

DATA CENTER CAMPUS DEVELOPMENT

North Texas candidate site 121-Acre Site Assessment

North Texas • Assessment date: September 10, 2026

Coordinates withheld

Candidate two-parcel assembly: **approximately 121 recorded acres.**

Development proposition

Targeted power and resilient-campus feasibility. Ten 50 MW IT hall targets form a spatial scenario. Full backup-fleet layout, emissions compliance, cooling and utility capacity remain unresolved. Construction commitment is conditional on closing these gates.

Prepared by **Sitebraid**. Research-based site selection and development assessment, with a companion cost workbook.

All budgets are estimated and projected for planning purposes and remain subject to design, utility requirements, procurement and contractual terms.

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SITE ASSESSMENT

Contents

01. Executive Assessment	3
02. Site Configuration and Buildable Area	5
03. Electrical Infrastructure and Interconnection	14
04. Natural Gas Supply and Onsite Generation	20
05. Water Supply and Cooling	26
06. Fiber Connectivity	30
07. Environmental, Geotechnical and Permitting Constraints	31
08. Geothermal Potential	37
09. Integrated Development Capacity	38
10. Development Cost Framework	40
11. Delivery Program	51
12. Qualification Budget and Decision Gates	52
13. Investment Recommendation	53
14. Methodology and Sources	54

SECTION 01

Executive Assessment

Retain the 121-acre candidate site for targeted first-phase qualification; hold acquisition and major equipment commitments. The candidate assembly and crossing transmission support further work. Utility service, cooling performance and a permitted backup installation remain the controlling evidence gaps.

Power: evaluate a grid-led 100 MW IT first phase against separately engineered onsite supply. The mapped 345 kV corridor is a connection lead, not available import capacity. Both diesel backup and gas-based alternatives require site-specific emissions and fuel reliability evidence.

Water: closed-loop cooling reduces ongoing evaporative demand but leaves charging, potable, firewater, treatment and generation uses. Mustang supply and alternative logistics remain unconfirmed.

Fiber: regional providers offer route-investigation leads. Two accessible endpoints and independent physical paths have not been established.

Land: the two-parcel assembly has approximately 121 recorded acres. The compact ten-hall layout is a spatial study; the larger five-hall support case also lacks an accepted complete equipment layout. Roads, drainage, easements and neighboring receptors affect both.

Entitlements: the retained overlays support unincorporated county jurisdiction. The county's severe ozone status makes whole-source air permitting material even for emergency generation. Source classification and ambient compliance remain separate tests.

Decision: the first 100 MW and ultimate 500 MW targets remain conditional. Resolve the provider intake path and a coordinated cooling/backup/access configuration before promoting either to investment capacity. No opening date or committed MW is established.

AIR primary source · ERCOT primary source · the distribution cooperative primary source · CAD primary source · Checked September 10, 2026

SECTION 01

Key Development Parameters

Measure	Assessment basis
Gross area	approximately 121 recorded acres; approximately 121 GIS acres
Screened land	approximately 98 acres after corridor/perimeter assumptions
Compact layout	10 × 50 MW IT hall targets; 500 MW spatial scenario
Expanded-support alternative	5 × 50 MW IT hall targets; 250 MW spatial scenario
Phased grid-led requirements	100 → 300 → 500 MW IT cumulative
Facility design allowance incl. reserve	Normal design: 126 / 378 / 630 MW; hot-day: 131.25 / 393.75 / 656.25 MW
Cooling/vendor validation	Not established; named performance requirements in Section 9
Backup compliance	Unresolved; illustrative 270-unit full fleet requires engineered controls and permitting
Committed capacity	Not established
Estimated/projected priced scope	\$6.09 billion; customer IT and unresolved utility work excluded
Estimated/projected first phase	\$1.35 billion; includes shared land and infrastructure
Early qualification envelope	\$2.58 million; staged, not authorization
Assessment basis	September 10, 2026 public-source update; GIS basis September 6, 2026

All budgets are estimated and projected for planning purposes and remain subject to design, utility requirements, procurement and contractual terms.

county appraisal district parcel records • Turner Q2 2026 index, July 24 release • T&T cost inclusions and exclusions

Readiness parameter	Current finding
First-power timing	Unestablished; no documented eligible intake or utility milestone
Independent backup	Illustrative fleet only; installed space, fuel autonomy and air approval open
Public-source refresh	September 10, 2026; retained spatial and cost source vintages disclosed

SECTION 02

Property Assembly and Access

The point and stated acreage match a two-parcel assembly on two intersecting county roads. Both records identify the landowner. The match is strong, but the owner’s intended boundary has yet to be confirmed.

Parcel	Recorded acres	Survey
Parcel A	approximately 80	Survey tract A
Parcel B	approximately 41	Survey tract B
Total	approximately 121	Single connected, L-shaped candidate

The current queried county appraisal district layer, municipal and ETJ layers and county ETJ layer return **no intersection with the full assembly**. The ETJ service contains 35 records, confirming a functioning layer. The working approval path is **unincorporated county**: county development/plat and drainage review, Fire Marshal commercial review, and road access coordination. A title/legal review must reconcile any later annexation or recorded agreement.

the secondary county road borders the north; the candidate site provides the eastern approach. Aerial imagery shows rural roads and nearby homes. The practical access solution is two separated entrances, improved turning areas and a reviewed heavy-haul route. Section 10 records the road-work allowance; Section 12 sets the qualification gates.

Boundary and topographic surveys are proposed to confirm legal access, parcel limits and design elevations. Their scope and estimated fees are addressed in Sections 10 and 12; no completed or commissioned survey is established in this assessment.

county appraisal district parcel records • county development requirements • ETJ polygons • municipal and ETJ GIS • Esri World Imagery

The September 10 CAD refresh returns both specified parcel IDs. Recorded acreage and ownership are appraisal evidence; legal control and deeded easements require title/survey confirmation.

CAD primary source • Checked September 10, 2026

The refreshed geometry is identical to the retained parcel union, measuring approximately 121 GIS acres. The live CAD records carry a propYear field of 2027; this is the retrieved dataset label, not a claim of a completed 2027 appraisal or legal survey.

