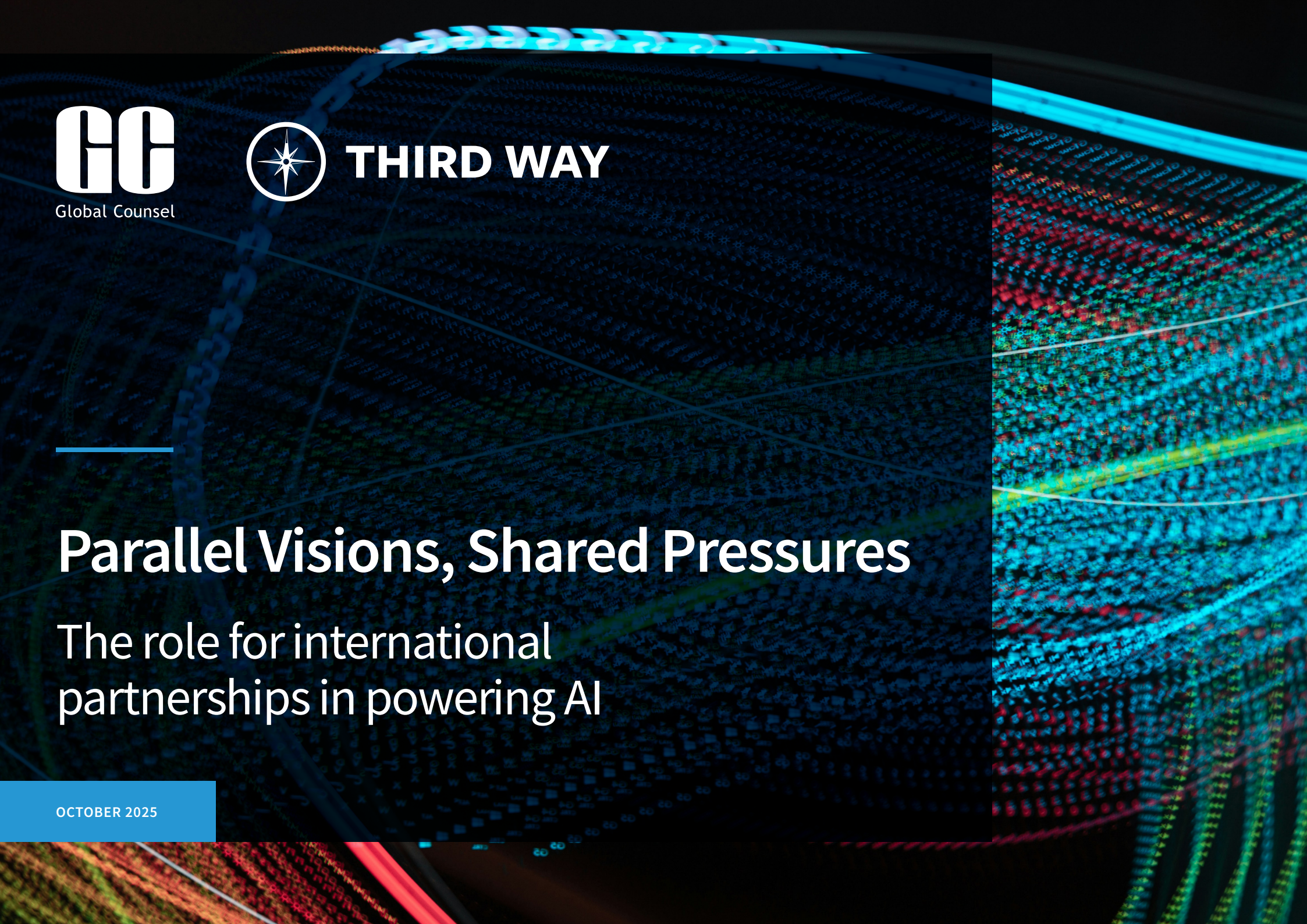


Global Counsel

THIRD WAY

Parallel Visions, Shared Pressures

The role for international partnerships in powering AI

OCTOBER 2025

Executive summary

In November 2022, OpenAI released an early demo of ChatGPT – a tool that fundamentally reshaped how policymakers perceived AI. It marked a dramatic leap forward, with increased compute power, lower development costs and abundant data enabling new uses and possibilities. In response, governments around the world took up bold AI development, adoption and innovation targets, positioning the technology as a driver of productivity, economic growth and competitiveness.

Yet this wave of ambition obscured a fundamental constraint: AI development and deployment relies on large-scale, energy-intensive data centers. These centers are expensive to build, and many jurisdictions lack the regulatory and energy infrastructure to support them.

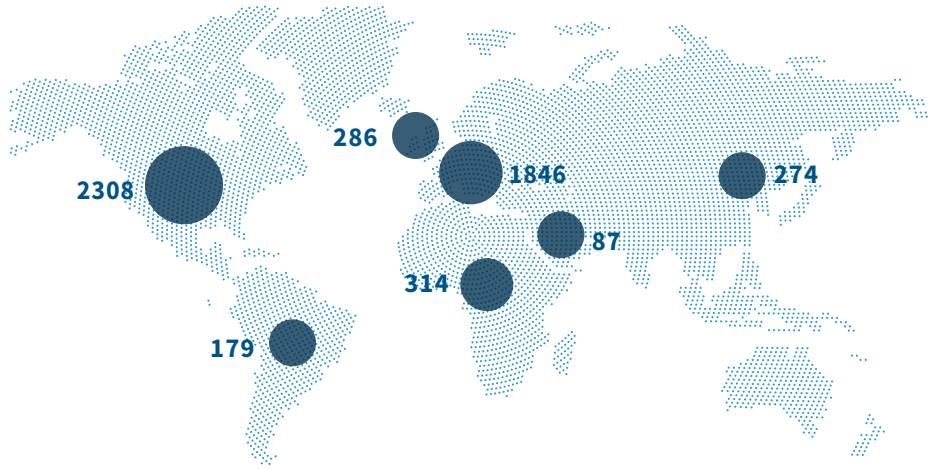
In recent months, the global AI race has been increasingly reframed as one for control over physical infrastructure. This was a central driver of US President Donald Trump's "Stargate" Initiative, which has formed a $500 billion public-private venture focused on maintaining US AI leadership through constructing at least ten hyperscale data centers across the US.

The international response to Stargate has signaled that while data center capacity is likely to be the ultimate determinant of AI competitiveness, most governments do not yet have the energy systems, planning tools or capital to rapidly increase it.

This report has been written at a moment where countries are competing to demonstrate why they are well positioned to become global leaders in AI and why investors should choose to pour funds into their infrastructure. Yet, it is also a moment where many government are trying to come to terms with the tensions between scaling up energy generation and adapting their grids to power data centers and achieving their wider priorities.

This report seeks to separate rhetoric from reality. It clarifies the current global landscape in the race for AI leadership, outlines the key challenges facing policymakers as they pursue AI expansion and importantly, highlights the opportunities to deploying and powering AI through international collaboration.

MAP OF GLOBAL DATA CENTER HUBS



This report is structured into five sections:

1

RHETORIC VS REALITY

This section provides an overview of the current landscape in the race for AI leadership across the US, UK, EU and the Middle East. It distinguishes between ambitious government narratives and the constraints they face in reality. Finally, it sets out the key emerging tensions facing policymakers.

2

TENSION 1: DIGITAL SOVEREIGNTY VS INTERNATIONAL PARTNERSHIPS

This section outlines the tension at the heart of debates around data center development, as calls for digital sovereignty and domestic control over data centers coexist with attempts to attract international tech firms and FDI.

3

TENSION 2: AI EXPANSION VS GRID STABILITY

This section outlines the varied attempts to reduce the grid impact of massive data center development and questions whether energy efficiency reporting requirements, efforts to oblige providers to meet their own energy demands or attempts to guide the location of new data centers will prove effective.

4

TENSION 3: AI ELECTRICITY NEEDS VS PACE OF NEW GENERATION

This section sets out the scale of the global energy demand challenge posed by AI. It outlines the different generation technologies which are being deployed to meet its needs, focusing in on small modular nuclear reactors and how different countries are approaching challenges around financing and lengthy regulatory approval processes.

5

OPPORTUNITIES FOR INTERNATIONAL PARTNERSHIPS

This section sets out proposals for how international partnerships could be deployed to address the key tensions. These include setting international standards for the energy efficiency of data centers and to ensure the integrity of Virtual Power Purchase Agreements, along with cooperation on export financing and (mutual) recognition of SMR regulatory approvals.

