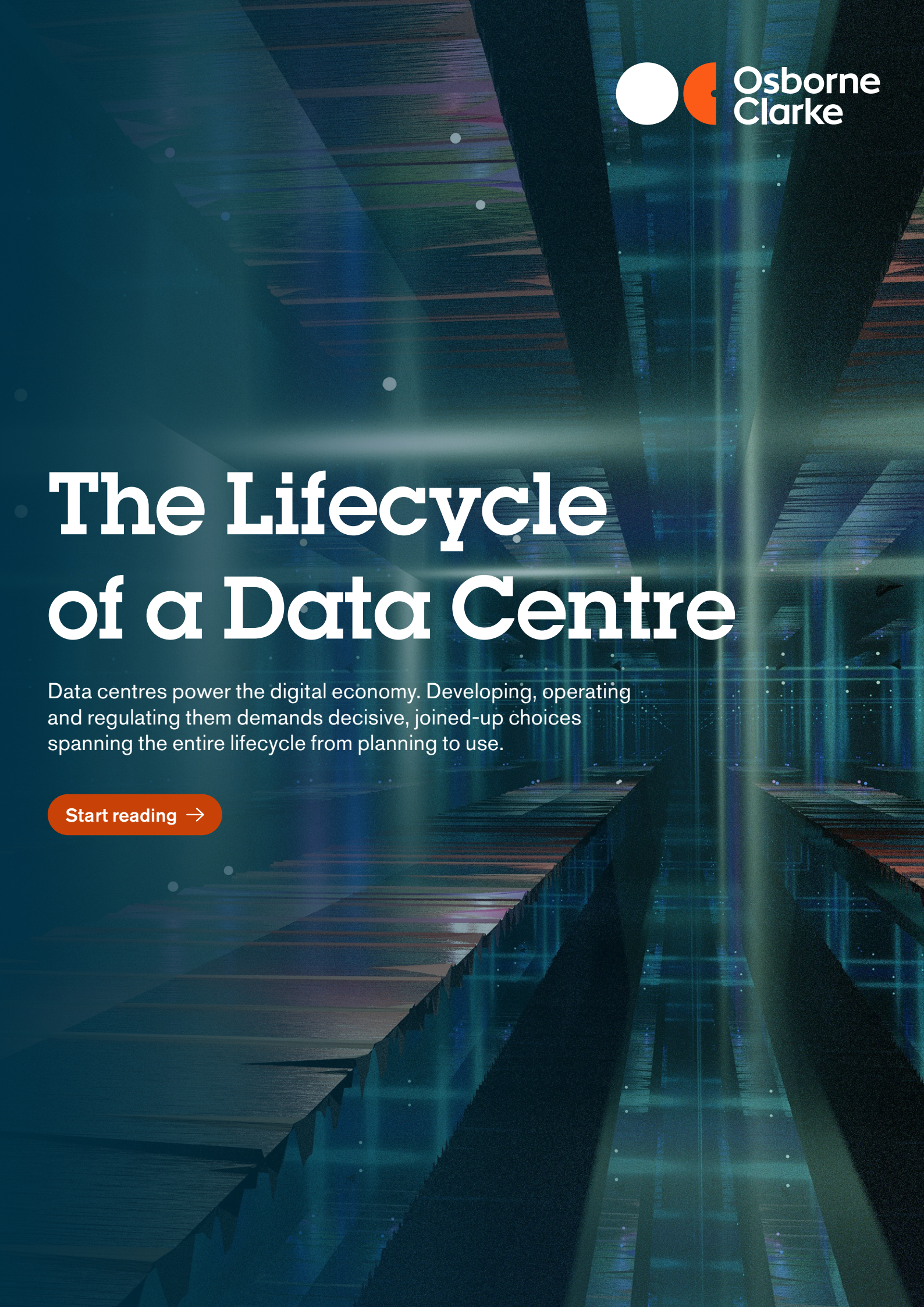


Osborne Clarke

The Lifecycle of a Data Centre

Data centres power the digital economy. Developing, operating and regulating them demands decisive, joined-up choices spanning the entire lifecycle from planning to use.

Start reading →

Distinct lifecycle risks emerge at every stage.