SECTION 02

Site Context

Site imagery withheld in the sample edition

The delivered assessment includes a georeferenced aerial with the parcel boundary, a topographic surface and a regional infrastructure map.

The visible land use is predominantly cultivated farmland, with homes along adjoining roads. There is little visible demolition scope, but the domestic setting makes noise, lighting, landscaping and construction traffic important design controls.

The aerial is a visual screening layer. Its acquisition date was not established from the export. The boundary comes from the current parcel record; any buried farm infrastructure, wells, tanks or historic uses require field and title work.

Esri World Imagery • county appraisal district parcel records

SECTION 02

Topography and Grading

The site has modest overall relief but extensive expansive clay. Pad grading and drainage must be planned together. The recovered USGS raster ranges from about 225 to 238 meters elevation; approximately 61.5% of the footprint is in the 2–5% slope class and 37.7% is below 2%.

Site imagery withheld in the sample edition

The delivered assessment includes a georeferenced aerial with the parcel boundary, a topographic surface and a regional infrastructure map.

A median-level screen across the ten development envelopes produces about **46,100 cubic yards of cut and 56,200 cubic yards of fill**. This uses sampled ground levels and omits stripping, soil volume change, detailed drainage and final platform gradients. The cost model therefore retains a separate 250,000-CY overall civil grading scenario rather than treating the pad-only calculation as a contractor takeoff.

USGS 3DEP elevation service • NRCS Soil Data Access • TxDOT March 2026 highway cost index

SECTION 02

Net Buildable Area

Land account	Acres	Meaning
Mapped parcel union	approximately 121	Recorded ownership schedule: approximately 121
Transmission planning corridor	12.59	200-foot combined screening corridor; deed survey pending
Additional perimeter deduction	10.99	Overlaps already removed
Screened land	approximately 98	Mapped Zone X; no mapped onsite NWI wetlands
Substation reserve	12.00	Four-transformer concept; clearances pending
Stormwater / water / administration	10.00	5 + 3 + 2 acres; provisional functions
Ten local development blocks	33.36	Halls, cooling/electrical yards and local circulation
Shared routed access screen	4.92	8-meter corridors, separate from local support
Residual land	39.52	Support enlargement, landscape or additional design testing

The residual land is not proven surplus capacity. Its geometry, access and utility duties have not been optimized. The expanded-support option tests one practical use of more land per hall. A wider deeded transmission easement or drainage reserve would change the account. Regulatory exclusions and selected planning buffers remain distinct.

county appraisal district parcel records • Archived transmission geometry • FEMA National Flood Hazard Layer • USFWS National Wetlands Inventory

SECTION 02

Architectural Masterplan

The compact concept investigates 500 MW IT through ten 50 MW hall targets. Each 100 × 135-meter development envelope includes a 64 × 73-meter building, local equipment yards and circulation.

 Campus concept

The routed road screen connects all envelopes and common facilities within the mapped property. Entrances, turning radii, final driveway tie-ins and transmission-corridor crossing permissions remain open. The illustrated equipment represents reserved space, not a completed equipment selection. The 100 MW initial phase uses two halls; later groups are conditional construction stages.

Backup-system limitation: the exhibit shows hall and local support envelopes, not a fitted 270-generator system. Fuel tanks, emissions equipment and full maintenance/fire access remain to be integrated. The hall count may change.

county appraisal district parcel records • Archived transmission geometry • NVIDIA rack hardware; checked September 8, 2026

SECTION 02

Hall Area and Equipment Basis

A 50 MW hall is a design target that must pass both an equipment test and a space test. This concept allows slightly more than one acre of gross building area to avoid assigning almost the whole footprint to IT space.

Input or check	Current screening basis
Gross hall	64 × 73 m = 4,672 m² = about 50,290 sq ft / 1.15 acres
Applicable IT area	40,000 sq ft; about 79.5% of gross
Area-based target	40,000 × 1.25 kW/sq ft = 50 MW IT
Equipment cross-check	400 rack equivalents × 120 kW = 48 MW
Other IT systems	2 MW provisional networking/storage allocation
Support boundary	IT density includes working aisles in applicable space; non-IT galleries outside it
Local block	13,500 m² / 3.34 acres; about 15 MW IT per acre

The rack count is a candidate equipment schedule, not a tenant bill of materials. Rack dimensions, maintenance clearances, egress, structure and actual networking/storage allocation require a coordinated architectural plan. The selected 1.25 kW/sq ft is a design input, not a universal industry density. NVIDIA’s approximately 120 kW rack documentation supplies a cross-check only.

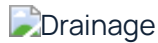
Each current hall is tested at a 50 MW IT design target. Commissioning less IT initially may change the load ramp without permanently reducing the hall’s design target.

NVIDIA rack hardware; checked September 8, 2026

SECTION 02

Drainage and Catchment Evidence

The existing terrain establishes local flow tendencies, but final drainage capacity is still open. The arrows below follow the negative local terrain gradient; they do not represent surveyed channels or a complete offsite watershed model.



The terrain export does not resolve every roadside ditch, culvert invert or downstream control. The five-acre stormwater area is a provisional reserve. Surveyed inflows, offsite run-on, outlet rights, tailwater and safe overflow routes determine whether it is correctly located and large enough. These are funded civil-design tasks, not evidence that drainage has already been approved.

USGS 3DEP elevation service • county drainage standards

SECTION 02

Stormwater, Landscape and Security

Development should preserve drainage routes and use the perimeter to screen equipment from neighboring homes. A lower-water landscape with native/adapted planting is the base concept; irrigated amenity features remain optional.