Recommendations

1

Set high international standards for data center efficiency

As the number of data centers rapidly expands internationally, it is crucial that developers adopt the latest technology to manage energy demands. Europe's Climate Neutral Data Center Pact requires operators to meet strict Power Usage Effectiveness benchmarks and commit to 100% carbon-free energy by 2030. Expanding this approach beyond Europe - through a new voluntary initiative or via coordination at the G20 or OECD - would help ensure that new data centers adopt cutting-edge, energy-efficient technologies and compete on a level playing field.

2

Introduce high-integrity standards for Virtual Power Purchase Agreements (VPPAs)

As cross-border VPPAs become a common tool for corporates to claim clean energy use, shared international standards are needed to ensure they deliver genuine emissions reductions. Without strong rules, companies cannot use VPPAs to reduce reported emissions through additional renewable and other clean energy generation. New standards could require transparency on project details, ensuring geographic and temporal relevance. These could be embedded in existing regulatory regimes and certificate systems across the US, EU, UK and emerging markets.

3

Expand cooperative export finance to support strategic infrastructure

Scaling AI-ready data centers and small modular reactors will require significant capital investment, which export credit agencies are well placed to help unlock. There are proposals for the UK and US to explore like joint ECA financing for SMR deployment, creating a model that could be extended to digital-energy infrastructure more broadly. This approach could evolve into a multilateral platform, pooling public capital and aligning policies across agencies. Reforms to OECD export credit rules may also be needed to ensure member countries are not constrained in supporting strategic industries.

4

Accelerate SMR deployment through regulatory cooperation

Licensing small modular reactors across multiple countries is time-consuming and often disproportionate to their risk, given many designs are based on proven reactor technology. International collaboration between nuclear regulators—such as joint technical reviews or recognition of overseas assessments—can reduce duplication, speed up approvals, and build trust in shared safety standards. Over time, this could evolve into more formal reciprocity agreements, helping bring SMRs to market more quickly while supporting decarbonization and energy security goals.

Rhetoric vs Reality
Overview of the current global landscape

Rhetoric vs. reality: An international picture

Despite similar ambitions — to become global AI epicenters, develop sovereign AI models, or provide high performance compute capacity — governments are at very different stages of readiness. Each jurisdiction reveals a significant gap between policy ambitions and delivery capability. Understanding these unique starting points is key for determining how different jurisdictions will approach the policy choices and tensions as they seek to deliver on their AI ambitions.

US: AMBITION BACKED BY ACTION

The US has aligned political rhetoric with concrete delivery. The $500 billion Stargate initiative announced in January 2025 signals that the US sees domestic data center capacity as a cornerstone of global AI dominance. Spearheaded by a coalition including OpenAI, Oracle, and SoftBank, Stargate will build at least 10 hyperscale facilities across the US.

Beyond Stargate, the Department of Energy (DOE) has identified 16 federally owned sites suitable for fast-track data center deployment. At the state level, long-standing tax incentives and energy agreements continue to attract hyperscale investment.

However, success is not without challenge: electricity needed to power data centers is straining local grids, prompting states like New York and Texas to propose legislation that would impose curbs or charges on data center developers. Nonetheless, the US remains the only jurisdiction with the scale, flexibility, and capital to rapidly expand its AI infrastructure in both public and private sectors — a significant advantage in the global AI race.

UK: HIGH AMBITION, FISCAL CONSTRAINTS

The UK has placed AI at the heart of its digital growth strategy, with the 2025 AI Opportunities ACTION Plan pledging to grow national compute resources twentyfold by 2030 and to introduce reforms to enable infrastructure expansion.

To accelerate the build-out of data centers, the UK has begun a process to select areas to become “AI Growth Zones” and has extended the critical national infrastructure status to data centers to enable the government to intervene to support data centers in a crisis.

However, the UK faces a tight fiscal environment and its ability to co-fund infrastructure is limited. As a result, much of the strategy relies on crowding in private capital, securing £25bn in FDI from firms including Microsoft, Brookfield, and Equinix in recent months. However, questions remain around delivery speed, particularly outside high demand regions.

The UK government has also set ambitious climate targets to deliver clean power by 2030, which data center deployment will make harder to deliver.

Rhetoric vs. reality: A fragmented European Union

EUROPEAN UNION: VISION WITHOUT VELOCITY

In April 2025, the European Commission launched the "AI Continent Action Plan". With its focus on investment, regulatory simplification, and domestic innovation, the Communication signals a move away from the AI regulation that dominated the last mandate.

The plan included a proposal for a Cloud and AI Development Act, seeking to outline a coordinated EU plan on AI infrastructure. The proposal includes a headline commitment to triple data center capacity over the next five to seven years and address existing obstacles, including 48-month average permitting time and grid connection challenges.

However, implementation remains the bloc's primary obstacle. Unlike the US, the EU has no unified zoning, permitting or energy framework and Member States retain control over most infrastructure. As a result, fragmentation is a consistent challenge.

FRANCE: NEW EUROPEAN CHAMPION

France stands out as a leader in the bloc. With strong central leadership, a favourable nuclear-powered grid, and over €100bn in planned AI and data center investment, the French government is proactively courting foreign capital. The flagship plan to develop 35 new data centers across nine regions aims to avoid the overconcentration seen in countries like Ireland. However, despite its ambition, France is already facing local opposition, mayoral pushback, and political resistance to granting fast-track status to foreign-owned centers.

IRELAND: HISTORIC LEADER

Once hailed as Europe's hyperscale capital, Ireland illustrates the difficulties of domestic data center development. Since 2022, a de facto moratorium has been in place due to severe grid constraints, with new data center plans effectively frozen until 2028. While Ireland's direct investment agency, the IDA, and the new government under Taoiseach Micheál Martin are keen to indicate their support for development, the reality is that EirGrid - the state grid operator - has blocked new load connections in Dublin and other concentrated areas, citing energy reliability concerns. Moreover, the Commission for Regulation of Utilities' (CRU) 2025 proposals for mandatory on-site power generation reflect potential additional obstacles to data center development.

Rhetoric vs. reality: The emerging policy tensions

GULF COOPERATION COUNCIL (GCC): CAPITAL AS A STRATEGIC TOOL

The UAE has positioned itself as an AI enabler, acting as an investor and strategic broker in international AI Infrastructure while seeking to become among the top "AI-powered nations" in the post-oil era.

This dual strategy was on display during President Donald Trump's May 2025 "Gulf tour" which included the launch of a "US-UAE AI Acceleration Partnership" which commits the UAE to build a 10 square mile AI campus in Abu Dhabi with 5 gigawatts of power capacity data centers. The campus will be the biggest of its kind outside of the US and marks the internationalization of the US Stargate initiative.

In Europe, the UAE is involved in key projects such as the AI campus in Île-de-France, and in Italy, it's backing a 1GW hyperscale project in Lombardy. However, the UAE's domestic infrastructure remains modest. Its strength lies in capital, diplomacy, and flexibility, rather than grid capacity or compute scale.

EMERGING TENSIONS FACING POLICYMAKERS

While international governments are at different stages of AI development and deployment, there are some common tensions which are emerging between meeting their AI ambitions and wider policy agendas.

These tensions revolve around choices over how willing governments are to allow foreign ownership of their assets in exchange for capital injections, what requirements they place on data centers to reduce their overall impact on electricity grids and how to meet AI infrastructure's high energy demands while delivering on commitments to net zero.

THREE KEY TENSIONS

1

DIGITAL SOVEREIGNTY VS. INTERNATIONAL PARTNERSHIPS

Governments seek to increase domestic capacity and control yet most lack the domestic capital or energy to build alone.

2

AI EXPANSION VS. GRID STABILITY

Data centers are concentrated in dense regions. Governments must decide whether to regulate location, enforce self supply or invest in grid upgrades.

3

POWERING AI VS. MEETING GROWING ELECTRICITY DEMANDS

With climate goals looming, powering hyperscale infrastructure without increasing emissions is a technical and political challenge.

Tension 1: Digital sovereignty vs international partnerships

Sovereignty vs. dependence:
Domestic data center development

At the heart of debates around domestic data center development lies a persistent tension between digital sovereignty and digital dependence.

