Datacenter Debt

Financing the GCC's AI Infrastructure Buildout

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May 2026

Abstract

The boom in artificial intelligence (AI) is driving an unprecedented buildout of datacenter capacity, and the Gulf Cooperation Council (GCC), with its cheap power, ambitious technology strategies and capital, is positioning itself as a hub for this infrastructure. Financing the buildout requires large quantities of long-dated project capital, and datacenter debt, the project and term financing of these facilities, is becoming a significant new segment of GCC infrastructure finance. This paper examines datacenter debt as a financing opportunity in the GCC. Using an indicative dataset calibrated to 2026 conditions, it analyses the demand driving the buildout, sets out the technical and financing architecture of a datacenter project, examines the capital stack and the risks that lenders underwrite, and develops a framework for financing facilities of different types, from hyperscaler-contracted facilities to colocation and edge. It examines the central role of the offtake contract in supporting the financing, the power and technology risks distinctive to the asset, and the perspective of the project lender. The analysis finds that datacenter debt is a project-finance discipline in which the strength of the offtake contract is the principal determinant of the financing, that the GCC structural advantages in power and capital make it well-positioned for the buildout, and that the asset distinctive risks, power availability and technology obsolescence, must be carefully managed. Three indicative case studies, a sensitivity analysis, an international comparison and an implementation roadmap support the analysis, which is intended for developers, investors and lenders considering GCC datacenter infrastructure.

Keywords: AI infrastructure, datacenter, GCC, offtake, project finance, power, technology obsolescence

1. Introduction

The artificial intelligence boom is, at its foundation, a boom in computation, and computation requires datacenters: vast facilities of servers, power and cooling that house the computing on which AI runs. The demand for AI computation is driving an unprecedented buildout of datacenter capacity worldwide, and the GCC, with its cheap and abundant power, its ambitious national technology strategies, and its capital, is positioning itself as a regional hub for this infrastructure. The buildout requires enormous quantities of capital, and financing it is becoming a significant new segment of regional infrastructure finance.

This paper examines datacenter debt, the project and term financing of these facilities, as a financing opportunity in the GCC. As the region builds datacenter capacity to serve the AI boom, the financing of these facilities, large, long-dated, capital-intensive projects, is emerging as a substantial new market for lenders and investors. Understanding how datacenters are financed, the capital stack, the risks, the role of the offtake contract, is increasingly important for the developers building them, the lenders and investors financing them, and the policymakers fostering the buildout.

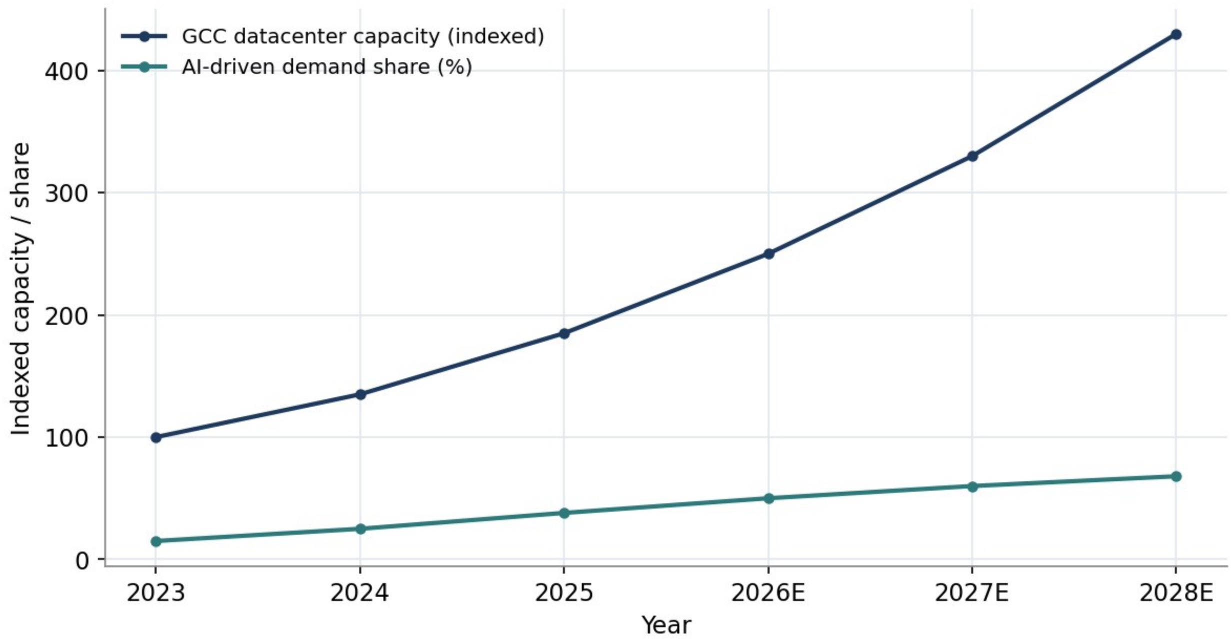
The central argument is that datacenter debt is a project-finance discipline in which the strength of the offtake contract, the agreement under which a customer commits to use and pay for the facility, is the principal determinant of the financing, much as in other contracted infrastructure. A facility with a strong, long-term offtake from a creditworthy customer supports substantial, cheap debt; a facility built on speculation, without a committed offtake, supports far less. The GCC structural advantages in power and capital position it well for the buildout, but the asset distinctive risks, power availability and technology obsolescence, must be carefully managed. The paper develops the framework for financing datacenters in the region.

