From Greenfield to Stabilised: The Data-Centre Capital Lifecycle

A stage-gated financing framework for site control, construction, commissioning, lease-up, refinancing and capital recycling

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ABSTRACT

Background. A data-centre project changes materially between site control, ready-to-build status, construction, commissioning, operating ramp and stabilisation. Each stage carries a different combination of land, power, execution, customer, operating and refinancing risk.

Objective. This paper develops a stage-gated capital-lifecycle framework for sponsors, lenders and investors financing Gulf data-centre campuses.

Approach. The analysis combines current IEA system evidence, UAE utility requirements, public-company disclosures, disclosed IFC financings, accounting standards, technical standards and project-finance control methods.

Findings. Capital should migrate when objective evidence demonstrates that a defined risk has changed. Physical completion, service readiness, customer acceptance and commercial stabilisation require separate tests. Liquidity should be sized to the maximum cumulative funding requirement under connected downside scenarios.

Implications. Sponsors and capital providers can use lifecycle gates, a capacity-to-cash bridge, controlled draw processes, separate completion and stabilisation certificates, and pre-agreed refinancing evidence to protect delivery and capital recycling.

Highlights

- Capital should migrate only when the evidence demonstrates that a defined project risk has changed.
- Construction completion, service readiness, customer acceptance and stabilisation require separate tests.
- Refinancing capacity should be constrained independently by cash flow, value and absolute exposure.

JEL Classification: G21, G23, G24, G31, G32, L96, O33

Keywords: data centres, digital infrastructure, project finance, construction debt, stabilisation, refinancing, capital recycling, Gulf infrastructure

1. INTRODUCTION

Data-centre development converts a sequence of contingent rights, designs, equipment orders, construction activities, operating procedures and customer commitments into an infrastructure asset capable of producing recurring cash flow. Capital changes character throughout that sequence. Early money pays for options and evidence. Development equity absorbs entitlement and design risk. Construction finance funds physical progress. Commissioning liquidity supports testing and customer acceptance. Permanent capital becomes available when the facility has demonstrated the operating and commercial attributes required by its lenders and investors.

The transition has become more important as investment accelerates. The International Energy Agency reported that capital expenditure by five large technology companies exceeded USD 400 billion in 2025 and expected a further 75 percent increase in 2026 [1]. Its 2025 analysis estimated global data-centre investment at approximately USD 500 billion in 2024 and projected data-centre electricity consumption of around 945 terawatt-hours by 2030 [2]. These figures describe a global demand and investment cycle. A financing decision remains specific to the site, utility, design, construction programme, customer contract and sponsor.

The Gulf provides a useful setting for a lifecycle approach. Dubai Electricity and Water Authority's July 2025 major-project guidelines require realistic load phasing, expected power dates, plot-level load details, proposed substation locations and corridor information [3]. Khazna Data Centers announced a USD 2.62 billion financing facility in September 2025 to support UAE and international expansion [4]. The size of that transaction shows that regional digital infrastructure can attract substantial debt. It does not establish terms, leverage or availability for another project.

This paper develops a stage-gated capital framework for data-centre developers, operators, infrastructure investors and lenders. The framework follows a project from origination and site control through design, procurement, construction, commissioning, customer ramp, stabilisation, refinancing and portfolio recycling. It identifies the evidence created at each stage, the risks that remain, the capital instruments that can respond and the objective tests that should govern movement to the next phase.

The central proposition is that capital should migrate when risk has migrated. Development capital should not rely on operating assumptions that have not been evidenced. Permanent debt should not be used as a substitute for unresolved completion support. A refinancing should be triggered by demonstrated readiness, cash flow and operating performance rather than a calendar date alone.

Public reporting by major operators illustrates the scale and diversity of capital requirements. Digital Realty reported 769 megawatts of projects underway at year-end 2025, 64 percent pre-leased, and approximately USD 2.54 billion of cash development-project expenditure during 2025 [5]. Equinix reported USD 4.4 billion of capital raised during 2025 for organic growth, land and building acquisitions and refinancing, together with approximately USD 6.3 billion of unaccrued capital expenditure commitments [6]. These company disclosures are evidence of their own portfolios. They are not cost or financing benchmarks for an individual Gulf campus.

The paper uses six evidence classes:

1. utility, land, planning and permitting records;
2. customer contracts and capacity reservations;
3. design, procurement, construction and commissioning records;
4. financial statements, budgets, models and funding documents;
5. independent technical, legal, insurance and environmental reviews; and
6. clearly described hypothetical modelling assumptions.

The worked case is a hypothetical 48-megawatt campus built in three 16-megawatt phases. Every amount, schedule, margin and financing ratio in the case is a modelling assumption. The case does not describe a Matchpoint client, transaction, mandate, saving, forecast outcome or observed investment return.

Lifecycle question	Evidence required	Capital consequence
Can the site support the intended asset?	land, power, planning, fibre, water and environmental records	option capital or development equity
Is the project ready to build?	approved design, priced scope, permits, customer evidence and funding plan	construction financial close
Is physical progress creating financeable value?	certified work, procurement status, contingency and updated completion forecast	controlled construction draws
Can the facility produce contracted service?	energisation, integrated systems testing, customer acceptance and operating readiness	completion or mini-perm conversion
Has recurring cash flow stabilised?	occupancy, revenue, collections, operating performance and covenant headroom	permanent refinancing
Can capital be recycled?	seasoned portfolio evidence, valuation, governance and exit rights	portfolio debt, joint venture, bond or sale

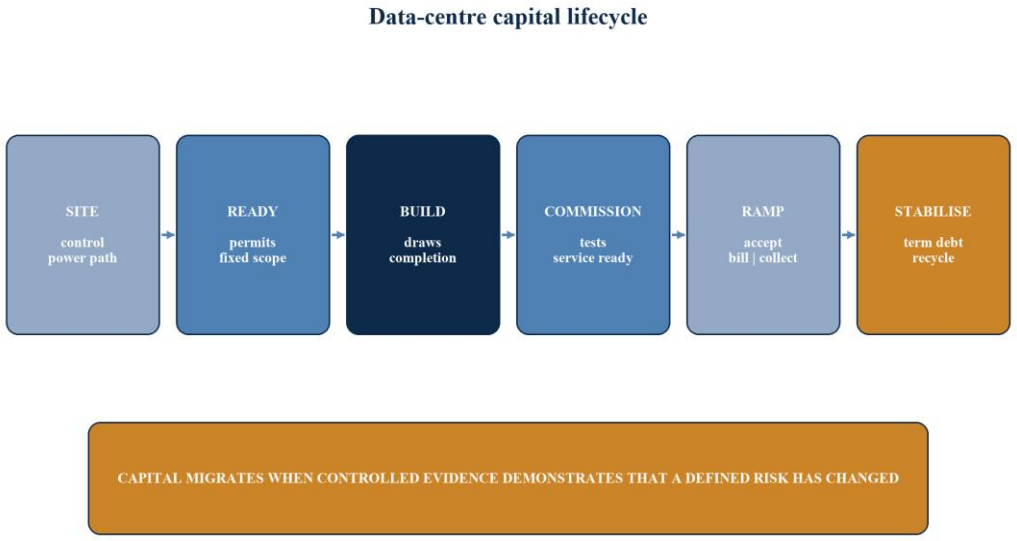

Figure 1. Data-centre capital lifecycle from site control to capital recycling

Source: Matchpoint capital-lifecycle framework based on sources [1-10].

2. THE LIFECYCLE AS A SERIES OF RISK CONVERSIONS

2.1 Development converts uncertainty into evidence

The first stage creates evidence rather than operating cash flow. The developer assembles land rights, utility information, design studies, planning pathways, fibre options, environmental information, budget ranges and customer interest. Expenditure at this stage has option value because it can support a decision to proceed, redesign, phase, relocate or stop.

The financeable output is a controlled development dossier. It should state which rights are binding, which submissions are pending, which dates are supported by third parties and which figures remain modelling assumptions. The dossier should also identify expiry dates. A land option, capacity reservation or customer reservation can lose value if a milestone or payment is missed.

Development equity typically carries the widest risk because security value remains incomplete and cash flow is absent. The sponsor should therefore release it against decision gates. The first gate may fund a utility application and site studies. A later gate may fund detailed design after the utility and land positions are sufficiently aligned. This preserves optionality and stops sunk cost from replacing credit discipline.

2.2 Construction converts evidence into a physical asset

Construction begins after the project has achieved a defined readiness state. The design, contracts and budget should allocate responsibilities across the developer, utility, contractor, equipment suppliers, operator and customers. Construction finance then advances against certified work, eligible costs and maintained conditions.

The asset remains exposed to completion risk until its systems have been integrated and tested. A building shell, installed generators or delivered switchgear do not separately establish operational capacity. The completion definition should connect permanent power, electrical and mechanical systems, controls, security, fire protection, fibre, operating procedures and customer acceptance.

Construction finance should recognise the difference between progress and value. Expenditure can occur while the completion forecast deteriorates. Monthly draw review therefore requires cost-to-complete, schedule-to-complete, contingency and liquidity tests alongside work certification.

2.3 Commissioning converts equipment into service capacity

Commissioning is the stage in which installed systems are tested individually and together. The financing file should distinguish mechanical completion, energisation, functional testing, integrated systems testing, reliability demonstration, operator readiness and customer acceptance. Each milestone resolves a different risk.

Uptime Institute describes certification stages covering design documents, constructed facility and operational sustainability [15]. The sequence reinforces a financing principle: design evidence, installed evidence and operating evidence are separate. A lender can use an agreed certification route, an independent engineer's test protocol or another suitable standard. The chosen route should be defined before financial close.