Policymakers around the world call for domestic control of critical AI infrastructure, including data centers, seeking to mitigate the geopolitical risks and supply chain disruption of recent years. However, this ambition runs up against a fundamental challenge: very few countries possess the domestic capital, technical expertise or industrial scale to build and operate AI-ready data centers entirely on their own.

This gap between ambition and capability leaves governments with tough choices. While some policymakers argue that digital sovereignty requires domestic solutions across the entire tech stack - including data centers - others take a more pragmatic view, courting foreign direct investment (FDI), public-private partnerships and cross-border collaboration to accelerate capacity. While this approach can risk entrenching existing dependencies, when used selectively such partnerships can serve national AI ambitions and build domestic capacity. In this sense, sovereignty is not an "all or nothing" proposition, it can be reserved without control over every layer of the technology stack.

However, the tension between digital sovereignty and digital dependence has elicited divergent reactions from governments around the world.

The United States illustrates one end of the spectrum. With its mature market, home-grown hyperscalers, highly skilled workforce and abundant domestic capital, it represents the global leader in data center development. Domestic operators have historically dominated the market, benefitting from regulatory familiarity and close relationships with infrastructure stakeholders.

However, the return of President Donald Trump to the White House has marked a shift in approach. Determined to retain America's technological edge, the administration has signaled an openness to selective foreign investment in domestic data center development, particularly when aligned with broader foreign policy goals. The Stargate initiative represents a prime example. While it is spearheaded by US tech companies (OpenAI and Oracle), it relies on capital from Japan's Softbank. Similarly, the Dubai-headquartered EDGNES Data Centers has committed $20 billion to US data center development, drawn by US hyperscalers and AI firms.

DIGITAL SOVEREIGNTY: A SPECTRUM

"EUROSTACK" INITIATIVE: Seeks to rebuild Europe's tech stack via "Buy European" public procurement reform and public-private funding of domestic AI infrastructure.

STARGATE: Accepts foreign investment when aligned with strategic goals and supplementary to core US leadership. The market dominance of US hyperscalers ensures operational sovereignty, IP ownerships and domestic AI innovation.

€109B INVESTMENT: Government welcomes large scale international investment within the boundaries of a state-led plan. Sovereignty dominates political debate and risks derailing government ambitions.

DRAFT DATA CENTER BILL: Sovereignty ambitions drive efforts to designate data centers "strategic national assets", though Italy remains reliant on international funding and foreign hyperscalers to meet capacity targets.

AI GROWTH ZONES: Seeks to rebuild Europe's tech stack via "Buy European" public procurement reform and public-private funding of domestic AI infrastructure.

FOREIGN TECH RELIANCE: Has local capital to fund AI investment and ambitions to be a regional hub but domestic tech capabilities are limited. Aligns with US demands to secure frontier GPUs, but preserves narrow optionality for Chinese imports.

Sovereignty vs. dependence:
Domestic data center development

While the US administration's embrace of foreign capital has raised sovereignty concerns in some quarters, the scale and strength of the domestic sector and the benefits to US hyperscalers limits the dependency risks.

The EU presents a different picture. With its historic embrace of digital sovereignty rhetoric, policymakers in Brussels argue that data centers represent another critical dependency in the digital ecosystem. Seeking to close the AI gap with the US and China, the European Commission has pledged to triple data center capacity over the next five to seven years, with key measures expected in the forthcoming Cloud and AI Development Act (expected Q4 2025) and the Strategic Roadmap for AI and Digitalisation in the Energy Sector (expected Q1 2026). While the files remain in their infancy policymakers have stressed the importance of sovereignty "tests", rules around foreign ownership and public procurement preferences for EU-based operators.

Yet in practice, the EU's ambition to build out its AI-ready data center capacity at pace will necessitate continued reliance on foreign actors.

Behind this EU-wide ambition lies a complex national picture. With considerable differences in market maturity, investor appetite, domestic tech capabilities, governments have taken divergent approaches to domestic data center development.

France stands out as one of Europe's most proactive Member States, stressing the importance of domestic capacity build out in the absence of clear leadership from Brussels. President Macron has spearheaded this approach, announcing a €109 billion public-private investment plan in AI and data center development.

However, his agenda strikes a delicate balance between sovereignty rhetoric and opened to international investment, with capital drawn from the US (Digital Realty), Canada (Brookfield), and the UAE (MGX) to build 25 new data centers across nine regions - coined the "French Stargate". French reliance on US and Gulf sources has prompted fierce parliamentary debates over whether foreign-owned projects should receive fast-track approvals.

THE FRENCH 'DATA CENTER' REVOLUTION

With its vast renewable energy resources, surplus electricity production, and vibrant domestic tech ecosystem, France is emerging as an outlier in the European data center market. President Macron has sought to capitalize on these competitive advantages through a vision of digital sovereignty that blends billions in foreign investment with strong support for domestic players and a vocal sovereignty narrative.

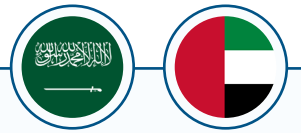
Canadian investment fund Brookfield has led the charge, pledging €20 billion in AI projects by 2030, including €15 billion earmarked for a 1 GW data center project in northern France (Cambrai). Similarly, Macron has welcomed initiatives with the UAW for an AI campus project backed by €50 billion. On the domestic front, Bpifrance has announced a €10 billion investment, while French telecom group Iliad is committing €2.5 billion to building new AI-focused data centers. This combination of international capital, domestic commitment, sustainable energy supply, and deep talent pools positions France to compete in the global AI race—while advancing its goal of digital sovereignty.

Sovereignty vs. dependence:
Domestic data center development

Italy, by contrast, has a less mature market and far greater reliance on foreign capital and expertise. While the government has designated data centers as “strategic national assets” and introduced draft legislation to enable construction on state-owned land, its ability to meet capacity targets still depends on securing large scale foreign investment. Investment from the UAE has funded two hyperscale projects in Lombardy and Apulia and given its market infancy, Brussels will likely dictate its future.

Outside the EU, the UK demonstrates a third approach – one that places less emphasis on sovereignty rhetoric and instead prioritizes rapid capacity expansion by prioritising foreign investment. Seeking to attract FDI, the government has designated data centers as critical national infrastructure and announced the creation of AI Growth Zones offering accelerated planning and grid access. The result has been a flood of inward investment from US firms and global asset managers. While this strategy boost capacity quickly, it raises questions around economic security, innovation capacity and domestic control, with the forthcoming Cyber Resilience Bill likely to consider mandatory security standards for foreign-owned facilities.

Despite national differences, a pattern has emerged across the world. Where domestic capacity is strong, as in the US, foreign participation is supplementary and strategically managed. Where domestic markets are smaller or less mature, as in much of Europe, sovereignty goals tend to give way to the imperatives of securing immediate investment and expertise, even at the cost of deepening structural dependence. The strategic trade-off between autonomy and acceleration remains unresolved, and for many countries the challenge will be to balance urgent capacity needs with the longer-term objective of controlling the infrastructure on which their AI ambitions depend.



GULF: PARTNERED SOVEREIGNTY

When Gulf policymakers choose partners, the practical choice today is the US ecosystem or a China-centerd alternative. Europe matters on rules and research but lacks a single national champion at hyperscale (e.g. US providers still dominate Europe’s cloud market).

The hinge issue is chips. Frontier-class training and inference still depend on NVIDIA/AMD parts subject to US export controls. The US tightened Middle East shipments in 2023, then introduced a Validated End-User route in 2024 so vetted data center operators in partner countries can receive advanced GPUs under a general authorization. In parallel, the US has green-lit specific arrangements - most visibly for a Microsoft-run facility in the UAE - to unlock advanced GPU flows under defined safeguards. In short, access runs through Washington, and the Gulf tilt toward US partners reflects that reality. Chinese alternatives are ramping up but reporting points to yield/capacity limits and shipments prioritized for domestic demand.

Maintaining US access has already shaped local choices. The Microsoft-G42 deal went ahead on the explicit understanding that sensitive Chinese chips would be removed from UAE operations. At the same time, the Gulf is trying to keep options open: Tencent Cloud has announced a Riyadh region as it expands in Saudi. This is the balancing act at the heart of the tension: asserting autonomy while preserving the US channel for compute.