The figures used throughout are indicative, calibrated to observable GCC conditions in early 2026 but not drawn from any specific transaction. The paper proceeds from the demand driving the buildout (Section 2), through the technical and financing architecture (Section 3), the capital stack (Section 4), the risks lenders underwrite (Section 5), the central role of the offtake (Section 6), the financing framework by facility type (Section 7), the lender perspective (Section 8), power and technology risk (Section 9), GCC-specific considerations (Section 10), three case studies (Section 11), sensitivity analysis (Section 12), an international comparison (Section 13), common errors (Section 14), an implementation roadmap (Section 15), a strategic perspective (Section 16), a conclusion (Section 17) and limitations (Section 18).

2. The Demand Driving the Buildout

The demand for datacenter capacity is being driven by the AI boom, which requires vast and growing quantities of computation, and Figure 1 illustrates the trajectory. The capacity required to train and run AI models has grown rapidly, and the AI-driven share of datacenter demand is rising, transforming a steadily-growing market into a rapidly-accelerating one. This demand is the foundation of the buildout, and it is the source of the offtake that supports the financing of the facilities built to meet it.

Figure 1. GCC Datacenter Capacity and AI-Driven Demand Share



Capacity grows rapidly, driven increasingly by AI demand. Not a forecast.

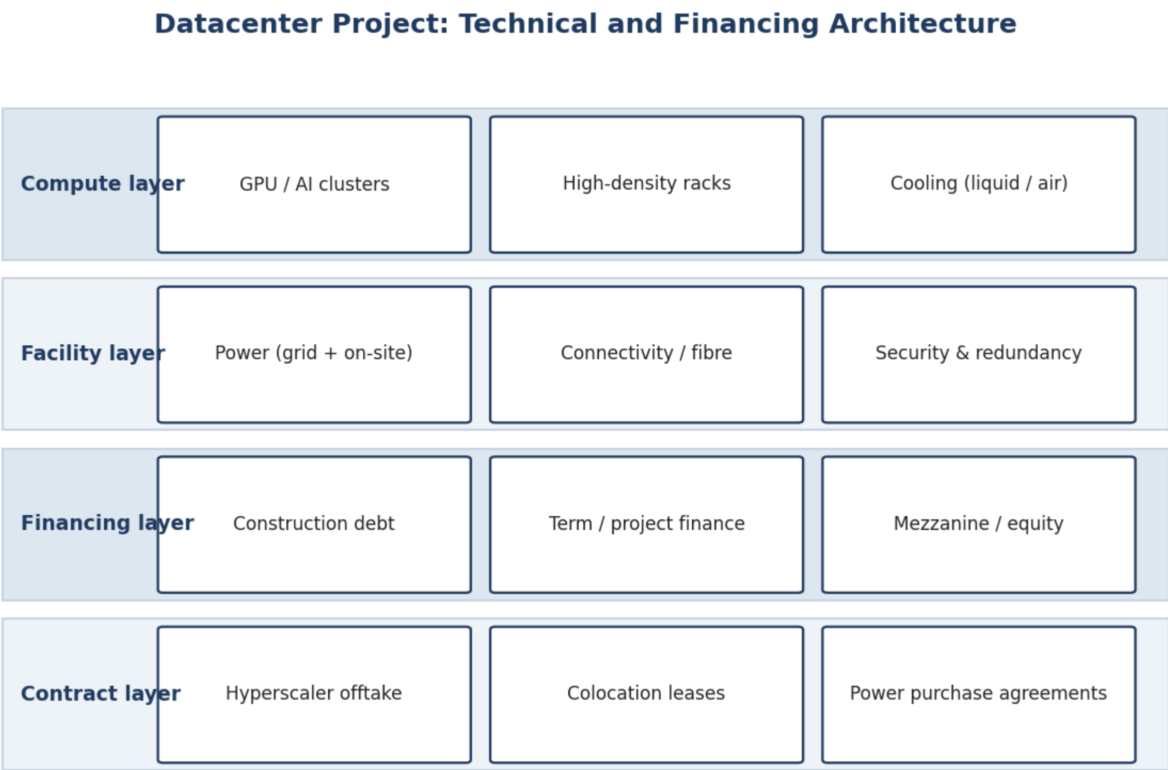
The GCC is positioning itself to capture a share of this demand, leveraging its structural advantages. The region has cheap and abundant power, the single largest operating cost of a datacenter, which gives it a cost advantage in hosting compute-intensive AI workloads. It has ambitious national technology and AI strategies, backed by sovereign capital, that are fostering the buildout as a strategic priority. And it has the capital, both sovereign and private, to fund the substantial investment the buildout requires. These advantages are drawing datacenter investment to the region and positioning it as a regional hub.

The demand has a distinctive structure that shapes the financing. Much of it comes from a small number of large customers, the hyperscalers and large AI companies that require vast capacity, and these customers frequently contract for capacity in advance through offtake agreements, committing to use and pay for facilities before they are built. This contracted demand from creditworthy customers is what supports the project financing of the facilities, and it makes the offtake contract, examined later, the central element of the financing. The structure of the demand, concentrated and contracted, is well-suited to project finance, which is why datacenter debt is developing as a project-finance discipline.

3. The Technical and Financing Architecture

A datacenter is a complex facility, and understanding its architecture is necessary to financing it. Figure 2 sets out the technical and financing architecture in layers. The compute layer houses the servers, increasingly the GPU and AI clusters that AI workloads require, in high-density racks that demand intensive cooling. The facility layer provides the power, connectivity and security that the compute requires, with power the most critical and the largest cost. The financing layer provides the capital, and the contract layer provides the offtake and the power agreements that underpin the project.

