data centre industry. This issue has been edited by <u>Elie Kaufman</u> with contributions from the Data Centre's team. In this edition, we cover key topics in the data centre sector, including increasing investments, the impact of energy efficiency regulations, and the management of these centres in

We are delighted to share the December edition of TopTier. The newsletter will focus on hot topics and legal development impacting on various aspects of the

Singapore from an ESG perspective. We also discuss the push towards green data centres, the UK's preparation for Al infrastructure, the potential use of nuclear power in Al data centres, and provide you with a handy guide to the EU AI Act. Please get in touch if you would like to discuss any of the issues raised in these articles, or

<u>visit our webpage</u> for more information about Bird & Bird's International Data Centre Group.

Click on the links below to jump to the respective article:

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EU AI Act Guide - ready to download! 7. 8. **Events**

a case-by-case basis.

use case.

Recommended actions

impact and next steps.

Investing in data centres: understanding permanent establishment issues

establishment (PE) is crucial for defining the areas of competence among EU member states. This concept ensures that the place of tax connection for service provisions is detected, thereby avoiding "conflicts of competence" that could lead to double taxation or non-taxation of income. Established EU jurisprudence emphasises the importance of this concept, referencing multiple landmark cases, such as Berkholz (1985), DFDS (1997), and Welmory (2014).

The notion of a PE introduces an exception to the general rule that the tax connection point coincides with the place where a taxpayer has established their economic activity's seat. For determining the presence of a PE, the requirements outlined in Article 11 of Regulation 282/2011/EU are pivotal. This regulation defines a "fixed place of business" as any establishment other than the headquarters, characterised by a sufficient degree of

For the purpose of Value Added Tax (VAT) regulations, the concept of a permanent

permanence and an appropriate structure in terms of human and technical resources. Key elements that identify a PE for VAT purposes include: 1. Temporal Requirement: The presence of a structure with a sufficient degree of permanence in the State's territory. 2. Objective Requirement: The necessary presence of human resources along with technical means.

The structure must be capable of receiving and using services for its own needs or providing services. Simply having a VAT identification number is insufficient to assume the existence of a PE; the human and technical/material factors are essential. Additionally, the legal status of the entity is not significant by itself. Even a subsidiary can constitute a PE for its parent company, but this depends on material conditions and economic realities, as emphasised in the Dong Yang Electronics case (2020). The presence of a subsidiary alone does not infer the existence of a PE. In terms of verifying a PE's existence, the human and technical resources must be

"permanently present," and these criteria generally need to operate cumulatively. The sufficiency and adequacy of the structure in human and technical terms must be assessed on

The only reference for determining the existence of a PE for VAT purposes is Article 11 of Regulation 282/2011/EU, not Article 192-bis of the VAT Directive. Only if the conditions in Article 11 are met can one analyse the PE's involvement in specific transactions. In order for a foreign entity to ensure not having a PE for VAT purposes in the country where investments are made, it will be essential to set up local entities that owns or have at their disposal all necessary infrastructure, including land and buildings, as well as all equipment and technology required for operations. Moreover, technical support services should be provided by local entities acting independently, with their own employees and resources, ensuring that the foreign entity does not directly engage in contractual or operational activities

in Italy without appropriate local involvement. This approach prevents the foreign entity from establishing a PE for VAT purposes, as long as the local entity handles the necessary resources and services. The presence of a PE cannot be inferred without the existence of human and technical resources through which the foreign company operates its economic activity in Italy. This guideline is crucial for avoiding the establishment of a PE inadvertently and ensuring compliance with VAT regulations. Free of charge supply of (residual) heat is subject to EU VAT

