

GCC Data-Centre Valuation under Subsidised, Contracted and Merchant Power

An Evidence-Gated Framework for Tariffs, Indexation, Reliability and Sovereign Support

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Abstract

Electricity can be the largest variable operating input in a data centre, yet the economic meaning of a quoted power price differs across Gulf Cooperation Council markets and projects. A standard tariff can contain government policy, fuel adjustments and customer classifications. A contracted supply can contain take-or-pay obligations, indexation, availability terms and change-in-law exposure. A merchant or market-linked position can expose cash flow to fuel, system and scarcity conditions. None of these structures proves reliable delivery, customer pass-through or durable support.

This paper develops a GCC Power-Structure Valuation Framework for boards, investors, lenders, developers and transaction advisers. It separates tariff, contracted and merchant price components; tests legal eligibility, duration, indexation, volume, network cost, reliability, carbon attributes, sovereign support and customer pass-through; and reconciles power economics to billable capacity, operating cash, financing and enterprise value. Discounted cash flow controls the analysis. Normalised value-per-megawatt, replacement cost and scenario analysis provide cross-checks.

The worked case is wholly hypothetical. An 80 MW customer-usable campus operates at 70 per cent billable utilisation and a 1.28 power usage effectiveness ratio. This produces 56 MW of average billable IT load and approximately 628 GWh of annual facility electricity demand. The model compares protected, contracted and merchant-linked prices of USD 45, USD 65 and USD 95 per MWh. It assumes contracted service revenue of USD 165 per billable kW per month, sustaining capital of USD 12 million a year and an illustrative enterprise value range of USD 0.95 billion to USD 1.45 billion. These figures do not describe an identified company, tariff, support arrangement or transaction.

The analysis concludes that a low observed tariff should not be capitalised as a permanent competitive advantage without evidence of legal entitlement, funding, duration and survival through ownership or use changes. A power contract creates value only when delivery, price, indexation, volume, curtailment, network cost and credit terms align with customer service and financing. Merchant exposure can preserve flexibility while creating liquidity and covenant risk. Investment committees should value power as a portfolio of enforceable rights and obligations, then test the cash consequences of repricing, delay, curtailment, efficiency change and support withdrawal.

JEL Classification: G12, G31, G32, L86, L94, Q41

Keywords: GCC data centres, power pricing, electricity tariffs, power purchase agreements, merchant power, indexation, sovereign support, data-centre valuation, discounted cash flow, project finance

1. Define the valuation decision

The decision question is which power rights, prices and support mechanisms justify value in the transaction case. The evidence record should begin with transaction perimeter, facilities, utility accounts, supply contracts, tariff decisions, customer contracts and cash. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][2]

The principal failure is that a single blended power price can conceal incompatible rights, durations and risks. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to separate regulated, contracted, merchant, network, reliability and environmental value drivers. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

2. Adopt a power-structure dictionary

The decision question is how subsidised, standard-tariff, contracted, self-generated and merchant supply are defined across the portfolio. The evidence record should begin with laws, tariff schedules, licences, supply agreements, metering and settlement records. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [3][4]

The principal failure is that commercial language can label a tariff or bilateral arrangement as subsidised without proving economic support. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to approve one evidence-based classification for every meter, site and supply period. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Figure 1. Proposed GCC power-structure classification



Every structure requires evidence of price, duration, volume, delivery, credit and transfer

Analytical framework; governing law and executed documents control classification.

Table 1. Power-structure definitions

Structure	Minimum evidence	Principal valuation issue
regulated tariff	published decision and eligible account	reclassification and reset
policy support	governing instrument and funded mechanism	duration and withdrawal
bilateral contract	executed price, volume and delivery terms	indexation and credit
self-generation	permits, fuel, dispatch and operating evidence	capital and availability
merchant-linked	market access and settlement evidence	volatility and liquidity
customer pass-through	enforceable recovery formula	timing and leakage

Proposed definitions; governing instruments and executed documents control treatment.

