure partner, based in London, with a focus on the energy sector, including nuclear.
+ **Richard Hughes:** a partner based in London and international infrastructure, rail and bus specialist, with significant experience in the energy transition and transportation sectors.
+ **Indraj Mangat:** a project finance partner based in London, advising on clean energy and infrastructure finance.
+ **Iwan Walters:** a partner based in Dubai, advising on the full life cycle of energy, renewables, and infrastructure projects, with a particular focus on clean energy and sustainability.
+ **Chris White:** nuclear energy counsel, who re-joins us in London, advising on nuclear regulation, new build, fuel cycle, nuclear insurance and advanced nuclear projects.
+ **Stephen Begley:** a consultant specialising in the financing and development of energy-related transactions in the Asia Pacific region.

We are also delighted to be named Middle East Solar Industry Association (MESIA) Legal Consultant of the Year, in recognition of the firm's role advising Yellow Door Energy on a multi-million term loan financing facility with Arab Banking Corporation, to finance twenty-five operational solar PV projects totalling over 42MW, located on Majid Al Futtaim shopping malls in the UAE, Bahrain and Oman.

We hope you find this briefing interesting. If you would like to discuss any of the topics covered, or to learn more about upcoming events, please contact any of the contributing authors, any other member of the Energy Transition and Infrastructure Group, or your usual Stephenson Harwood contact.

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OVERVIEW

The global energy landscape in 2025 was shaped by continued geopolitical turbulence and policy uncertainty. The year was marked by heightened trade tensions and an escalating trade war between the United States and China, focussing the attention of governments on their domestic capacities and supply chain vulnerabilities. The impact of geopolitics and the application of active political pressure on policy, was starkly illustrated by the International Maritime Organization's postponement of a decision on its net zero framework, despite earlier support from member states. A decision on formal adoption has been pushed back to October this year.

In 2025, while decarbonisation remained on the agenda, the global energy narrative increasingly pivoted towards energy sovereignty and national security, while affordability and economic cost also became central to transition discussions.

ENERGY SECURITY IS NATIONAL SECURITY

As countries seek to insulate their economies from energy supply shocks and price volatility, many governments are prioritising domestic capacity, local investment, and control over vital supply chains, particularly for critical minerals and technologies essential to the energy transition. In 2025 energy security was redefined and elevated to a national security imperative. While physical supply disruptions and price volatility continue to be key challenges, underlying risks are evolving and new threats emerging, including cybersecurity threats, grid constraints, electricity system resilience and more frequent extreme weather events; with 2025 exposing the vulnerabilities of concentrated supply chains. We discuss the changing nature of energy security and these emerging risks further in our recent briefing, co-written with Longspur Capital, Energy security: its evolving role in the energy transition.

These dynamics will continue to shape policy direction and impact cross-border collaboration in 2026, with affected countries prioritising supply chain diversification to reduce concentration risk while preserving cost competitiveness.

AFFORDABILITY AND POLITICAL RISK

During 2025, energy affordability and the economic impact of climate policies moved to the forefront of political debate in developed economies, particularly in the United States, the UK, and Europe. Volatile fossil fuel prices, exposure to imports, and policy costs passed through to consumers, contribute to higher electricity bills for both households and businesses. Against this backdrop, the question of the cost of the energy transition, and who should bear it, became a contentious issue. Net zero policies were criticised on economic grounds, with political parties sharply divided on whether climate policies cause economic harm. In the UK, the longstanding cross-party political consensus on climate policy fractured; and the United States continued to withdraw from the global co-operative dialogue on climate, exiting a number of multilateral institutions and obligations, including the Paris Agreement and the Intergovernmental Panel on Climate Change.

As affordability concerns took centre stage and economic arguments against climate policy gained traction, the urgency of climate action was often overshadowed. Maintaining public support for the energy transition, especially during a cost-of-living crisis, will depend on acknowledging and addressing these concerns and communicating clear and positive reasons for policy.

This shift in the energy transition, with energy security and affordability now shaping policy and investment as much as decarbonisation, was a common theme at Stephenson Harwood's recent energy trilemma roundtables. Singapore-based partners John Zadkovich and Nick Dingemans facilitate regular discussions on energy developments, set against the context of the energy trilemma, with industry clients and contacts at roundtable breakfasts and seminars. This briefing includes the key themes emerging from roundtables held in Singapore, Jakarta, Hong Kong and London in 2025.

GLOBAL AND REGIONAL OUTLOOKS

2025 saw milestones reached for renewable generation. Solar and wind are now expanding fast enough to meet all new global electricity demand (subject to regional differences), a milestone reached in the first three quarters of 2025, and for the first time across a sustained period, renewables generated more electricity than coal in the global energy mix. In the EU, wind and solar generated a record 30% of EU electricity, higher than fossil power (29%) for the first time on record (sources: Ember). Although renewables are starting to meet the growth in electricity demand globally, grid investment and modernisation and developments in storage solutions are essential to reduce costly curtailment payments and enable renewables to maximise their long-term potential as round-the-clock dispatchable electricity.

Despite fractures in its political consensus on climate, the UK government remained committed to its clean power ambitions during 2025. The UK government considers clean power the key to energy sovereignty and strengthened national security, as well as cutting emissions and lowering bills. In January, it announced the signing of the "Hamburg Declaration", pledging a fleet of interconnected European offshore wind projects to support regional energy security in the North Sea.