Design question	Screen and consequence
Runoff sensitivity	At an assumed 8-inch event, a 0.5 runoff increase over 60 acres adds 20 acre-feet before outlet discharge. This is a volume sensitivity, not an adopted design storm.
Provisional storage	A 5-acre basin at 4 feet of average live depth would hold 20 acre-feet. Side slopes, tailwater and freeboard may require additional land.
Outlet controls	Stage-storage and outlet routing must meet current county criteria; no release rate is assumed approved.
Security/access	Perimeter fencing, controlled visitor/service entries, clear sightlines and emergency access; detailed security remains tenant-specific.
Landscape alternatives	Drought-tolerant screening first; optional higher-amenity planting requires irrigation and maintenance funding.

The estimated/projected budget includes drainage structures, landscaping, fences and public-road works separately. Decorative ponds or fountains are not counted as flood storage or included in the base cost. County review must confirm stormwater quality and downstream effects.

county drainage standards • county development requirements

SECTION 02

Backup Equipment, Fuel and Road Space

Road space is allocated; the full backup installation still needs a coordinated layout. The compact plan reserves about 4.92 acres for shared eight-meter road corridors, in addition to local circulation. Boundary and envelope-overlap checks do not establish truck turning, fire access or two approved public-road connections. The remaining 39.52 acres provide land to investigate, not proof that the backup system fits. The fleet, fuel storage and controls may require moving halls or using a larger support-yard arrangement.

System	Required layout closure
Generator assemblies	Exact enclosure/radiator footprint, spacing and exhaust-treatment equipment
Fuel and chemicals	Day/bulk tanks, containment, autonomy, delivery and safe transfer
Service access	Equipment replacement, crane positions, refueling trucks and maintenance clearance
Fire and emergency access	Adopted code, clear width, turning, hydrants, gates and entrance separation
Neighbor impacts	Noise, intake/exhaust recirculation and stack/receptor relationships

A diesel backup yard is distinct from the separately tested fuel-cell first-power yard. Neither can be counted twice within the same acreage. Required storage must follow the adopted outage duration and actual dispatched fuel consumption; there is no verified site autonomy calculation yet.

Caterpillar 3516E LEHE2570-05, May 2023; retrieved September 2026 • county development requirements

SECTION 03

Electrical Supply Strategy

Crossing 345 kV infrastructure is the strongest physical grid lead, while gas offers a separate route to first power. The mapped alignments and Oncor filing identify regional a regional 345 kV circuit and a second regional 345 kV circuit circuits. Matching the specific crossing, protection arrangement and tap rights remains utility work.

The recovered PUC boundary places the property in **the incumbent distribution cooperative**. the wholesale power supplier and the transmission owner must participate in a coordinated supply study. Line ownership and retail service rights are distinct.

The grid-led concept is a new 345/34.5 kV substation adjacent to the western transmission corridor. A mapped 138 kV route approximately 1.68 miles from the boundary is an alternative to test for first-phase cost and timing. Neither map establishes spare capacity.

The requested study scope is **100 MW IT initially, with 300 and 500 MW cumulative scenarios**, using explicit facility demand rather than annual PUE. A single 50 MW hall can be an operating increment, but splitting phases does not establish eligibility to avoid review of the whole planned load.

If grid delivery is slower, a separate fuel-cell/gas-backed initial phase should be compared on firm fuel, summer output, permit conditions and delivered cost.

Archived transmission geometry • Oncor 2025 FERC Form 1, filed April 2026 • the distribution cooperative construction policy • PUC cooperative service areas • ERCOT large-load integration

SECTION 03

Substation Placement and Capacity

The 12-acre reserve lies immediately outside the screened transmission corridor. Moving the same yard 25 meters in the cardinal directions fails the retained land/corridor containment screen. A different yard shape may create other options; utility clearances and the connection point remain unresolved.

Cumulative IT target	Transformers	One out at 0.95 PF	Design load + reserve
100 MW	2 × 250 MVA	237.5 MW	126 MW
300 MW	3 × 250 MVA	475.0 MW	378 MW
500 MW	4 × 250 MVA	712.5 MW	630 MW

The assumed transformer capacities pass the stated component-count arithmetic. Seasonal derating, bus topology, feeder limits, system strength and external utility supply remain unconfirmed. The full case has about 82.5 MW margin above the 630 MW design-plus-reserve demand in this simplified transformer test.

Two lines in the same corridor can fail together. The concept does not establish independently deliverable sources or a reliability certification. A utility-approved topology, maintaining all required paths during outages, is a separate gate.

Archived transmission geometry • Oncor 2025 FERC Form 1, filed April 2026 • SPP April 2026 filed interconnection amendment

SECTION 03

Electrical Construction and Reliability

The electrical budget prices a defined customer-side concept rather than unknown upstream reinforcement.

Cost ID	Scope	Estimated budget
C028	345 kV switching bays	\$33.60 million
C029	250 MVA transformers, delivered	\$60.00 million
C030	HV loop-in and line modifications	\$7.80 million
C031	MV collection and site feeders	\$27.60 million
C032	Protection, SCADA and telecom	\$7.20 million
C033	Substation civil, installation and EPC execution	\$26.40 million
C034	Substation testing and commissioning	\$3.60 million

Electrical construction totals **\$166.20 million**, including the stated reserves. Substation detailed design sits in Development. Equipment advances are credited to these construction contracts.

The building electrical benchmark includes normal emergency power and UPS scope, but runtime, fuel autonomy, load steps and common-mode failures require a site-specific specification. A grid outage without a proven alternate source has no established sustained supply.

SPP April 2026 filed interconnection amendment • Turner Q2 2026 index, July 24 release

SECTION 03

Utility Studies and Delivery Gates

The current utility-entry position must be established before a delivery date is forecast. ERCOT issued provisional Batch Zero classifications to the submitting providers on September 3. Inclusion can depend on verification and curing deficiencies; the notice does not establish this site's eligibility or allocation.

The cooperative and interconnecting providers must identify the applicable intake path for the complete planned load, including a 131.25 MW first-phase hot-day reserve case. Earlier 126 MW figures represent a lower design-day scenario, not the governing maximum.

the distribution cooperative's published commercial extension policy calls for advance construction contributions based on actual scope. It cannot be treated as a quote for a hyperscale transmission connection. Customer-side substations, upstream work, deposits and nonrefundable contributions need separate commercial terms.