3. Fix the legal and geographic perimeter

The decision question is which entities, sites, meters, grid rights, supply contracts and support entitlements transfer. The evidence record should begin with corporate records, land and lease documents, licences, utility accounts, contracts and change-of-control terms. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [5][6]

The principal failure is that an attractive price can sit outside the acquired entity or terminate on a change in owner, use or load. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to map legal holder, beneficiary, location, permitted use, transfer condition and expiry. The base case should retain only evidenced rights, measured demand and costed obligations.

The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

4. Reconcile tariff to economic cost

The decision question is how the billed customer price relates to generation, fuel, transmission, distribution, system and policy costs. The evidence record should begin with regulatory decisions, bulk supply tariffs, network charges, customer bills and government disclosures. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [3][7]

The principal failure is that the customer tariff can differ from system cost and the difference may change with policy. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to model the observed bill separately from the underlying economic-cost and policy bridge. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

5. Verify subsidy and support eligibility

The decision question is whether a lower price arises from an enforceable entitlement, policy classification, budget transfer or discretionary arrangement. The evidence record should begin with legislation, eligibility decisions, customer classification, appropriation, compensation and renewal evidence. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [3][8]

The principal failure is that management can treat a policy benefit as a contractual right despite conditions, review or withdrawal. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to assign duration and probability from the governing instrument and funding mechanism. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

6. Test transfer and change-of-use risk

The decision question is whether acquisition, expansion, customer type, ownership or workload changes alter the price or support. The evidence record should begin with tariff rules, licences, utility correspondence, closing conditions and proposed operating plan. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [4][5]

The principal failure is that value can disappear when the site crosses a demand band or changes legal customer classification. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to price the expected post-closing use and retain reclassification downside. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

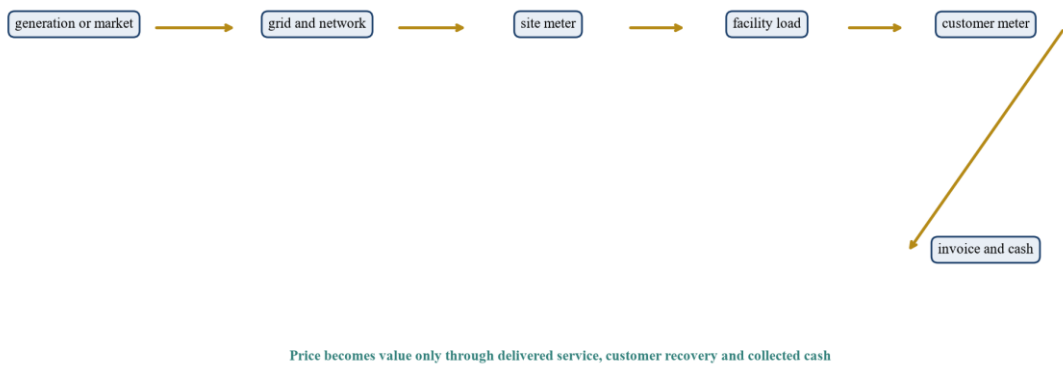
7. Diligence contracted supply

The decision question is whether a bilateral supply, sleeved arrangement or power purchase agreement delivers the required volume and service. The evidence record should begin with executed contracts, schedules, metering, settlement, credit support, curtailment, remedies and termination. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [6][9]

The principal failure is that a headline fixed price can exclude network charges, imbalance, shape, losses, taxes and replacement energy. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to rebuild the all-in delivered price and service obligation from the executed documents. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Figure 2. Proposed power-rights to customer-cash architecture



Analytical framework; actual rights and settlement routes require legal and financial verification.

Table 2. Contracted-power diligence

Term	Evidence question	Cash consequence
volume	fixed, shaped or tolerance band?	surplus and deficit cost
price	energy only or all-in delivered?	margin basis
indexation	which benchmark, date, cap and floor?	escalation
delivery	firm, interruptible or conditional?	customer service risk

Term	Evidence question	Cash consequence
take-or-pay	what minimum and make-up rights apply?	ramp-up cost
termination	which default, change and expiry rights apply?	replacement exposure

Proposed checklist; executed terms determine exposure.