The UK also secured Europe's largest ever single procurement of offshore wind, awarding 8.4GW in Allocation Round 7, after doubling the fixed offshore budget during the process. The Solar Roadmap, launched in June, set out plans for solar, including unleashing a "rooftop revolution", with the latest renewables auction round securing 4.9GW, the largest ever procurement of solar projects in the UK. 2025 also saw the overhaul of the grid connections queue to prioritise ready-to-build and strategically aligned projects. We discuss these topics further in this briefing.

Nuclear continues to be considered an essential component of energy security and low-carbon strategies for the UK and other countries, offering a low-carbon stable baseload that can be complementary to intermittent renewables in the energy mix. The UK made real progress in nuclear during 2025, as we discuss further in this briefing, with Sizewell C reaching financial close under the RAB (regulated asset base) model and fresh commitments to multiple new reactors at Wylfa, on the Isle of Anglesey. In parallel, the launch of the Maritime Coalition for UK Maritime Nuclear (MarNuc), of which Stephenson Harwood is a founding consortium member, demonstrates the interest in innovative new applications for nuclear, with an industry initiative now focussed on frameworks for nuclear-powered ships and guidance to catalyse deployment.

In the Middle East and North Africa (MENA), while natural gas and oil continue to overwhelmingly dominate the electricity mix, the United Arab Emirates and Kingdom of Saudi Arabia are leading clean energy ambitions, as both jurisdictions continue their diversification away from reliance on gas and oil. At the 2025 Cleantech Alliance Conference held in Saudi Arabia, the scale of this clean energy opportunity was emphasised, with solar and wind at the forefront, there are strong government commitments and market opportunities for private investment. The region is also making strides in green data infrastructure, with solar-powered data centres driving sustainable digital growth, supported by ambitious policy frameworks and innovative financing solutions. Commercial rooftop solar opportunities are accelerating, illustrated by the financing of twenty-five operational solar PV projects located on shopping malls in the UAE, Bahrain, and Oman, for which we were named Middle East Solar Industry Association (MESIA) Legal Consultant of the Year. With solar energy growing rapidly in MENA, capacity is projected to increase tenfold by 2035 (source: IEA).

Across the Association of Southeast Asian Nations (ASEAN), electricity demand has tripled over the past two decades, driven by rapid economic growth, urbanisation, industrial expansion and rising living standards (source: IEA). As discussed at our energy trilemma roundtables in the region, gas, particularly LNG, remains a key transition fuel due to the need for reliable baseload power, and capital, both private credit and institutional banking, has returned to the sector with fever. Nuclear, especially small modular reactors, is gaining attention for its potential to meet long-term climate commitments. The increase in fossil fuel investment and a whitling of ESG metrics has however tempered the pace and scale of renewables deployment, though some markets such as the Philippines continue to attract significant attention.

China remains the largest market and manufacturer for renewables, dominant in installed capacity, annual capacity additions and clean energy investment. While it offers a cost advantage in the supply of solar and batteries, it raises concerns about manufacturing and supply chain concentration, trade exposure and security risks for some countries. The acute vulnerability in a number of supply chains where China dominates, including critical minerals, was a key focus of the International Energy Agency's World Energy Outlook in 2025 and will be a key policy area of focus for the United States, the UK, Europe and other countries during 2026.

"Geopolitics, policy risk, concentrated supply chains and grid constraints are shaping the energy transition, while record renewable milestones and renewed nuclear ambition signal real momentum. We expect to see priorities in 2026 focussed on diversifying critical supply chains and accelerating the grid and infrastructure upgrades essential to sustaining progress."

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Energy Transition Insights

ENERGY + INFRASTRUCTURE

UK ELECTRICITY MARKETS AND INFRASTRUCTURE

Electricity market

2025 was another year of significant developments across the UK electricity market. There was broad recognition that demand for energy is set to increase with technology acceleration, with AI and data centres largely responsible for driving that demand. Energy project developers are keen to seek out opportunities across wind, solar, battery storage and new nuclear. However, it is recognised that material hurdles remain, notably grid connection and grid investment, which need to be overcome to deliver on the potential. We anticipate that the ever-increasing demand for energy will continue to drive project development in 2026.

The Review of Electricity Market Arrangements (REMA) process continued during the year. As a reminder, REMA aims to identify reforms to ensure a fair, affordable, secure, efficient and sustainable energy system – in other words to try to address the "energy trilemma". A REMA Summer Update issued in July 2025, confirmed that zonal pricing will not be introduced into the UK market, but rather a single national wholesale electricity price would remain the "order of the day" in the UK.

The full REMA report, scheduled for publication at the end of 2025, has not been published to date. Hopefully the full REMA report will be made available early in 2026. We await its publication.