The initial study must resolve service jurisdiction, terminal and topology, import and standby requirements, reinforcement, protection, power quality, construction phasing and milestone conditions. No enrollment, capacity reservation or supplier delivery agreement has been demonstrated.

BATCH primary source · ERCOT primary source · the distribution cooperative primary source · Checked September 10, 2026

SECTION 03

Backup Fleet and Rating Basis

The full buildout needs more than a simple nameplate count. The illustrative Caterpillar 3516E mission-critical example is rated 3 MW with an 85% average-load allowance. Applying that duty basis and hall-level N+1 to the 65.625 MW hot-day reserved demand gives:

Units per hall = ceiling(65.625 ÷ 2.55) + 1 = 27.

Cumulative IT target	Installed units	Nameplate	Rating screen with one unit out per hall
100 MW	54	162 MW	132.6 MW
300 MW	162	486 MW	397.8 MW
500 MW	270	810 MW	663.0 MW

The usable-power figures are arithmetic screens. Manufacturer site-condition guarantees, duty/load profile, cooling and control parasitics, step response and transfer design remain outstanding. A shared-bus design could produce a different count but must demonstrate the distribution topology and failure behavior.

The emissions sheet is dated May 2023 and was retrieved for this review; it is not a current purchase quotation or a guaranteed controlled package. Federal engine certification does not establish the full campus's air authorization. Backup generation does not provide permission for continuous pre-grid operation.

Caterpillar 3516E LEHE2570-05, May 2023; retrieved September 2026 • TCEQ emergency engines and general PBR conditions

SECTION 03

First-Phase Operating Acceptance

Operating requirement	100 MW IT initial study
Normal design case	120 MW facility; 126 MW including 5% reserve
Hot-day case	125 MW facility; 131.25 MW including 5% reserve
Hall-level backup	54 reference units; 52 available at 2.55 MW = 132.60 MW
Margin to hot-day reserve	1.35 MW across the two halls; 0.675 MW per hall
Additional 2% output reduction	129.948 MW: 1.302 MW reserve shortfall, while exceeding 125 MW facility load
Provisional 48-hour autonomy test	6,000 MWh delivered at 125 MW; requires actual fuel consumption and storage design

The extra 2% case is an analyst sensitivity, not a vendor derating curve. The 85% rating allowance must be assessed against actual duty, temperature, electrical transients and parasitic loads. A reserve shortfall differs from inability to carry operating load.

Backup acceptance also needs independent supply paths through transformers, switchgear, controls, UPS, cooling restart and refueling. Two nominal supply sources that share a transmission corridor or common fuel failure do not establish resilience. No autonomy guarantee follows from an equipment count.

CAT primary source · EPA primary source · Checked September 10, 2026

SECTION 04

Regional Gas Supply

Two substantial gas routes are close enough to warrant operator engineering. The 24-inch Atmos route has the shortest connection; the 36-inch Energy Transfer route offers a stronger upstream hydraulic screen.

Pipeline record	Diameter	Boundary distance	Finding
Atmos NT-201	24 in	0.82 mi	Continuous nearby transmission lead
ET NET North / Paris Loop	36 in	1.82 mi	Operator history corroborates 36-inch route
Enterprise Sherman Extension	36 in	2.05 mi	Nearby large-diameter segment; continuity needs tracing
Atmos WN	30 in	12.03 mi	Longer alternative
Gulf South 819	42 in	25.75 mi	Only 4-foot mapped segment; reject as large-corridor capacity evidence

The complete 30-mile search retrieved 3,407 pipeline segments. The comparison uses in-service natural-gas records and avoids counting repeated segments as independent supply systems. Distances are straight-line minima to the candidate boundary; laterals need longer surveyed routes.

Energy Transfer’s historical Paris Loop announcement records 135 miles of 36-inch pipe and 400 MMcf/day initial capacity, with 900 MMcf/day then planned. Those historical system numbers corroborate scale, not current uncommitted delivery at this tap.

RRC pipeline GIS • Energy Transfer Paris Loop commissioning record

Atmos publishes a separate data-center service process involving project-specific capacity, contracts and potential interruption terms. Both mapped operator routes warrant evidence-based qualification. Neither operator identity nor pipeline diameter establishes firm delivery.

ATMOS primary source • Checked September 10, 2026

SECTION 04

Regional Infrastructure Map

Site imagery withheld in the sample edition

The delivered assessment includes a georeferenced aerial with the parcel boundary, a topographic surface and a regional infrastructure map.

The map shows the complete search area, with electrical routes in gold and selected gas systems in teal. The property is the central marker.

The near-site gas routes are more useful than the isolated 42-inch database fragment farther away. The investment test is the whole delivery path: upstream headroom, tap conditions, a permitted lateral and a commercially firm fuel contract. A larger diameter improves one part of that chain.

Archived transmission geometry • RRC pipeline GIS

SECTION 04

Gas Delivery Model

A 16-inch lateral can carry the concept fuel demand under favorable upstream conditions. The limiting uncertainty is available pressure and existing pipeline demand.

The model tests 30 miles of upstream pipe, a 1.5-mile Atmos or 3-mile ET lateral, 15.25-inch lateral internal diameter, 150 psig delivery, gas specific gravity 0.60, compressibility 0.90 and 289 K. All pressure and existing-load inputs are scenarios.

Route	Upstream psig	Existing MMcf/d	Hydraulic new MMcf/d
Atmos NT-201	400	300	0
Atmos NT-201	600	300	121
Atmos NT-201	800	300	253
ET Paris	400	300	223
ET Paris	600	300	383
ET Paris	800	300	535

A separate 20 m/s outlet-velocity screen caps the 16-inch lateral at about **90 MMcf/day**. This engineering screen is tighter than most pressure-only cases. At 400 psig and 300 MMcf/day existing demand, the Atmos upstream assumption cannot maintain 150 psig even before new demand, so it receives zero additional capacity in that case.