8. Model price indexation

The decision question is which inflation, fuel, foreign-exchange, benchmark, floor, cap and review clauses change future cost. The evidence record should begin with contract formulae, tariff decisions, historic settlements, benchmark data and reset notices. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [4][10]

The principal failure is that a fixed-price description can contain material escalation or reopeners. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to calculate every index on its contractual date and test cap, floor and correlation. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

9. Separate energy, capacity and network charges

The decision question is which charges pay for consumption, reserved capacity, peak demand, connection, losses and system use. The evidence record should begin with bills, tariff schedules, connection agreements, metering and demand profiles. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [3][7]

The principal failure is that cost per MWh can omit capacity and network obligations that persist at low utilisation. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to forecast each charge from its own driver and reconcile it to invoices. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Table 3. All-in electricity-cost bridge

Component	Driver	Evidence
energy	metered MWh	tariff or supply contract
capacity	reserved kW or peak demand	bill and network schedule
network	connection and system use	regulated charge
losses and imbalance	profile and settlement	market or contract statement
tax and levy	statutory base	legislation and invoice
environmental attribute	certified MWh	registry and retirement

10. Test volume, shape and take-or-pay

The decision question is how hourly demand and minimum purchase obligations compare with ramp-up and customer utilisation. The evidence record should begin with meter intervals, IT-load forecasts, PUE, contract quantity, tolerance, banking and make-up rights. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][9]

The principal failure is that a cheap contracted block can create stranded take-or-pay cost during delayed ramp-up. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to align supply shape with facility load and model surplus, deficit and make-up treatment. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

11. Value reliability and redundancy

The decision question is how firm supply, reserve margin, outage performance, dual feeds and on-site generation support customer service. The evidence record should begin with grid codes, service levels, outage logs, network diagrams, fuel plans and test evidence. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][11]

The principal failure is that low-cost energy can carry weak value when interruption destroys customer credits and renewal economics. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to link reliability evidence to service revenue, remedies and replacement power. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

12. Price curtailment and interruption

The decision question is which instructions, thresholds, notice, compensation and restoration rules govern constrained supply. The evidence record should begin with grid and supply contracts, operating procedures, event history, metering and compensation records. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [9][11]

The principal failure is that nominal availability can exclude commercially important curtailment periods. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to value expected lost contribution, customer remedies and resilience cost by event. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

13. Reconcile power usage effectiveness

The decision question is how IT load, cooling, electrical losses and auxiliary demand translate billable load into facility consumption. The evidence record should begin with meter hierarchy, commissioning tests, weather data, operating logs and customer specifications. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][12]

The principal failure is that an assumed efficiency ratio can understate electricity demand or overstate saleable capacity. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to use measured and climate-adjusted PUE with a transparent numerator and denominator. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

14. Map customer pass-through

The decision question is which electricity and adjustment costs can be recovered from customers and on what timing. The evidence record should begin with customer contracts, price schedules, metering, invoicing, caps, floors, notice and dispute records. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [13][14]

The principal failure is that a facility can bear power inflation while customer prices remain fixed or lagged. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to model gross cost, recoverable cost, timing, leakage and customer elasticity separately. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Table 4. Customer pass-through matrix

Cost item	Recovery mechanism	Principal leakage
base electricity	fixed or metered pass-through	contracted cap
fuel adjustment	indexed surcharge	notice lag
network charge	allocation formula	utilisation mismatch
carbon attribute	premium or bundled service	unretired certificate
backup generation	event or reserved-capacity fee	disputed event
tax and levy	statutory change clause	excluded tax

15. Verify carbon and clean-energy claims

The decision question is which certificates, contractual attributes and emissions factors support customer claims and price premiums. The evidence record should begin with certificate registry, procurement contracts, retirement records, metering and disclosure controls. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [15][16]

The principal failure is that renewable language can double count attributes or confuse physical supply with certificates. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to separate electricity delivery, environmental attributes, emissions accounting and premium revenue. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