Grid connection reform

Grid connection remains a concern and potential block to the delivery of planned energy projects. Reform of the connections process was a focus in 2025, with NESO (National Electricity System Operator) addressing the connections pipeline and removing a large number of "zombie" projects from the queue. Grid reforms have changed the "first come/first served" approach to grid connection to a "first ready/first connected" regime. The focus is now on project "readiness", with priority given to shovel ready projects that are aligned with national targets. Readiness is primarily demonstrated through secured land rights, granted planning permission and the availability of technical data for the project. It is anticipated that Gate 1 projects should be able to connect from 2026/2027, with Gate 2 projects permitted to connect from 2030. Beyond grid connections, substantial grid reinforcement and investment are still required, and we wait to see what progress 2026 will deliver in this regard.

PPAs

Price volatility and affordability remain key concerns both at a domestic and industrial/commercial user level. We have seen an increase in power purchase agreements (PPAs) (both financial and physical) and private wire arrangements as clients seek to mitigate exposure to price volatility. We expect this trend to continue into 2026.

The UK Government has opened a call for evidence to assess the barriers limiting uptake of physical corporate PPAs and to examine how corporate PPAs interact with existing market support schemes. The call for evidence is open until 6 March 2026.

Renewable generation

Renewable generation increased in the UK during the course of 2025. A record number of projects secured consent in 2025, with planning approvals received for 45GW of new battery, wind and solar capacity. New battery storage projects saw the strongest momentum, with applications for new projects nearly doubling when compared to 2024.

Initially, the £1.08 billion budget for the clean energy CfD (contracts for difference) auction for Allocation Round 7 (AR7) disappointed many in the renewables space, being significantly lower than the final AR6 budget and of particular concern for offshore wind developers. However, after submission of bids, the Government increased the fixed offshore budget from £900 million to £1,790 million, demonstrating its commitment to providing government support to create more capacity and taking a step towards its ambitious delivery target of 43–50GW of offshore wind by 2030.

The successful allocation of 8.4GW across 12 projects (mostly fixed, with just under 200MW of floating capacity) set a record as Europe's biggest ever single procurement of offshore wind. AR7 also secured a record 4.9GW of solar across 157 projects and around 1.3 GW of onshore wind across 28 projects, alongside a small number of tidal schemes. This auction delivers the UK's largest solar procurement to date and includes the largest onshore wind project to be successful in England in a decade, alongside a record offshore wind allocation. As a result, AR7 is now the largest CfD round by awarded capacity, boosting near-term renewables deployment.

"The UK remains focussed on renewables growth, increasingly driven by energy sovereignty rather than the sustainability and emission-reduction priorities of previous years. Grid connection continues to be the key issue for the UK electricity market and the development of new generation capacity."

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NUCLEAR

GLOBAL NUCLEAR ENERGY PROGRESS AND EXPANSION

In 2025, the global nuclear sector made notable progress as governments, investors and industry pushed the technology forward. Worldwide nuclear generation reached record levels and continues to rise, underpinned by strong performance from existing fleets and a build-out of new reactors. Growth was particularly visible in Asia, with China approving multiple new units and expanding construction activity.

Governments and major companies signed pledges to significantly increase nuclear capacity, supporting ambitions to at least triple global nuclear output by 2050. Investment in advanced reactor technologies, including small modular reactors (SMRs), also reached new levels, with growing interest from data centres developers.

In May, we hosted a high-level industry discussion in London on ***Advanced Nuclear Technology: Powering the AI Revolution***, bringing together legal, nuclear and data centre experts to explore how modular nuclear solutions could reliably meet surging energy demand from next-generation data centres and AI infrastructure.

In October, we hosted the Nuclear Industry Association (NIA) International Group Meeting at our London offices, with the day focussing on new build, decommissioning and waste management, SMRs, fusion, fuel cycle and defence. Members of our nuclear team also spoke at a number of events throughout the year, including at the Energy Council's World Energy Capital Assembly in December.

What to look out for in 2026

In 2026, the sector is poised for a pivotal year, as the industry shifts from ambition to action, with a strong focus on project delivery and final investment decisions across multiple countries. Key milestones include the anticipated start-up of new reactors in Bangladesh and Turkey, the first concrete at Hungary's Paks II, and continued rapid progress in China and India, where legal reforms are opening doors for greater international and private sector participation. The ASEAN region is emerging as a new hotspot, with the Philippines, Vietnam, and Indonesia advancing nuclear plans to meet rapidly growing energy demand.

Financing will remain a key theme in 2026, with innovative models and increased private investment supporting new build programmes. Further developments are expected across the fuel cycle (particularly in relation to high-assay low-enriched uranium (HALEU)), as well as in maritime nuclear, where Stephenson Harwood is one of the founding consortium members of the MarNuc Coalition for UK Maritime Nuclear, which was formally launched in London in January.

FINANCING

2025: From difficult to investable

2025 marked a shift from difficult to investable. Sizewell C reached financial close under the UK's RAB (regulated asset base) model, showing how regulated cashflows during construction can draw in long-term infrastructure capital alongside government sponsorship. The UK Government also committed to fund between three and eight new build reactors at Wylfa, on the Isle of Anglesey, signalling a programme approach rather than one-off projects, moving materially closer to realising the promise of "nth-of-a-kind" small modular reactors. In parallel, Apollo's private capital injection into EDF supported delivery of Hinkley Point C (HPC). Whilst this is a broader bet on EDF rather than the HPC investment specifically, it is still welcome.