Commissioning consumes working capital. Utility charges, test loads, fuel, specialist staff, spares, customer installations and defect correction can arise before full billing. The financing plan should contain a commissioning and ramp reserve rather than assume that construction debt automatically covers every post-completion expense.

2.4 Stabilisation converts service capacity into recurring cash flow

Stabilisation requires an agreed definition. Digital Realty distinguishes stabilised and non-stabilised portfolios in its reporting and includes development activity and newly delivered properties within the non-stabilised category [5]. The exact accounting and reporting definitions are company-specific. A transaction should use its own objective tests.

A practical stabilisation test can include:

1. permanent power available for the relevant phase;
2. all material completion tests passed;
3. contracted customer capacity accepted;
4. billing commenced and collections demonstrated;
5. occupancy or utilisation above the agreed threshold;
6. operating expenses supported by actual results;
7. availability, PUE and other service measures within agreed bands;
8. no unresolved material defects or claims;
9. reserves funded and covenant reporting operational; and
10. a minimum operating history completed.

Permanent lenders should decide which tests matter for debt sizing, pricing, amortisation and distributions. Stabilisation can apply by building or phase rather than only at campus level.

Risk conversion	Starting condition	Evidence created	Typical financing response
site selection	multiple uncertain locations	controlled site and utility dossier	sponsor option capital
development	conditional rights and concept design	permits, priced design and customer support	development equity and partner capital
construction	approved project with completion exposure	certified asset and cost-to-complete record	construction debt with completion support
commissioning	installed systems	tested service capacity and operating readiness	commissioning reserve or mini-perm
lease-up	available capacity	contracted, billed and collected revenue	phased term conversion
stabilisation	operating asset with short history	recurring cash flow and covenant record	permanent debt and distributions
seasoning	stable asset or portfolio	diversified performance history	portfolio financing or capital recycling

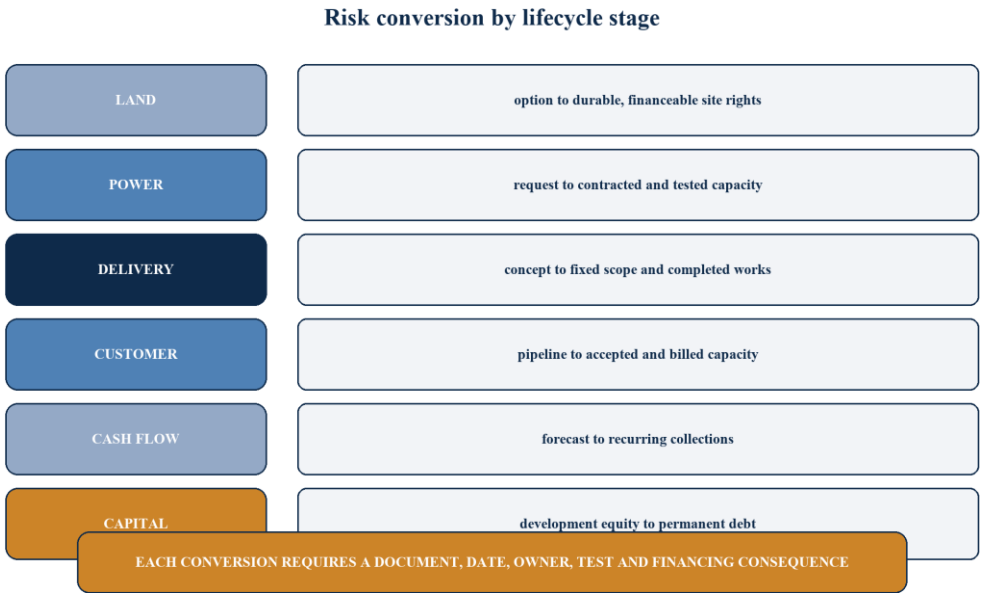

Figure 2. Risk conversion by lifecycle stage

Source: Matchpoint financing-readiness framework.

3. STAGE ZERO: ORIGINATION AND SITE OPTION

3.1 Control the decision before controlling the land

An attractive site is a bundle of dependencies. The land must support the intended use, scale and security perimeter. Power must be technically and legally achievable. Fibre routes require diversity. Water and cooling assumptions must be credible. Access, aviation, flood, geotechnical, hazardous-neighbour and security risks require review. The project should also fit a plausible customer and network strategy.

The earliest capital should buy information and limited rights. A site option or conditional lease can preserve control while power, planning and title diligence proceed. The instrument should align its long-stop date, extension rights and deposit schedule with the expected utility and approval process. The developer should avoid an unconditional land commitment based solely on a preliminary power discussion.

ISO/IEC 22237-2:2024 covers building-construction requirements and recommendations including location, site selection, environmental risks, site configuration, access, intrusion protection, fire protection, water damage and quality construction measures [16]. The standard does not replace local law or project engineering. It provides a structured set of questions that can inform site diligence.

3.2 Build a site-option budget

The option budget should identify the cost and decision purpose of each workstream. Typical categories include land reservation, utility application, load study, concept design, surveys, geotechnical work, planning advice, environmental screening, fibre study, tax and legal structuring, insurance advice and customer development.

The budget should distinguish recoverable deposits, transferable studies and sunk professional expenditure. It should also identify the next decision that each item enables. A study without a decision consequence can create activity without reducing risk.

Early expenditure	Decision enabled	Evidence gate
land option or conditional lease	preserve site while diligence proceeds	enforceable term and extension rights
utility application and load study	assess capacity route and phasing	receipt, study scope and formal response
surveys and concept design	test physical fit and budget	signed reports and controlled drawing set
environmental and climate screening	identify constraints and lender scope	risk register and required assessment plan
fibre and connectivity study	test route diversity and carrier access	route evidence and provider responses
customer engagement	test product, capacity and timing	documented demand, reservation or pre-lease evidence

3.3 Treat abandonment as a designed outcome

A disciplined development process permits abandonment when a gate fails. The investment committee should specify maximum exposure, stop conditions and information required before additional capital is released. Common stop conditions include an unfinanceable utility date, inadequate land rights, a material planning obstacle, unacceptable geotechnical conditions, weak customer evidence or a cost estimate beyond the investment mandate.

The option portfolio should be measured by decisions produced as well as projects retained. A site rejected early after a bounded diligence spend can represent effective capital discipline.

4. STAGE ONE: DEVELOPMENT EQUITY AND PROJECT DEFINITION

4.1 Create one project definition

Development equity should fund a project that has a controlled definition. The definition includes ultimate and phased IT capacity, facility maximum demand, service standard, redundancy philosophy, cooling method, building configuration, customer product, connection concept, fibre strategy, procurement route, programme and cost plan.

The definition must be consistent across the utility submission, design, customer documents and financial model. DEWA's major-project guidance asks for total connected load, expected maximum demand, realistic power requirement dates and phasing, including data-centre load and cooling information [3]. A financeable project should reconcile these items before committing major equipment or construction capital.

4.2 Match development funding to deliverables

Development equity can be released in tranches:

1. concept and utility submission;
2. planning and environmental assessment;
3. schematic and detailed design;
4. early equipment procurement;
5. customer contracting;
6. construction-contract negotiation; and
7. financing due diligence and close.

Each tranche should have a budget, owner, output, timing and approval. The sponsor should maintain an expenditure ledger that identifies costs expected to become part of the constructed asset, costs expensed as development activity and deposits that remain recoverable. Accounting treatment requires project-specific advice.

IAS 23 states that directly attributable borrowing costs for the acquisition, construction or production of a qualifying asset form part of that asset's cost [11]. Capitalisation begins and ends under defined conditions and can be suspended during extended interruptions. These principles matter because a delayed project can continue consuming interest while value creation has slowed. Accounting compliance and cash liquidity should be monitored separately.

4.3 Select the development partnership deliberately

A developer may use wholly owned equity, a project joint venture, a platform joint venture or customer-backed capital. Each structure allocates governance, follow-on funding, completion obligations and exit rights differently.

Equinix reports using joint ventures to develop hyperscale capacity and identifies land, power, financing, customer fill, construction delay and partner funding among the associated risks [6]. Its disclosures also describe future equity contributions, loan commitments and certain debt guarantees [6]. These are company-specific arrangements. They show why a joint venture agreement should address capital calls, shortfalls, guarantees, decision rights and exit mechanics before construction begins.