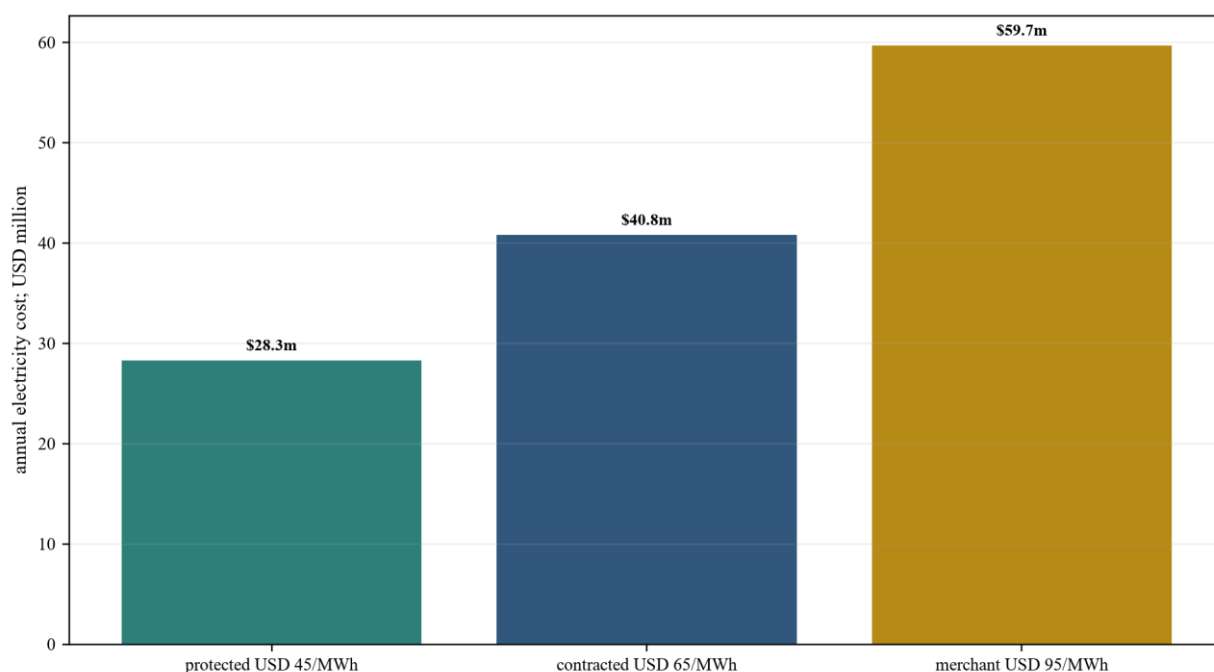
16. Build the power-cost forecast

The decision question is how load, efficiency, price, indexation, network cost, tax, support and pass-through create annual cash. The evidence record should begin with site and meter forecasts, contracts, tariff decisions, customer terms and working-capital records. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][4]

The principal failure is that one price assumption can hide different volume and timing drivers. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to construct a meter-to-cash model with auditable formulae and scenario switches. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Figure 3. Hypothetical annual electricity cost by power structure



Wholly hypothetical USD millions; prices and demand do not describe an identified site.

Table 5. Hypothetical annual operating case

Metric	Assumption	Result
customer-usable capacity	80 MW	80 MW
billable utilisation	70%	56 MW
PUE	1.28	71.68 MW facility load
annual facility demand	8,760 hours	627.9 GWh
contracted service price	USD 165/kW-month	USD 110.9m revenue
sustaining capital	annual	USD 12.0m

Wholly hypothetical USD millions unless stated; figures do not describe an identified company.

17. Estimate sovereign-support durability

The decision question is how law, policy, fiscal capacity, strategic designation and precedent affect the continuation of support. The evidence record should begin with statutes, budgets, regulator decisions, compensation records, state-company filings and review clauses. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [3][17]

The principal failure is that a state-related counterparty or strategic policy can be mistaken for an unconditional sovereign guarantee. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to identify the exact obligor, legal mechanism, funding route, review right and remedy. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

18. Value protected-price operations

The decision question is how evidenced tariff or support duration affects operating cash and terminal value. The evidence record should begin with eligibility, billed price, economic-cost bridge, customer contracts, operating cost, capital and tax. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [3][8]

The principal failure is that a temporary price benefit can be capitalised beyond its evidenced life. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to limit protected pricing to the evidenced period and apply an explicit reversion case. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

19. Value contracted supply

The decision question is how enforceable price, volume, delivery, indexation and credit terms affect operating value. The evidence record should begin with supply contract, utility interfaces, meter data, settlements, customer cash and financing terms. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [6][9]