Global financing trends

In Europe, Poland is blazing the trail with CfD (contracts for difference) support cleared by the European Commission, setting the template for others to follow. Meanwhile, in the United States, a new wave of nuclear SPAC (special purpose acquisition companies) deals and other mergers delivered public-market access for advanced fission and fusion startups, with a surprising number of fusion deals publicised.

Globally, tech titans and venture funds announced partnerships, equity commitments and power offtake deals across both fission and fusion technologies, tying nuclear directly to data centre and AI demand, in an effort to future proof low-carbon energy supplies. Whilst the sums invested were significant, in most cases, this was pocket change for businesses accustomed to investing in future tech. Nonetheless, this marks the beginning of a new approach to nuclear power delivery, with much that both industries can learn. The common thread: clearer risk allocation, deeper sovereign support, innovative adaption of financial engineering and a broader investor base spanning infrastructure funds, pensions, private credit and equity capital markets.

2026 outlook: From momentum to delivery

2026 could be the year momentum turns to delivery. If interest rates ease and inflation stabilises, and there is no further deterioration in geopolitical tensions, particularly in relation to fuel supply, components and sanctions, we would expect to see: more RAB-style financings in the UK; US Department of Energy and export credit agency-backed packages in the United States and Europe; greater use of private credit for late-stage construction; and corporate power purchase agreements anchoring revenue for SMR fleets near industrial and digital loads. Fusion will remain pre-revenue, but milestone-based funding and sovereign moonshot programmes will undoubtedly continue. Nobody is seriously betting commercial scale fusion is imminent, but the markets are betting it will become a reality and are picking potential winners. Key watchpoints are election cycles, supply-chain resilience, and the availability of high-assay low-enriched uranium (HALEU). Overall, the investment case is shifting from "if" to "how fast", with bankability hinging on robust offtake, standardised delivery and predictable state support.

INSURANCE

Nuclear third-party liability regimes remain a vital enabler of trade and investment in new nuclear projects, supporting the energy transition and enhancing energy security. It is therefore welcome that the UK's accession to the 1997 IAEA Convention on Supplementary Compensation for Nuclear Damage (CSC) entered into force on 1 January 2026.

By establishing formal treaty relations with eleven additional major civil nuclear partners, including the United States, Canada, and Japan, the CSC removes key legal barriers to inward investment and helps further safeguard domestic supply chains. The CSC also reinforces London's strategic importance as a key nuclear insurance hub, where the Lloyd's insurance market provides significant nuclear insurance capacity globally, by providing a clearer and more internationally uniform legal framework for managing nuclear risks.

In addition, joining the CSC materially bolsters the UK's international standing as a leading nuclear nation and a pioneer in nuclear liability law. As the first party to the Paris Convention to ratify the CSC, the UK now effectively bridges two major global liability regimes. This development should facilitate, and potentially simplify, cross-border trade in civil nuclear technology and further support British exports, to CSC nuclear countries. India is a notable example: as a key CSC country, it has recently passed legislation to end six decades of exclusive government monopoly in civil nuclear, enabling private sector participation and inward investment into India's burgeoning nuclear sector for the first time.

MARITIME NUCLEAR

In January 2026, a new industry-led initiative – the Maritime Coalition for UK Maritime Nuclear (MarNuc) – was formally launched to accelerate the safe, secure and commercially viable adoption of nuclear propulsion in the maritime sector. The coalition's objective is to support the decarbonisation of shipping, by harnessing advanced modular reactors capable of powering vessels for years and with zero carbon emissions.

Convened by Lloyd's Register, the MarNuc Coalition brings together major UK-based partners from nuclear, maritime, insurance and legal sectors, including Rolls-Royce, Babcock, Global Nuclear Security Partners, Stephenson Harwood, and NorthStandard. In its initial phase, the Coalition will focus on creating the proof of concept (from a technical and legal/regulatory perspective) for the deployment of nuclear in the civil maritime context. The UK's engineering, regulatory experience, and naval nuclear heritage makes it particularly well-placed to help enable this transformative technology, as other countries move to develop competing approaches.

“2025 marked a decisive shift for UK nuclear from aspiration to delivery. In 2026, clearer frameworks, earlier enabling works and compressed timelines should unlock private capital and accelerate nuclear from planning to construction; to cement nuclear as the anchor of a resilient, net zero power system for the 2030s and beyond.”

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Spotlight

ENERGY AND INFRASTRUCTURE IN THE MENA REGION

A PERSPECTIVE FROM THE KINGDOM OF SAUDI ARABIA

Stephenson Harwood was delighted to be a platinum sponsor of the Cleantech Alliance Conference, held in the Kingdom of Saudi Arabia in 2025. This landmark event brought together leaders and innovators who are shaping the future of clean energy across the Middle East and North Africa (MENA) region.

The main themes emerging from the conference, include:

Enormous opportunities ahead

To achieve Vision 2030's ambitious goal of generating 50% of the Kingdom of Saudi Arabia's electricity from clean energy by 2030, Saudi Arabia will need to reach 100GW of clean energy capacity. With 7GW currently installed, and total installed capacity expected to reach 15GW by the end of 2025 and 35GW by 2027, the majority of capacity must be delivered between 2027 and 2030. The scale of opportunity for the clean energy industry in the Kingdom of Saudi Arabia is enormous.