Tension 2: AI expansion vs grid stability

Grid capacity: an international challenge

Hyperscale data centers require vast and unpredictable energy loads and often cluster in high connectivity locations. These features have transformed national electricity demands, raising new challenges for governments around electricity prices, local grid stability and how to balance data center development with decarbonization ambitions. Taken together, these challenges has slowed, and even blocked, data center development in some regions, as policymakers face a new balancing act: how to expand domestic data center capacity without overloading their energy systems.

To date, three main policy levers have emerged to manage this challenge:

1. Energy efficiency requirements
2. Requirements to meet energy demands independently
3. Location guidance.

ENERGY EFFICIENCY REQUIREMENTS

Policymakers seeking to drive domestic data center development, manage grid impacts and preserve climate ambitions have pursued mandatory energy efficiency requirements for data center operators, initially focused on reporting requirements.

Proponents argue that standardized reporting provides much-needed transparency about the cumulative grid impact of AI-ready data centers as well as peak demand patterns. This data, they argue, enables authorities to forecast demand from planned data center clusters, assess whether proposed projects are viable and incentivises operators to adopt more efficient practices. The EU represents the best example of this approach, seeking to pursue its "twin" digital and climate ambitions via the recast Energy Efficiency Directive (EED), which introduces mandatory, standardized new energy efficiency reporting requirements.

However, mandatory reporting requirements are unlikely to solve grid capacity constraints alone. While standardised reporting improves transparency and provides data for improve transparency, they do not automatically reduce consumption unless paired with minimum energy performance thresholds.

This has been recognised in Europe where over 100 data center operators and trade associations are signed up to the Climate Neutral Data Center Pact, which requires data center operators to meet targets on energy efficiency and the proportion of energy they use from renewable or low-carbon sources.

Under the pact, operators in cool climates are required to have a Power Usage Effectiveness (PUE) of 1.3 or lower and those in warm climates of 1.4. The PUE measures the ratio of all energy used by a facility to the amount used by computing equipment. An ideal ratio would be 1.0, meaning no energy is wasted on cooling and wider overheads. Operators have also committed to sourcing 75% of their energy from carbon-free energy by 2025 and 100% by 2030.

These standards set a high baseline for companies to compete on and ensures investment in the latest technologies. However, it is currently only voluntary and focused just on Europe.

RECAST ENERGY EFFICIENCY DIRECTIVE

The recast Energy Efficiency Directive (EED) formed part of the Commission's broader Fit for 55 package, a tranche of legislation to support the bloc's goal of climate neutrality by 2050.

With the introduction of standardised, mandatory reporting for data center operators, the Commission sought to boost transparency and incentivise efficient practices. However, the EED is widely seen as a "first step" towards minimum performance thresholds for EU data centers.

Operators must disclose key performance indicators (KPIs) around Power Usage Effectiveness (PUE), Water Usage Effectiveness (WUE), Energy Reuse Factor (ERF) and Renewable Energy Factor (REF). These include:

- Total Energy consumption
- Installed IT power demand
- Total water use
- Waste heat generated and reused
- Rated cooling capacity
- Total renewable energy consumption
- Renewable energy consumption from on site generation

KPIs are submitted annually to an EU-wide database.

Member States are responsible for transposing the EED into national law. With diverse views towards sustainability reporting, Member State approaches have varied widely. While some have delayed transposition altogether, others have attempted to "gold plate" reporting requirements (i.e. Germany).

Grid capacity: an international challenge

ELECTRICITY GENERATION

In recent months, an alternative approach to managing grid constraints has emerged, with efforts to require new or expanding data centers to generate their own electricity – either fully or partially. Seeking to unlock capacity in congested grids and allow new projects to proceed in the face of electricity constraints, struggling markets have called for obligations around on-site renewables, private generation of direct supply agreements. Proponents argue that this approach also protects other industries and households from prices spikes caused by rapid hyperscale build out.

Ireland's energy regulator, the Commission for Regulation of Utilities (CRU) is experimenting with this approach, seeking to resolve the country's effective moratorium on new data center development via a combination of reporting obligations and requirements for on site or nearby energy generation. To secure power off grid, avoid permitting delays and reduce exposure to local congestion, US hyperscalers have adopted a similar approach. In the absence of federal regulation to accelerate permitting, some hyperscalers are also exploring "behind the meter" generation solutions, including deployment of on-site solar and battery storage, direct gas-fired microgrids and private power purchase agreements with wind and solar producers.

However, on-site generation and storage significantly increase upfront project costs and is likely to favour hyperscalers with capital and expertise while disadvantaging smaller domestic operators. Moreover, on-site generation still requires interconnection and may not fully resolve grid capacity challenges.

LOCATION GUIDANCE

Location guidance policies represent another tool employed by governments to steer data center growth toward areas with power capacity, stronger grid connections or existing industrial energy infrastructure. Proponents argue that centralized local control allows authorities to accelerate approvals while avoiding regional concentration, ensuring expansion happens where it is technically and politically possible.

Both France and the UK have adopted this approach to data center development. In France, the government's €109 billion investment package is guided by a map of 35 preferred sites, categorized by grid-readiness. This pre-emptive location strategy seeks to help developers align with grid capacity and reduce the risk of stalled projects. With its AI Growth Zones, the UK seeks to attract investment to locations where large-scale builds can proceed without prolonged energy infrastructure upgrades.

UK AI GROWTH ZONES

AI Growth Zones represent an effort to reconcile the government's AI and climate ambitions. With its comparatively high energy costs, permitting delays and grid connection challenges, the new Growth Zones seek to accelerate domestic development by easing planning requirements in designated areas. This location guidance also dictates that bids must be able to guarantee access to at least 500MW power by 2030.

However, in the absence of adequate clean energy, the government will likely require a stop gap solution to meet its AI infrastructure ambitions, with as fuel cells already promoted as a potential solution. Moreover, strict location and scale requirements will likely prioritise global hyperscalers rather than domestic actors in the UK's data center development.

Tension 3: AI electricity needs vs pace of new generation

Powering AI: the scale of the energy challenge

Data centers are among the most energy-intensive forms of infrastructure. A typical AI-focused data center consumes as much electricity as 100,000 households, but the largest under construction will use 20 times as much.

According to the International Energy Agency (IEA), data centers across the globe currently consume around 415 TWh of electricity each year. By 2030, this is expected to double. By this point, data centers will account for around 3 percent of total electricity consumption globally. While this might not seem like much, it is roughly the equivalent of all electricity demand in France and Germany combined.

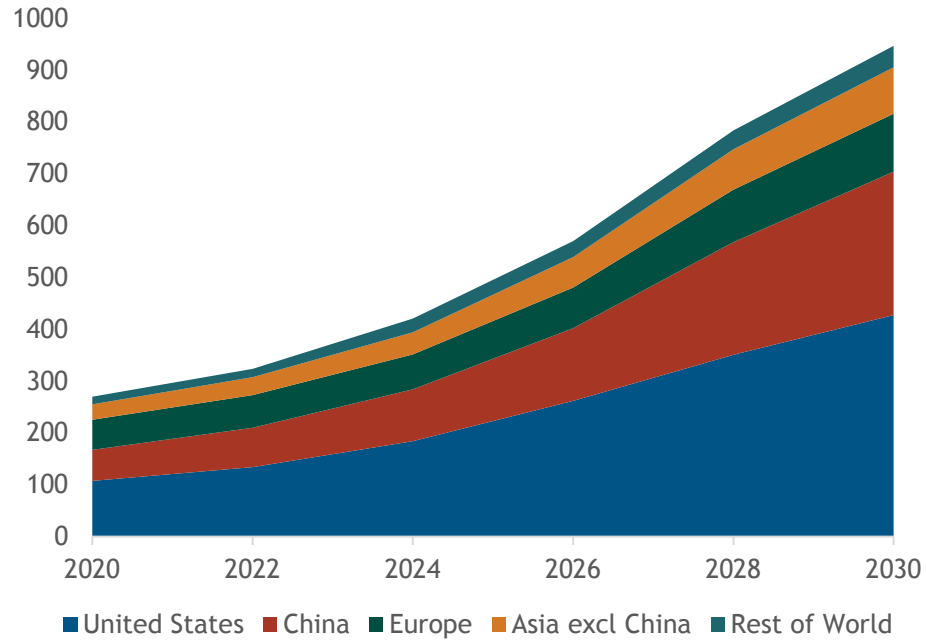
In practice, the scale of energy demands from data centers into the next decade and beyond will depend on a range of social and technological factors. There remains uncertainty over how rapidly uptake of AI will spread, how quickly new applications will be uncovered and how patterns of digital literacy and remote working will drive demand. There are also questions over how efficiently data centers can be run, as advances in the efficiency of semiconductors, cooling systems and IT equipment have the potential to drive down energy consumption.