The principal failure is that contract value can ignore take-or-pay, credit collateral, curtailment and basis exposure. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to discount site cash after all supply obligations, collateral and replacement costs. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

20. Value merchant-linked exposure

The decision question is how spot, fuel, system and scarcity prices affect margin, liquidity and terminal assumptions. The evidence record should begin with market rules, price history, hedges, load shape, settlement and customer pass-through. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [10][18]

The principal failure is that a central merchant price can understate tails and working-capital demand. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to use hourly or shaped scenarios, coherent shocks and liquidity reserves. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

21. Normalise value per megawatt

The decision question is how transaction and public-company evidence compares after power structure, utilisation, PUE, contracts and remaining capital. The evidence record should begin with disclosed values, capacity definitions, energy arrangements, operating cash, capex and dates. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [19][20]

The principal failure is that an enterprise-value multiple can transfer another asset's power advantage to the subject. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to compare like-for-like billable capacity and reconcile every multiple to DCF. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

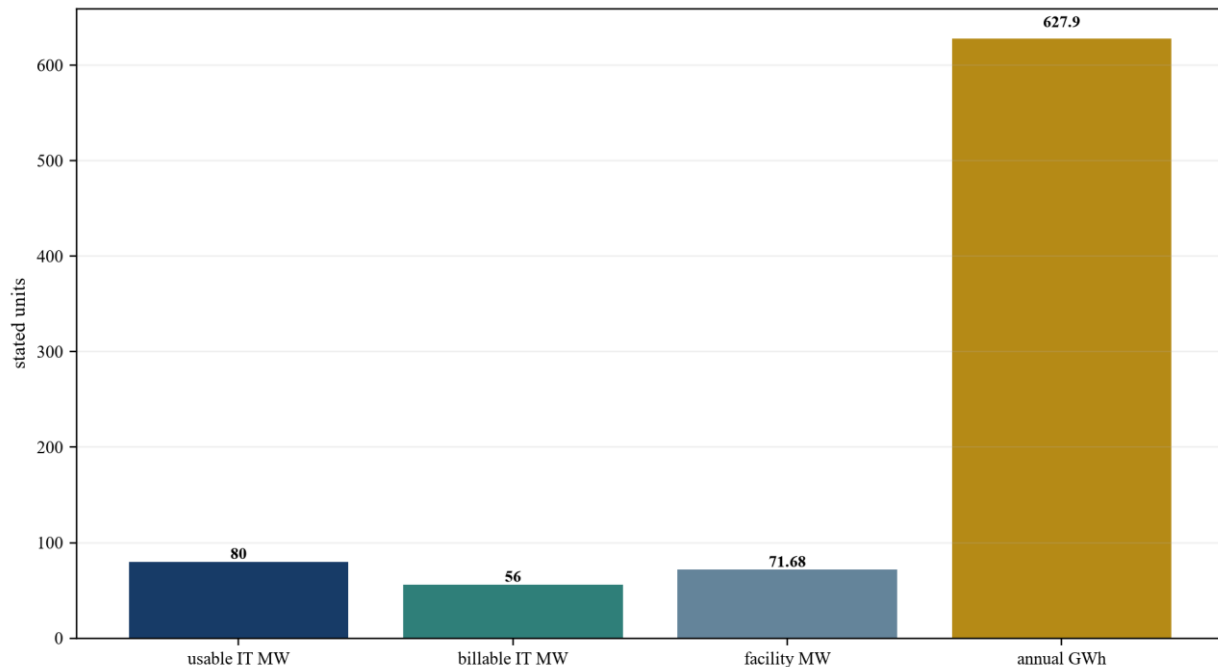
22. Apply the hypothetical operating case

The decision question is how 80 MW of usable capacity converts into 56 MW of billable load and about 628 GWh of facility demand. The evidence record should begin with the illustrative meter, utilisation, PUE, price, customer and cost assumptions. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][2]

The principal failure is that one headline MW denominator can obscure consumption and contract economics. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to bridge usable capacity through billable load, facility demand, revenue and power cost. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Figure 4. Hypothetical capacity-to-electricity-demand bridge



Wholly hypothetical; the case assumes 80 MW usable capacity, 70 per cent utilisation and 1.28 PUE.

