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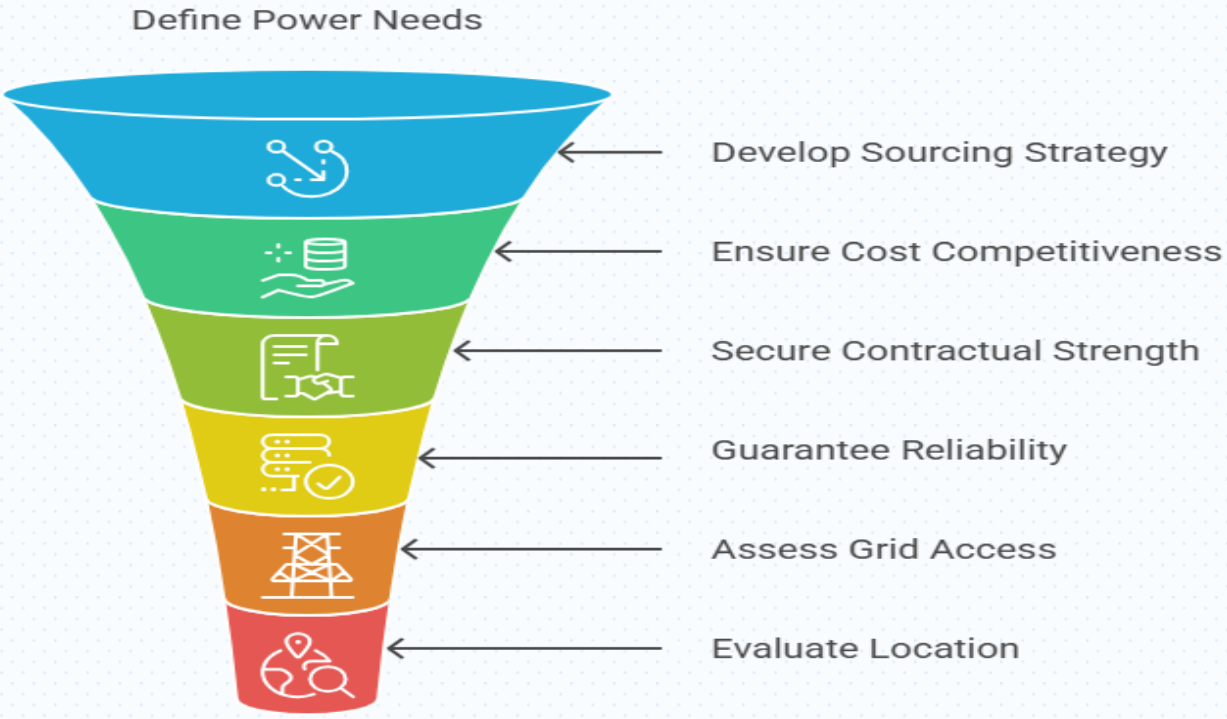
Strategic Energy Guidance.
Legal Precision. Market Insights.

Data Center and Crypto Mining Power Sourcing Checklist



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Data Center and Crypto Mining Power Sourcing Checklist

A framework for securing reliable, cost-efficient, and risk-resilient power supply for energy-intensive operations

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1. Load Profile and Demand Definition

Objective: Establish a precise and bankable understanding of power requirements.

Key Checks

- Total required capacity (MW) and scalability pathway
- Load profile (baseload vs variable demand)
- Ramp-up schedule aligned with infrastructure deployment
- Redundancy requirements (N, N+1, 2N configurations)

Critical Question

- Is demand clearly defined, realistic, and aligned with operational timelines?

Red Flag

- Overstated demand without a phased deployment plan

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2. Power Supply Strategy and Sourcing Model

Objective: Determine the most suitable and resilient sourcing approach.

Key Checks

- Grid supply vs captive generation vs hybrid solutions
- On-site vs off-site generation strategy
- Short-term vs long-term procurement structure
- Exposure to merchant power markets

Critical Question

- Does the sourcing strategy balance cost, reliability, and flexibility?

Red Flag

- Overreliance on a single supply source without contingency

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3. Tariff Structure and Cost Competitiveness

Objective: Ensure long-term cost viability of operations.