However, with electricity demand from data centers growing at four times the rate as demand from all other sectors, countries with high AI ambitions are quickly realizing that substantial upgrades to their grids will be required if they are to compete internationally.

This poses particular challenges for governments seeking to rapidly decarbonize. The electrification of transport, heating and industrial processes is putting substantial strains on energy grids, requiring considerable investment in new generation, transmission and distribution infrastructure. The rapid growth in demand from data centers is exacerbating these challenges and will increasingly force governments to make trade-offs between competing policy priorities.

THE DEMAND FOR POWER CONTINUES TO GROW

Data center power demand, Gw



Source: IEA

Powering AI: Options for meeting the demand challenge

Faced with rapidly growing electricity demands from data centers, governments and the private sector are considering options to ramp up generation. Many governments hope to do this in a way that is consistent with their climate change goals, and developers have so far indicated a preference for low carbon energy.

In the US, tech companies have increasingly turned to nuclear energy, with recent deals to bring old nuclear sites back online and purchase electricity from next-generation SMRs.

However, the recent shift in the Trump administration's approach towards clean energy and the drive to compete with lower energy consumption AI models like Deepseek may mean that in some regions, energy needs are prioritized over sustainability.

Beyond SMRs, a range of technologies are being deployed alongside data centers. These range from generation assets such as wind, solar and gas peaker plants to energy management technologies including battery storage and microgrids. These are often deployed in tandem, ensuring energy supply and reducing costs.

NUCLEAR

- The stable, baseload power that an SMR can generate is an attractive solution for supplying data centers, and the scale of a power plant is typically on par with that of a data center campus based on cost per megawatt of IT load.

GEOTHERMAL ENERGY

- Next-generation geothermal technologies enable energy production from man-made reservoirs, making it a potential source of carbon-free, firm power in a wider range of locations. While currently expensive, advancements have reduced drilling costs significantly.

HYDROGEN

- Interest in using green hydrogen as a replacement for diesel backup generators has risen in the past few years. The potential of hydrogen for data centers typically falls into the energy storage category, where electricity is utilized to generate low-carbon hydrogen which is stored.

WIND AND SOLAR

- According to the AFCOM State of the Data Center 2024 survey, more than half of all data centers plan to implement wind and solar. However, these technologies are weather-dependent and therefore, need to be deployed in tandem with other energy generation or storage.

BATTERY STORAGE

- Large-scale data centers are increasingly taking advantage of battery energy storage to manage energy demand, reduce the impact on the distribution network and increase energy resilience. Battery systems are already being deployed alongside data centers in the US, UK, and EU.

GAS

- Gas still plays a key role in many countries' national grids; however, onsite natural gas generators and power plants are also proving popular with some data centers. This is especially true in jurisdictions with long waiting times for electricity grid connections.

Financing nuclear innovation

The development of SMRs and advanced reactors has been a focal point for both governments and industry seeking solutions to address hyperscale data center energy needs.

Several governments have expressed ambitions for the private sector to play a larger role in the financing of new nuclear and SMRs – specifically for powering data centers – and in the US, large tech companies are already partnering with SMR developers. However, many SMR technologies are first of a kind and have high upfront costs. More broadly, nuclear projects have traditionally been hard to finance due to their scale, capital intensity, long construction lead times and technical complexity. Although SMRs should theoretically be simpler to finance and construct than large-scale reactors, the overruns and delays that have plagued some recent projects, have created a greater sense of risk for some investors.

Governments will therefore need to consider what support they need to provide in terms of initial investment and funding, to ensure projects are commercial and to de-risk and crowd in private sector investment. For example, even in the US, where agreements have been established to deliver SMRs via power purchase agreements (PPAs), government funding and support through the Advanced Reactor Demonstration Program and previously the IRA's clean energy investment and production tax credits have been critical for enabling initial developments.

However, nuclear projects, particularly first of a kind projects, come with a high price tag, and for some countries, such as the UK, which are facing strained public finances, identifying innovative models of funding will be essential if they want to be able to deploy SMRs in time to meet growing AI ambitions. This includes ascertaining what specific gaps exist and how targeted investment, which could include blended finance, deploying a mixture of equity investment, low-cost loans and grants, could be used to de-risk wider private sector investment.

What role should governments play in funding small modular reactors?

The US provides a variety of funding mechanisms, including loan guarantees, tax credits, and direct funding for R&D. For example, the US's Advanced Reactor Demonstration Program offers cost-shared awards to developers to demonstrate advanced reactors.

Almost all nuclear investment in the UK relies on public funding, including Great British Nuclear's investment in Rolls Royce's SMR development and the "Regulated Asset Base" model which will fund Sizewell C, combining an upfront equity investment with costs being placed on energy bills.

The EU provides several incentives for new nuclear, including through the Euratom Research and Training Programme, the EU Taxonomy for Sustainable Activities and State Aid approvals. Member states also have their own funding mechanisms.

There are currently no financial incentives specifically targeting SMRs in the Middle East. However, the UAE's Federal Authority for Nuclear Regulation is developing strategies relating to the use of new nuclear technologies such as SMRs.

Streamlining nuclear planning and regulatory processes

Understandably, nuclear is a sector that has long faced a complex regulatory and planning landscape across jurisdictions.

However, with the energy demand from data centers growing rapidly and government ambitions to deploy new reactors at a faster pace, policymakers are now looking for ways to streamline processes to ensure that new nuclear projects are not held up at the pre-construction phases.

Part of the challenge with nuclear is that it commonly involves several regulatory and planning bodies which each must assess the safety and suitability of a new nuclear development. Streamlining these processes whilst maintaining high safety standards and navigating public and environmental concerns is understandably challenging.

There is also a question over how planning and regulatory reforms are aligned with those relating to new data centers, such as restrictions on siting new plants near large urban centers and their interaction with the national electricity grids.

An opportunity for greater international collaboration?

With the assessment of SMR and AMR designs frequently proving lengthy and complex, and an increasing number of developers looking to have their design approved across a range of jurisdictions, there is an opportunity for greater global regulatory alignment. This includes the sharing of assessment data between regulators internationally. Likely, there will always be some form of local or site-specific assessment required. However, greater collaboration between regulators has the potential to shorten pre-construction assessment periods for developers as well as reduce the burden on domestic regulators.

In many cases, such as the UK, there is no law preventing the use of another regulator's assessment or data in the assessment of a new nuclear technology. However, given that regulators usually assume some level of the risk burden associated with approving a technology, robust partnerships between regulators will likely be necessary to ensure they are comfortable in utilizing third-party data.

JURISDICTION	DETAIL
	In 2024 the US introduced the ADVANCE Act, which modernizes the Nuclear Regulatory Commission's framework. It includes several provisions designed to streamline and de-risk the licensing process, including fee reform, to reduce upfront financial barriers.
	The UK is currently undertaking planning reforms to simplify the process for developers, including lifting restrictions on where new sites can be located. It is running an ongoing review into the regulatory system with the aim of streamlining assessment processes.
	The EU is currently exploring opportunities for EU-wide licensing and promoting harmonized licensing approaches via the European Nuclear Safety Regulators Group, aiming to reduce duplication and delays for SMR approval across Member States. Member states are also introducing new legislation to speed up developments.

CASE STUDY: US-UK-CANADA REGULATORY COOPERATION FORUM

There has already been some recognition of the merits of international collaboration on regulatory standards for nuclear. The UK, US and Canadian nuclear regulators have signed a trilateral memorandum of cooperation to collaborate on technical reviews of advanced reactor and small modular reactor technologies. There are substantial opportunities from continuing to build on this initiatives.

Opportunities for international partnerships

Opportunities for international partnerships

As this report has highlighted, the challenges policymakers are facing are largely not unique to their countries. Grand ambitions for the development and deployment of AI cut across many jurisdictions. In practice, this means that while there is competition to lead in this space internationally, there are also substantial opportunities for collaboration and trade.

We believe that there are 4 key areas where government should explore cooperation:

1 Setting high international standards for data center energy usage

Data centers which adopt the latest processors and cooling technologies use far less energy. While global data center capacity grew by 6.5 times between 2010 and 2018, energy consumption only grew by 6% because of technology improvements.