On April 25, 2024, the Court of Justice of the European Union (CJEU) delivered its judgment in case <u>C-207/23</u> ("Y KG"). The case involved a German plant that produced biogas and which made (residual) heat from the production process available free of charge to neighbouring farmers, which used the heat for heating asparagus fields. The CJEU ruled that these free of charge supplies were socalled deemed supplies subject to VAT on the cost price, resulting in a true tax cost. Why is this important? This ruling underscores that (residual) heat cannot be made available free of charge by the

even where the recipient would use such heat for its own business purposes. This is important for every data centre supplying or anticipating to supply (residual) heat to other businesses, communities or private individuals in the EU as part of the energy transition. Data centres would have to determine the cost price of their deemed supplies, which may include direct manufacturing costs and financing costs. Data centres would also have to determine whether free of charge supplies may result in a clawback of input VAT previously recovered on their design, build or operational costs incurred. The issue could be resolved if data centres would charge sufficient consideration for the supply of (residual) heat, but this may not be commercially viable for each energy transition

producer without an additional tax burden for the producer across the EU Member States,

Italy Before investing in data centres, it is crucial to understand the concept of Permanent Establishment (PE) as interpreted by Italian tax authorities, especially in the context of the digital economy. Recently, Italian authorities have adopted an innovative approach to challenging the presence of a PE for foreign companies, a move highlighted by Netflix's settlement with the Italian Revenue Agency. The case of Netflix involved the availability of a network of servers used exclusively for

providing streaming services to Italian customers. The Italian authorities argued that these servers constituted a PE under the concept of a fixed place of business. This approach marks a shift in the interpretation of PE, reflecting an evolving and increasingly fluid definition. Traditionally, PE has been understood through the lens of physical presence, such as offices

Historically, the definition of PE has been governed by tax treaties between countries, guided by the OECD Tax Treaty Model. With initiatives like BEPS (Base Erosion and Profit Shifting) Actions 1 and 7, the EU Directive Proposal 147 of 2018, and amendments to Article 162 of

or branches. However, the digital economy's growth necessitates new interpretations.

Data centres should take proactive steps to understand the implications of this EU VAT case. We recommend benchmarking the facts against your (residual) heat use cases to determine

the Italian legislation, the scope of what constitutes a PE has expanded. The OECD Model Convention now includes exemptions for specific activities, a new definition of dependent agent PE, and an "anti-fragmentation" rule. Furthermore, the concept of Significant Economic Presence (SEP) has emerged, proposing that businesses can have a PE based on their digital and economic presence, even without a physical office. Despite these changes, the new definitions are not immediately enforceable. They require renegotiation of existing tax treaties and the ratification of the Multilateral Convention (MLI) to implement BEPS measures. This process allows countries to make reservations or opt out of

SEP, designed to address tax challenges posed by digital businesses, aims to create a nexus between foreign entities and revenues generated within a country. This concept considers factors such as a user base, local billing, and after-sales services, in addition to digital presence. Italy has adopted the SEP principle unilaterally, without waiting for global consensus. This has led to some confusion, as the concept is still debated among scholars

Investors must be aware that while SEP and other new PE definitions aim to tax profits of non-resident digital enterprises, these interpretations can significantly impact business operations and tax obligations. The Netflix case exemplifies the need for companies to

In conclusion, understanding the evolving definitions of PE and SEP is vital for foreign companies, especially in the digital economy, when considering investments in data centres in Italy. These changes reflect a broader trend of tax authorities adapting to modern business practices, but they also bring uncertainty and the need for diligent planning and compliance.

carefully evaluate their business models and the potential for PE establishment in Italy.

certain provisions, meaning full global consensus is still lacking.

and lacks detailed guidance from Italian tax authorities.

centre operators

implement an energy audit.

waste heat should be emphasised.

and annually thereafter by 31 March.

obligations both at European and German level.

deployed using green energy in the next few years.

register.