As AI, cloud and edge reshape digital infrastructure, data centres have become regulated, capital-intensive assets under close scrutiny. Bankability, performance and compliance hinge on decisions about site, power, cooling, sustainability, cybersecurity, finance and operations – at every stage. Osborne Clarke's lifecycle approach identifies pitfalls to de-risk delivery, accelerates time to power, and optimises operations.

THE DATA CENTRE LIFECYCLE

The Six Phases

Plan

The 'Plan' phase sets objectives, selects the site, defines the design and secures the necessary approvals and compliance.

EXPLORE THE 'PLAN' PHASE →

Power

The 'Power' phase establishes grid connection, adequate capacity, and efficient cooling to enable stable, sustainable operations.

EXPLORE THE 'POWER' PHASE →

Finance

The 'Finance' phase arranges funding and capital structures, aligning risk, compliance and sustainability to support delivery and operations.

EXPLORE THE 'FINANCE' PHASE →

Build

The 'Build' phase delivers construction and commissioning to specification, schedule, budget and sustainability standards.

EXPLORE THE 'BUILD' PHASE →

Operate

The 'Operate' phase maintains performance through capacity management, maintenance, security, resilience, audits and ongoing compliance.

EXPLORE THE 'OPERATE' PHASE →

Use

The 'Use' phase governs service procurement and consumption with clear contracts, SLAs, security standards and reporting.

EXPLORE THE 'USE' PHASE →

Plan

The ‘Plan’ phase lays the foundation for bankable, sustainable operations by balancing technical requirements, regulatory compliance, financial structure and long-term planning.

Typical objectives

1

Site selection, design & delivery model

In a fast-moving market, owners and developers should align site selection, design intent and delivery model with clear objectives on capacity, timeline and cost.

2

Site acquisition

Assess real estate markets to secure sites with optimal connectivity, power availability, low environmental impact and strategic proximity.

3

Planning permissions & regulatory approvals

Navigate rigorous EU and UK standards to secure planning permissions and regulatory approvals across sustainability, telecoms infrastructure and data protection.

4

Structuring, JVs, exits, tax, disputes

Consider structuring, joint ventures and exit routes early to allocate risk and support funding. Tax planning and dispute avoidance.

5

Protecting intellectual property

Safeguard innovative designs and proprietary technologies with robust IP protection, registrations, and contractual controls.

6

Regulatory compliance & resilient systems

Plan compliance across energy, sustainability, AI and data. Build robust, secure systems protecting against cyber threats and physical breaches.

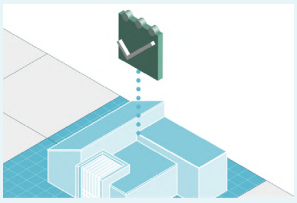
Early, evidence-based decisions and stakeholder alignment set the pace and reduce risk throughout the lifecycle.

Key legal considerations

Our key legal considerations establish a compliant, bankable foundation for your data centre from the outset.

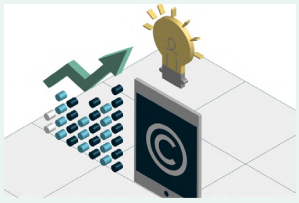
Site Acquisition

Ensure compliance with local zoning laws and environmental regulations.



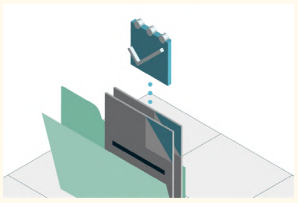
Planning Permissions

Obtain necessary permits and approvals from local authorities. May require prior changes of the applicable zoning law.



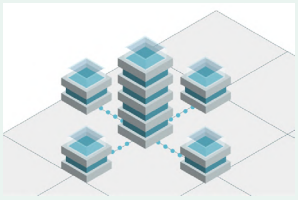
Design and IP

Protect intellectual property rights for innovative designs and technologies.



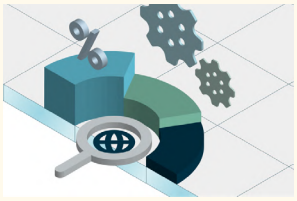
Regulatory Compliance

Ensure your plans adhere to energy-related regulations, sustainability standards, telecoms and data regulations.