At a 9 MMBtu/MWh HHV heat rate and 1,037 Btu/scf gas, the revised 126 MW reserved first-phase facility demand requires about 26.2 MMcf/day. The 378 MW and 630 MW expansion requirements imply approximately 78.7 and 131.2 MMcf/day. The final combustion case exceeds the 90 MMcf/day lateral velocity screen and needs a larger or additional fuel route. Firm pressure and supply remain unestablished.

RRC pipeline GIS • Atmos interconnection requirements

SECTION 04

Onsite Power and Fuel-Cell Alternative

The Energy Transfer 36-inch route about 1.82 miles from the boundary supports a serious firm-gas inquiry. The closer Atmos route remains another lead. Neither recorded diameter nor operator identity establishes available volume.

A fuel-cell first-power scenario targets **100 MW IT** and 120 MW facility load before reserve. An illustrative fleet of **430 × 325 kW** provides 139.75 MW nameplate. At an assumed 5% output derating with one unit unavailable, the arithmetic leaves about **132.5 MW**, compared with 126 MW demand including reserve. Vendor guarantees must establish summer/end-of-life output, outages and auxiliary boundaries.

At 120 MW net facility demand and 7.127 MMBtu/MWh HHV, fuel need is about **19.8 MMcf/day**, assuming 1.037 MMBtu/Mcf. The upper heat-rate input is from a dated manufacturer sheet, not a negotiated site guarantee. At the 126 MW reserved envelope the requirement rises to about 20.8 MMcf/day.

Fuel cells can reduce local combustion emissions but still require whole-source air review, gas conditioning, electrical controls and a carbon-acceptance test. Standby equipment, stack replacement, service commitments and black start must be included. Low local emissions do not make natural-gas power carbon-free.

Compare the fuel-cell case with an engine case using 9 MMBtu/MWh: approximately **25.0 MMcf/day** at the same 120 MW net load. The latter carries a more demanding combustion-emissions analysis.

RRC pipeline GIS • Bloom Energy Server specifications • Bloom Energy Server current product page • TCEQ major-source thresholds and offsets

SECTION 04

Onsite Power Layout and Funding

Onsite generation changes the campus footprint. A provisional eight-acre power yard fits only after two compact hall envelopes are removed in the tested alternative. That leaves eight hall targets, or a 400 MW IT spatial scenario, while the yard itself is sized only for investigating 100 MW IT first power.

 Onsite alternative

Gas-yard thermal clearances, equipment spacing, acoustic setbacks and emergency access remain unvalidated. Its road screen has been recomputed separately. A future 400 MW islanded plant is not established by the first-power yard. Later grid integration would require synchronization, import/export approval and reserve-capacity treatment.

Bloom Energy Server specifications • RRC pipeline GIS

SECTION 04

Generation Economics and Commitments

Alternative-only scope	Estimated / projected allowance
Fuel-cell plant EPC allowance	\$670.80 million
Gas lateral, tap and conditioning	\$22.50 million
Microgrid, gas and air detailed design	\$7.50 million
Grid-forming storage and black-start systems	\$15.00 million

These amounts are alternative work packages, **not additions to the grid-led total without a scope bridge**. A vendor proposal must identify which grid timing costs, standby equipment and design packages are displaced, retained or deferred.

At an assumed delivered gas price of \$4/MMBtu, a 7.127 HHV heat rate gives \$28.51/MWh of fuel alone. Plant capital, service/stack replacement, reserve generation, gas demand charges, controls and financing must be added to compare delivered power cost.

An illustrative 80% annual minimum on 20.8 MMcf/day at \$4/MMBtu would expose about \$25.2 million/year before transport tariffs, using 1.037 MMBtu/Mcf. This is a take-or-pay sensitivity, not a proposed contract. The operator must define MDQ, pressure, minimum terms, start date and interruption rights.

A 30 MW / 15 MWh storage allowance gives 30 minutes at its rated 30 MW, or only 7.5 minutes of energy at 120 MW before losses; its power rating cannot carry the full campus. A vendor microgrid study must resolve load steps, UPS contribution, black start and fuel-failure duty.

Bloom Energy Server specifications • Energy Transfer Q1 2026 capital update

SECTION 05

Water Supply and Cooling

The proposed non-evaporative design avoids continuous cooling-tower consumption. It still needs proven hot-day heat rejection, a phased charging plan and dependable domestic/fire service.

Planning requirement	100 MW IT	300 MW IT	500 MW IT
Loop water-volume allowance	750,000 gal	2,250,000 gal	3,750,000 gal
Potable screening allowance	1,000 GPD	3,000 GPD	5,000 GPD
90-day charging rate	8,333 GPD	25,000 GPD	41,667 GPD
6,000-gal delivery equivalents	125	375	625

These are preliminary water allowances, not an engineered water balance. Circuit drawings must establish fill volumes, maintenance/makeup and fluid chemistry. Occupancy and ancillary uses must establish potable demand; the MW ratio alone is insufficient for final sizing.

The full assembly intersects Mustang SUD water CCN 10150 in the recovered map. No sewer CCN intersection was returned. Temporary treated-water deliveries can avoid a high-volume permanent cooling connection; an approved source, backup hauler, route and water-quality specification are still needed. Effluent reuse at another treatment plant establishes a possible source category, not an allocation to this site.

Mustang February 2026 rate order • PUC water service areas • municipal reuse and conservation plan

SECTION 05

Storage, Treatment and Reuse

Domestic storage, fire supply and sanitary reuse are separate systems. The estimate includes an elevated potable-tank option, a 500,000-gallon fire-storage placeholder and a 10,000-GPD sanitary-treatment concept. Actual usable volumes, fire flow, treatment peaks and wastewater quality remain to be designed.

A 100,000-gallon usable potable volume would represent 20 days at the 5,000-GPD full-campus screening demand, before unusable volume and water-quality turnover. Initial occupancy is lower, so tank compartmenting or a smaller first-stage tank may be preferable. Elevated tank height and foundations require review.

Treated sanitary water can support approved irrigation and ancillary reuse. At low occupancy it cannot supply the initial cooling charge. Wet-weather/no-irrigation storage, sludge, salts and maintenance fluids need their own balance and lawful disposal route.