Figure 2. Datacenter Project: Technical and Financing Architecture



Indicative architecture across compute, facility, financing and contract layers. Not transaction-specific.

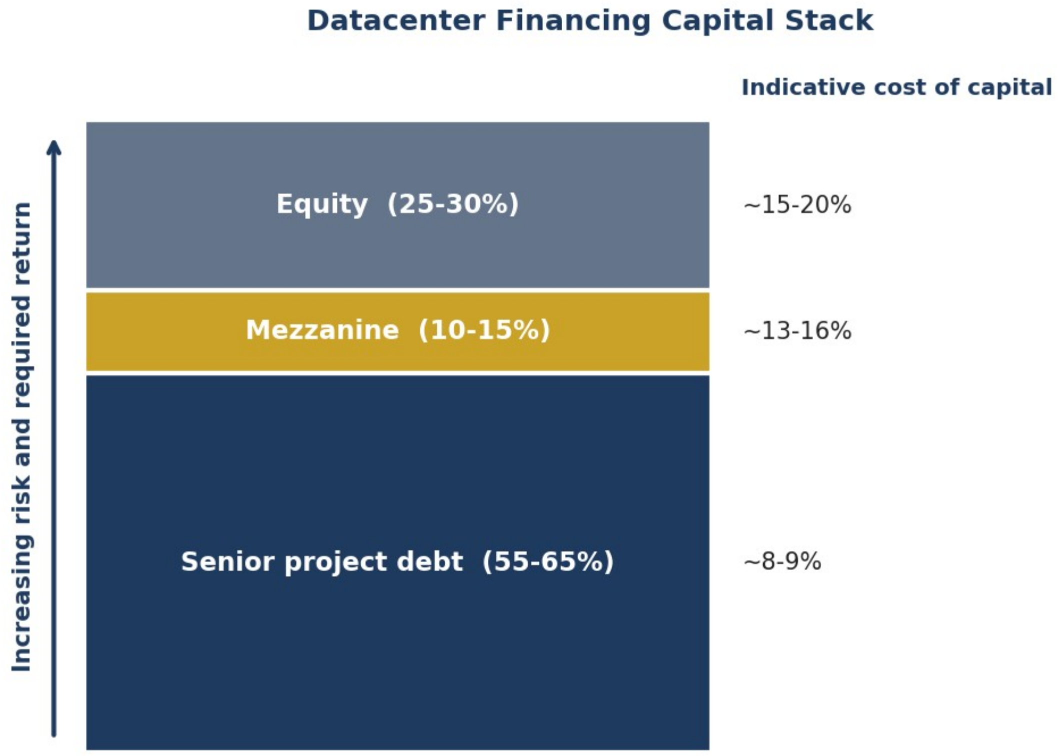
The architecture shows that a datacenter is not merely a building but an integrated system of compute, power, cooling, connectivity and contracts, and that financing it requires understanding all the layers. The lender financing a datacenter underwrites not just the building but the power supply that will run it, the cooling that will keep it operating, the connectivity that will serve it, and above all the offtake contract that will pay for it. A weakness in any layer, an unreliable power supply, inadequate cooling for high-density AI workloads, a weak offtake, undermines the project and the financing, which is why the lender assesses the whole architecture.

The AI-driven demand has changed the architecture in ways that matter for financing. AI workloads require far higher power density than traditional datacenter workloads, which demands more intensive cooling, often liquid cooling, and more power per facility, straining the power supply and raising the importance of the power layer. The technology also evolves rapidly, with new generations of compute hardware, which raises the technology-obsolescence risk that the financing must consider. These AI-driven features, higher density, more power, faster technology evolution, distinguish AI datacenters from traditional ones and shape their financing, as the risk discussion explores.

4. The Capital Stack

A datacenter is financed through a project-finance capital stack, illustrated in Figure 3, combining senior project debt, mezzanine and equity. The senior project debt funds the bulk of the cost, secured against the facility and supported by the offtake contract, at a cost reflecting the project risk. Mezzanine fills the gap above the senior debt, and equity funds the remainder and bears the first loss. The stack is similar to that of other contracted infrastructure, with the offtake contract supporting the debt much as a power purchase agreement supports a power project.