Development structure	Main benefit	Principal control issue
wholly owned project	unified decisions and economics	sponsor concentration and funding capacity
asset-level joint venture	shares project risk and capital	reserved matters, capital calls and deadlock
platform joint venture	repeatable pipeline and procurement scale	allocation policy and portfolio governance
customer contribution	demand alignment and lower sponsor cash need	acceptance conditions, refunds and service obligations
landowner participation	lowers initial land cash cost	valuation, priority, governance and exit

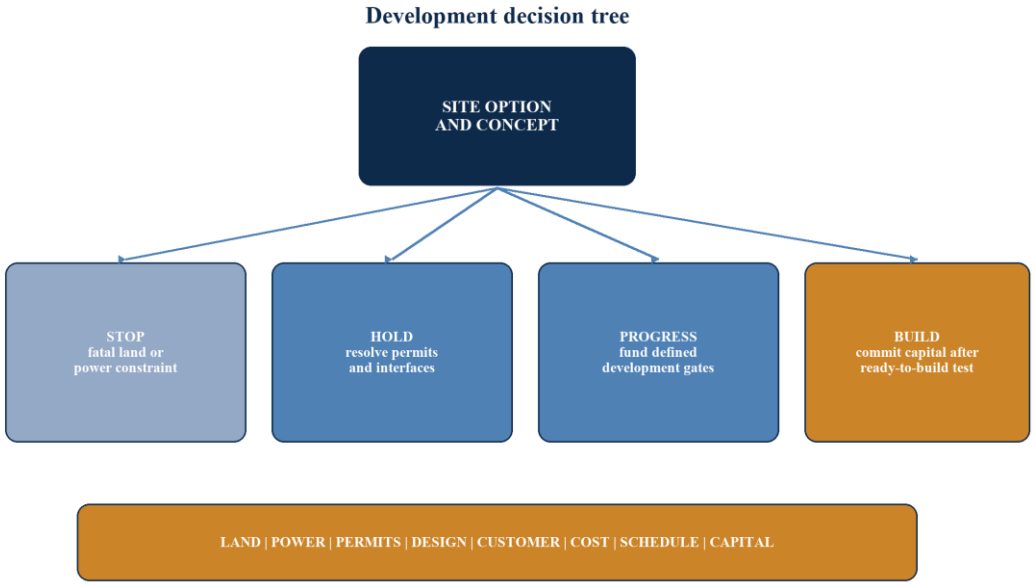

Figure 3. Development decision tree

Source: Matchpoint stage-gate framework.

5. STAGE TWO: READY-TO-BUILD AND FINANCIAL CLOSE

5.1 Define ready-to-build for the transaction

Ready-to-build is a financing state rather than a marketing phrase. The credit committee should approve a schedule of evidence that establishes land control, material permits, power position, design maturity, procurement strategy, construction contract, customer support, environmental and social requirements, insurance, budget, contingency, funding and governance.

Some items may remain conditional at close. The financing documents should classify them as conditions precedent, conditions subsequent, draw conditions or ongoing covenants. The classification should match the consequence of failure. A missing permit that prevents physical work belongs at a different gate from a reporting item that can be completed after close.

5.2 Fix the completion perimeter

The completion perimeter states what the financing is expected to deliver. It should define the building or phase, gross and IT capacity, permanent power, redundancy, cooling, fibre, security, operating team, certifications, customer works and acceptance tests. It should also state excluded future phases and shared-campus assets.

The perimeter drives cost-to-complete, security value and completion support. Shared substations, central cooling, common roads or network rooms can create dependencies between phases. The lender should know which entity owns them, how costs are allocated and what happens if a later phase is delayed.

5.3 Align contract packages and financing rights

The construction structure may use a single design-build contract, an EPC-style contract, construction management with multiple trade packages or a hybrid. Data-centre projects often contain specialist packages with different warranties, testing protocols and lead times. The financing review should map each critical system to its supplier, contract, payment schedule, warranty, delay remedy and interface owner.

The lender's security and direct-agreement package should be appropriate to the local legal structure. Relevant items can include shares, project accounts, land or lease rights, material contracts, insurances, receivables and assignment of warranties. Counsel should assess enforceability and local perfection requirements.

5.4 Establish a closing sources-and-uses test

The uses schedule should include land, design, utility and connection costs, construction, equipment, testing, financing fees, capitalised interest where applicable, taxes, working capital, reserves and contingency. Sources should identify committed equity, debt, partner funding, customer amounts and other instruments. Timing matters because a committed source that arrives after a major equipment deposit does not solve the earlier liquidity requirement.

Financial-close test	Minimum evidence	Failure response
land and permits	enforceable rights and permit schedule	close condition or reduced scope
permanent power	documented route, scope, cost and programme	draw gate, reserve or site decision
design maturity	approved design basis and interface register	additional design contingency
construction price	executed packages and procurement schedule	price contingency and sponsor support
customer evidence	executed pre-lease, reservation or controlled sales case	lower leverage or later conversion
funding sufficiency	monthly sources and uses through completion	equity first-loss and overrun support
environmental and social	completed review and action plan	conditions and monitoring

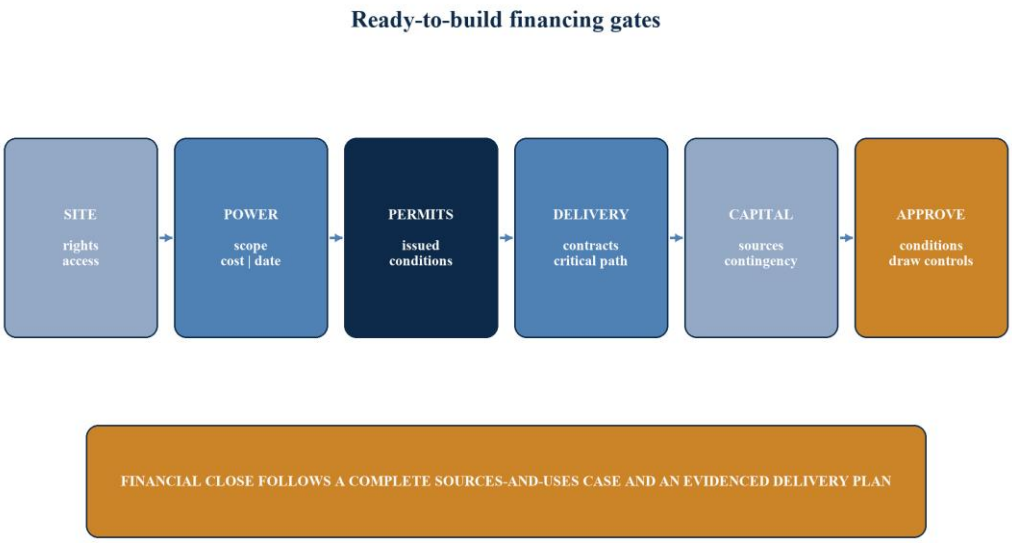

Figure 4. Ready-to-build financing gates
Source: Matchpoint transaction-control framework.

6. STAGE THREE: CONSTRUCTION DRAWDOWN

6.1 Advance against eligible cost and maintained value

Construction draws should be based on eligible incurred or forecast expenditure, certified progress and continued satisfaction of the financing tests. The draw package typically includes invoices, engineer certification, budget variance, procurement status, updated programme, contingency, claims, insurance and evidence of equity contributions.

The facility agreement should specify the treatment of deposits, off-site materials, foreign-currency purchases, related-party contracts, taxes, interest, fees and shared-campus costs. Off-site equipment may require vesting, identification, insurance and inspection before it is eligible.

6.2 Recalculate cost-to-complete every month

Cost-to-complete is a forward-looking liquidity test. It should include contracted remaining work, approved changes, probable claims, unplaced packages, escalation, utility costs, commissioning, professional fees, financing costs, contingency and reserves. The result is compared with undrawn committed sources.

A useful test is:

Remaining committed sources >= forecast remaining project uses + required reserves.

The definitions matter. An undrawn facility subject to an unmet condition is not immediately available. A sponsor commitment with no demonstrated funding capacity requires additional support. A contingency already allocated to known change is no longer available for unknown risk.

6.3 Protect the critical procurement path

Transformers, switchgear, generators, cooling systems, UPS equipment, batteries, controls and specialist components can drive delivery. The IEA's 2026 analysis identified tight supply chains for energy technologies and advanced chips among the bottlenecks affecting data-centre expansion [1]. Project procurement evidence should therefore include order date, specification freeze, manufacturing slot, payment security, factory test, shipping, customs, installation and warranty.

The lender should also monitor vendor concentration and substitution. A lower-cost substitution can affect efficiency, reliability, certification, warranty integration and customer approval. The change-control process should require technical and commercial review.

6.4 Use contingency as a governed source

Contingency should be separated into design development, construction, escalation and sponsor reserve where useful. Every use should identify the underlying event and residual balance. Management reporting should show gross contingency, approved transfers, pending exposure and remaining unallocated amount.

Monthly draw control	Measure	Escalation threshold
physical progress	certified completion by package	variance from approved programme
procurement	committed, manufactured, shipped and installed	critical item misses required date
cost-to-complete	remaining uses versus committed sources	forecast shortfall or reserve breach
contingency	unallocated balance and pending claims	balance below approved minimum
power programme	utility and project milestones	energisation moves beyond customer date
customer programme	fit-out, acceptance and billing dates	contracted revenue delay

7. STAGE FOUR: COMMISSIONING AND COMPLETION

7.1 Separate completion milestones

The financing documents should define several milestones rather than one broad completion certificate:

1. building and systems mechanically complete;
2. permanent electricity energised;
3. individual systems functionally tested;
4. integrated systems test passed;
5. operator staffing, procedures and spares ready;
6. required authority and certification evidence delivered;
7. customer installation and acceptance completed; and
8. revenue commencement achieved.

ISO/IEC 22237-2 addresses quality construction measures and the physical environment supporting availability [16]. Uptime Institute's certification framework separates design, constructed-facility and operational evidence [15]. The project should select its applicable standards and contractually define the evidence expected from each party.

7.2 Preserve liquidity through the test period

Commissioning can expose the project to test energy, specialist labour, temporary systems, consumables, fuel, defects and repeated tests. Customer acceptance may also require time after the facility is technically ready. The budget should retain a dedicated reserve through the agreed completion date.

Debt service can begin before stabilised revenue if interest capitalisation ends or a construction facility reaches its maturity. The financing schedule should therefore include extension options, mini-perm capacity or a committed refinancing route. A projected refinancing is not a source until its conditions have been met.

7.3 Define defects and retained obligations

Minor defects may remain after service commencement. The completion test should distinguish defects that affect safety, capacity, redundancy, certification or customer acceptance from punch-list items that can be completed under retention. The project should retain funds, security or guarantees sufficient to close remaining items.