Water construction scope	Estimated budget
Potable and fire service connection allowance	\$540,000
Fire-water tank and pumps	\$2.16 million
Package sewage treatment and reuse	\$1.80 million
Closed-loop charge treatment and temporary delivery	\$3.60 million
Water storage and common distribution	\$2.04 million
Elevated potable storage option allowance	\$780,000

Groundwater is not the proposed charging strategy. A potable utility's underlying source mix must be verified independently. Zero cooling-water discharge does not imply zero stormwater or sanitary obligations.

Mustang February 2026 rate order • municipal reuse and conservation plan

SECTION 05

Cooling Duty and Performance Gates

The compact layout’s controlling design risk is the cooling yard, not the hall label. Each hall must reject its heat without evaporative assistance at the selected hot-day conditions.

Per 50 MW IT hall	Screening requirement
IT liquid capture	45 MW at assumed 90% capture
Residual IT air heat	5 MW; rack auxiliaries/networking still need air cooling
Liquid-side allowance	46 MW including 1 MW pumping/CDU heat
Non-IT electrical overhead	10 MW: pumps 1; dry fans 2; refrigeration 5; losses 1.5; other 0.5
Total facility load	60 MW; 63 MW including 5% reserve
Total heat-release envelope	60 MW aggregate; detailed heat destinations require design
Climate test	42°C selected hot-day case; 46°C stress sensitivity
Installed site-rated cooling	Not established; supplier curves and equipment selection required

The hot-day temperatures are design sensitivities pending the adopted site climate basis. Raising refrigeration from 5 to 7.5 MW per hall increases the reserved requirement to 65.625 MW. The report does not use annual PUE to prove this peak load.

If a vendor’s non-evaporative equipment cannot meet the duty, the correct responses are larger yards, revised water temperatures, trim refrigeration or a lower simultaneous load. The expanded-support alternative exists to test that trade-off. The geometric screen alone does not validate 500 MW of operation.

NVIDIA rack hardware; checked September 8, 2026 • DOE data-center design guide

SECTION 05

First-Hall Thermal Acceptance

Duty	Acceptance requirement
50 MW IT hall	60 MW normal and 62.5 MW hot-day total heat rejection
90% liquid IT assumption	45 MW liquid and 5 MW residual IT heat; facility overhead heat separately reconciled
Two-hall first phase	120 / 125 MW normal/hot-day heat rejection
Weather and outage tests	Supplier curves at 42°C and 46°C stress conditions; selected equipment outage and maintenance cases
Footprint	Dry coolers/chillers, pumps, CDUs, clearance, service replacement and electrical equipment fit together
Water	Actual loop inventory, filling schedule, firewater and generation demand replace proxy allowances

The 10 MW normal and 12.5 MW hot-day overhead per hall are design assumptions. Equipment power and thermal performance must confirm them or change the electrical and capacity model. Larger support footprints are alternatives to test, not automatically validated cooling designs.

Mustang’s public service information supplies an inquiry route, not a will-serve or available-volume commitment. Water quality, pressure, drought performance and discharge/reuse conditions remain open.

MUSTANG primary source · Checked September 10, 2026

SECTION 06

Fiber Connectivity

There is a credible local carrier lead, but route diversity is still unresolved. a local fiber carrier operates regional fiber services associated with the local cooperative area. a national backbone carrier's carrier material establishes a substantial Dallas network. Neither source provides a verified pair of parcel-specific splice points or disjoint paths.

The proposed arrangement has two physically separated entrances, two carrier paths and independent upstream aggregation points. Route drawings must identify shared bridges, poles, conduits and failure points. Two commercial invoices alone would not demonstrate diversity.

The budget carries **\$4.00 m construction**, comprising ten total route-miles of allowance and two interfaces, with 25% reserve. The ten miles are an estimating quantity rather than a measured carrier route. Separate feasibility and design budgets fund the route determination.

The qualification deliverable is a carrier proposal naming endpoint, bandwidth, route, construction charge, recurring charge, latency and restoration terms. Until obtained, capacity marketing should remain conditional. A longer verified route would change the allowance before land commitment.

a local fiber carrier • a national backbone carrier

SECTION 07

Environmental Liability

The current evidence supports targeted investigation of an agricultural property rather than a priced cleanup program. Aerial review shows cultivation and nearby homes. Farm fuel storage, chemicals, fill, wells and historic activities remain potential exposure pathways.

EPA ECHO returned 128 facility records within 8 km. Many relate to residential construction stormwater. One record, Windchime Offsite, plots within the assembly but carries approximately 17.5 km location accuracy; that location cannot establish an onsite facility or release.

The state LPST query returned 337 the county records. Five were labeled the municipality or Weston, all with closure dates:1990,1998,1999,2005 and 2017. None is identified by the candidate parcel address in the retrieved record. The dataset lacks coordinates, so this city-name screen is not a complete distance-based liability search.

The budget includes a Phase I assessment, targeted Phase II scope and a separate **\$500,000 provisional remediation reserve**. The reserve is not an estimate of a confirmed cleanup. Acquisition should depend on records review, site inspection and any triggered sampling defining liability, responsibility and a costed remedy.

EPA ECHO facilities • TCEQ leaking tank records • Esri World Imagery

SECTION 07

Geotechnical Development Measures

Expansive clay is the main ground-engineering exposure. Houston Black units cover about 74% of the parcel and Heiden about 26%. Representative mapped horizons contain 50–55% clay, plasticity indices around 40–55 and elevated expansion indicators.

Issue	Development response	Cost treatment
Shrink/swell below slabs	Moisture-controlled pads, tested treatment and appropriate slab design	40-acre treatment allowance, with 25% reserve
Variable bearing/settlement	Borings beneath buildings, transformers and tanks; settlement modeling	Separate \$180,000 investigation base
Sulfate-sensitive treatment	Test sulfate and mix design before selecting lime/cement	Treatment method subject to laboratory result
Deep active clay	Compare select fill/stiffened slab with piers where warranted	Abnormal-foundation increment separately reserved
Drainage/moisture change	Positive drainage, utility leak control and protected edges	Civil drainage and moisture works included

The current foundation increment is **\$35/kW IT base**, or \$17.50 m at 500 MW, with 30% reserve. This is added only for abnormal conditions beyond normal foundations already included in the building benchmark. Blanket deep piling is not assumed.