Figure 3. Datacenter Financing Capital Stack



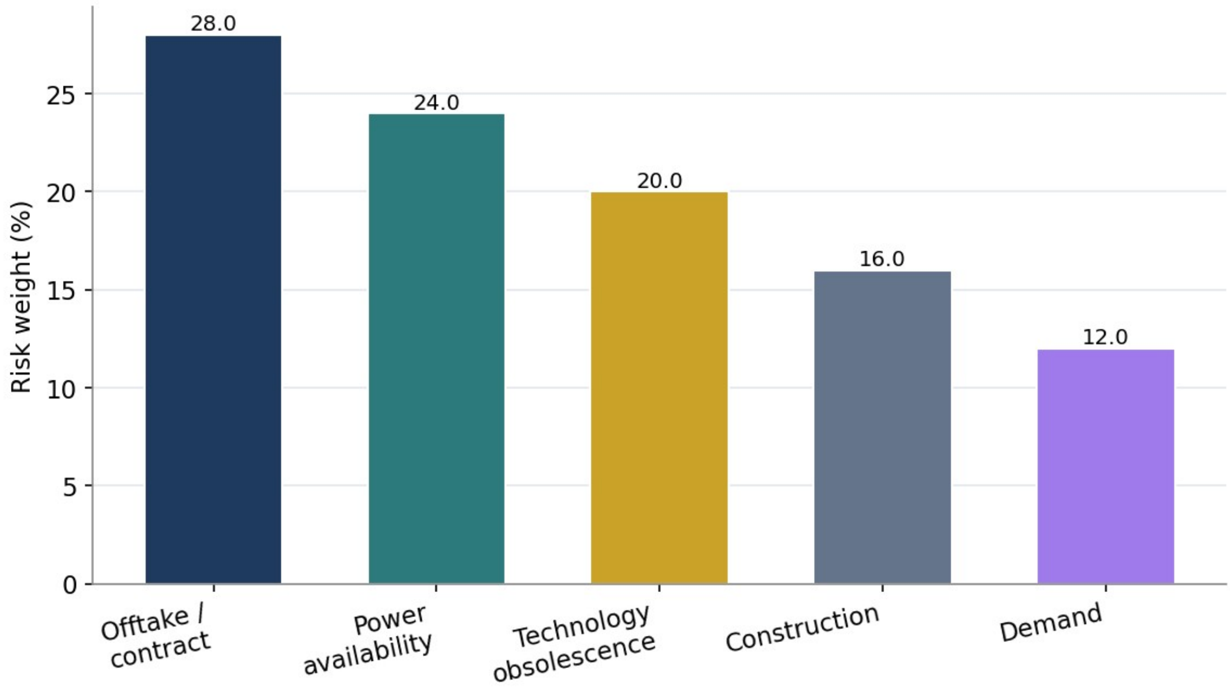
The loan-to-cost that the senior debt supports depends above all on the strength of the offtake contract, much as the financing of other contracted infrastructure depends on the strength of its offtake. A facility with a strong, long-term offtake from a creditworthy hyperscaler supports a high loan-to-cost, because the contracted revenue reliably services the debt; a facility built on speculation, without a committed offtake, supports a low loan-to-cost or no project debt at all, because the revenue is uncertain. The offtake is therefore the foundation of the capital stack, determining how much debt the facility can support, as the dedicated section explores.

The cost of capital across the stack reflects the project risk and the strength of the offtake. A well-contracted facility, with its risk reduced by the strong offtake, supports cheap senior debt and a moderate equity return; a speculative facility, with its higher risk, supports more expensive debt and demands a higher equity return. The stack is structured to match the capital to the risk, with the senior debt taking the contracted, lower-risk position and the equity taking the residual, higher-risk position. The structuring of the stack, and the loan-to-cost it supports, follows from the offtake and the project risk, as in other project finance.

5. The Risks Lenders Underwrite

A datacenter lender underwrites a distinctive set of risks, illustrated in Figure 4. The foremost is the offtake or contract risk, the risk that the customer that has contracted for the capacity does not pay or does not renew, which is the principal determinant of the financing. The power risk, the risk that the facility cannot secure the reliable, affordable power it requires, is distinctive to the asset and central, given the enormous power that AI datacenters consume. The technology-obsolescence risk, the risk that the facility becomes outdated as compute technology evolves, is distinctive and growing with the rapid evolution of AI hardware.

Figure 4. Datacenter Project Risks by Weight



The construction risk, the risk that the facility is not built on time and on budget, is common to infrastructure projects, and the demand risk, the risk that the demand the facility was built to serve does not materialise, applies particularly to speculative facilities without a committed offtake. The lender assesses each of these risks, and it structures the financing to mitigate them, through the offtake contract that addresses the contract and demand risks, the power arrangements that address the power risk, and the construction contracts that address the construction risk. The technology-obsolescence risk is the hardest to mitigate and is examined in its own section.

The relative weight of these risks distinguishes datacenter debt from other infrastructure finance. The power risk is far more prominent than in most infrastructure, because of the enormous and rising power consumption of AI datacenters, and the technology-obsolescence risk is distinctive, because unlike a road or a power plant, a datacenter can become technologically outdated. These distinctive risks, power and obsolescence, are what a datacenter lender must particularly understand and manage, and they are what distinguish datacenter debt as a specialist segment of infrastructure finance rather than a routine application of project-finance principles.

6. The Central Role of the Offtake

The offtake contract, under which a customer commits to use and pay for the facility capacity, is the foundation of datacenter financing, much as the power purchase agreement is the foundation of power-project financing. A strong offtake, a long-term commitment from a creditworthy customer to pay for the capacity, transforms a speculative real estate project into a contracted infrastructure project with reliable, bankable revenue, and it is what allows a datacenter to support substantial, cheap project debt. The strength of the offtake is, more than any other factor, what determines the financing the facility can support.

The strength of the offtake depends on its term, its counterparty, and its terms. A long-term offtake, of ten or fifteen years, from a creditworthy hyperscaler, with terms that commit the customer to pay regardless of its usage, is the strongest, supporting the most and the cheapest debt; a short-term offtake, from a weaker counterparty, with terms that allow the customer to reduce its commitment, is weaker, supporting less. The lender assesses the offtake along these dimensions, and the financing it provides reflects the offtake strength. A developer seeking to maximise the financing should secure the strongest possible offtake before seeking the debt.

The centrality of the offtake means that the sequence of a datacenter project is frequently offtake-first: the developer secures the offtake contract, and then raises the financing against it, rather than building speculatively and seeking customers afterward. This offtake-first sequence reduces the demand risk and supports the financing, and it is the prudent approach for a facility seeking project debt. A facility built speculatively, without a committed offtake, takes the demand risk and supports far less debt, and it is a riskier proposition that suits equity and patient capital more than project debt. The offtake-first approach is the standard for bankable datacenter projects.