Corporate Structuring

Plan joint ventures and exit strategies to optimise financial outcomes.



Tax Implications

Analyse tax obligations and potential liabilities.

Dispute Management

Prepare for potential legal disputes and establish mechanisms for resolution.

Key regulations

These regulations are all relevant when setting the framework for site selection, design, approvals and compliance in the 'Plan' phase.

Last updated 31 October. These may be subject to change.

European Union

- **Energy Efficiency Directive (EU) 2023/1791**
- **Commission Delegated Regulation (EU) 2024/1364**
- **Energy Performance of Buildings Directive (EU) 2024/1275**
- **Industrial Emissions Directive (EU) 2010/75**
- **Environmental Impact Assessment Directive (EU) 2011/92**
- **EU Taxonomy Regulation (EU) 2020/852**
- **Corporate Sustainability Reporting Directive (EU) 2022/2464**

National level

- **Relevant national implementations of EU directives**
- **Applicable zoning law**
- **Applicable environmental regulations**
- **Relevant local regulation**
  e.g. regarding soil and groundwater contamination, explosive ordnance, monument protection

How we can help

Our team provide comprehensive support across all aspects of the 'Plan' phase, ensuring your data centre project is well structured for future success:

- Site acquisition and due diligence
- Zoning laws and permissions
- Regulatory mapping and engagement
- Design advisory and optimisation
- Intellectual property protection strategies
- Integrating green power solutions
- Project structuring and governance

OUR EXPERIENCE

UK energy and infrastructure investor

A UK energy and infrastructure investor on its first German data centre deal. Involving the purchase of two large areas of land, conditional on achieving planning permission for a multi-storey data centre site.

Our experts

Our team of specialists can guide you through every aspect of the ‘Plan’ phase.

Joanna Peltzman
Partner, Head of ESG
Osborne Clarke France
+33 1 84 82 45 35
Email Joanna
Full bio

Natalie Kopplow
Senior Associate
Osborne Clarke Germany
+49 30 72621 8178
Email Natalie
Full bio

Dr Katarzyna Barańska
Partner, Head of Decarbonisation
Osborne Clarke Poland
+48 504 270 492
Email Katarzyna
Full bio

Benedetta Mussini
Partner
Osborne Clarke Italy
+39 02 5413 1763
Email Benedetta
Full bio

Sylwia Uziębło-Kowalska
Counsel
Osborne Clarke Poland
+48 797 835 885
Email Sylwia
Full bio

Power

The ‘Power’ phase ensures efficient, reliable data centres by implementing and optimising power and cooling systems. It maintains performance, resilience, and extends the facility’s life.

Typical objectives

1

Obtain viable, sufficient, stable power

Prioritise viable, sufficient, stable power with realistic timelines for grid connections and long-lead equipment procurement.

2

Renewables, PPAs, on-site solutions

Use renewables, PPAs and on-site solutions to control costs, enhance resilience and meet sustainability targets.

3

Efficient cooling & advanced designs

Implement efficient cooling to prevent overheating and sustain performance. Adopt advanced designs to reduce energy use and environmental impact.