3. Comment

the EED.

incorporate:

For more information, please contact <u>Giuliana Polacco</u> and <u>Andy Van Esdonk</u>. To access Investing in data centres: understanding Permanent Establishment issues -Corporate Income Tax, click **here**. Impact of the Energy Efficiency Directive and the Energy Efficiency Act on companies, especially data

The Energy Efficiency Directive (EED) and the Energy Efficiency Act introduce increasing obligations for companies, especially for data centre operators, in terms of energy saving and energy efficiency. As the first deadline for reporting certain energy-relevant data from data centres in Germany ended on 15 August 2024, we are taking this opportunity to provide more

The purpose of the revised EED (Directive (EU) 2023/1791 of 13 September 2023) is to increase energy efficiency, as energy efficiency is regarded as one the elements to achieve a reduction of greenhouses gases by 55% until 2030 and a climate-neutral European Union by 2050. For such purposes the revised EED provides that Member States of the European Union shall collectively ensure a reduction of energy consumption across the EU by 11.7% by

With regard to the private sector, companies, regardless of the sector and including small and medium sized enterprises, with an average annual energy consumption of more than 85 TJ are obliged to introduce an energy management system (e.g. EMAS). Companies with an average annual energy consumption of more than 10TJ, but less than 85 TJ are obliged to

Already in 2016, the EU-Commission published a working paper "Best practice on energy efficiency" which addressed the data centre industry directly. The working paper indicated the

detailed information on the impact of the EED and the Energy Efficiency Act.

2030 compared to the projections of 2020 through a series of measures.

1. Energy Efficiency Directive (EED)

EU-Commission's intention to introduce specific regulations for the sector. This was implemented in the revised EED that expressly addresses operators and owners of data centres and imposes certain obligations on them. Amongst others, operators of data centres with a non-redundant rated electrical load of at least 500 kW are obliged to publish certain information for the first time by 15 September 2024 and annually thereafter by 15 May. A delegated regulation ((EU) 2024/1364 of 14 March 2024) regulates which data is to be published in detail. 2. Energy Efficiency Act Germany has implemented the EED through the Energy Efficiency Act.

For companies with an annual final energy consumption of more than 2.5 GWh, regardless of the sector, the newly established obligation in the Energy Efficiency Act to avoid or reuse

In addition, energy or environmental management systems must be set up by all companies

Data centres with a non-redundant rated electrical load of at least 300 kW are subject to more

A power usage effectiveness (PUE) value of 1.2 is to be achieved for newly constructed

 For waste heat recovery, an energy recovery facility (ERF) of up to 20% is required, which shall be achieved by connecting the data centres to the district heating network.

Data centre operators must publish energy consumption data annually in a public

The first reporting deadline for data centre operators in Germany ended by 15 August 2024

It becomes very clear that the data centre industry is explicitly being addressed with concrete

As the case may be, other EU Member States may consider the Energy Efficiency Act with its strict requirements for data centre operators as a model for their national implementation of

Breaches of the obligations cause offenses that can result in substantial fines.

You can find more details of the legal requirements for waste heat utilisation here. • Data centres must obtain all of their energy from renewables - physically or virtually from

with an average annual total final energy consumption of more than 7.5 GWh.

specific requirements that go beyond the obligations of the EED:

The rapidly changing and growing European and national regulatory environments for the development and operation of data centres therefore requires thorough and constant monitoring. For more information, please contact <u>Dr. Dirk Barcaba</u> and <u>Elie Kaufman, LL.M.</u> Management of data centres in Singapore – Key legal issues part 2 – ESG

Singapore has over 1.4GW of DC capacity across 70 operational DCs with capacity expected to at least double within the next decade. Following from a moratorium on new data centre projects that was implemented to manage the growth and curtail the energy consumption of the industry, the government set out plans for new data centre projects to be subject to higher sustainability requirements. The Infocomm Media Development Authority ("IMDA") has also launched a Green Data Centre Roadmap targeting at least 300MW of capacity to be

IMDA will be supporting the industry at all levels to promote innovation in areas such as cooling technologies, green computing, and low-carbon energy. New projects are expected to

Energy efficient DC design and operations – achieving power usage effectiveness of less

Green energy sources – partnering with green energy suppliers and solutions providers.