7. The Financing Framework by Facility Type

The financing framework distinguishes facility types by their offtake structure. A hyperscaler-contracted facility, built to serve a single large customer under a strong long-term offtake, supports the most and cheapest debt, because its revenue is the most contracted and bankable. A colocation facility, serving multiple customers under shorter leases, supports moderate debt, because its revenue is diversified across customers but less contracted than a single strong offtake. A speculative or edge facility, without a committed offtake, supports the least debt and relies more on equity, because its revenue is uncertain.

The framework matches the financing to the offtake structure of the facility type. The hyperscaler-contracted facility, with its strong single offtake, suits a high-loan-to-cost project financing, much like other contracted infrastructure. The colocation facility, with its diversified but shorter-term revenue, suits a moderate-loan-to-cost financing that reflects the diversification and the shorter contracts. The edge or speculative facility, with its uncertain revenue, suits an equity-heavy financing that takes the demand risk. A developer should understand which type its facility is, and structure its financing accordingly, securing the offtake that supports the debt it seeks.

The framework also reflects the different risk profiles of the facility types. The hyperscaler-contracted facility concentrates its risk in the single customer, so the customer creditworthiness is paramount, while the colocation facility diversifies its risk across customers but takes more demand and renewal risk. The edge or speculative facility takes the full demand risk. A developer and a lender should understand the risk profile of the facility type, the concentration in the contracted facility, the diversification and renewal risk in the colocation, the demand risk in the speculative, and structure the financing to reflect it. The facility type determines both the financing and the risk profile.

8. The Lender Perspective

A datacenter lender is typically a project-finance lender, a bank, an infrastructure debt fund, or a specialist, and it underwrites the project much as it would other contracted infrastructure, with the distinctive datacenter risks added. It assesses the offtake contract as the foundation of the revenue, the power arrangements as the foundation of the operation, the construction as the delivery of the asset, and the technology and obsolescence as the durability of the asset. It lends against the contracted revenue, secured by the facility, at a loan-to-cost reflecting the offtake strength.

The lender particular focus is on the offtake and the power, the two factors most distinctive to and critical for a datacenter. It scrutinises the offtake counterparty creditworthiness, the offtake term and terms, and the security of the revenue, because the offtake is what repays the debt. And it scrutinises the power arrangements, the availability, the cost, and the reliability of the power, because without reliable, affordable power the facility cannot operate. A facility with a strong offtake and secure power gives the lender the comfort it needs; a facility with a weak offtake or uncertain power does not, regardless of the building quality.

Understanding the lender perspective tells the developer how to finance a datacenter well. It should secure a strong, long-term offtake from a creditworthy customer, arrange reliable and affordable power, manage the construction and technology risks, and present the project as a contracted infrastructure project with bankable revenue. A developer that presents a strong offtake and secure power accesses substantial, cheap project debt; a developer that presents a weak offtake or uncertain power finds the debt expensive or unavailable and must rely on equity. The offtake and the power are the keys to financing a datacenter on good terms, and the developer that secures them well finances the facility well.

9. Power and Technology Risk

The power risk is distinctive to datacenters and central to their financing, because power is the largest operating cost and the most critical input, and AI datacenters consume enormous and rising quantities of it. A facility that cannot secure reliable, affordable power cannot operate profitably, and the power arrangements, the grid connection, any on-site generation, the power purchase agreements, are therefore central to the financing. The GCC advantage in cheap, abundant power is a significant attraction for datacenter investment, but even in the region the enormous power demand of AI datacenters strains the supply, and securing the power is a central task.

The technology-obsolescence risk is the other distinctive risk, and it is the hardest to manage. Unlike a road or a power plant, which provides the same service for decades, a datacenter houses compute technology that evolves rapidly, and a facility built for one generation of technology may become outdated as new generations require different power, cooling and configuration. This obsolescence risk means a datacenter may have a shorter economic life than other infrastructure, or may require costly refurbishment to remain competitive, and the financing must reflect this through the amortisation, the tenor, and the assessment of the asset durable value.

Managing the technology-obsolescence risk requires the financing to be structured around a realistic view of the asset economic life and the cost of keeping it current. A lender financing a datacenter should not assume the long, stable life of traditional infrastructure, but should reflect the risk that the facility becomes outdated, through a shorter tenor, faster amortisation, and a conservative view of the residual value. The developer, for its part, should design the facility for flexibility, to accommodate evolving technology where possible, and should reflect the refresh cost in its economics. The obsolescence risk is the distinctive challenge of datacenter finance, and managing it well, through realistic economic-life assumptions and flexible design, is central to the discipline.

10. Considerations Specific to the GCC

The GCC structural advantages, cheap power, sovereign backing and capital, make it well-positioned for the datacenter buildout, and these advantages shape the financing. The cheap power reduces the largest operating cost, improving the economics and the bankability of regional datacenters. The sovereign backing, through national technology strategies and sovereign capital, provides both demand, as governments and government-linked entities require capacity, and capital, as sovereign vehicles invest in the buildout. The regional capital, both sovereign and private, is available to fund the substantial investment the buildout requires.

The region is also attracting the hyperscalers and large technology companies whose offtake supports the financing, as they establish regional capacity to serve regional demand and to leverage the cheap power. The presence of these creditworthy offtake counterparties is what makes bankable, contracted datacenter projects possible in the region, and it is a key enabler of the financing. A regional datacenter developer that can secure an offtake from one of these counterparties can finance its facility as contracted infrastructure, accessing the substantial project debt that a strong offtake supports.