4

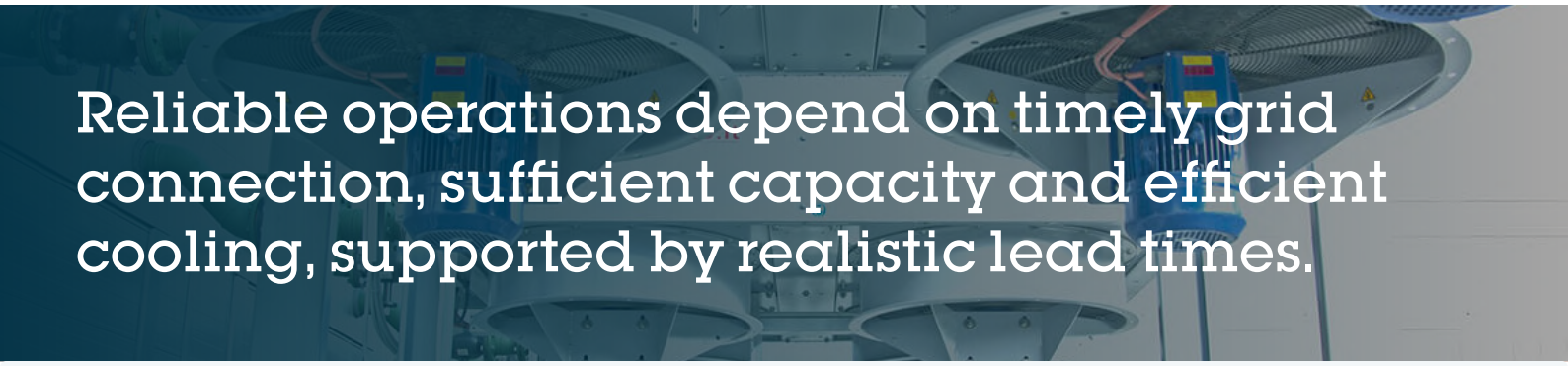
Integrate & install systems

Integrate software, servers, hardware and networks. Coordinate construction to execute designs, installing power and cooling systems correctly and efficiently.

5

Regulatory compliance

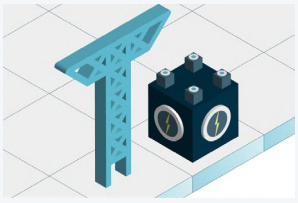
Plan for EU and UK energy and environmental regulations with thorough understanding, early engagement, and documented compliance processes.



Reliable operations depend on timely grid connection, sufficient capacity and efficient cooling, supported by realistic lead times.

Key legal considerations

Our key legal considerations secure timely connection, resilient power infrastructure and regulatory assurance.

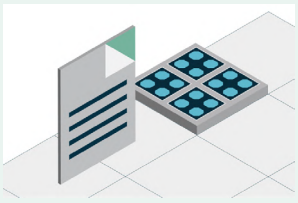


Grid Connection Regulation

Ensure compliance with regulations to obtain a legally binding grid connection with sufficient capacity, on time.

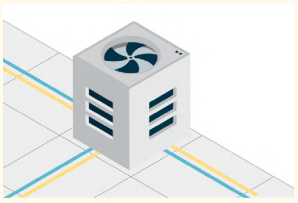
Energy Efficiency Requirements

Ensure compliance with energy efficiency requirements.



Energy Supply Contracts

Negotiate terms with energy providers and consider renewable energy options.

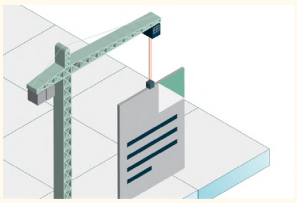


Cooling Systems

Ensure compliance with environmental regulations and efficiency standards.

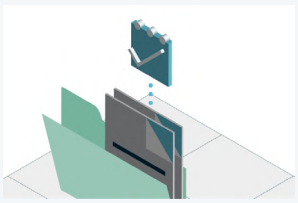
Technology Integration

Protect intellectual property rights and ensure cybersecurity measures.



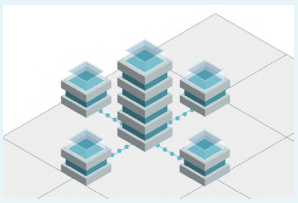
Construction Contracts

Manage agreements with construction service providers to ensure timely and compliant installation.



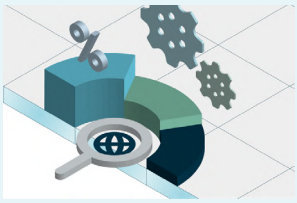
Regulatory Compliance

Ensure you comply with sustainability standards and applicable energy, telecoms and data regulations.



Corporate Structuring

Plan joint ventures and exit strategies to optimise financial outcomes.



Tax Implications

Analyse tax obligations and potential liabilities.

Dispute Management

Prepare for potential legal disputes and establish mechanisms for resolution.

Key regulations

The outlined regulations are relevant to grid connections, energy efficiency, power supply arrangements and environmental authorisations, and should be addressed during the 'Power' phase.