IAS 16 addresses the cost and depreciation of property, plant and equipment and the period when assets are available for use [12]. Accounting availability, contractual completion, customer acceptance and financing completion can occur at different times. The project should reconcile them without treating one as automatic evidence of the others.

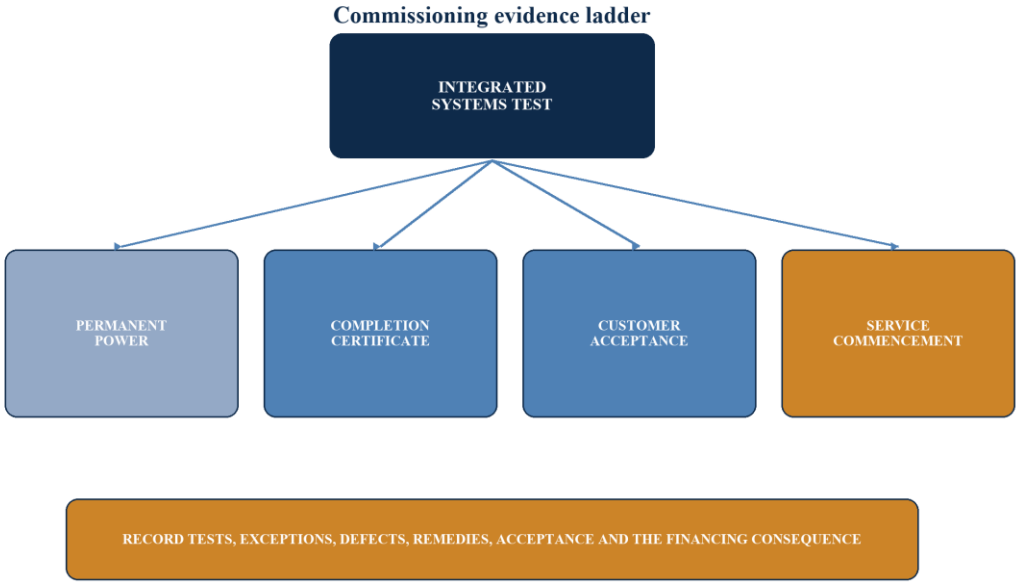

Figure 5. Commissioning evidence ladder and conversion to service capacity
Source: Matchpoint framework based on sources [12,15-17].

8. STAGE FIVE: LEASE-UP AND OPERATING RAMP

8.1 Convert reservations into accepted capacity

Pre-leasing can support a construction case. Digital Realty reported that 64 percent of its 769 megawatts of development activity was pre-leased at year-end 2025 [5]. The figure relates to its own disclosed portfolio. A lender reviewing another project should analyse the contract terms, customer credit, capacity schedule, termination rights, deposits, conditions, pricing, energy pass-through and acceptance process.

The revenue bridge should track:

1. reserved capacity;
2. contracted capacity;
3. capacity ready for customer installation;
4. capacity accepted;
5. capacity billed;
6. cash collected; and
7. recurring capacity retained after credits or churn.

The stages prevent booked demand from being treated as current cash flow. They also identify operational and documentation tasks that affect each conversion.

8.2 Build the operating-cost evidence base

The lease-up period produces the first actual evidence for electricity, cooling, staffing, maintenance, insurance, security, connectivity, water and other costs. Actual expenses should be reconciled with design assumptions and customer recoveries. Partial occupancy can produce inefficient performance because fixed systems and staffing support a smaller revenue base.

ASHRAE Standard 90.4 establishes energy-efficiency requirements for data centres [17]. European Union reporting rules also require defined energy and water performance information for relevant data centres in their jurisdiction [18]. A Gulf project may not be subject to those EU rules. Their measurement discipline illustrates the value of consistent definitions and controlled operating data.

8.3 Manage service credits and early operating incidents

Early operating incidents can affect revenue, customer confidence and refinancing. The operator should maintain an incident register recording duration, affected capacity, root cause, corrective action, customer consequence, insurance notice and recurrence prevention. The financing model should distinguish routine service credits from material availability failure.

The lender should receive enough information to understand financial impact while preserving customer confidentiality and cybersecurity. Thresholds can be linked to lost revenue, service-level breach, capacity outage or repeated events.

Ramp metric	Definition discipline	Financing use
contracted MW	executed capacity with stated conditions	forward revenue evidence
accepted MW	customer acceptance completed	conversion test
billed MW	recurring invoice issued	revenue bridge
collected revenue	cash received net of credits	debt-service evidence
PUE	controlled boundary and measurement period	operating-cost review
availability	defined service boundary and exclusions	covenant and customer-risk review
churn or termination	capacity lost and reason	stabilisation durability

9. DEFINING STABILISATION

9.1 Use a multi-dimensional test

Stabilisation should combine physical, commercial, operating and financial tests. A facility can be physically complete with limited contracted capacity. It can be highly contracted while customer acceptance remains incomplete. It can have revenue while operating costs and service performance remain too volatile for permanent debt sizing.

A lender can use a matrix with minimum thresholds and a test period. For example, the facility may require permanent power, completion certificates, a defined percentage of saleable capacity accepted, recurring revenue collections for six months, operating expenses within an agreed band and no material unresolved incident. Every threshold is transaction-specific.

9.2 Stabilise by phase where the campus is modular

A three-phase campus may support phase-level completion and refinancing. Shared infrastructure complicates the analysis. Phase one can only be separated if it has durable rights to the shared substation, cooling, fibre, security, access and operations required for service. Cost allocation and security should be documented.

Phase-level refinancing can recycle equity earlier and reduce blended funding cost. It can also create intercreditor, cash-sharing and future-expansion constraints. The financing structure should preserve the ability to build later phases without weakening the completed asset.

9.3 Require a stabilisation certificate

The sponsor, operator, independent engineer and finance team can produce a stabilisation certificate supported by a defined evidence schedule. The certificate should state measurement dates, exceptions, outstanding items and the financing consequence. The lender retains its contractual decision rights.

Stabilisation dimension	Example test	Evidence source
physical	permanent power and completion tests passed	utility, engineer and authority records
commercial	minimum accepted and billed capacity	customer contracts and billing system
operating	availability and efficiency within agreed band	BMS, DCIM and incident records
financial	collections, EBITDA and DSCR support term debt	accounts, bank statements and model
risk	no material defect, claim or compliance breach	registers and professional reports
governance	reporting, reserves and controls operating	board and lender reporting pack

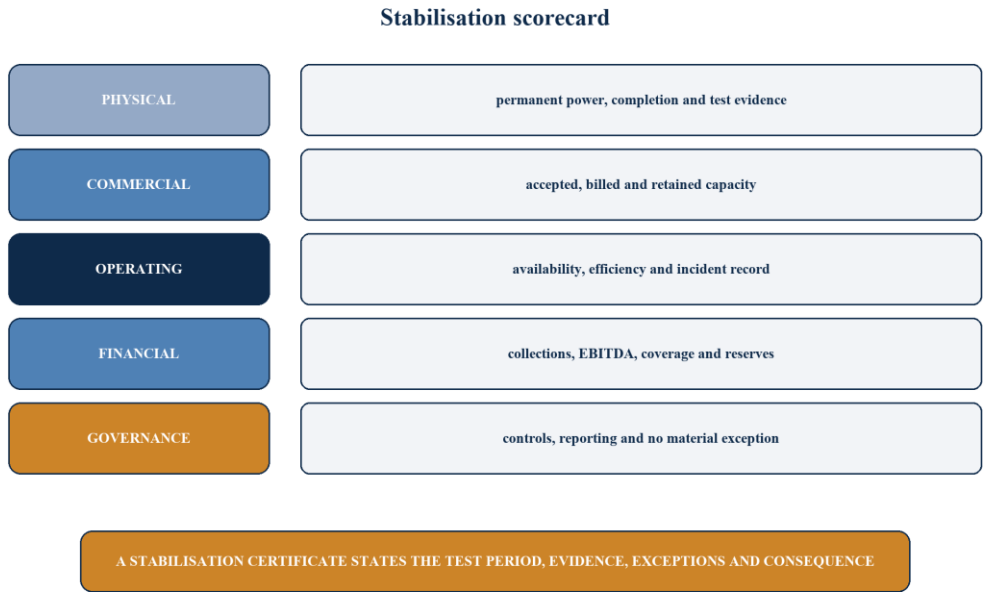

Figure 6. Stabilisation scorecard and evidence certificate

Source: Matchpoint financing-readiness framework.

10. REFINANCING POINTS AND CAPITAL MIGRATION

10.1 Refinance when evidence changes the risk allocation

Refinancing should follow a demonstrable change in project risk. Site finance is exposed to land, planning and power uncertainty. Construction debt adds execution, cost and completion exposure. A mini-perm facility can bridge the period after technical completion while customer acceptance and recurring cash flow develop. Permanent debt is supported by a seasoned operating record, durable contracts and predictable cash conversion.

The transition between instruments should be designed at the preceding stage. Construction documents should anticipate the evidence required by a permanent lender, including assignable contracts, completion certificates, operating data, customer acceptance, insurance history and a clean security release process. This reduces the risk that a technically successful project remains trapped in expensive or short-dated capital.

The four common refinancing windows are:

1. ready-to-build, when site control, permits, power rights and the delivery package support a committed construction facility;
2. energisation and technical completion, when remaining risk is concentrated in customer acceptance and operating ramp;
3. stabilisation, when recurring collections and operating performance support term-debt sizing; and
4. portfolio seasoning, when several operating assets can support aggregation, institutional capital or capital recycling.