The power dimension, while an advantage, also presents a regional challenge as the buildout accelerates. The enormous power demand of AI datacenters, even in a region of abundant power, strains the power infrastructure and raises questions of power allocation, grid capacity, and the integration of the datacenters with the region energy system, including its growing renewable capacity. The financing of datacenters is therefore increasingly intertwined with the financing of power, and a developer must secure not just the datacenter financing but the power that will run it, which may require power purchase agreements, on-site generation, or integration with the region energy strategy. The power dimension is both the region advantage and its central challenge in the datacenter buildout.

11. Indicative Case Studies

Three indicative cases show datacenter financing in action. The figures are synthetic and constructed for analytical clarity, not drawn from any specific transaction.

11.1 Case A: hyperscaler-contracted facility

Case A is a datacenter built to serve a single creditworthy hyperscaler under a strong, long-term offtake, which supports a high-loan-to-cost project financing because the contracted revenue reliably services the debt. The financing is structured as contracted infrastructure, with senior project debt supported by the offtake, mezzanine and equity, at a cost reflecting the strong offtake and reduced risk. The case illustrates the strongest financing position, where a strong offtake from a creditworthy customer supports substantial, cheap project debt.

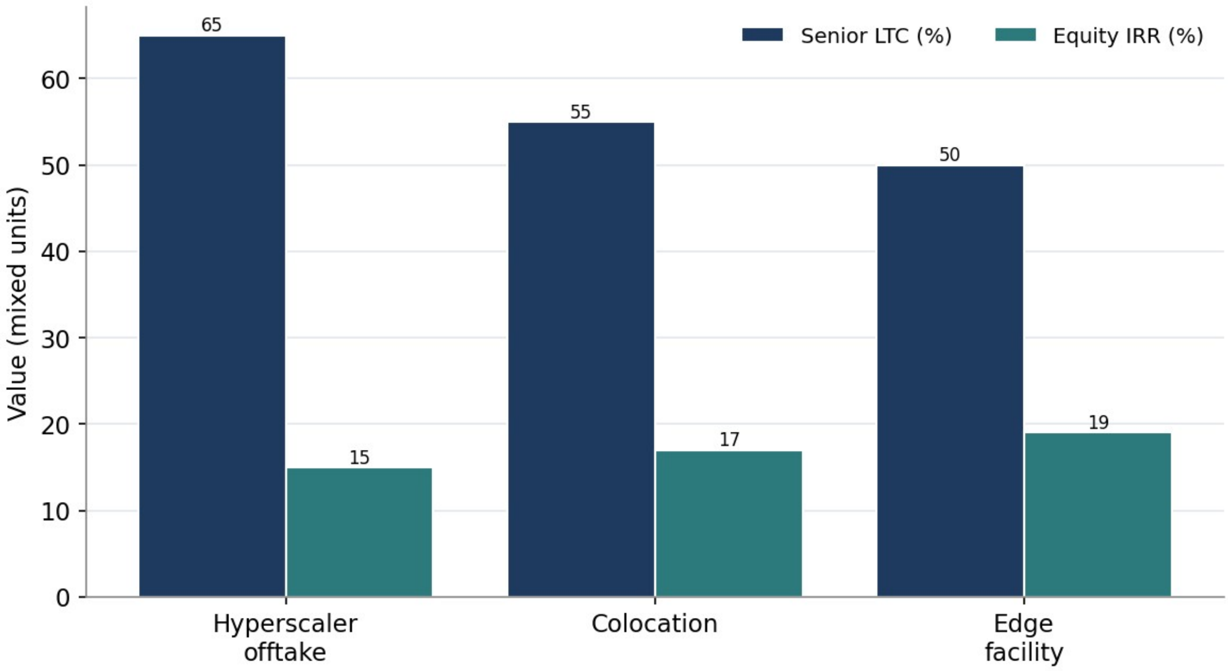
11.2 Case B: colocation facility

Case B is a colocation datacenter serving multiple customers under shorter leases, which supports a moderate-loan-to-cost financing reflecting the diversified but less-contracted revenue. The financing reflects the diversification across customers, which reduces the concentration risk, but also the shorter contracts and renewal risk, which increase the revenue uncertainty relative to a single strong offtake. The case illustrates the colocation financing, balancing the diversification benefit against the shorter-contract risk.

11.3 Case C: edge facility

Case C is an edge datacenter built closer to users to serve latency-sensitive demand, without a single committed offtake, which supports the least debt and relies more on equity, taking the demand risk. The financing is equity-heavy, reflecting the uncertain revenue and the demand risk, and it suits patient capital willing to take the risk for the higher return. The case illustrates the speculative or edge financing, where the absence of a committed offtake limits the debt and requires equity to take the demand risk.