Solar and wind energy at the forefront

60% of the Kingdom of Saudi Arabia's 100GW clean energy target is expected to come from solar, and 40% from wind. For context, the UK's entire operational wind capacity is approximately 32GW, highlighting the scale of Saudi Arabia's ambitions.

Strong commitment from the Kingdom of Saudi Arabia and market opportunity

The Public Investment Fund (PIF) of the Kingdom of Saudi Arabia, plans to develop 70% of Saudi Arabia's 2030 renewable energy capacity, aligning with the Kingdom's clean energy targets and the broader Saudi Vision 2030. The remaining 30% is open to the market for development, with the PIF also actively promoting investment in areas such as green hydrogen and e-mobility to accelerate the global energy transition.

Key enablers for success

For Saudi Arabia to achieve its clean energy ambitions it must continue to:

+ Foster a competitive EPC market
+ Attract new developers
+ Expand funding options, including green bonds
+ Identify and develop high-potential sites for public tender
+ Deregulate the self-consumption market to enable large-scale projects

Outlook: momentum, collaboration, innovation and investment

The momentum in the Kingdom of Saudi Arabia is clear, and the opportunities for collaboration, innovation and investment are unprecedented.

DATA CENTRES

Partner Iwan Walters and Associate Punte-â Hosseini, contributed to the Middle East Solar Industry Association's Solar Outlook Report 2026. Their article explores how solar-powered data centres are driving sustainable digital growth across MENA.

Backed by ambitious policy frameworks, such as the UAE's Net Zero 2050 Strategy and Saudi Arabia's Vision 2030, together with the accessibility of innovative financial tools (including sustainability-linked loans) and investment from sovereign wealth funds, the MENA region is rapidly building green data infrastructure. Despite challenges such as water scarcity and the demands of desalination, MENA's abundant solar resources position it to become a global leader in solar-powered data centres.

"As a firm we are expanding our presence in the UAE, and we have also recently opened two offices in the Kingdom of Saudi Arabia.

We will continue to advise our clients on their work on energy projects in the MENA region and follow our clients as they diversify their investments in energy projects globally."

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Spotlight

ENERGY TRILEMMA ROUNDTABLES - KEY THEMES

In 2025, Stephenson Harwood hosted a series of energy trilemma roundtables in Singapore, Jakarta, Hong Kong and London. Participants included representatives from across the energy sector, including governments, investors, lenders, engineers and advisers.

The roundtable discussions point to a markedly pragmatic turn in the global energy transition. Energy security and affordability are increasingly shaping strategy and investment, with policy and finance adapting to enable near-term delivery, while keeping long-term decarbonisation in view.

Gas as a transition fuel

A central theme is the continued prominence of gas, particularly LNG, as a transition fuel. This reflects both the intermittency limits of renewables and the urgent need for reliable baseload power across Europe and Asia. Capital and project development are being redirected towards Africa and South-East Asia, while the United States and the Middle East are expected to meet European LNG demand for the foreseeable future. Financing upstream gas remains challenging; however, banks have returned alongside agile private credit, broadening the capital stack for developers.

Nuclear resurgence

The nuclear resurgence is another defining strand. Small modular reactors (SMRs) viewed as “smarter, smaller and more flexible,” promise shorter build times, enhanced safety, and clearer financing pathways. In many jurisdictions, nuclear is considered necessary rather than optional to meet decarbonisation pledges. Momentum spans fission and fusion, with the United States attracting private capital and China accelerating execution. Fuel cycle investment, from mining to enrichment, is drawing both public and private funding. Across ASEAN, there is a focus on choosing regulatory philosophies deliberately, standardising licensing for SMRs where feasible, and deciding whether to build regional supply capability or rely on imports; with financing to be assembled from government support, offtaker commitments, multilaterals, export credit agencies and commercial lenders.

Barriers to scale

Regulatory and structural barriers remain the principal constraint on deployment at scale across ASEAN and APAC, particularly for solar, LNG infrastructure and gas-fired generation. This persists despite strong demand signals from data centres and AI, which are also catalysing new balance-sheet-backed infrastructure finance models. Policymakers are encouraged to streamline approvals and align regulations with nationally determined contributions to enable commercial delivery at pace. Singapore is highlighted as a jurisdiction well-placed to build domestic and regional capability through strengthened legal and regulatory institutions.

Grid and supply chain constraints

Several of our roundtable sessions underline that grids and supply chains are now the primary constraints for renewables growth. Copper shortages and multi-year mine development timelines, together with grid bottlenecks, risk slowing progress unless countries invest intelligently and collaborate across borders. In APAC, insufficient grid capacity is driving strategies such as co-locating power-hungry loads (notably data centres) with power supply to reduce transmission exposure, and favouring small-scale, sub-100MW commercial and industrial solar that can proceed notwithstanding grid constraints. A financing gap persists for smaller renewable and transition projects notwithstanding regional liquidity, while larger projects still find bank debt viable. The proposed ASEAN grid, connecting all ASEAN members states in South-East Asia, is gaining momentum, with regulators collaborating on regulatory, engineering and commercial studies.