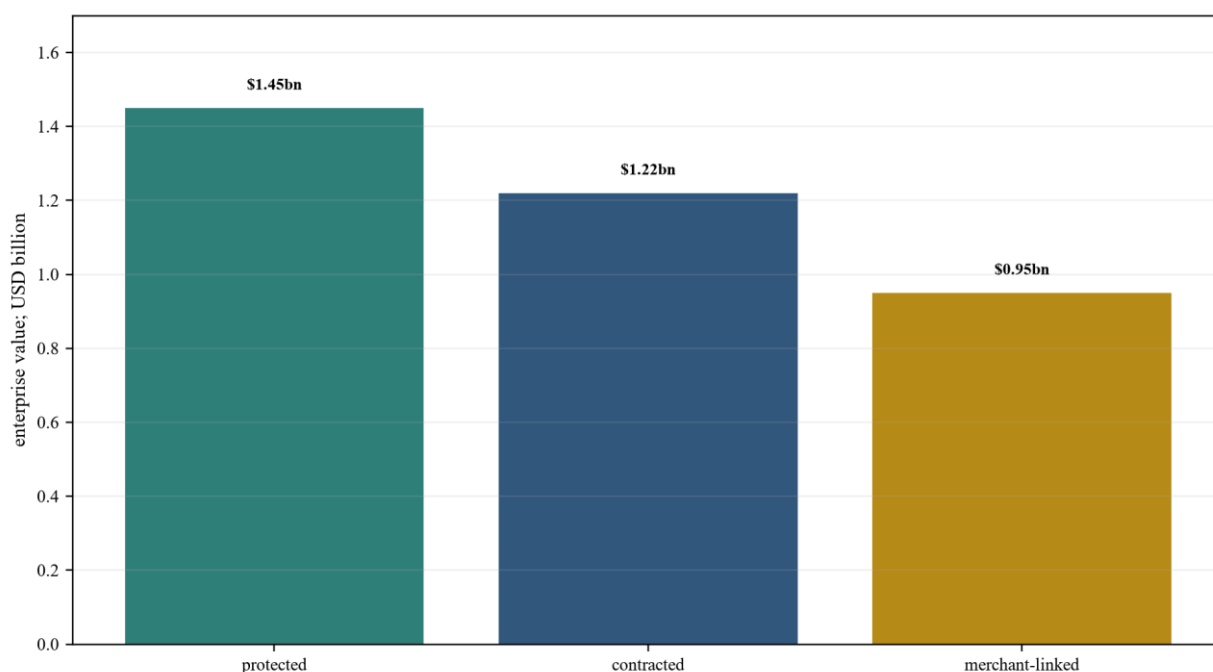
23. Bridge power structure to enterprise value

The decision question is how protected, contracted and merchant cases change EBITDA, funding, risk and terminal value. The evidence record should begin with illustrative revenue, power cost, operating cost, sustaining capital, tax and discount assumptions. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [18][21]

The principal failure is that a lower price can be valued without its duration, conditions or reversal risk. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to show the complete cash-flow and valuation bridge for each structure. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Figure 5. Hypothetical enterprise-value range by power structure



Wholly hypothetical USD billions; this is not a valuation opinion.

Table 6. Hypothetical valuation comparison

Case	Power price	Annual electricity cost	Enterprise value
protected	USD 45/MWh	USD 28.3m	USD 1.45bn
contracted	USD 65/MWh	USD 40.8m	USD 1.22bn
merchant-linked	USD 95/MWh	USD 59.7m	USD 0.95bn
support withdrawal stress	USD 115/MWh	USD 72.2m	USD 0.73bn

Wholly hypothetical; values are illustrative and not a valuation opinion.