Figure 5. Senior Loan-to-Cost and Equity IRR by Case



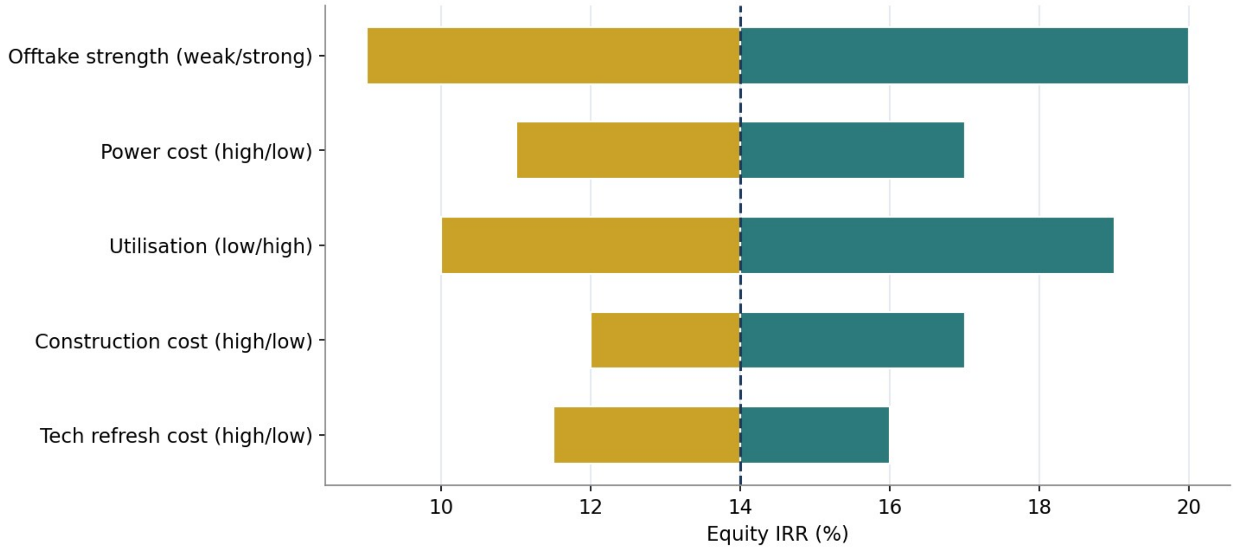
Synthetic figures for analytical comparison. Not a forecast.

Figure 5 compares the three cases on the senior loan-to-cost and the equity IRR. The hyperscaler-contracted facility supports the highest loan-to-cost at the lowest equity IRR, reflecting its low risk; the edge facility the lowest loan-to-cost at the highest equity IRR, reflecting its higher risk; and the colocation facility between. The comparison illustrates the central role of the offtake: the stronger and more contracted the revenue, the more debt the facility supports and the lower the equity return, while the more speculative the facility, the less debt and the higher the equity return, reflecting the risk the equity takes.

12. Sensitivity and Scenario Analysis

A tornado analysis identifies the variables that most influence the equity IRR of a datacenter project. Figure 6 presents the result.

Figure 6. Sensitivity of Equity IRR to Key Variables



Each bar shows the equity IRR when the labelled variable moves to its low or high case. Dashed line is the base case. Indicative.

The analysis shows that the offtake strength and the utilisation dominate the equity IRR, with the power cost, the construction cost and the technology refresh cost also significant. The prominence of the offtake strength confirms its central role: the offtake determines the revenue, which drives the return, and a strong offtake supports a high return while a weak one depresses it. The utilisation matters because it determines how fully the facility is used and paid for, and the power cost matters because it is the largest operating cost. The sensitivity confirms that the offtake and the operating factors, utilisation and power, drive the return.

Table 2. Scenario Matrix for Equity IRR

Scenario	Offtake	Power cost	Equity IRR
Strong	Long, creditworthy	Low	~20%
Base	Solid	Moderate	~14%
Weak offtake	Short / weaker	Moderate	~9%
Adverse	Speculative	High	~5%

Indicative scenarios. Not a forecast.

The scenario matrix shows how the return depends on the offtake and the power cost. The strong scenario, with a long offtake from a creditworthy customer and low power cost, produces an attractive return; the adverse scenario, with a speculative facility and high power cost, produces a poor one. The matrix underlines that the offtake and the power, the two factors most distinctive to and critical for a datacenter, are the principal determinants of the return, and that a developer should focus on securing a strong offtake and affordable, reliable power, which together determine whether the facility earns an attractive return.

13. International Comparison

Datacenter finance is a large and rapidly growing segment globally, particularly in the United States and Europe, where the AI boom is driving an enormous buildout and where datacenter debt has become a significant part of infrastructure finance. The structures, the role of the offtake, and the risks are well understood in these markets, and the GCC market can draw on the established international practice as it develops its own datacenter finance. The international experience shows that datacenter debt is a project-finance discipline anchored in the offtake, and that the power and technology risks are the distinctive challenges.

The international experience also highlights the power challenge that the GCC, despite its advantage, will face. In the mature markets, the enormous power demand of AI datacenters has strained power grids, raised power costs, and made power availability a binding constraint on the buildout, and it has driven datacenter developers to secure dedicated power, including renewable power and on-site generation. The GCC, with its abundant power, is better placed, but it will face the same pressure as its buildout accelerates, and the integration of the datacenter buildout with the region power and renewable strategy will be central. The international experience suggests that power, more than capital, may become the binding constraint on the buildout, even in the power-rich GCC.

14. Common Errors and How to Avoid Them

A recognisable set of errors recurs in datacenter financing.

- **Building without an offtake.** Building speculatively without a committed offtake takes the full demand risk and supports little debt. The remedy is to secure a strong offtake before seeking project debt.
- **Neglecting power.** Underestimating the power requirement and failing to secure reliable, affordable power undermines the project. The remedy is to secure the power arrangements before financing.
- **Ignoring obsolescence.** Assuming the long, stable life of traditional infrastructure ignores the technology-obsolescence risk. The remedy is to use realistic economic-life assumptions and flexible design.
- **Mis-financing the asset.** Financing a datacenter as a real estate project rather than contracted infrastructure misjudges the risk and the structure. The remedy is to finance it as project finance anchored in the offtake.