Last updated 31 October. These may be subject to change.

European Union

- **Energy Efficiency Directive (EU) 2023/1791**

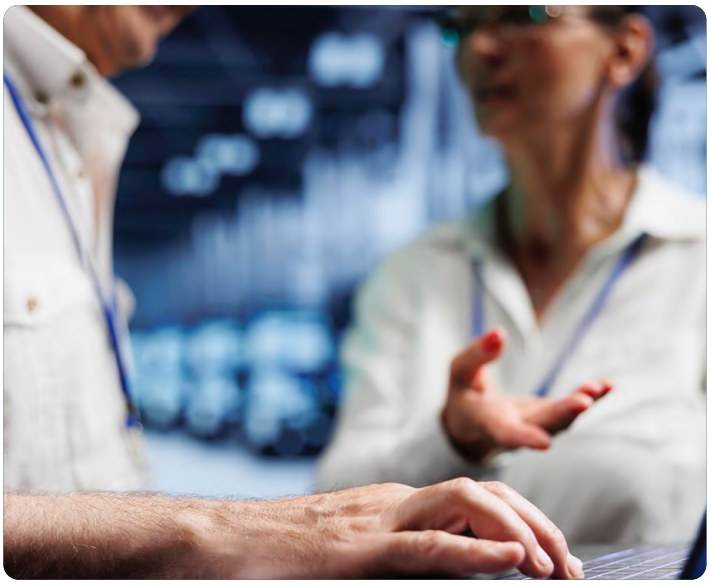
National level

- **National electricity sector law**
  e.g. Spain: Law 24/2013
- **Rules for transmission/distribution and installation authorisations**
  e.g. Spain: Royal Decree 1955/2000
- **Access and connection procedures to networks**
  e.g. Spain: Royal Decree 1183/2020
- **Environmental assessment for electrical works**
  e.g. Spain: Law 21/2013

How we can help

We support all aspects of the 'Power' phase to ensure reliable, efficient and compliant energy infrastructure for your data centre:

- Energy supply contract negotiation
- Efficient cooling system implementation
- Regulatory and standards compliance
- Integrate AI and green power
- Construction process management and oversight
- Optimise performance and reliability



OUR EXPERIENCE

Goodman

Goodman on grid access and grid usage agreements in relation to a German data centre project.

Our experts

Our team of specialists can guide you through every aspect of the 'Power' phase.

James Watson
Partner, Head of Decarbonisation
Osborne Clarke UK
+44 20 7105 7254
Email James
Full bio

Luis Gil
Counsel
Osborne Clarke Spain
+34 91 576 44 76
Email Luis
Full bio

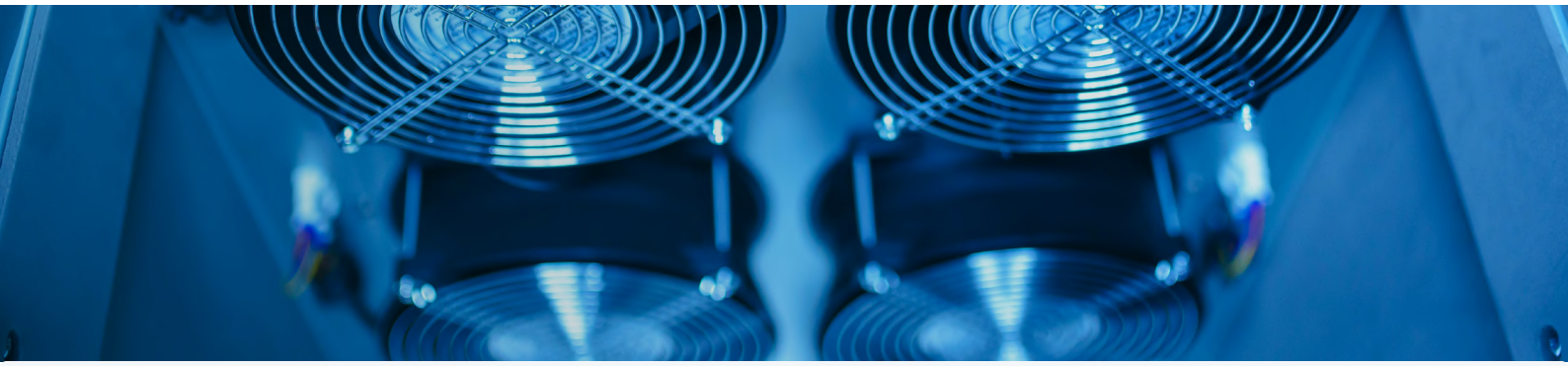
Dr Katarzyna Barańska
Partner, Head of Decarbonisation
Osborne Clarke Poland
+48 504 270 492
Email Katarzyna
Full bio