Key Checks

- Tariff structure (fixed, indexed, time-of-use, interruptible)
- All-in cost of power (generation, transmission, distribution, taxes)
- Historical and projected tariff trends
- Sensitivity to price volatility

Critical Question

- Will power costs remain competitive over the project lifecycle?

Red Flag

- Tariffs that appear low initially but are highly exposed to escalation

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4. Counterparty and Contractual Strength

Objective: Secure enforceable and reliable commercial arrangements.

Key Checks

- Creditworthiness of power supplier or utility
- Power Purchase Agreement (PPA) terms and enforceability
- Curtailment provisions and compensation mechanisms
- Termination rights and change-in-law protections

Critical Question

- Can the supplier reliably deliver power under all contractual conditions?

Red Flag

- Weak counterparties or poorly defined contractual obligations

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5. Reliability and Uptime Assurance

Objective: Guarantee operational continuity for high-availability environments.

Key Checks

- Historical grid reliability and outage frequency
- Backup systems (diesel, gas, battery storage)
- Service level agreements (SLAs) for uptime
- Black start and recovery capabilities

Critical Question

- Can operations continue uninterrupted under adverse conditions?

Red Flag

- Frequent outages without robust backup infrastructure

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6. Grid Access and Transmission Constraints

Objective: Confirm the physical ability to deliver power to site.

Key Checks

- Proximity to transmission infrastructure
- Available grid capacity and congestion risks
- Interconnection approvals and timelines
- Responsibility for grid upgrades and associated costs

Critical Question

- Is there sufficient and reliable transmission capacity to support the load?

Red Flag

- Dependence on future or uncertain grid expansion

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7. Location and Jurisdictional Considerations

Objective: Assess geographic and regulatory suitability.

Key Checks

- Regulatory stance on data centers and crypto mining
- Energy market structure (regulated vs liberalized)
- Political and policy stability
- Climate conditions affecting cooling efficiency

Critical Question

- Is the location supportive of long-term, energy-intensive operations?

Red Flag

- Jurisdictions with evolving or restrictive policies on crypto or high-load users

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8. Environmental and Sustainability Factors

Objective: Align power sourcing with sustainability expectations and requirements.

Key Checks

- Energy source mix (renewables vs fossil fuels)
- Carbon intensity of supplied power
- Access to green tariffs or renewable PPAs
- Compliance with environmental standards and reporting requirements

Critical Question

- Does the power strategy meet current and future sustainability expectations?

Red Flag

- High carbon exposure without mitigation strategy

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9. Infrastructure Integration and Technical Compatibility

Objective: Ensure seamless integration with facility systems.

Key Checks

- Voltage levels and frequency compatibility
- Substation and on-site electrical infrastructure requirements
- Cooling system energy dependencies
- Synchronization with backup and storage systems

Critical Question

- Can the power supply integrate efficiently with operational infrastructure?

Red Flag

- Significant technical mismatches requiring costly retrofits

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10. Scalability and Expansion Readiness

Objective: Enable future growth without structural constraints.

Key Checks

- Availability of additional capacity for expansion
- Flexibility within supply contracts
- Land and infrastructure for scaling operations
- Grid upgrade pathways

Critical Question

- Can the power supply grow with the business?

Red Flag

- Fixed capacity arrangements with no expansion flexibility

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11. Risk Allocation and Contingency Planning

Objective: Identify, allocate, and mitigate key risks.

Key Checks

- Allocation of supply, price, and regulatory risks

- Force majeure provisions
- Business continuity planning
- Diversification of supply sources

Critical Question

- Who bears the risk when supply is disrupted or costs increase?

Red Flag

- Concentrated risk exposure with limited mitigation measures

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12. Financial Impact and Operational Viability

Objective: Confirm that power sourcing supports overall business economics.

Key Checks

- Power cost as a percentage of total operating cost
- Sensitivity of profitability to power price changes
- Alignment with revenue models (especially for crypto mining)
- Break-even and downside scenarios

Critical Question

- Does the power strategy support sustainable and resilient operations?

Red Flag

- Business model viability dependent on unrealistically low power costs

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Closing Insight

For data centers and crypto mining operations, power is not simply an input—it is the core determinant of profitability, uptime, and long-term viability. A disciplined sourcing strategy ensures that:

- Costs remain predictable,
- Supply remains reliable, and
- Risks are understood and actively managed.

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