Mapped soils identify the risk; they do not provide allowable bearing pressure, movement or final foundation depth. The investigation must convert that risk into a buildable section and contractor quantity before construction.

NRCS Soil Data Access • TxDOT March 2026 highway cost index

SECTION 07

Permitting and Community Constraints

Continuous gas generation has a materially harder air-permit route than the grid-led case. the county is in the DFW 2008 ozone severe nonattainment area. TCEQ identifies a 25-ton/year major-source threshold and 1.3:1 offset ratio for relevant ozone precursors.

A simple illustration at 120 MW generation, 9 MMBtu/MWh and 0.01 lb NOx/MMBtu produces about 47 tons/year at continuous full duty. This assumed controlled rate already exceeds 25 tons. Final applicability uses vendor emissions and the permitted whole-site operating envelope, including spare units and startup.

Emergency generators require their own permit, testing and runtime basis. Baseload gas requires a major-source strategy, lowest-achievable-emission controls where applicable and verified offsets. Offset supply and price are unresolved and excluded from the gas EPC allowance.

Nearby homes also make noise a meaningful investment gate. The plan needs a receptor-based acoustic model, screening, lighting control and construction-traffic agreement. The ledger separates the noise study, acoustic/landscape design, physical landscaping and community program.

FEMA maps the full assembly in Zone X minimal hazard and the NWI query returned no onsite mapped wetlands. Field delineation and drainage design still address small channels and unmapped features. The 8 km critical-habitat query returned no designated feature; species review remains a field/agency task.

Natural-gas fuel cells require a model-specific applicability analysis rather than automatic treatment as engines. Their lower NOx can be useful in this location, while whole-site aggregation, standby units, startup, CO/VOC and carbon requirements remain relevant.

TCEQ major-source thresholds and offsets • FEMA National Flood Hazard Layer • USFWS National Wetlands Inventory • county development requirements • Bloom Energy Server specifications

SECTION 07

Backup Emissions and Permit Path

Full-campus backup emissions compliance is not established. A conventional diesel screen substantially exceeds the 25-ton/year NOx major-source threshold applicable to severe ozone nonattainment in the county. This changes the permitting path; it does not by itself prohibit the site.

IT target	Fleet	NOx rated-output 500-hour screen
100 MW	54 units	About 809 short tons/year
300 MW	162 units	About 2,428 short tons/year
500 MW	270 units	About 4,047 short tons/year

These are **screening sensitivities**, not predicted actual emissions or a completed PTE inventory. They use the selected sheet’s potential-site-variation rate and electrical horsepower as a lower bound on brake horsepower. Actual engine power, load curves and startup emissions remain to be established. The full-rating calculation also differs from sustained average duty.

EPA’s historical 500-hour assumption is guidance, not an operating entitlement or enforceable cap. The full-fleet 100-hour sensitivity is still about 809 tons. Testing hours, legal operating restrictions and PTE assumptions must be evaluated separately.

Assess whole-source nonattainment NSR, controls/LAER and offsets where applicable, plus other-pollutant PSD and operating-permit requirements. TCEQ identifies a 1.3:1 minimum offset ratio for the applicable severe classification. No offset availability, cost or approval is established here. Phases must not be treated as automatically independent exempt sources.

TCEQ major-source thresholds and offsets • EPA emergency-generator PTE memorandum, 1995 • TCEQ emergency engines and general PBR conditions • Caterpillar 3516E LEHE2570-05, May 2023; retrieved September 2026

SECTION 07

Controls and Ambient Compliance

Low-emission equipment could change the outcome, but controls must be supported by guarantees and operating evidence. In the full-fleet 500-hour sensitivity:

Assumed NOx removal	Remaining annual screen	Interpretation
99%	About 40.5 short tons	Still above 25-ton threshold
99.5%	About 20.2 short tons	Below threshold before omitted sources; no guarantee

The 99% and 99.5% cases are mathematical sensitivities, not demonstrated equipment performance. Remaining startup, low-load and auxiliary emissions can materially change the result. The full fleet would need a rate below roughly 0.056 g/kWh on an electrical-output basis to stay below 25 tons at the selected hours, with further headroom for other sources.

A complete inventory also needs CO, VOC/HAP speciation, PM fractions, sulfur, greenhouse gases and ancillary equipment. The screened hydrocarbon value must not be substituted for an established VOC inventory.

Ambient compliance remains unresolved. Final stack positions/heights and exit conditions, building downwash, neighboring receptors, background concentrations and accepted meteorology are missing. No site-specific dispersion model has demonstrated compliance during simultaneous emergency operation. Annual control percentages alone cannot answer that question.

The decision gate is a supported equipment-and-permit solution: either a compliant controlled minor-source design or an achievable major-source route, compared with alternative power architectures. Unvalidated assumptions cannot be marketed as approved backup capacity.

TCEQ major-source thresholds and offsets • EPA/TCEQ ambient NO2 modeling guidance • EPA emergency-generator PTE memorandum, 1995

SECTION 07

Air and Backup Decision Gates

Gate	Current position
Authorization applicability	Emergency and continuous operation are separate; whole-campus eligibility unresolved
Source category / PTE	Legacy rating-based NOx sensitivities exceed the severe-area threshold; regulator-supported inventory pending
Ambient impacts	No dispersion study with actual stacks, receptors, downwash and simultaneous-outage operation
Equipment installation	Full fleet, fuel, exhaust treatment, clearances and refueling routes remain unfitted
Schedule and cost	No accepted controls package, offsets where applicable, or permit milestone/price

Low-emission equipment, a major-source route and alternative architectures should be compared on the same operating and installation basis. Neither emergency designation nor fuel-cell marketing closes the whole-source permit analysis. Reducing hours requires an enforceable and commercially usable operating basis; splitting hall phases does not automatically split the stationary source.