As the number of data centers rapidly expands internationally, it is crucial that developers continue to adopt the latest technology to reduce the sector's overall energy demands.

This has been recognized in Europe where over 100 data center operators and trade associations are signed up to the Climate Neutral Data Center Pact, which requires data center operators to meet targets on energy efficiency and the proportion of energy they use from renewable or low-carbon sources.

Under the pact, operators in cool climates are required to have a Power Usage Effectiveness (PUE) of 1.3 or lower and those in warm climates of 1.4. The PUE measures the ratio of all energy used by a facility to the amount used by computing equipment. An ideal ratio would be 1.0, meaning no energy is wasted on cooling and wider overheads. Operators have also committed to sourcing 75% of their energy from carbon-free energy by 2025 and 100% by 2030.

These standards set a high baseline, which sets a baseline standard for companies to compete on and ensures investment in the latest technologies. However, it is currently a voluntary standard which is focused on Europe.

We believe that a similar standard should be agreed internationally to drive up energy efficiency standards for data centers and create a level playing field.

This could be achieved through an expanded voluntary model or through a new workstream at the G20 and/or OECD. For instance, the G20 could set green infrastructure targets or the OECD's Environmental Policy Committee or Digital Economy Policy Committee could issue recommendations.

Work would be need to done to assess to what extent operators in certain jurisdictions are limited on their ability to adopt the latest technologies through trade restrictions and tariffs.

Opportunities for international partnerships

2 Ensuring Virtual Power Purchase Agreements meet high integrity standards

As businesses have realised that building out clean energy capacity is particularly challenging in some markets, they have begun to turn to alternate mechanisms to demonstrate their projects are green.

One growing tool is the use of Virtual Power Purchase Agreements (VPPAs) where businesses enter into contracts with overseas renewables energy generators claiming the use of clean energy on their carbon reporting, even though they are being supplied with power from their local grid.

This tool carries benefits for the consumer, who can reduce their declared carbon footprint, and the generator, who can secure a guaranteed price for the energy they supply to the market giving them the revenue certainty needed to secure investment for new projects.

However, there have been criticisms that VPPAs don't guarantee additionality and that instead the consumer continues to use fossil fuel-based power and projects that would go ahead anyway are subsidized.

These products are cross-border by nature. To ensure that they lead to genuine investment in additional clean energy generation, we believe businesses and governments should collaborate internationally to agree on shared standards to guarantee the integrity of these agreements and prevent them from becoming a tool for greenwashing.

This could include:

- Requiring transparent disclosures on the details of projects, to ensure that the agreements are being used to finance additional generation and only financing new projects and not those underway or which would have been built anyway. Governments could commit to making these mandatory under their relevant regimes, such as the EU's Central Securities Depositories Regulation or the US's SEC climate rules.
- Geographic requirements, which could limit the use of VPPAs to countries or regions with an interconnected grid which would support the decarbonization of the grid as a whole even if local energy generation remains more carbon intensive.
- Restrictions on temporal matching, requiring time stamped certificates which demonstrate that energy is being generated at the same time as it is being consumed, preventing firms from being able to claim to be using renewable energy when there aren't sufficient clean sources on the grid.

Some organizations are already creating standards on theses issues. For instance, the EnergyTag imitative is creating rules for hourly accounting.

The challenge is ensuring that these standards are adhered to across operators and markets.

As approaches to renewable energy certificates develop across regions, governments should incorporate these best practices into their policy design. This means ensuring that there is a minimum standard in place that corporates will be expected to meet for VPPAs in order to secure Guarantees of Origin in the EU and UK and International RECs. Opportunities to participate in specific US markets via RECs may exist. However, such activities will be highly varied due to the segmented, state-based nature of US REC policies.

Notwithstanding, enforceable standards will be necessary to ensure that companies cannot artificially reduce their Scope 2 emissions without making the equivalent contribution to new renewables.

Opportunities for international partnerships

3 Collaborative financing of AI and energy infrastructure, including through export finance

Meeting the capital requirements for scaling AI infrastructure and small modular reactors will demand significant long-term investment. While private capital will play a critical role, there is a strong case for more proactive use of government-backed export finance tools to support long-term, capital-intensive projects across borders.

Export credit agencies (ECAs), such as UK Export Finance (UKEF) and the US Export-Import Bank (EXIM), already have the mandate and capacity to support strategic industries. In the civil nuclear sector, there are active proposals to align UK and US export credit policy to support shared SMR deployment. Under this approach, ECAs could co-finance a common reactor design across multiple markets, allowing both governments to support projects that include mutual content and supply chain participation. This model reduces duplication, increases commercial certainty, and builds transatlantic technology leadership.

There is a strong case to extend this form of cooperative export financing to include digital-energy infrastructure such as AI-ready data centers, renewable generation, and grid-integrated storage. These types of projects are increasingly considered strategic but often fall outside the remit of export finance because they are not classically "trade" transactions. However, with greater policy alignment between partner governments, ECAs could support one another's strategic infrastructure pipelines — mobilizing significantly more public capital, spreading risk and enabling coordinated industrial deployment.

While bilateral ECA coordination offers a strong starting point, the concept could be further developed into a multilateral financing model, pooling greater expertise and resources. This would likely require technical alignment across ECAs on issues such as content thresholds, risk appetite, sector eligibility and co-financing protocols. These could be reflected in updated framework and co-financing agreements.

At the intergovernmental level, there is also a case for reviewing OECD export financing rules to avoid disadvantaging member states. The OECD Arrangement on Officially Supported Export Credits, was designed to ensure a level playing field, so that OECD countries would not engage in a race to the bottom on financing terms. However, in some cases it now constrains members from flexibly leveraging their ECA tools (e.g. modifying loan tenors and rates) and coordinating their use to support strategic industries and technologies.

This is particularly relevant in sectors like nuclear and digital infrastructure, where long timelines and high upfront costs mean that favourable financing terms often determine project viability.

To avoid disadvantaging member states and allow for greater flexibilities to facilitate the formation of cooperative financing partnerships, the guidelines may need to be modernized and updated. This could include, for example, re-establishing 95% risk cover and updating local cost rules for nuclear and other relevant energy and infrastructure projects.

Opportunities for international partnerships

4 Enhancing regulatory cooperation to accelerate SMR licensing and deployment

Long and complex regulatory assessments risk delaying the deployment of SMRs. In many cases these assessments are likely to be disproportionate to the risks faced given SMRs draw on existing reactor technology.

With a growing number of developers seeking approval for the same reactor designs in multiple jurisdictions, there is a clear opportunity for greater regulatory coordination to reduce duplication, share technical capacity, and improve time to deployment.

International partnerships between nuclear regulators can support both near-term acceleration and longer-term regulatory harmonization. Cooperation on technical reviews allows regulators to share expertise, divide assessment tasks, and avoid repeating similar evaluations of the same designs. In turn, this can reduce the burden on individual regulators while improving consistency in safety assessments. The collaborative review of the BWRX-300 design by US and Canadian regulators offers a working example of how this model can be put into practice.

Over time, these technical partnerships can lay the foundation for more formal arrangements for recognising licensing decisions made by other countries.

Recognition could take the form of mutual licensing reciprocity, where countries agree to accept certain aspects of one another's assessments, or more simply through unilateral acceptance of overseas evaluations, where one regulator chooses to incorporate external findings into its own review. While the latter won't create the same export opportunities for domestic technology, it will mean that approved international designs can be deployed more quickly locally.

While each site will still require its own assessment, the core design of many SMRs does not introduce fundamentally new regulatory risks and could, in principle, be assessed once and recognized across multiple jurisdictions.

Some countries already have the legal flexibility to incorporate third-party assessments into their domestic processes. In the UK, for instance, regulators are permitted to draw on external technical reviews, provided they are confident in the robustness of the evidence and the credibility of the source regulator. Building formal partnerships would strengthen the trust and transparency needed to make fuller use of this discretion.

In the longer term, a coordinated international effort to align regulatory expectations on new reactor technologies could reduce approval timelines, create more predictable market entry conditions, and support a standardized global supply chain. This could be pursued through voluntary cooperation among a core group of early-mover countries, or through existing platforms such as the International Atomic Energy Agency or OECD Nuclear Energy Agency.