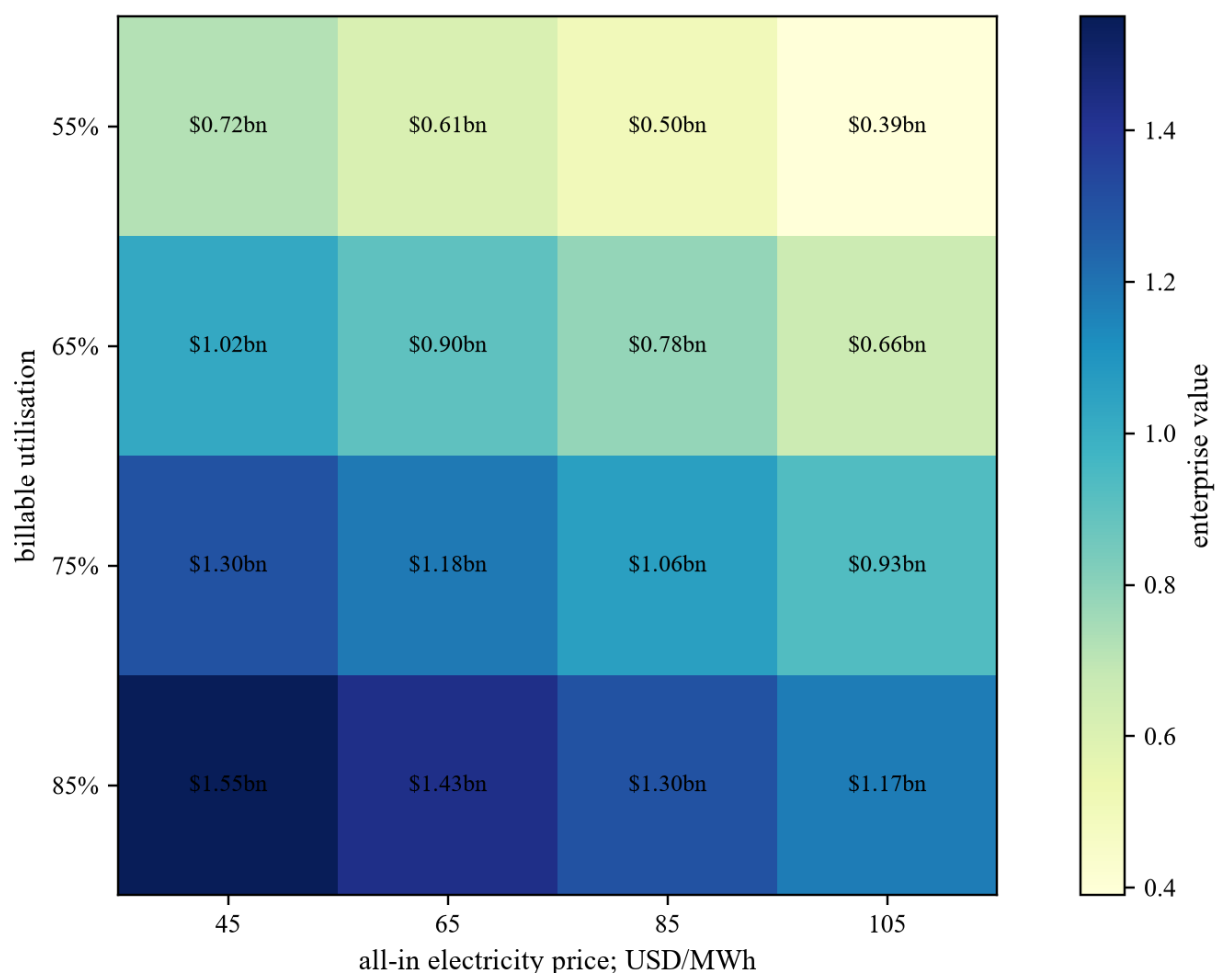
24. Stress repricing, utilisation and efficiency

The decision question is which combinations of price, billable load, PUE, pass-through and curtailment drive value loss. The evidence record should begin with scenario model, contract limits, operational evidence, customer terms and financing covenants. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [1][18]

The principal failure is that single-variable sensitivities can miss compounding demand and power shocks. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to test coherent operational and market cases with explicit management actions. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Figure 6. Hypothetical value sensitivity to power price and billable utilisation



Wholly hypothetical USD billions; this is not a valuation opinion.