Each window should have a defined evidence pack, valuation basis, debt-sizing method and fallback. A financing plan that depends on one projected closing date is fragile. Extension capacity, sponsor liquidity and alternative lender routes should be agreed before the relevant maturity.

10.2 Use three independent sizing constraints

Permanent debt should be tested against leverage, debt-service capacity and absolute exposure. A lender may apply a maximum loan-to-value ratio, a minimum debt-service coverage ratio and a maximum debt quantum. The binding constraint determines proceeds.

For a simple annual test:

Debt sized by value = stabilised value × permitted loan-to-value ratio

Debt sized by coverage = stabilised cash flow available for debt service ÷ minimum DSCR ÷ annual debt-service factor

The definitions matter. Stabilised value may depend on an income-capitalisation method, discounted cash flow, replacement cost or transaction evidence. Cash flow available for debt service should reconcile contracted revenue, energy pass-through, operating expenditure, lifecycle reserves, taxes and recurring capital requirements. The annual debt-service factor should reflect interest, amortisation and hedging.

The project should show the result under each constraint and disclose which assumptions drive it. A valuation increase cannot cure weak cash conversion. Strong contracted cash flow does not remove concentration, obsolescence or residual-value risk.

10.3 Separate refinancing proceeds from distributable proceeds

Gross refinancing proceeds first settle existing debt, accrued interest, hedge termination, fees, taxes, reserve top-ups and required capital expenditure. The remainder may be available for distribution subject to covenant compliance and agreed equity-lock-up tests.

An equity distribution should not weaken completion of later phases or reduce operating resilience. Shared-infrastructure expenditure, future customer fit-out, defect remediation and working capital should be funded before release. A phased campus can use a distribution waterfall that protects the completed phase and preserves committed capital for the next build.

Refinancing use	Evidence required	Typical control
repay construction debt	final utilisation and payoff statement	direct lender-to-lender payment
fund remaining completion	certified cost-to-complete	controlled account
replenish reserves	agreed reserve calculation	blocked reserve account
pay transaction costs	invoices and approved budget	closing statement
finance next phase	approved scope and sources-and-uses	separate tranche or account
distribute surplus equity	all conditions and lock-up tests satisfied	restricted-payment certificate

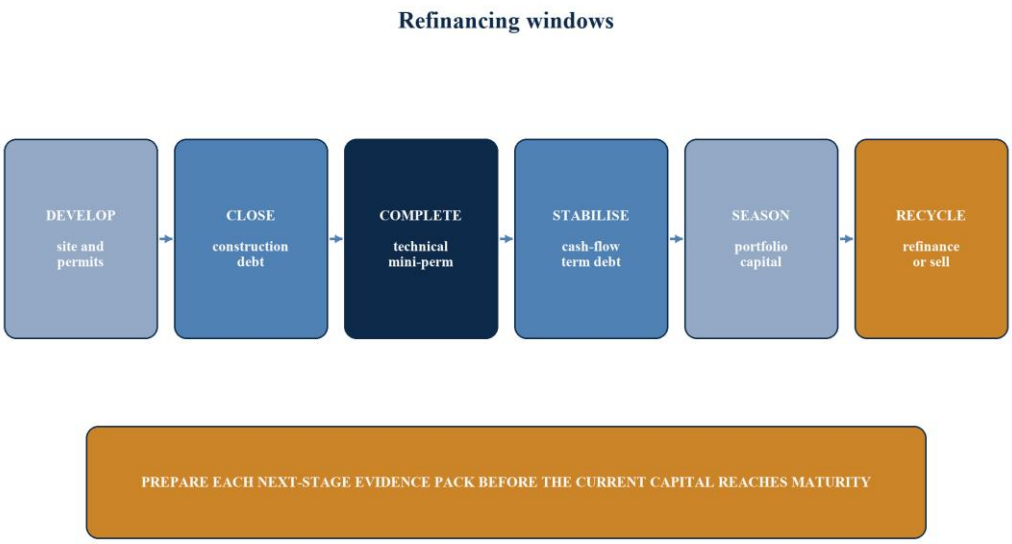

Figure 7. Refinancing windows, evidence thresholds and capital migration
Source: Matchpoint capital-lifecycle framework.

11. DEBT INSTRUMENTS ACROSS THE LIFECYCLE

11.1 Match instrument tenor to the risk being financed

Early-stage capital is short in duration and high in uncertainty. It should be sized to achieve defined milestones rather than fund an open-ended development process. A site or development facility may finance deposits, design, permits and utility work, with draw conditions tied to evidence. The repayment route can be a construction closing, site sale or sponsor equity.

Construction debt requires a detailed budget, draw process, cost-to-complete test, security package and completion support. Interest is often capitalised during construction. IAS 23 provides the accounting framework for borrowing costs directly attributable to a qualifying asset [11]. The financing model should distinguish accounting capitalisation from cash availability and lender commitment.

A mini-perm facility can provide time for customer installation, acceptance and operating ramp. Its pricing and amortisation may step up, creating an incentive to refinance. A permanent facility typically relies more heavily on contracted cash flow and operating evidence. Portfolio debt may diversify single-asset exposure while introducing allocation, release and cross-collateralisation questions.

11.2 Build construction draw controls around remaining cost

Every draw should update the complete sources-and-uses position. The lender and independent engineer should assess work completed, payments due, remaining commitments, contingency, change orders, claims and remaining time. The central calculation is whether committed sources remain sufficient to complete the agreed project.

A cost-to-complete test can be expressed as:

Available sources ≥ forecast remaining project costs + financing costs + required reserves

Available sources should reflect committed and drawable amounts. Forecast remaining costs should include approved and reasonably foreseeable changes, taxes, commissioning, customer-specific scope and financing carry. If the test fails, the documents should specify the order of remedies, which may include sponsor equity, additional support, scope change or draw suspension.

The draw mechanism should retain enough flexibility for long-lead equipment deposits and direct payments while preserving auditability. Supplier payment schedules, vesting certificates, title, insurance and storage arrangements require particular attention when equipment is located off-site.

11.3 Treat equipment finance as part of one capital structure

Generators, cooling systems, switchgear, batteries, servers and other equipment may be financed through vendor credit, leasing or separate facilities. These sources can extend liquidity and match asset lives. They also affect security, cash flow and completion.

The project should map ownership, lien priority, access rights, removal rights, maintenance obligations and termination payments. A senior project lender needs assurance that critical equipment will remain available after enforcement. An equipment provider needs a clear remedy if payment fails. Intercreditor terms should resolve those interests before drawdown.

11.4 Use sustainable-finance features only with controlled data

The Loan Market Association publishes Green Loan Principles and Sustainability-Linked Loan Principles [20]. A data-centre financing may use eligible green proceeds or performance targets related to energy, water or renewable electricity. The selected framework should fit the purpose and evidence base.

Targets should have precise boundaries, baselines, measurement periods and verification. Power usage effectiveness can vary with occupancy, climate, system boundary and operating conditions. A headline target without controlled definitions can create disputes and reputational risk. IFC's disclosed sustainability-linked financing for WIOCC illustrates the use of defined efficiency and green-building targets in a financing context [10].

Instrument	Principal risk financed	Core repayment source	Critical evidence
site or development facility	entitlement and site readiness	construction close or site sale	site rights, permits, power path
construction facility	delivery, cost and completion	permanent refinance or asset sale	budget, contracts, engineer reports
equipment facility	procurement and asset life	project cash flow	title, security and equipment schedule
mini-perm	lease-up and operating ramp	permanent refinance	acceptance, billing and ramp evidence
permanent term debt	recurring operating performance	contracted cash flow	stabilisation certificate and accounts
portfolio facility	diversified operating assets	portfolio cash flow	asset eligibility and release mechanics

12. EQUITY, JOINT VENTURES AND CAPITAL RECYCLING

12.1 Allocate development risk explicitly

Development equity funds uncertainty that debt cannot absorb. Sponsor equity may cover site control, design, permits, deposits, utility works and overruns. A joint-venture investor may enter after selected risks have been resolved. The entry valuation and governance rights should reflect the evidence available at that date.

The joint-venture agreement should address capital calls, default funding, dilution, reserved matters, development fees, affiliate contracts, exit, future phases and deadlock. Equinix discloses that its joint ventures can require capital contributions and create financing, land, power, governance and exit risks [6]. The relevance for an individual project is the need to make those obligations explicit in the project documents and downside model.

Milestone-based equity can align valuation with risk reduction. A partner may commit capital at signing while funding tranches after land transfer, grid confirmation, permit receipt, construction notice to proceed or customer contracting. The mechanism should define the evidence, independent verification, long-stop dates and consequences if a milestone is delayed.

12.2 Protect the project from incomplete equity funding

Equity commitment quality is a financing risk. The lender should understand the identity and credit of the obligor, funding conditions, transfer restrictions and enforcement route. A commitment from a thin special-purpose vehicle may require a parent guarantee, letter of credit, escrow or funded reserve.

Equity should generally fund first or in an agreed ratio that keeps the project fully financed. Later-stage equity cannot be assumed to arrive solely because construction has started. Capital-call mechanics should allow sufficient time for funding without interrupting the critical path.

12.3 Recycle capital without losing operational control

Once an asset stabilises, the sponsor can retain it, sell an interest, contribute it to a fund or joint venture, or refinance and distribute part of the equity. Digital Realty disclosed a 2025 contribution of operating data centres and development projects to a fund for approximately USD 937 million in gross proceeds [5]. This is company-specific transaction evidence. It demonstrates one route by which an operator can recycle capital while maintaining exposure through a managed structure.