Michel Chatelin
Partner
Osborne Clarke Netherlands
+31 20 702 8680
Email Michel
Full bio

Dr Daniel Breuer
Partner
Osborne Clarke Germany
+49 221 5108 4138
Email Daniel
Full bio

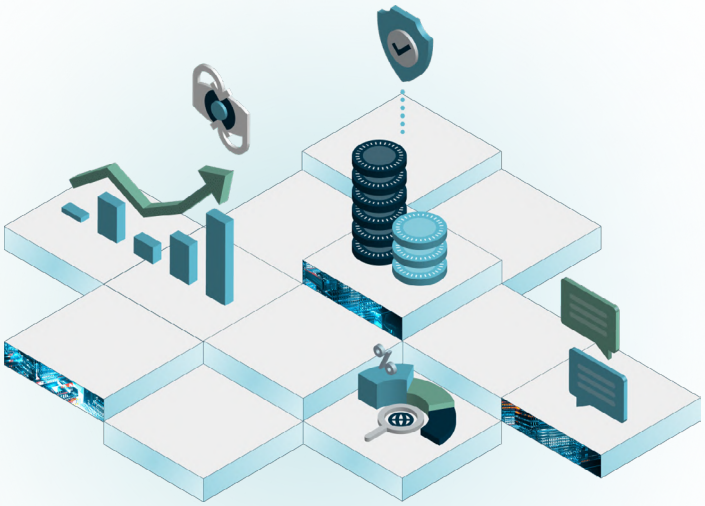
Hannah Roscoe
Partner
Osborne Clarke UK
+44 207 105 7312
Email Hannah
Full bio

Rafał Włodarski
Counsel, Head of Energy Transition
Osborne Clarke Poland
+48 451 584 215
Email Rafał
Full bio



Finance

The ‘Finance’ stage determines a data centre project’s feasibility, stability and sustainability. It requires a strategic approach balancing financial structuring, regulatory compliance and risk management.



Typical objectives

1

Cash flows & quality counterparties

Prioritise cash flow predictability, credible construction and power plans, and the strength and reliability of counterparties.

2

Appropriate capital structure

Select project finance, private credit, equity or hybrids based on risk allocation, capex phasing and offtake strength, across equity, debt and capital markets.

3

Dispute management and legal challenges

Anticipate and manage disputes and legal challenges early to avoid costly delays, disruptions, and value erosion.

4

Tax, capital allowances & cross-border flows

Integrate tax treatment, capital allowances and cross-border flows into models early to minimise disruption and support bankability.

5

Structuring, compliance & risk management

Adopt a strategic financing approach that balances financial structuring, regulatory compliance and robust risk management.

6

Regulations & market trends

Maintain current insight into evolving regulations and market trends to navigate challenges and secure funding.

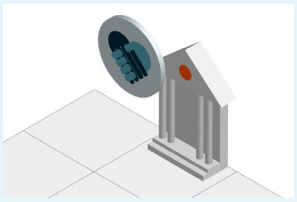
Bankability depends on clear economics, aligned risk and credible delivery assumptions, backed by strong counterparties.

Key legal considerations

Our key legal considerations structure and secure funding while managing risk and compliance.

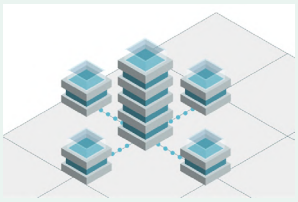
Project Finance

Structure loans and investments to support development and operation.