Geopolitics and energy security

Geopolitics continues to shape energy markets and supply chains. Governments are prioritising energy security, with a more pragmatic, less postured, approach to transition pathways. Global LNG infrastructure projects are set to have robust growth through 2030. Shifts in United States policy, talent migration and evolving governance in markets such as Indonesia, are influencing investor sentiment, with some policy choices risking deterrence of Western capital. In shipping, decarbonisation pressures are accelerating work on scalable solutions, including CCS (carbon capture and storage) and e-fuels.

Hong Kong and China

In Hong Kong and China, the rise of data centres and AI is materially increasing electricity demand, reinforcing the role of LNG as a transitional anchor given renewables' intermittency. Interest in nuclear and SMRs is sustained, particularly given China's advanced nuclear sector, while hydrogen is progressing at a more measured, practical scale (for example, hydrogen buses in Hong Kong). Market activity is buoyant, with Hong Kong seeing a resurgence of IPOs, including in energy-linked sectors such as mining.

The energy trilemma

Discussions repeatedly return to the energy trilemma. Security of supply is increasingly dominant in decision-making. Practical enablers are required to reconcile the trilemma: scalable grid modernisation, standardised and predictable regulation, and innovative blended finance that can support both nuclear and renewables at pace.

The energy trilemma series will continue across Singapore, Hong Kong, Jakarta and London in 2026. If you are interested in attending any of these events, please contact Gemma Kay.

"In 2026, policy and capital are converging on deliverability: LNG to keep the lights on, SMRs to lock in decarbonised baseload, and smart grids to unlock renewables at scale."

NICK DINGEMANS

"The transition is no longer a trilemma in theory but a hierarchy in practice—security first, affordability next, with sustainability achieved by pragmatic regulation and blended finance."

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Energy Transition Insights

TRANSPORTATION + TRADE

GLOBAL MARITIME DECARBONISATION

2025 saw maritime decarbonisation making headlines far beyond the maritime press. In October, the postponement of the vote on the formal adoption of the International Maritime Organisation Net Zero Framework (IMO NZF), despite its provisional approval in April, attracted global attention amidst rising geopolitical tensions.

In the absence of the IMO NZF, some entities will undoubtedly struggle to decide which decarbonisation strategies to pursue. For others, however, the commercial opportunities of the current moment mean they continue to move forward swiftly with new ideas, new ventures and new technologies; and we continue to work on the development of novel financial, methodological and contractual features of products ranging from new tech to new carbon credits.

Financing energy efficiency tech

Our work with the Global Centre for Maritime Decarbonisation, establishing a new commercial venture in the form of a fund for energy efficiency technology (EET), lays a foundation for more finance to flow, and to flow more easily, towards the installation of EET on ships. In an era when regulatory uncertainty is high, efficiency is increasing valuable, whether by way of cutting the bill for fossil fuels, reducing regulatory costs or reducing the demand for expensive alternative fuels.

Onshore infrastructure

We see continued investment in onshore power facilities, despite uncertainty around the IMO NZF. We advised NatPower Marine on its joint venture with Wah Kwong, aimed at building and operating a shore power network for ships across major ports in Asia.

Regulatory developments

2025 was also notable for its regulatory agenda, as the industry grappled with the first ever verification period under the EU Emissions Trading Scheme and first reporting period under FuelEU Maritime. The proposed extension of the UK Emissions Trading Scheme started to take shape in the form of final policy decisions, and the other national regulators advanced their plans for national level emissions regulation.

We continue to receive a significant number of instructions from clients seeking to align their contractual relations to accommodate these regulations and respond to the new commercial opportunity of pooling presented by FuelEU Maritime. We have spoken widely on these topics throughout the year, including at events in Singapore, Rotterdam, Bilbao, London and online, and are receiving instructions in respect of disputes arising under the regulations and new contractual regimes, underscoring the importance of tending to the issues in contractual negotiations.

Alternative fuels

Commercially, the drive to adopt lower GHG intensity fuels has brought the maritime industry increasingly into contact with the biofuel and alternative fuels markets. We presented our views on the legal issues and risks arising in connection with alternative fuels at the Argus Biofuels and Argus Clean Ammonia Conferences and were invited to address the IMO on the issue of the coverage of liability regimes.

Maritime decarbonisation team

Stephenson Harwood's maritime decarbonisation team continues to play an important role in influencing the development of this space as well as supporting clients in responding to it. This includes involvement in the UK Chamber of Shipping Carbon Working Group and Offshore Panel; chairing the decarbonisation international working group of the Comité Maritime International; participating in the annual summit of the Global Maritime Forum; co-ordinating the Blue Visby Consortium; working on BIMCO sounding boards reviewing new clauses for industry; participating in UK Government working groups and consultations; participating in the Practical Law Energy Consultation Board and speaking on decarbonisation and energy transition topics on panels and at seminars globally, as well as producing regular insight bulletins.

To register for our monthly Offshore Energy Bulletin or our Maritime Decarbonisation Insights please contact any of the contributing authors or Nicola Porter.

> *"In 2026 commercial opportunities in connection with FuelEU pooling will mature, while insetting continues to be an attractive option for monetising emissions reductions beyond regulatory boundaries. Globally, the industry is facing a high level of regulatory uncertainty and new national regulatory proposals seek to fill the gap left by the IMO NZF postponement."*
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Spotlight

MARITIME DECARBONISATION IN FRANCE

Despite the current political uncertainty in France, the French government continues to support the decarbonisation of the maritime sector through a range of measures and initiatives. There is a strong market appetite in France for solid projects focussed on maritime decarbonation.