Capital recycling should consider control, management fees, future capital calls, asset-level debt, customer consent, change-of-control provisions and tax. A sale of an interest can create cash while retaining operating scale. It can also constrain later financing or strategic decisions. The sponsor should compare proceeds with the present value of retained cash flow and control.

12.4 Design portfolio aggregation from the first asset

A future portfolio financing benefits from consistent leases, reporting, cybersecurity controls, insurance, maintenance, sustainability data and security packages. Asset-level variation increases diligence time and can reduce eligibility. The first project should therefore adopt a data architecture and document suite capable of supporting aggregation.

Eligibility tests may cover location, age, occupancy, customer concentration, remaining contract term, operating history, availability, efficiency and compliance. Release mechanics should state the value and cash-flow tests for an asset sale. Concentration limits should be based on economic exposure rather than asset count alone.

13. ECONOMICS, SENSITIVITY AND CONTINGENCY

13.1 Model the project by capacity state

A data-centre model should move capacity through defined states: planned, powered, technically ready, contracted, accepted, billed and collected. Capital expenditure, energy demand, operating cost and revenue should be linked to the relevant state. This approach makes timing risk visible and prevents a single utilisation percentage from obscuring the conversion process.

Revenue should reflect committed capacity, commencement dates, ramp, pricing, indexation, energy pass-through, credits and termination. Operating costs should separate fixed site costs, capacity-dependent costs, energy, maintenance, staff and lifecycle reserves. Cash flow should capture deposits, working capital and tax.

13.2 Test the variables that affect both completion and value

The most useful sensitivities connect operational events with funding consequences. A grid delay can extend interest capitalisation, staff and contractor cost while delaying revenue. Equipment inflation can increase total cost and also delay commissioning. Slow customer acceptance can reduce cash flow after construction debt has matured.

The minimum scenario set should include:

1. grid energisation delay;
2. construction cost overrun;
3. equipment delivery delay;
4. slower contract conversion;
5. customer acceptance delay;
6. lower realised price;
7. higher electricity or operating cost not recovered from customers;
8. service credits or availability incidents;
9. higher refinancing interest rates; and
10. lower terminal value or tighter leverage.

Scenarios should be combined where risks are connected. The downside case should show the maximum funding requirement, covenant position, maturity headroom and sponsor response. A sensitivity that only changes final returns does not reveal whether the project survives the path to stabilisation.

13.3 Size contingency by unresolved exposure

Contingency should change as scope and risk become clearer. An early estimate carries design, quantity, price and schedule uncertainty. As procurement and construction progress, unused contingency can decline only after the underlying exposure has genuinely reduced. Committed cost alone is insufficient if change orders, interfaces or claims remain unresolved.

The cost report should classify contingency as project-wide, package-specific, lender-controlled or sponsor-reserved. Transfers should be approved under clear authority. The model should retain a minimum reserve for commissioning, customer integration and early operations.

Sensitivity	First-order effect	Financing consequence	Possible mitigant
six-month grid delay	later energisation and revenue	additional interest and maturity pressure	utility milestones, extension and liquidity
10 percent build overrun	higher total uses	equity shortfall and LTV pressure	fixed-price scope, contingency, support
slower acceptance	lower billed capacity	DSCR and refinancing delay	acceptance plan, mini-perm and reserves
energy under-recovery	lower operating margin	reduced debt capacity	pass-through clauses and hedging policy
customer loss	concentration and revenue decline	covenant and valuation pressure	credit review and diversified pipeline
higher refinance rate	higher debt service	lower proceeds and coverage	hedging, amortisation and lower leverage

14. HYPOTHETICAL 48 MW CAMPUS CASE

14.1 Case boundary

This section applies the framework to a hypothetical three-phase campus with 48 megawatts of planned IT load. Each phase provides 16 megawatts. All values, dates, ratios and operating assumptions are modelling inputs created for this paper. They are not a forecast, market benchmark, client result or description of an actual transaction.

The hypothetical sponsor has secured a site option and is seeking to progress through development, construction and permanent financing. The campus depends on shared grid, substation, fibre, security and operating infrastructure. Phase one must therefore obtain durable rights to those shared systems before it can be financed or refinanced separately.

14.2 Illustrative sources and uses

The total hypothetical project cost is USD 720 million. The budget includes the full campus backbone and three capacity phases.

Illustrative use	USD million	Evidence required before financial close
site and rights	50	title, access and restrictions diligence
design, permits and professional costs	20	scope, approvals plan and appointments
grid connection and substation	95	utility agreement, programme and interface scope
shell and civil works	120	design, quantities and construction package
mechanical, electrical and critical systems	285	procurement schedule, warranties and integration plan
commissioning	20	test scripts, independent witnessing and acceptance plan
financing costs and interest	55	draw schedule, rates, fees and maturity assumptions
contingency	55	quantified risk register and draw control
start-up and working capital	20	staffing, maintenance, energy and ramp budget
Total uses	720	fully reconciled cost plan

The proposed sources include USD 140 million of sponsor equity, USD 110 million of joint-venture equity, USD 380 million of construction debt, USD 30 million of equipment finance, USD 40 million of committed sponsor overrun support and USD 20 million of working-capital funding. The overrun support is treated as a committed source only if its obligor, conditions and enforceability satisfy the lenders.

Illustrative source	USD million	Funding control
sponsor equity	140	funded first and then pro rata
joint-venture equity	110	milestone-based capital calls
construction debt	380	monthly certified draws
equipment facility	30	equipment schedule and lien controls
sponsor overrun commitment	40	callable support for approved shortfall
working-capital facility	20	available after service readiness
Total sources	720	documented and committed

14.3 Illustrative capital deployment curve

Development equity funds the site option, design, permits, utility deposits and procurement deposits. Sponsor and joint-venture equity then fund the required proportion of the construction budget. Construction debt draws against certified work and remaining-cost tests. Equipment finance funds identified critical systems under coordinated security.

The hypothetical plan has three decision gates. Gate one authorises acquisition and detailed development after satisfactory title, grid path and concept design. Gate two authorises construction after permits, fixed scope, committed sources and minimum customer evidence. Gate three authorises phase expansion after phase-one commissioning, updated market evidence and confirmation that shared infrastructure can support the next phase.

The capital curve should include committed future equity and debt headroom as separate lines. Available liquidity should remain above the stressed remaining-cost requirement throughout the programme. A small surplus at initial close does not protect the project from a later funding peak.

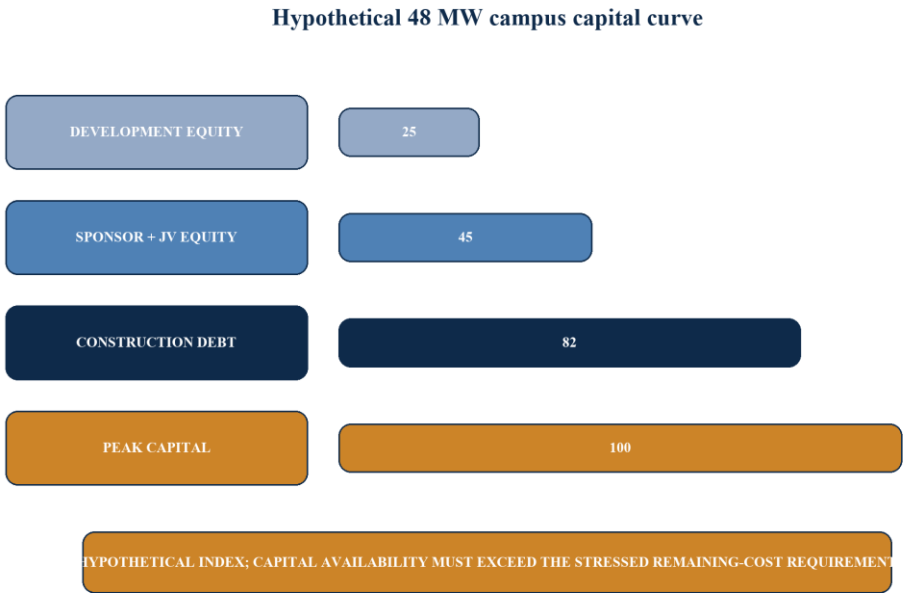

Figure 8. Hypothetical 48 MW campus capital deployment and risk reduction curve

Source: Matchpoint hypothetical modelling illustration; index values are not observed project data.

14.4 Illustrative stabilised refinancing test

Assume the campus reaches a hypothetical stabilised EBITDA of USD 78 million after the defined operating test period. The refinancing analysis applies three illustrative constraints:

1. a debt-to-EBITDA test of 4.5 times, producing USD 351 million;
2. a minimum DSCR of 1.50 times, tested against contractual interest and amortisation; and
3. a maximum loan-to-value ratio of 55 percent, applied to a separately supported valuation.

The ratios are modelling assumptions. The actual financing capacity would depend on contracts, customer credit, asset quality, jurisdiction, market conditions, operating history and lender policy. The lowest supported result should set the starting debt quantum, subject to absolute exposure and other limits.

If the resulting permanent facility were USD 330 million, gross proceeds would first repay construction and equipment debt, transaction costs and any reserve shortfall. Any remaining cash could be retained for phase completion, distributed under the restricted-payment tests or applied to debt reduction. The case demonstrates the separation between asset stabilisation, debt capacity and distributable equity.

14.5 Illustrative downside case

The downside combines a six-month grid delay, an eight percent increase in relevant construction cost, slower customer acceptance and a higher refinancing rate. The model should calculate additional interest, operating carry, cost-to-complete, delayed collections and lower permanent-debt capacity.