In addition to these more stringent criteria for new data centre projects, data centre operators and managers are also facing increasing pressure to ensure that their data centres meet ESG indicators for compliance and even financing. In Singapore, in addition to ESG disclosures by certain companies the Monetary Authority of Singapore ("MAS") is also pushing for green financing and fintech based upon ESG principles. To this end, MAS has been promoting initiatives under Project Greenprint to facilitate the efficient flow of ESG data from disclosure platforms to data orchestrators and registries that can record and maintain

than 1.3 at 100% load and refreshed BCA-IMDA Green Mago for Data Centres;

Energy efficient compute/IT hardware and software stack; and

provenance of ESG certifications and verified/verifiable data.

Environmental Sustainability

manage data centre performance and efficiency.

levels – reducing the cooling requirements.

otherwise.

Social

community.

click **here**.

Governance

Environmental sustainability is perhaps the more readily understood indicia taking into account energy and resource efficiency, decarbonisation, and overall environmental impact during construction and operations as well as during the retrofitting and optimising legacy data centres. This has spurred remarkable innovations in the space as various stakeholders align their understanding and goals in this area, and new approaches and solutions are developed. These range from cooling-as-a-service concepts with service providers offering consultancy, retrofitting and management of cooling solutions, materials and hardware research and

design to harden equipment improve shelf-life and serviceability while reducing cooling and power requirements, as well as machine- and deep-learning capabilities to better monitor and

Apart from upgrading existing M&E, operators can also consider the Tropical DC standard developed by IMDA that enables DCs to operate safely at higher temperatures and humidity

As the space is still developing, Parties will need to be clear about the deliverables as well as potential risks involved especially where data (in particular personal data) is involved, and ensure that their review processes are sound and agreements are sufficiently comprehensive. There are already growing concerns about "greenwashing" and as more disclosures are mandated by regulatory bodies there is a greater likelihood that civil penalties and damages may be imposed for any misrepresentation or mis-reporting, negligent or

Data centres predominantly operate with only a necessary complement of manpower on-site presenting challenges for diversity, training and career progression, as well as particular issues for workplace safety and health. Data centre operators and managers have to take particular care to ensure these internal areas and metrics are not overlooked and while also being cognisant of their role in society at large. This could include community engagement and participation in community events, or at least minimising impact to the immediate

especially data protection and governance requirements if not for the operators and managers themselves then for the trust and assurance of their tenants. An important part of this is regular training on general ethics and governance issues, as well as domain-specific training on areas such as financial and other audits, data protection and security, as well as ESG-specific training. This would also enable data centre managers and operators to identify situations where professional advisors with sufficiently qualifications and experience can be valuable in navigating the often complex and evolving landscape.

To access Management of data centres in Singapore – Key legal issues part 1 – Energy use,

The global uptick in the adoption of digital technologies and the use of artificial intelligence has spurred the demand for data centres as well as the energy demands of these data centres. Southeast Asian countries are vying to draw more investments into the data centre space. In the coming years, Singapore plans to add at least 300MW more of data centre capacity to the existing 1.4GW of combined computing capacity of more than 70 data centres in Singapore. Malaysia is seeing enormous growth in the data centre scene, attracting data

However, there are concerns over the high energy consumption of data centres. High energy consumption not only drives up operational costs, but also increases carbon emissions, which

The Singapore government has signalled its commitment to advancing the growth of data centres in a sustainable manner. The government has expressed its preference to allocate new data centre capacity to operators that "prioritise both sustainability and economic value". This is in line with Singapore's overarching sustainability goals, including achieving net-zero emissions by 2050. To this end, the Singapore government launched the **Green Data Centre**

The successful management of data centre projects necessitates a thorough understanding of and close adherence to local regulations. Building on our earlier published 4-part series on legal issues relating to the management of data centres in Singapore, this article offers an