Wind propulsion milestones

The wind propulsion sector is experiencing ongoing development, as illustrated by the delivery of Neoliner Origin, currently the world's largest sail-powered cargo ship. Intended for transatlantic service, Neoliner Origin is designed to reduce carbon emissions and incorporates sail technology developed by Chantiers de l'Atlantique. This delivery marks a milestone after the 2023 delivery of Canopée, the first French cargo vessel equipped with rigid wings. It also precedes the scheduled deliveries in 2026 and 2027 of two ultra-luxury passenger vessels for Orient Express, under construction at Chantiers de l'Atlantique, and set to use the same sail technology as Neoliner Origin. The Stephenson Harwood Paris shipping team has advised banks on the financing of Neoliner Origin and is currently assisting Orient Express with the development of its new cruise company.

Emerging technologies

Other wind propulsion technologies are progressing. Companies such as Beyond the Sea and Wisamo are testing kite propulsion and inflatable wing systems on vessels, demonstrating the growing feasibility of alternative wind-assisted propulsion methods. In line with these developments, and to further support the industry's transition to greener technologies, the Stephenson Harwood Paris shipping team will join the French Windship Association in early 2026.

Regulation and alternative fuels

Recent regulatory frameworks, including the EU Emissions Trading System (EU ETS) and FuelEU Maritime regulations, are now established features of the sector and are generating fewer queries from shipowners and financiers. Methanol is still regarded as a leading alternative fuel, although ongoing concerns about supply and technological readiness have resulted in delays for certain vessel deliveries due to technical issues. The Stephenson Harwood Paris shipping team has worked on several financings involving methanol-ready vessels in 2025, including financings of methanol –ready containerships for Eastaway France, and this trend is expected to continue in 2026.

"Decarbonisation is now at the heart of the maritime industry's transformation in France. Our team is proud to play an active role in supporting clients as they navigate the legal, financial, and technical challenges of the energy transition, helping to bring innovative and sustainable projects to fruition."

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AVIATION SUSTAINABILITY

Decarbonisation

The aviation industry is making tangible progress in addressing its decarbonisation challenges, with 2025 marking milestones for mandatory policy intended to stimulate demand for Sustainable Aviation Fuel (SAF). The UK SAF Mandate, in force since January 2025, transformed SAF from a voluntary initiative into a legal requirement, starting with an initial 2% blend obligation, increasing to 10% by 2030 and 22% by 2040. While this has successfully created a market for green fuels, the industry is already facing a "supply crunch" – a central theme of our SAF Seminar, held in our London office in October 2025.

Stakeholders cite persistent bottlenecks as limiting SAF's ability to help the sector meet its net zero target for 2050. These include competition for feedstocks with other sectors, inefficiencies in the conversion process, the slow pace of technology deployment and insufficient investor certainty to commit to long-term projects. Members of our aviation sustainability team have spoken at a number of events throughout the year, including co-hosting a Sustainable Aviation Fuels Conference with the Board of Airlines Representatives in October 2025, and more recently, presenting to the members of IMPACT on the regulatory landscape in the UK in respect of SAF and the differences between the UK and EU regime.

De-risking SAF infrastructure

To unlock and encourage the private financing required for domestic production, the UK Government has introduced the Sustainable Aviation Fuel Bill. The Bill proposes a revenue certainty mechanism, effectively a "guaranteed strike price", designed to de-risk the construction of SAF plants across the UK. Having passed through the House of Commons and entered the Committee Stage in the House of Lords, it is expected to receive Royal Assent later this year. We anticipate the first "price-guarantee" contracts to be awarded to UK fuel plants towards the end of 2026, finally providing the support needed to progress from pilot projects and import reliance to full-scale industrial supply. For a more detailed insight into the UK Government's consultation on revenue certainty contracts, please read our recently published article: Green light for green flight: The UK's new SAF revenue certainty mechanism explained.

The regulatory landscape

Alongside legislative developments, the regulatory landscape is set to become more granular and evidence-based. The Civil Aviation Authority's (CAA) Environmental Review Roadmap 2025 set out the CAA's new approach to the Aviation Environmental Review (AER), transforming it from a high-level summary to a comprehensive, data-driven environmental reporting framework. The AER will provide annual updates on emissions, noise and air quality, supported by new data reporting tools, including a CAA Emissions Database to bring greenhouse gas emissions reporting closer to real-time. Its scope will gradually expand to include alternative fuels, technological advances, biodiversity and climate change adaptation, with the CAA updating its environmental recommendations every three years to reflect recent developments. In December 2025, the CAA applied this new approach in its latest AER, using the Emissions Database to provide a more detailed update on greenhouse gases, noise and air quality.

For a discussion on the increasing regulatory scrutiny of airline environmental claims and the evidential standards expected, see our recent article: Airline environmental claims–navigating the new era of regulatory scrutiny.