Management responses are pre-agreed by trigger. They include drawing committed overrun support, deferring non-critical expansion, extending construction or mini-perm maturity, retaining distributions and rephasing customer installations. Each action has a responsible owner and latest decision date.

The downside is useful because it identifies the maximum cumulative funding gap rather than a single-period earnings reduction. The funding plan is acceptable only if committed liquidity and available remedies cover that gap with a documented margin.

15. DOCUMENTATION, SECURITY AND COVENANTS

15.1 Make the security package follow the operating system

The security package commonly extends to land or lease rights, project accounts, material contracts, receivables, insurance proceeds, shares and movable assets. Its effectiveness depends on local law, registration, consent and enforceability. Specialist counsel should identify assets or rights that cannot be assigned or charged and propose alternatives.

Critical contracts include the utility connection, construction and equipment contracts, operation and maintenance agreements, customer contracts, network access, insurance and permits. Direct agreements can provide notice, cure and step-in rights. The project should avoid assuming that a contractual assignment automatically transfers licences, data, software access or operational capability.

Shared campus infrastructure requires a durable legal framework. Each financed phase needs rights to access, power, cooling, fibre, security, common areas and operational services. Cost allocation and service standards should survive a change in ownership or enforcement.

15.2 Link covenants to evidence and action

A useful covenant identifies a risk, a measurement method, a reporting frequency and a consequence. Construction covenants may cover budget, schedule, cost-to-complete, change orders and completion. Operating covenants may cover availability, contracted capacity, customer concentration, collections, DSCR, leverage, reserves and material incidents.

Definitions should align with the model and operating systems. Contracted capacity, accepted capacity and billed capacity should remain distinct. EBITDA should state permitted adjustments. Availability and efficiency should use controlled boundaries and periods.

Information covenants should produce a decision-ready pack rather than uncontrolled data. Material thresholds can apply to claims, outages, cybersecurity events, contract changes and customer termination. The project should preserve confidentiality while giving lenders enough information to assess financial impact.

15.3 Coordinate intercreditor and account controls

Construction lenders, equipment financiers, hedge providers, working-capital lenders and future permanent lenders may have different claims. The intercreditor framework should address priority, enforcement standstill, cure, turnover, equipment access and release mechanics. It should also anticipate a refinancing before the original debt has fully matured.

Project accounts can separate equity, debt draws, revenue, operating costs, taxes, reserves and distributions. The waterfall should fund safety, essential operations and agreed reserves before debt service and distributions in the documented order. Account control should permit efficient ordinary operations within an approved budget.

15.4 Define completion and stabilisation separately

Construction completion concerns delivery of the specified asset and satisfaction of agreed tests. Stabilisation concerns sustained commercial, operating and financial performance. Documents should define both and state their different consequences.

Completion may end sponsor completion support or permit conversion to a mini-perm tranche. Stabilisation may reset pricing, release cash, permit permanent refinancing or allow distributions. Combining the concepts can release support before cash flow is durable or retain expensive support after physical risk has ended.

Document	Lifecycle purpose	Key negotiation point
facility agreement	funding and repayment	draw, completion, maturity and covenants
common-terms agreement	consistent definitions	capacity, cash flow and events
security documents	asset and cash-flow control	perfection, priority and releases
intercreditor agreement	creditor coordination	enforcement, standstill and turnover
direct agreements	continuity of material contracts	notice, cure and step-in
account agreement	cash waterfall	permitted withdrawals and reserves
equity support agreement	completion and shortfall support	amount, conditions and expiry

16. ENVIRONMENTAL, SOCIAL AND SUSTAINABILITY CONTROLS

16.1 Integrate diligence with financing decisions

Environmental and social diligence should begin before site acquisition and continue through operations. The Equator Principles provide a risk-management framework used by participating financial institutions for relevant project finance [13]. IFC Performance Standards address environmental and social risk assessment, labour, resource efficiency, community health, land, biodiversity, Indigenous Peoples and cultural heritage [14]. Applicability and required standards depend on the financing and project.

For a data-centre campus, diligence can cover land history, biodiversity, water, noise, traffic, construction labour, community impacts, emergency response, fuel and hazardous materials. The results should enter the budget, programme, permits, covenants and monitoring plan.

IFC's disclosed reviews of data-centre financings show how development, construction and refinancing can be accompanied by environmental and social due diligence and performance monitoring [7][8][9]. Each project remains subject to its own conditions and jurisdiction.

16.2 Treat energy and water data as finance data

Energy and water affect cost, resilience, permitting and stakeholder assessment. The operator should define the measurement boundary, source systems, ownership, review and correction process for key metrics. The same data should support customer reporting, lender covenants and management decisions where definitions align.

Power usage effectiveness should be accompanied by IT load, total facility energy, occupancy or utilisation context, climate period and measurement boundary. Water metrics should distinguish withdrawal, consumption, source and discharge where relevant. Renewable-energy claims should state contractual mechanism, location, period and treatment of environmental attributes.

The Central Bank of the UAE's climate-risk principles address governance, risk management, scenario analysis, capital and liquidity for regulated financial institutions [19]. A project borrower can support lender assessment by providing controlled exposure, resilience and performance information.

16.3 Link design standards to completion evidence

ISO/IEC 22237-2:2024 addresses data-centre building construction, including site, environmental risks, access, fire and water considerations [16]. ASHRAE Standard 90.4 addresses data-centre energy efficiency [17]. Uptime Institute's Tier Certification separates design-document review, constructed-facility verification and operational-sustainability assessment [15]. These are distinct standards and certification routes. The project should select applicable requirements and incorporate them into design, contracts, testing and finance evidence.

A certification objective should have a responsible party, budget, programme and remedy if certification is delayed. A lender should understand whether certification is a draw condition, completion condition, customer requirement or reporting item.

17. FAILURE MODES AND CONTROLS

17.1 Financing the label instead of the risk

Calling an asset ready-to-build, complete or stabilised does not establish the underlying condition. The control is a defined evidence schedule with independent review and documented exceptions. Every financing transition should identify which risks have ended, which remain and who bears them.

17.2 Treating power capacity as a single fact

Power may be discussed as requested, allocated, contracted, constructed, energised, tested or continuously available. Each state has a different financing value. The control is a power evidence register tied to utility obligations, project works, payment milestones and programme dates.

17.3 Counting contracted demand as current cash

Customer contracts can contain conditions, phased commencement, acceptance, termination and credits. The control is a capacity bridge from reservation through collection, reconciled to contracts, billing and bank receipts.

17.4 Allowing maturity to arrive before the operating evidence

Construction can finish before customer acceptance and cash flow stabilise. The control is a maturity schedule with commissioning and ramp headroom, extension options, committed liquidity and a realistic permanent-financing evidence plan.

17.5 Releasing support at the wrong milestone

Completion support can expire too early if defined only by physical construction. It can remain unnecessarily long if tied to full commercial stabilisation. The control is separate physical-completion and stabilisation tests with different releases and pricing consequences.

17.6 Using inconsistent operating metrics

PUE, availability, contracted capacity and EBITDA can vary by definition. The control is a metric dictionary owned jointly by finance and operations, with data lineage, review and version control.

17.7 Losing future financing flexibility

Equipment liens, customer consents, affiliate contracts, shared infrastructure and restrictive joint-venture rights can impede refinancing. The control is a refinance-readiness review before initial close and before every material amendment.

17.8 Underestimating the handover to operations

The operating team may inherit incomplete records, warranties, training and maintenance systems. The control is a staged handover plan with document completion, spares, system access, training, defect tracking and accountable acceptance.

18. IMPLEMENTATION ROADMAP AND CONCLUSION

18.1 First 30 days: establish one controlled baseline

The sponsor should appoint owners for site, power, design, construction, commercial, operations, finance, legal and environmental matters. The team should create a single milestone schedule, sources-and-uses statement, risk register, contract register and evidence index. Definitions for capacity, completion and stabilisation should be approved.

The finance team should reconcile the development model with the technical programme and procurement schedule. Every material assumption should have a source, date, owner and update frequency. Gaps should be recorded as open decisions with due dates.

18.2 Days 31 to 60: build the financing gates

The project should convert the lifecycle into approval gates with minimum evidence, decision rights and funding consequences. The construction draw process, cost-to-complete test, equity funding sequence, account waterfall and support package should be documented. Refinancing evidence should be incorporated into the construction and operating data room.

Management should run the combined downside case and identify the maximum funding gap. Committed liquidity, maturity headroom and sponsor responses should be verified against that result.

18.3 Days 61 to 90: test operational and reporting readiness

The operator, commissioning team and finance team should test data flows from building and data-centre infrastructure management systems into customer billing, management reporting and lender reporting. Metric definitions, controls and exception handling should be agreed.

The team should perform a simulated draw request, completion certificate and stabilisation certificate. The exercise should identify missing evidence, unclear authority and inconsistent definitions while correction remains possible.

18.4 Days 91 to 120: prepare the capital transition

The project should assemble the lender and investor information package for the next lifecycle stage. It should include the current evidence register, model, contracts, operating data, ESG information, insurance, legal diligence and remaining actions. Potential refinancing structures should be tested under current and downside performance.

The board should approve the capital transition only when the evidence threshold is satisfied and the residual-risk allocation is understood. The decision record should state proceeds, uses, conditions, remaining support and the fallback if closing is delayed.