Energy efficiency is a crucial aspect of Singapore's energy policies, and sometimes billed as the "first fuel" in its clean energy transition. In addition to mitigating greenhouse gas emissions, adopting energy efficient systems results in significant cost savings for consumers and businesses and has spawned a good number of innovative business models such as Energy as a Service (EaaS). Moreover, energy efficiency contributes to energy security and the resilience of energy systems by reducing the overall demand and strain on energy

Within the next 10 years, the Singapore government aims for all data centres in Singapore to (i) achieve a power usage effectiveness performance of ≤1.3 at 100% IT load; and (ii) use

Companies operating data centres should be mindful of any applicable climate reporting

centre investments including from tech giants such as Google, Nvidia and Microsoft.

poses a threat to global decarbonisation efforts and net zero targets.

overview of regulations for energy use in Singapore and Malaysia.

For more information, please contact **Jonathan Kao**.

The quest for green data centres

Regulations on energy in Singapore

Roadmap (Roadmap) in May 2024.

1.1 Regulations on Energy Use

only energy-efficient compute/IT infrastructure.

infrastructures.

1.1.1 Climate reporting

1.1.2 Government incentives

Efficiency Grant for Emissions (REG(E)).

efficient or green data centre projects.

centres by end-2024.

era of computing.

weather.

The bigger picture

What are SMRs?

Corporate ethics and governance are particularly important in relation to data centre operators and managers. A strong culture of corporate governance is likely to lay the foundation to meet the particularly high standards expected of data centres across all areas from cybersecurity and physical security, to uninterrupted power and connectivity and

requirements. For the present financial year (FY) 2024, climate reporting is required of listed issuers (i.e. issuers of equity securities listed on the Singapore Exchange) in the (a) financial industry; (b) agriculture, food and forest products industry; (c) energy industry; (d) materials and buildings industry; and (e) transportation industry. Climate reporting is required on a "comply or explain" basis for other listed issuers while non-listed issuers need not make climate-related disclosures. From FY 2025, all listed issuers must report annual climate-related disclosures, using International Sustainability Standards Board (ISSB)-aligned requirements. From FY 2027, large non-listed companies (defined as those with annual revenue of at least S\$1 billion and total assets of at least S\$500 million) must provide climate-related disclosures.

To encourage energy efficiency in data centres, the Economic Development Board (EDB) offers the Investment Allowance for Emissions Reduction (IA(ER)) and Enhanced Resource

The IA(ER) is an investment allowance granted on capital expenditure incurred for energy-

The REG(E) offers enhanced support to data centres to improve their energy efficiency and reduce carbon emissions. The grant quantum will be calculated based on the carbon

The EDB also has an Energy Efficiency Grant (EEG), which offers businesses co-funding to invest in energy-efficient equipment. Eligibility for the EEG will be expanded to cover data

Jointly developed by the Building and Construction Authority (BCA) and Infocomm Media Development Authority (IMDA), the Green Mark for Data Centres (GMDC) certification scheme recognises data centres that demonstrate superior sustainability and environmental performance (e.g. energy efficiency, sustainable design and construction, use of digital tools

Investment in UK data centres to prepare the

The increased demand for artificial intelligence has seen an increase in demand for data centres, which provide data storage, processing power and connectivity. In the UK, there has been a recent influx in overseas funding for data centres alongside a government announcement that data centres will now be classed as 'Critical National Infrastructure' (CNI). It is hoped that this additional stability and increased investment will provide the UK with the capacity to train the next generation of AI and create a lucrative steam of revenue in the new

In recent weeks, it was announced that four major US based technology companies (CyrusOne, ServiceNow, Cloud HQ and CoreWeave) have committed a collective £6.3 billion investment in data centres in the UK. This investment follows significant commitments from US investment company Blackstone for £10 billion to build a major Al data centre in the North East of England, and Amazon Web Services, which announced plans to invest £8 billion in