By reducing redundancy in review processes and enabling greater confidence in internationally assessed designs, this form of cooperation can help bring SMRs to market faster—supporting shared objectives on decarbonisation, energy security, and innovation in nuclear technology.

Annex: Jurisdiction deep dives

Deep dive: United States

Bipartisan agreement around furthering its global leadership in AI to compete with China.

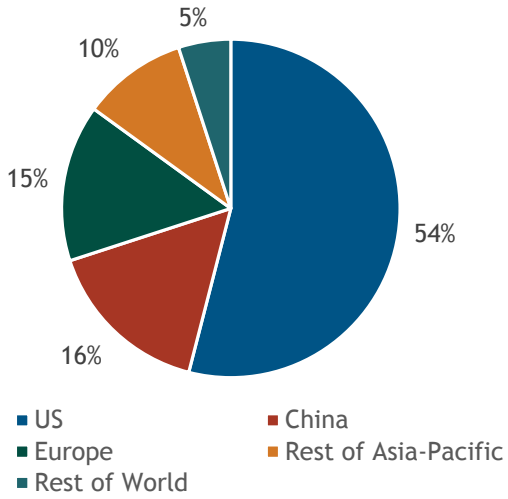
In a rare instance of bipartisanship, both Democrats and Republicans agree that the US must further its global leadership in AI, which includes keeping the data centers that train, deploy and deliver the technology in the country. Nationwide, there are over 2,500 data centers across the US, with close to 600 located in Northern Virginia, the single largest data center market in the world. The Trump administration, like the previous administration, frames AI as vital to strategic competition with China.

To power US leadership in AI, the Trump administration is focused on lifting regulations around environmental permitting and pollution monitoring from firm generation to expand electric capacity for data centers. The administration is also continuing efforts to make federal land available for data center development. In April, the Department of Energy (DOE) identified 16 potential sites owned or managed by the DOE, positioned for rapid data center construction. A key criterion of site selection included the availability of existing energy infrastructure and the ability to fast-track permitting for new generation.

State-level policies and market conditions like real-estate cost also shape data center development. Historically, many states offered incentives to attract data centers such as property tax abatement, tax exemptions, infrastructure grants, and expedited permitting timelines. However, in recent years, states are grappling with how to handle the pressure of data center expansion on electricity costs, reliability and sustainability. A new Texas law signed by Republican Governor Greg Abbott in June updates requirements around planning, interconnecting, and operating large loads connected to the Electric Reliability Council of Texas' transmission grid. Notably, the law requires new data centers to curtail electricity usage during emergencies and disclose information about behind-the-meter arrangements to inform a rulemaking on cost allocation for large load customers. Bills proposed in Georgia, California, and Virginia could also shift more costs of data center infrastructure from ratepayers to developers. Other proposals such as the New York State Sustainable Data Centers Act would require data centers to run on 100% renewable energy by 2050.

US DOMINATES GLOBAL HYPERSCALE CAPACITY

Data Center Capacity Q4 - 2024



Deep dive: European Union

Ambition to create AI centers to rival the US but a fragmented picture across Member States.

The EU has taken a decisive step toward a harmonised AI infrastructure strategy with its April 2025 AI Continent Action Plan and its proposal for a Cloud and AI Development Act. For the first time, the European Commission has placed domestic data center capacity at the heart of its vision to close the AI competitiveness gap with the US and China. However, this proposal for harmonization faces a critical obstacle: fragmented approaches have already taken hold across Member States.

While Brussels has outlined a central vision, energy access, planning regulation, investment policy and public support for data centers varies widely. Some countries have the grid capacity and political conditions to scale quickly; others are still navigating regulatory or technical bottlenecks. Every Member State now claims to be an AI hub — but only a few have the means to deliver.

The AI and Cloud Development Act presents the perfect opportunity for the EU to avoid creating a balkanized infrastructure market that could delay AI deployment.

MEMBER STATE	PLANNING INTEGRATION	ENERGY EFFICIENCY	INVESTMENT ATTRACTIVENESS	GRID CAPACITY	PERMITTING SPEED
	High	Medium	High	High	Medium
	Low	Medium	High (historically)	Low	Low
	Low	High	Medium	Low	Low
	High	Medium	High	High	Medium
	High	Low	Medium	Low	Medium

Deep dive: United Kingdom

Focused on attracting inward investment into AI but increasingly aware of tensions with clean energy ambitions.

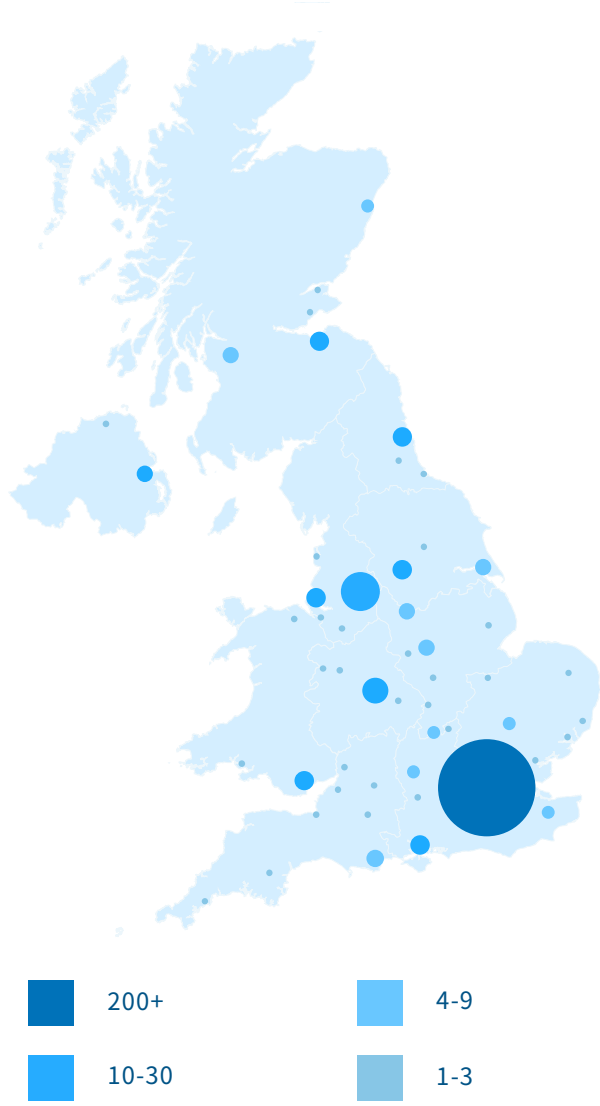
The AI Opportunities Action Plan is the central driver of the UK's AI policy focusing on growth, adoption and innovation. The plan laid out 50 recommendations across three themes: 'Lay the foundations for AI' (covering infrastructure, skills and talent), 'Change lives by embracing AI' (covering adoption, procurement and public-private sector partnership), and 'Securing our future with homegrown AI' (maximising economic impact for the UK and ensuring strategic leadership). Prime Minister Keir Starmer has been clear that building 'sufficient, secure and sustainable AI infrastructure' is a national priority, fronting the launch of the plan himself as he professed that the UK would 'mainline AI into the veins of this enterprising nation'.

To realize the ambition set out in the plan, the UK needs to upgrade its own compute, data centers and energy resources. However, with a lack of public funding available, the government has put considerable energy into attracting private sector investment to fund AI infrastructure bringing in approximately £25bn of investment in data centers alone since taking office.

Still, the pressure to attract investment and keep expansion on a par with other countries, like the US and France, has prompted further policy interventions. For example, the government is in the process of creating AI Growth Zones (AIGZs) – specific areas with enhanced access to power and support for planning approvals, to accelerate the build out of AI infrastructure (such as data centers). The first AI Growth Zones will be in Culham - the headquarters of the UK Atomic Energy Agency where there are ambitions for nuclear fission - and the North East, including sites in Blyth and Cobalt Park near Newcastle. Further zones are expected to be announced later in 2025.

However, with such heavy emphasis placed on financially fuelling the AI expansion, the energy question remains somewhat unanswered. In its action plan, the government created the AI Energy Council as a joint venture between the Department for Science, Innovation and Technology, and the Department for Energy Security and Net Zero to unpick how to satisfy the energy needs of AI, e.g. through the development of renewable and innovative energy solutions, including Small Modular Reactors (SMRs), but there has been little tangible output so far.