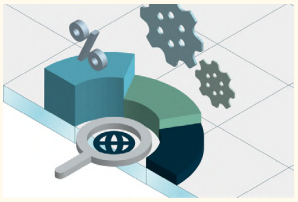
Banking Agreements

Negotiate favourable terms with financial institutions.



Corporate Structuring

Plan joint ventures, exit strategies, and implement OpCo/PropCo structures to optimise financial outcomes.

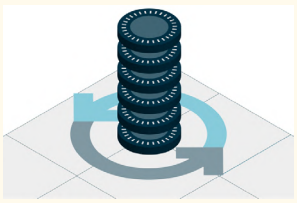


Tax Implications

Analyse tax obligations and potential liabilities.

Dispute Management

Prepare for potential legal disputes and establish clear mechanisms for resolution.



Capital Cycle Support

Arrange high-risk, high-cost development capital, construction and asset finance, and operational refinancing to recycle equity for future development.

Key regulations

The regulations outlined set the compliance framework for financing data centre projects. While no sector-specific regime exists, state aid or PPP rules may apply.

Last updated 31 October. These may be subject to change.

European Union

- **The Anti-Money Laundering Regulation (EU) 2024/1624**
- **Corporate Sustainability Reporting Directive (EU) 2022/2464**
- **EU Taxonomy Regulation (EU) 2020/852**

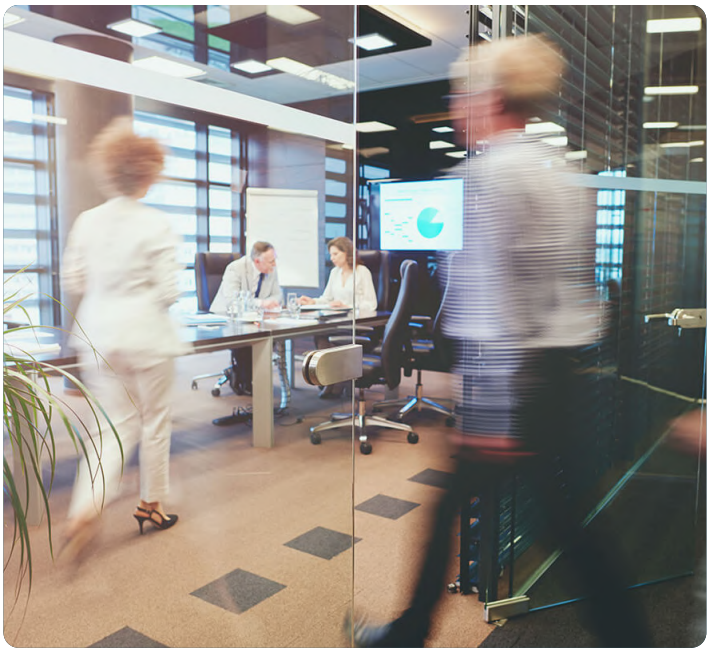
National level

- **Anti money laundering laws**
  e.g. UK: Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017
- **Banking regulatory laws**
  e.g. UK: Financial Services and Markets Act 2000
- **Anti bribery and anti corruption laws**
  e.g. UK: Bribery Act 2010
- **Sanctions laws**
  e.g. UK: Sanctions and Anti Money Laundering Act 2018

How we can help

We provide specialist guidance across the 'Finance' phase to secure funding, maintain compliance and structure your project effectively:

- Project and structured finance
- Banking agreements structuring and negotiation
- Regulatory compliance and standards
- Corporate structuring and governance
- Tax analysis and planning
- Dispute prevention and management
- Advice on sustainable financing



OUR EXPERIENCE

Octopus Energy

Octopus Energy on its £200m investment in data centre business Deep Green.

Our experts

Our team of specialists can guide you through every aspect of the ‘Finance’ phase.

Dominic O’Brien
Partner, Head of Project Finance
Osborne Clarke UK
+44 207 105 7304
Email Dominic
Full bio

Hannah Roscoe
Partner
Osborne Clarke UK
+44 207 105 7312
Email Hannah
Full bio

Olexiy Oleshchuk
Partner
Osborne Clarke Germany
+49 89 5434 8074
Email Olexiy
Full bio