This influx of investment will increase computing power and data storage in the UK. The increased storage space will be crucial for the development of the next generation of AI, as AI

While investors are pledging billions to build and maintain UK data centres, the UK government announced in early September that data centres are now considered to be CNI. This classification is significant for investors, both foreign and domestic, as it signals that the UK is a stable environment for AI development and therefore a good place to invest in building and maintaining data centres. CNI status means that data stored in UK data centres will be afforded greater government support both against and when recovering from critical incidents. This will mean that data stored in UK data centres is better protected against cyber security attacks and is less likely to be compromised during power outages and adverse

establishing and enhancing data centres across the UK over the next five years.

development involves huge amounts of both computer power and data storage.

abatement achieved by the project, capped at 50% of qualifying costs.

1.1.3 BCA-IMDA Green Mark for Data Centres

infrastructure needed for AI

Overseas investment in UK data centres

The importance of data centres as CNI

and maintainability). The GMDC was recently updated in 2024.

For more information, please contact **Sandra Seah** and **Genessa Chew**.

environmental perspective, training AI is an energy intensive process with vast quantities of data computed. This energy usage happens in the data centres. Data centres are already becoming increasingly power intensive, with a future significant increase in their power usage predicted as the development of Al takes off. This is certainly a consideration for companies investing in data centres for the development of Al with regard to their ESG goals. However, investment in data centres for the purpose of AI development is predicted to be a huge source of revenue for big tech companies further down the line. Data centre investment in the UK to improve the infrastructure for Al development is only part of a much bigger picture. Big tech companies such as Google and Microsoft are investing tens of billions of dollars globally in data centres, with the hope that these centres will keep them at the forefront of AI development worldwide and will produce a profitable stream of income in the new era of computing.

Following Google's recent announcement that it is investing in nuclear technology to support its US data centres, nuclear power, particularly in the form of small modular reactors (SMRs), is emerging as a potentially promising solution to meet the growing energy demands of Al.

SMRs encompass nuclear reactors up to 300 MW (compared to roughly 1,000 MW conventional reactors), which can be prefabricated and relatively quickly constructed on site. This makes them ideal for use by tech companies who are racing to meet rising energy

Currently, only China and Russia have operational SMRs but other nations, including the UK and US are developing their own designs. The US Nuclear Regulatory Commission certified its first SMR design for use in 2023, although this project was scrapped in the same year due

Sam Altman, the CEO of OpenAl has described powering Al as the "hardest part" in satisfying demand. Each search with OpenAl's ChatGPT typically requires 2.9 Wh per request, almost 10 times the 0.3 Wh required for a Google Search. Whilst the overall consumption numbers for Al data centres are currently unconfirmed, some estimates put the scale of ChatGPT consumption alone at 226 GWh annually. This is roughly equivalent to

As AI models increase in sophistication and popularity, this energy demand will continue to grow as hyperscaler data centres require increasing computing power. These data centres will need reliable, substantial, and cost-effective energy supply. The risk of price volatility and supply instability when obtaining energy on the open market is potentially colossal for data

Whilst many major tech firms are looking to renewables to power these data centres, nuclear

Compared to single site wind or solar generation, nuclear is highly reliable. Moreover, its flat output curve, compared to the periodic daylight curve of a solar farm for example, makes it well suited for data centres which require large baseloads at all times of day. The modular nature of SMRs also make them highly scalable as further units can be added when data

Furthermore, despite environmental safety concerns, which are being addressed through advanced features such as passive safety systems, nuclear does hold the benefit of being carbon free. This is crucial for tech companies who will want to ensure compliance with national and international emissions and sustainability standards as well as their own net-

SMRs also require a relatively small footprint in comparison with solar or wind farms which makes them easier to accommodate on data centre sites. For example, a 300 MW solar farm would require between 1,200 and 2,100 acres of land. Meanwhile, an SMR can sit on less than 100 aces. This greatly reduces the site size which reduces land costs and opens the