25. Size liquidity and hedging

The decision question is which reserves, collateral, caps, swaps, fixed blocks and pass-through mechanisms protect cash. The evidence record should begin with settlement timing, collateral terms, hedge documents, customer billing and downside forecasts. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [18][22]

The principal failure is that a profitable annual case can fail through intramonth margin calls or collection lags. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to size liquidity to the stressed settlement cycle and hedge only evidenced exposures. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

26. Match financing to power risk

The decision question is which project debt, corporate debt, covenants and draw conditions fit the supply structure. The evidence record should begin with sources and uses, operating cash, power contracts, tariff

evidence, security, reserves and covenants. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [22][23]

The principal failure is that debt service can rely on a tariff advantage or support period shorter than the loan. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to align tenor, amortisation, coverage and cash traps with repricing and termination risk. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

27. Translate diligence into price and protections

The decision question is which adjustment, condition, indemnity, escrow, earn-out and covenant allocate power uncertainty. The evidence record should begin with diligence findings, utility consents, contracts, financing, remedies and operating plan. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [5][6]

The principal failure is that valuation caveats can disappear from transaction documents. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to attach every material power dependency to value, protection, owner and deadline. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

28. Reach the investment decision

The decision question is whether evidence-gated operating value, downside liquidity, protections and financing justify commitment. The evidence record should begin with perimeter, tariff and contract ledger, meter model, cash flows, scenarios, funding and board record. Every item requires a source, date, legal holder, jurisdiction and reconciliation to the meter and site model. Regional policy and market development provide context. Site-specific documents still control price, duration, probability and cash-flow recognition. [21][23]

The principal failure is that a strategic data-centre narrative can displace evidence about delivered power and collected cash. The model should expose the contractual dependency, economic driver and event that confirms or rejects it. Management estimates can support scenarios when they are identified as assumptions and remain separate from observed evidence.

The recommended response is to approve a value range tied to enforceable rights and funded downside actions. The base case should retain only evidenced rights, measured demand and costed obligations. The investment committee should see value at risk, the earliest observable indicator and the intervention available before cash or capital is released.

Table 7. Investment-committee decision record

Decision	Evidence required	Possible action
protected price	eligibility, duration and funding	limit value to evidenced term

Decision	Evidence required	Possible action
contracted supply	price, volume, delivery and credit	reprice or protect
merchant exposure	market, hedge and liquidity evidence	reserve or cap
customer recovery	enforceable pass-through and timing	amend contract
financing	resilient cash and covenant headroom	resize or restructure
unresolved dependency	quantified cash and legal allocation	condition, escrow or decline

Proposed governance; transaction-specific approvals remain necessary.

Frequently asked questions

Q: What does subsidised power mean in a data-centre valuation? A: The label can refer to a customer tariff below economic cost, a policy classification, a budget-funded support mechanism or a negotiated arrangement. Valuation requires the governing instrument, eligible account, funding route, duration, review rights and transfer conditions.

Q: Is a regulated tariff equivalent to a fixed power contract? A: No. A regulated tariff can change through government or regulator decisions. A fixed contract follows its executed pricing, indexation, volume, delivery and termination terms. Both require an all-in delivered-cost bridge.

Q: How should a power purchase agreement affect enterprise value? A: Its effect follows enforceable price, volume, shape, delivery, indexation, collateral, network, curtailment, credit and termination terms. The model should include every obligation and the cost of replacement supply.

Q: What is merchant power exposure? A: Merchant exposure links some or all electricity cost to market, fuel, system or scarcity prices. The valuation should model shaped demand, tails, settlement timing, liquidity, hedging and customer pass-through.

Q: How does PUE affect valuation? A: PUE converts IT load into total facility electricity demand. A higher ratio increases power cost for the same billable load. The model should use measured and climate-adjusted evidence and retain a clear meter boundary.

Q: Can clean-energy certificates change value? A: Certificates can support customer claims or premium services when ownership, registry issuance, transfer and retirement are verified. They do not by themselves prove physical renewable delivery or eliminate electricity-price exposure.

Q: What power downside should lenders test? A: Relevant cases include repricing, support withdrawal, contract expiry, curtailment, PUE deterioration, delayed customer ramp-up, pass-through limits, collateral calls and collection lags. Compound cases should test covenant and liquidity effects.

Q: How should terminal value treat a temporary tariff advantage? A: The advantage should continue only for its evidenced duration. The terminal case should use a supportable long-run delivered price, renewal assumption and explicit reversion or replacement cost.

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