Each of these errors is avoidable through the disciplined approach the framework encourages: secure the offtake, secure the power, reflect the obsolescence risk, and finance the asset as contracted infrastructure. The developer that does so finances the facility well, while the one that does not takes excessive risk, undermines the project, or finances it on poor terms.

15. Implementation Roadmap

1. Secure a strong, long-term offtake from a creditworthy customer before seeking project debt, as the offtake is the foundation of the financing.
2. Arrange reliable, affordable power, through grid connection, power purchase agreements, or on-site generation, as power is the critical input and largest cost.
3. Structure the financing as contracted infrastructure project finance, with senior debt supported by the offtake, mezzanine and equity.
4. Reflect the technology-obsolescence risk through realistic economic-life assumptions, appropriate tenor and amortisation, and flexible design.

5. Match the financing to the facility type, hyperscaler-contracted, colocation, or edge, according to its offtake structure.
6. Manage the construction risk through appropriate contracts, and the power risk through secure arrangements.
7. Integrate the project with the region power and renewable strategy where relevant, recognising power as a potential binding constraint.

16. Strategic Perspective: Infrastructure for the AI Era

Datacenters are the infrastructure of the AI era, as essential to the AI economy as roads and power plants were to the industrial economy, and the GCC positioning itself as a hub for this infrastructure is a strategic bet on its role in the AI economy. The buildout is not merely a financing opportunity but a strategic investment in the region future, providing the computational infrastructure on which the AI economy will run and positioning the region as a provider of this infrastructure to itself and potentially to the wider region. The financing of the buildout is therefore part of a larger strategic endeavour.

For investors and lenders, the datacenter buildout offers a substantial new infrastructure asset class, combining the bankability of contracted infrastructure with the growth of the AI boom, and the GCC structural advantages make it an attractive place to deploy infrastructure capital. The asset class is new and carries the distinctive power and obsolescence risks, but for investors and lenders that understand these risks, it offers an opportunity to participate in the foundational infrastructure of the AI era at attractive returns. The development of datacenter finance in the region is creating a new infrastructure asset class for regional and international capital.

The broader strategic point is that the datacenter buildout connects the region capital, its power, and its technology ambitions in a single strategic endeavour. The region capital funds the buildout, its power runs the facilities, and the facilities serve its technology and AI ambitions, creating a virtuous connection between the region resources and its strategic goals. The financing of the buildout is the mechanism that mobilises the capital, and a region that finances the buildout well, securing the offtakes, the power and the capital, positions itself at the foundation of the AI economy. The strategic prize is significant, and the financing is the means of capturing it.

17. Conclusion

The AI boom is driving an unprecedented datacenter buildout, and the GCC, with its cheap power, sovereign backing and capital, is positioning itself as a hub. This paper has argued that datacenter debt is a project-finance discipline in which the strength of the offtake contract is the principal determinant of the financing, that the region structural advantages position it well for the buildout, and that the asset distinctive risks, power availability and technology obsolescence, must be carefully managed. A facility with a strong offtake and secure power supports substantial, cheap project debt; one without takes the demand risk and relies on equity.

The buildout is more than a financing opportunity; it is a strategic investment in the infrastructure of the AI era, connecting the region capital, power and technology ambitions. A region that finances the buildout well, securing the offtakes, the power and the capital, and managing the distinctive risks, positions itself at the foundation of the AI economy. For developers, investors and lenders, datacenter debt offers a substantial new infrastructure asset class combining bankability with growth, and the frameworks in this paper are intended to help them finance the buildout well and capture the strategic prize it represents.

18. Limitations and Directions for Further Research

This paper is framework-oriented and relies on indicative data, and its conclusions are directional rather than precise. The demand, cost and return figures are calibrated to observable conditions but are not empirical estimates, and the rapidly evolving AI and datacenter landscape makes them particularly uncertain. The technology-obsolescence risk, central to the asset, is inherently difficult to assess given the pace of technological change.

Several extensions would strengthen the analysis. An empirical study of GCC datacenter projects, their offtakes, financing and returns, would replace the indicative figures with data. A detailed analysis of the power dimension, the demand, the supply, and the integration with the region energy strategy, would sharpen the treatment of the binding constraint. And a study of the technology-obsolescence experience, how datacenter economic lives are evolving with technology, would illuminate the distinctive risk. Each is a natural subject for a later paper in this series.

Appendix A. Base Case Assumptions

Table 3. Base Case Assumptions

Parameter	Value	Parameter	Value
Senior project debt	55-65% LTC	Senior cost	~8-9%
Mezzanine	10-15% LTC	Equity IRR	~14-20%
Offtake term (strong)	10-15 years	Power	Largest operating cost
Economic life	Shorter than traditional	Tenor	Reflects obsolescence
Currency	AED (USD peg)	Region advantage	Cheap power, capital
Binding constraint	Power	Demand driver	AI compute

Indicative parameters used to generate the figures and case studies. Not transaction-specific.

Appendix B. Glossary of Terms

Table 4. Glossary of Key Terms

Term	Definition
Datacenter	A facility housing servers, power and cooling for computation.
Offtake contract	A customer commitment to use and pay for capacity.
Hyperscaler	A large cloud or technology company requiring vast capacity.
Colocation	A facility serving multiple customers under leases.
Edge facility	A datacenter located close to users for low latency.
Project finance	Financing secured by a project and its contracted

	revenue.
Power purchase agreement	A contract for the supply of power to the facility.
Technology obsolescence	The risk a facility becomes outdated as technology evolves.
Utilisation	The proportion of the facility capacity used and paid for.
Loan-to-cost	The debt as a proportion of the project cost.

Definitions provided for reference.

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About the Author

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