Given the potentially catastrophic costs of nuclear accidents, the area is highly regulated

Following the US Nuclear Regulatory Commission's approval of NuScale's innovative SMR design in 2023, the outlook for SMRs was highly positive. However, less than a year later, the project was scrapped, with the estimated project cost running up to £9.3bn in 2023 - up from the initial £3bn when it was announced in 2018. This financial strain was too much to make the project viable and ultimately cost is going to be a major issue for SMRs because ensuring

Nuclear projects typically run well over their estimated costs and timescales. See France's Flamanville-3 which is four times over the cost estimate and almost 12 years over the initial development time. This makes financing a huge problem as investors will be increasingly wary of nuclear projects. National government interest may also be waning with the US Energy Department under the last three administrations providing over \$600m in funding for

SMRs are also inherently more expensive per unit of output in comparison with their conventional counterparts as the development costs are not proportional to the size of the project. This potentially makes them even less bankable, although guaranteed connection to

Bankability may, however, be less of an issue for Big Tech, who have the funds and bargaining power to negotiate favourable contract terms with SMR developers which may

Most recently, in October 2025, Google signed an agreement with Kairos Power to produce a

Whilst SMRs present an exciting prospect to deliver clean energy around the clock to Al data centres, it is crucial not to ignore the issues of regulation and cost which have so far severely limited their development. Whilst significant investment may lead to breakthroughs, it remains to be seen whether SMRs hold the key to Al hyperscaler growth against the background of

To guide you through the EU Al Act, our multi-disciplinary global team of Al experts has launched our EU Al Act Guide which summarises key aspects of the new regulation and highlights the most important actions organisations should take in seeking to comply with it. Serving a similar purpose as our GDPR Guide, our EU Al Act Guide is divided into thematic

Navigating the EU AI Act:

key legal aspects you need to be aware of.

In this webinar, we will cover the following topics:

Terminology and general-purpose Al value chain

· General-purpose AI models with systemic risk

<u>Understanding general-purpose AI</u>

Join us for the third webinar in our EU AI Act webinar series for a detailed exploration of general-purpose AI models, highlighting the

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sections, with a speed-read summary and a list of suggested priority action points.

bankability is often the main factor in getting energy generation projects off the ground.

For more information, please contact **Natalie Northridge** and **Kate Deniston**.

demands without the long lead in times which come with other energy sources.

to rising costs – something which will be addressed later in this article.

centre owners and so tech companies need to find alternative solutions.

presents an alternative and potentially more suited option.

Growing energy demands of AI

charging the entire stock of US electric vehicles.

The nuclear option

centres are expanded or rebuilt.

availability of alternative site locations.

which brings with it cost issues and time delays.

SMRs without a single operational plant to date.

Notable deals and developments

A nuclear future?

more bankable options.

To access the guide, click **here**.

Events

12 December

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Potential issues

Nuclear power for AI data centres

Recent increased investment is not only significant in the UK but also globally. From an

number of SMRs to power its Al data centres. The first reactor is expected to be operational this decade (pending regulatory approval) with more to follow by 2035. Meanwhile, Amazon have signed an agreement with Energy Northwest, a consortium of state public utilities, to develop a series of SMRs in Washington state. Outside of SMRs, Big Tech are also investing in conventional nuclear power stations to provide their growing energy needs. Microsoft have plans underway to renovate an existing nuclear power station in Pennsylvania whilst Amazon have recently purchased 960 MW nuclear powered data centre from Talen Energy.

For more information, please contact **Josh Gallichan** and **Kate Deniston**.

EU AI Act Guide - now ready to download

models

a data centre does guarantee project revenue for the generator lifecycle.

well be giving them the confidence to gamble on a currently unproven technology.

Obligations for providers

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