DATA CENTERS IN THE UK



Deep dive: UAE & Saudi Arabia

Building domestic capabilities alongside role as source of capital.

UAE and Saudi are banking on AI, and the data-center estate needed to run it, as the growth engine of their post-hydrocarbon economies. The UAE's AI Strategy 2031 and Saudi's Vision 2030 tie national competitiveness explicitly to AI (66 of Saudi's 96 Vision targets rely on data/AI). Abu Dhabi created the world's first AI Ministry, while Riyadh has launched HUMAIN, a PIF (Saudi's sovereign wealth fund)-backed vehicle chaired by Crown Prince Mohamad Bin Salman to build "AI factories" and a sovereign Arabic LLM.

Both states are pouring capital into hyperscale infrastructure, leaning heavily on US technology. Under the April 2025 UAE-US accord, UAE's state-owned AI company G42 will build a 10 square mile, 5 GW 'Stargate UAE' campus able to import 500k Nvidia Blackwell GPUs a year - part of the US$500 bn global Stargate scheme led by OpenAI, Nvidia, Cisco, and Oracle. G42 pre-emptively severed Chinese ties to secure Washington's blessing. Meanwhile in Saudi, the government has stipulated that foreign cloud majors must relocate regional HQs to Riyadh to win public contracts, unlocking >US$6 bn from AWS, IBM and others. HUMAIN's first build-out will field an 18,000 GPU Grace-Blackwell supercomputer (500 MW) while DataVolt will add a 1.5 GW net-zero facility at NEOM Oxagon, part of Saudi's biggest gigaproject. Current Saudi IT load is only ~525 MW, on par with the UAE despite a population three times larger, signaling a looming capacity surge.

In the short run, both countries can meet near-term AI capacity goals by burning more domestic gas or oil. The open question is how fast they can bring online enough low-carbon generation to keep long-term costs, export revenues and ESG goals on track. The UAE has a gas-heavy grid, but a nuclear head-start over Saudi. Roughly 2/3rds of the country's electricity, and therefore most of the data center load comes from natural gas turbines. Barakah, the first commercial nuclear power station in the region, has four reactors that already supply 25% of annual demand (rising to 60% in the winter months), and the world-scale Al Dhafra solar park pushes more renewables on the grid.

Looking forward, the country is studying small modular reactors (SMRs) under its ADVANCE programme (MoUs signed late-2023), but there is no construction timeline or dedicated incentive scheme yet.

In Saudi, virtually all power still comes from oil and gas. Vision 2030 targets a 50-50 split between hydrocarbons and renewables and sets a net-zero date of 2060, spurring multibillion-dollar solar and wind farm pipelines. Riyadh has ambitions for a large conventional reactor and a Korean-designed SMR, yet the nuclear portfolio remains notional. The SMART SMR partnership (launched 2019) has seen regulatory progress in Seoul but no ground-breaking in the kingdom, and nuclear rules have not been updated since 2018. All SMR financing would likely be state-led, no private incentives exist yet.

DATA CENTERS IN THE UAE AND SAUDI ARABIA

The global race for Small Modular Reactors (SMRs)

2026

China's first onshore SMR, the ACP100 (also known as Linglong One), is expected to be fully operational by the end of 2026.

2027

Kairos Power plans to demonstrate its Hermes test reactor in Oak Ridge Tennessee by 2027

2028

X-energy is working toward bringing its Xe-100 high-temperature reactor online in Texas by 2028

2030

TerraPower's Natrium reactor in Wyoming is aiming to be operational by 2030.

Romania's 462 MWe project is the most advanced in the EU, making it the first European market to deploy an SMR in Doicești by 2030.

EARLY 2030's

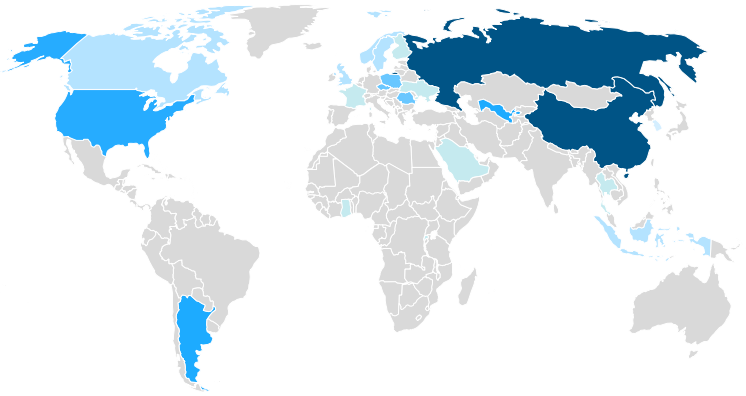
The UK is looking to have its first SMR funded via its SMR competition operational by the early 2030s.

Both Newcleo and Nuward are aiming to complete construction of their first SMRs in France in the 2030s.

The first GE-Hitachi BWRX-300 SMR is expected to be operational in 2030 in Ontario, Canada.

2035-6

South Korea's first SMR is expected to become operational around 2035-2036.



OPERATIONAL

UNDER CONSTRUCTION

COOPERATION AGREEMENT/OTHER

FINAL INVESTMENT DECISION

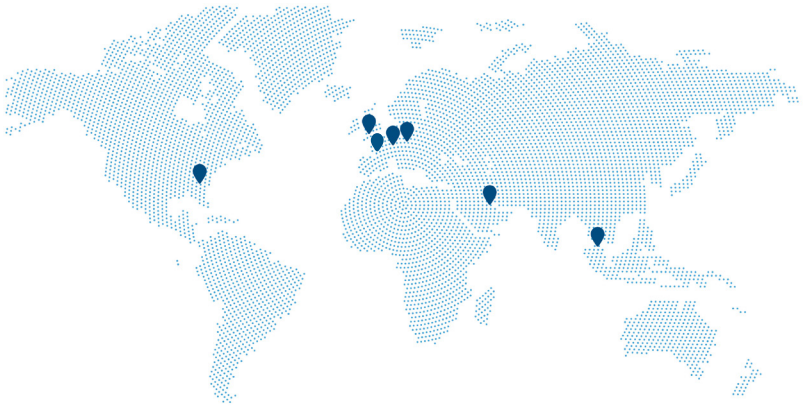
PRE-INVESTMENT

About Global Counsel

Global Counsel is a strategic advisory business. We help companies and investors across a wide range of sectors to anticipate the ways in which politics, regulation and public policymaking create both risk and opportunity - and to develop and implement strategies to meet these challenges.

Our team has experience in politics and policymaking in national governments and international institutions backed with deep regional and local knowledge.

Our global team operates across Berlin, Brussels, Doha, London, Paris, Singapore and Washington DC and is supported by a network of policymakers, businesses and advisers.



About Third Way

Third Way is a national think tank and advocacy organization that champions moderate policy and political ideas. Our work on the center left acts as a critical bulwark against political extremism.

Our approach brings together rigorous policy research, deep knowledge of the people and places that decide majorities, and sophisticated public opinion and messaging data to create strategic advocacy campaigns designed to persuade elected officials and influencers on the defining issues of our time. We advocate for the vital center across seven programmatic areas: climate and energy, economy, education, health care, national security, politics, and social policy.

As passionate moderates—or "radical centrists" per the New York Times—our work is not about splitting the difference but about standing for a values-driven, reform-oriented politics that can both deliver electoral power and drive meaningful policy change. We believe in building an opportunity economy that rewards hard work, making progress on social issues to uphold our fundamental freedoms, winning the global clean energy technology race, and securing our safety against evolving 21st century threats.

Since our founding in 2005, Third Way has earned a reputation for innovative thinking and high-impact campaigns that shift the national debate, help moderates win elections, and motivate ambitious policy reform. We have been lauded as "the best source of new ideas in public policy" (The Washington Post), "the future of think tanks" (Reuters), and the "North American Think Tank of the Year" (Prospect Magazine).

LEAD AUTHORS

Alan Ahn, Deputy Director for Nuclear
THIRD WAY

Kashvi Chandok, Climate & Energy Fellow
THIRD WAY

Saskia Giraud-Reeves, Senior Associate
GLOBAL COUNSEL

Hassan Mansoor, Associate Director
GLOBAL COUNSEL

Marley Miller, Associate Director
GLOBAL COUNSEL

Sarah Shinton, Associate
GLOBAL COUNSEL

THIRD WAY

Global Counsel

www.global-counsel.com
www.thirdway.org