"As the aviation sector transitions from voluntary goals to strict legal mandates, and with the UK SAF mandate and the upcoming revenue certainty mechanism redefining the market, staying ahead of the curve is more crucial than ever. We are closely following the evolving regulatory landscape so that we can advise and support our clients as they adapt to a more granular, evidence-based era of environmental reporting."

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With thanks to Lorenzo Edwards-Jones (Trainee)

Energy Transition Insights

BUILT ENVIRONMENT

BUILT ENVIRONMENT

Emerging themes and outlook for 2026

Looking ahead to 2026, UK commercial real estate faces a pivotal year as it looks for regulatory direction in its energy transition. Market expectations grow for clearer government direction on Minimum Energy Efficiency Standards (MEES) reform, operational energy ratings and embodied carbon, together with greater integration of flexibility, storage and demand-side response in large assets. While the UK residential sector has moved ahead with updates to Energy Performance Certificates (EPCs) and MEES, the commercial sector still awaits policy announcements. Many landlords are progressing retrofit programmes across offices, retail and industrial assets to mitigate future compliance risk and protect asset value. There is an increasing recognition of the widening divide between premium, sustainable “Grade A” office spaces and other lower-rated properties.

Some themes we have seen come into focus in the last year include:

+ **Data centres and heat sharing:** both have emerged as prominent industry topics.
+ **On-site clean energy and electrification:** deployment of on-site renewables, electrification of heating through heat pumps, and smarter building management systems are becoming more mainstream, although with continuing cost and grid connection challenges.
+ **EV charging:** requirements for electric vehicle charging points are appearing more frequently in lease agreements.
+ **Green leases:** adoption of green lease wording has accelerated, particularly following the tightening of the Model Commercial Lease provisions in April 2025.
+ **Embodied carbon and whole-life impacts:** there is a growing focus on the broader measurement of the impact of carbon beyond operational energy.
+ **Retrofits and targets:** questions arise around existing retrofit rates and the challenges of meeting current decarbonisation targets.

Commercial rooftop solar opportunities

In June 2025, the UK government published the Solar Roadmap as part of its ambition to achieve 45-47GW of installed solar by 2030, from the current capacity of 18GW (as at Q1 2025). One area of focus for the government is to boost rooftop solar deployment and "unleash a rooftop revolution". To support this, the government outlined measures to reduce practical and contractual barriers, including:

+ **Leasing and contractual clarity:** streamlining installation on leased commercial buildings, addressing traditional lease structure challenges, and developing guidance on how to align landlord–tenant agreements to accommodate rooftop solar.
+ **Grid access:** tackling grid connection hurdles that hinder projects.
+ **Financing and offtake:** addressing financing concerns and power purchase agreements (PPAs). In January 2026, the Government launched a call for evidence on strengthening the corporate PPA market in Great Britain.

Beyond commercial new-builds and large distribution centres, these policy moves open up credible routes for regeneration and refurbishment schemes. Landlords could pursue park-wide energy models, by subleasing roof space from existing tenants (with modifications to lease repairing obligations) and entering into supply agreements with neighbouring tenants, so the array becomes a shared resource. Consideration needs to be given to whether an electricity supply licence would be required for such an arrangement, but there may be exemptions available.

Innovative lease negotiations could unlock value where a lease is nearing expiry, with solar being installed on top of the building, in exchange for a lease extension. With tenants benefiting from cheaper power and improved sustainability credentials after a short disruption period, and landlords gaining a highly sustainable unit for re-letting. Vacant units could become lettable with a relatively modest investment in rooftop solar, leveraging permitted development rights and plug-and-play systems. Subject to grid access and equipment availability, projects could be delivered in as little as six months. These approaches and integrated site models could reposition underperforming assets into high-demand, prime-rent assets with strong sustainability credentials and a reliable on-site power source.

UK and EU CBAMs moving forward

The UK is moving towards implementation of its domestic carbon border adjustment mechanism (CBAM) from 1 January 2027, putting a price on the embedded emissions of imported products, to ensure carbon intensive products from overseas face a comparable carbon price to that paid by UK manufacturers. Aluminium, cement, fertilisers, hydrogen, and iron and steel are in scope in the UK regime. This mechanism is intended to reduce carbon leakage, being the shift of production and related emissions from one country to another to reduce costs, due to the different levels of carbon pricing and climate regulation. During 2026, the legislative framework will be finalised through the Finance Bill 2025-26. The inclusion of indirect emissions within scope of the CBAM is being delayed until 2029 at the earliest, and the government is considering the feasibility and impacts of including refined products in the CBAM in the future.

For UK businesses trading with the EU, 2026 will be the first year of full operational compliance under the EU CBAM, following the end of the transitional reporting-only period and the introduction of an EU CBAM simplification package during 2025.

As well as bringing in measures to strengthen anti-circumvention and compliance rules, the EU has proposed an extension of scope to certain steel and aluminium-intensive downstream products from 2028. The UK and EU agreed last year to work towards linking their Emissions Trading Systems, with potential for goods originating from the UK and the EU to have mutual exemptions from the EU and UK CBAMs.

> *"In 2026, commercial real estate is waiting for clearer regulatory direction on MEES reform and operational energy ratings. The gap between resilient Grade A assets and lower-sustainability stock is clear – retrofits, on-site electrification and green leases are now essential to protect asset value."*
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