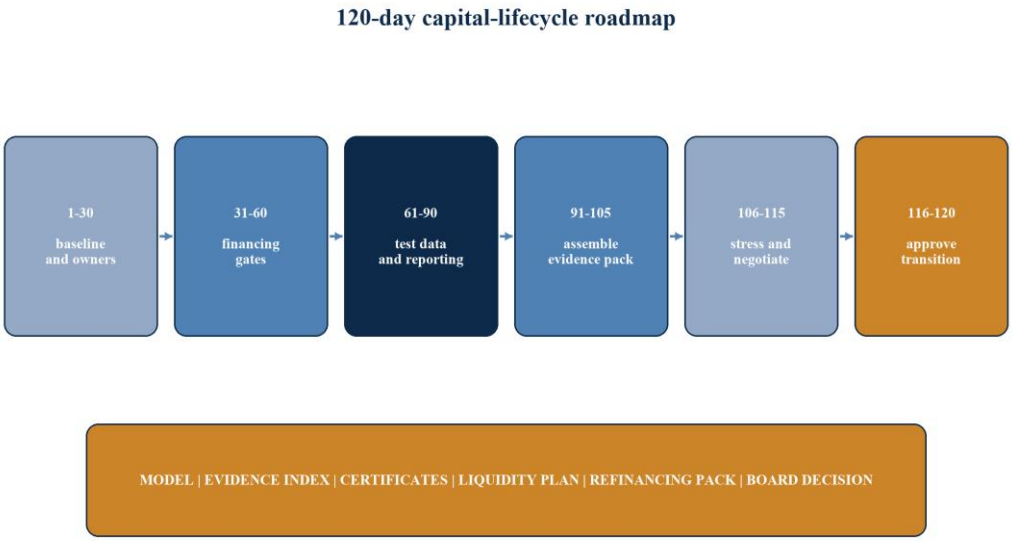

Figure 9. A 120-day implementation roadmap for capital-lifecycle governance

Source: Matchpoint implementation framework.

18.5 Conclusion

Data-centre capital should change as the asset changes. The site option, ready-to-build project, construction programme, commissioned facility, operating ramp and stabilised asset have different risks, evidence and suitable financing. Treating them as one continuous funding problem obscures those differences.

A stage-gated framework connects engineering, commercial delivery, operations and finance. It defines the evidence that converts risk, protects liquidity through the maximum funding requirement and prepares the next financing before the current instrument matures. Separate completion and stabilisation tests preserve accountability. A controlled capacity bridge connects customer demand to collected cash. Refinancing then becomes an evidence-led capital transition.

The resulting discipline supports investment decisions, lender underwriting and sponsor capital recycling. Its value rests on the quality of definitions, contracts, data and governance applied to the individual project.

APPENDIX A. DATA-ROOM INDEX BY LIFECYCLE STAGE

A.1 Site and development

1. land title, lease, option and access rights;
2. surveys, geotechnical, environmental and contamination reports;
3. planning, zoning, building and environmental approvals;
4. utility applications, studies, offers, agreements and payment evidence;
5. concept design, basis of design and design-responsibility matrix;
6. fibre route and carrier strategy;
7. development budget, schedule and risk register; and
8. corporate approvals, equity commitments and joint-venture documents.

A.2 Ready-to-build and construction

1. issued-for-construction design and specifications;
2. permits and authority conditions;
3. construction, equipment and professional contracts;
4. procurement and long-lead schedule;
5. baseline programme and critical path;
6. sources and uses, draw schedule and contingency policy;
7. insurance, bonds, guarantees and warranties;
8. independent engineer reports; and
9. customer contracts, pipeline and capacity bridge.

A.3 Commissioning and operations

1. commissioning plan, scripts, records and exceptions;
2. utility energisation and capacity evidence;
3. completion, occupancy and certification documents;
4. customer acceptance and service-commencement records;
5. operating procedures, maintenance plans and staffing;
6. incident, defect, warranty and claims registers;
7. billing, collections and operating-cost evidence;
8. energy, water, availability and efficiency data; and
9. cybersecurity, business-continuity and emergency-response records.

A.4 Stabilisation and refinancing

1. stabilisation certificate and supporting schedule;
2. audited or reviewed accounts and bank statements;
3. contracted, accepted, billed and collected capacity bridge;
4. valuation and model with sensitivities;
5. compliance, covenant and reserve certificates;
6. asset, share, contract and account security records;
7. legal, technical, insurance, tax and E&S diligence;
8. debt payoff, hedge and closing statements; and
9. board approvals and use-of-proceeds statement.

APPENDIX B. STABILISATION CERTIFICATE TEMPLATE

The certificate should identify the asset, phase, test period and measurement date. It should state whether each required condition has been satisfied and list every exception. Supporting evidence should be indexed and retained.

Certificate item	Required statement
physical completion	specified systems completed and permanent power available
testing	integrated systems and required acceptance tests passed
commercial conversion	required accepted and billed capacity achieved
collections	recurring cash receipts evidenced for the test period
operating performance	availability, incidents and efficiency within thresholds
financial performance	defined EBITDA, DSCR and reserves calculated consistently
compliance	permits, insurance, reporting and material obligations current
exceptions	outstanding items, impact, owner and completion date

The certificate should be signed by authorised sponsor and operator representatives. Independent engineer, accountant or other verification should be included where required by the financing documents. The lender's acknowledgement should not waive unresolved conditions unless expressly stated.

APPENDIX C. REFINANCING QUESTIONS

1. Which risk has changed since the current financing closed?
2. What evidence demonstrates that change?
3. Are completion, customer acceptance and stabilisation defined separately?
4. Which debt-sizing constraint is binding?
5. How are shared-campus costs and rights allocated?
6. What cash and capital expenditure remain after closing?
7. Which consents, releases and direct agreements are required?
8. Do equipment liens or affiliate arrangements restrict enforcement?
9. What happens if refinancing closes six months late?
10. Which sponsor support remains after closing?
11. How are future phases protected and financed?
12. What data supports energy, water, availability and revenue claims?
13. What distributions are permitted and under which tests?
14. Can the asset enter a portfolio financing without material amendments?
15. Which residual risks remain with debt providers and equity investors?

APPENDIX D. EVIDENCE AND ASSUMPTION CONTROL

The project should distinguish four information classes:

1. executed or issued evidence, including signed contracts, permits, utility agreements and bank records;
2. verified technical evidence, including independent reports, tests and certifications;
3. controlled management information, including approved budgets, programmes, operating systems and reconciled accounts; and
4. modelling assumptions, including future dates, prices, utilisation, costs and refinancing terms.

Each material item should have an owner, date, source and review status. Modelling assumptions should remain identifiable in board, lender and investor materials. Scenario results should not be presented as observed performance.

REFERENCES

[1] International Energy Agency. Key Questions on Energy and AI. 2026. https://www.iea.org/reports/key-questions-on-energy-and-ai
[2] International Energy Agency. Key Questions on Energy and AI: Executive Summary. 2026. https://www.iea.org/reports/key-questions-on-energy-and-ai/executive-summary
[3] International Energy Agency. Energy and AI. 2025. https://www.iea.org/reports/energy-and-ai
[4] Dubai Electricity and Water Authority. Power Supply Guidelines for Major Projects. July 2025. https://dewa.gov.ae/-/media/Files/Major-Project-Guidelines-July-2025.ashx
[5] Digital Realty Trust, Inc. Annual Report on Form 10-K for the year ended 31 December 2025. 2026. https://www.sec.gov/Archives/edgar/data/1297996/000110465926015365/dlr-20251231x10k.htm
[6] Equinix, Inc. Annual Report on Form 10-K for the year ended 31 December 2025. 2026. https://www.sec.gov/Archives/edgar/data/1101239/000110123926000032/eqix-20251231.htm
[7] International Finance Corporation. NTT India Loan, Project 50807: Environmental and Social Review Summary. 2026. https://disclosures.ifc.org/project-detail/ESRS/50807/NTT%20India%20Loan
[8] International Finance Corporation. SISL, Project 51725: Environmental and Social Review Summary. 2026. https://disclosures.ifc.org/project-detail/ESRS/51725/sisl
[9] International Finance Corporation. Raxio DC, Project 48537: Environmental and Social Review Summary. https://disclosures.ifc.org/project-detail/ESRS/48537/raxio-dc
[10] International Finance Corporation. WIOCC SLL, Project 48053: Environmental and Social Review Summary. https://disclosures.ifc.org/project-detail/ESRS/48053/wiocc-slf-loan
[11] IFRS Foundation. IAS 23 Borrowing Costs. https://www.ifrs.org/issued-standards/list-of-standards/ias-23-borrowing-costs/
[12] IFRS Foundation. IAS 16 Property, Plant and Equipment. https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards/english/2021/issued/part-a/ias-16-property-plant-and-equipment.pdf
[13] Equator Principles Association. The Equator Principles, EP4. https://equator-principles.com/
[14] International Finance Corporation. IFC Performance Standards on Environmental and Social Sustainability. https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards
[15] Uptime Institute. Tier Certification. https://connect.uptimeinstitute.com/tier-certification
[16] International Organization for Standardization. ISO/IEC 22237-2:2024, Data centre facilities and infrastructures, Part 2: Building construction. https://www.iso.org/standard/82248.html
[17] ASHRAE. ANSI/ASHRAE Standard 90.4-2022, Energy Standard for Data Centers. https://www.ashrae.org/file%20library/technical%20resources/standards%20and%20guidelines/standards%20addenda/90_4_2022_a_20250131.pdf
[18] European Commission. Energy Performance of Data Centres. https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive/energy-performance-data-centres_en
[19] Central Bank of the UAE. Principles for the Effective Management of Climate-related Financial Risks. https://rulebook.centralbank.ae/en/entiresection/5114
[20] Loan Market Association. Sustainable Lending Resources. https://www.lma.eu.com/sustainable-lending/resources

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