AIR primary source · THRESHOLD primary source · EPA primary source · Checked September 10, 2026

SECTION 08

Geothermal Potential

The available well evidence does not establish an electricity-producing geothermal resource. The TWDB search returned 72 well reports within 8 km, with recorded depths up to 2,500 feet. Uses include domestic, public supply, irrigation and closed-loop geothermal.

A closed-loop geothermal well record indicates a ground heat-exchange application, not evidence of a hot commercial power reservoir. The retrieved records do not provide a tested temperature/flow pair supporting dependable electrical output beneath the property.

No geothermal MW or speculative drilling capital is credited in the base case. A ground-source cooling comparison could be considered only if a thermal model shows a benefit against the proposed non-evaporative system. That comparison would need borefield land, heat-rejection performance, drilling cost and long-term thermal balance.

The site should not reserve major capital for deep geothermal exploration while its crossing transmission opportunity remains unqualified. The geological record review is included within the ground-investigation scope; any drilling program would require a separate investment decision.

TWDB well completion reports

SECTION 09

Integrated Capacity and Phasing

The **capacity ladder separates design ambition from proven service**. The 500 MW compact case is the largest current tested arrangement, not an optimized maximum or an operating commitment.

Measure	Result	Evidence boundary
Net area potential	75.52 acres before shared roads after 22-acre reserves	An area calculation; irregular geometry and support duty matter
Compact hall arrangement	10 × 50 MW IT targets = 500 MW	Geometry plus assumed hall/load basis
Expanded local-support layout	5 × 50 MW IT targets = 250 MW	Larger 120 × 170 m blocks; comparable shared reserves
Onsite-power layout	8 hall targets = 400 MW spatial case	Eight-acre first-power yard displaces two halls
Grid-led phases	100 → 300 → 500 MW IT	Utility and cooling dependent
Committed/dependable site MW	Not established	No service commitment or vendor thermal validation

Approximately 39.52 acres remain outside the compact blocks, shared roads and common reserves. That land may accommodate cooling enlargement, landscape, gas equipment or additional hall studies. Its availability does not prove a higher capacity. The next integrated design must compare the cost of added support space with the capacity it enables.

The 50 MW target remains conditional: if floor area, equipment, heat rejection or supply fails, the report must show the specific deficit rather than imply guaranteed operation.

county appraisal district parcel records • NVIDIA rack hardware; checked September 8, 2026 • DOE data-center design guide

SECTION 09

Operating Cases and Reliability

Case	100 MW IT	300 MW IT	500 MW IT
Base electrical requirement	120 MW	360 MW	600 MW
With 5% reserve	126 MW	378 MW	630 MW
Transformer N-1 scenario	237.5 MW	475 MW	712.5 MW
Hot-day stress incl. reserve	131.25 MW	393.75 MW	656.25 MW
Normal liquid/air/rejection capability	Vendor data pending	Vendor data pending	Vendor data pending
Grid outage without proven alternate	Sustained supply unestablished	Sustained supply unestablished	Sustained supply unestablished

The transformer arithmetic passes the stated equipment scenario, including the hotter refrigeration sensitivity. The operating design remains **unvalidated** because cooling performance, independent power paths and utility allocation are unknown. A numeric N-1 result cannot certify simultaneous maintainability or a Tier level.

The estimated budget uses a 500 MW target-sized construction scope. If cooling or supply limits the executable concept to fewer halls, the design and estimate must be repriced by actual quantities; the budget is not evidence of feasibility.

The backup rating screen adds 54 / 162 / 270 generators for the three cumulative phases. These counts are provisional equipment requirements, not available or authorized supply. Air compliance and installed-yard capacity remain unresolved.

DOE data-center design guide • ERCOT large-load integration

SECTION 10

Development Cost Framework

The budget separates investigation, preconstruction, physical construction and shared land/owner costs. It prices the compact 500 MW target scenario, with a 100 MW initial phase.

Stage	Initial 100 MW	Two later phases	Full estimated budget
Due diligence	\$1.50 million	\$0	\$1.50 million
Development	\$27.50 million	\$90.09 million	\$117.60 million
Construction	\$1.28 billion	\$4.64 billion	\$5.92 billion
Land and owner	\$42.04 million	\$6.31 million	\$48.35 million

Priced full scope: \$6.09 billion. Initial allocation: \$1.35 billion; each later 200 MW increment: approximately \$2.37 billion. These allocations are planning cash/scope shares, not contractor schedules.

All budgets are estimated and projected for planning purposes and remain subject to design, utility requirements, procurement and contractual terms.

Major upstream reinforcement, binding utility security, customer servers, exceptional tariffs and vendor-driven design changes remain outside the priced subtotal. Fuel-cell plant costs are a separate alternative. Design engineering for buildings/MEP is a major part of preconstruction; it must not be confused with the much smaller early qualification envelope.

Backup-cost exposure: this priced subtotal is not a complete cost for a validated 270-unit, emissions-controlled backup system. Reconcile the vertical electrical benchmark against actual equipment before adding control, fuel-yard and permitting costs. These unresolved increments remain unpriced rather than assumed to be covered by contingency.

Turner & Townsend 2025 cost study • T&T cost inclusions and exclusions • Turner Q2 2026 index, July 24 release • Turner 2025 annual index in Q1 2026 table

SECTION 10

Due Diligence and Surveys

Cost ID	Work package	Estimated budget
C001	Boundary and ALTA/title survey	\$51,750
C002	Site and topographic survey	\$63,250
C003	Title, easement and jurisdiction legal review	\$74,750
C004	Geotechnical borings and laboratory work	\$207,000
C005	Phase I environmental assessment	\$20,700
C006	Targeted environmental investigation reserve scope	\$86,250
C007	Wetland and habitat field survey	\$40,250
C008	Drainage and flood modeling	\$74,750
C009	Traffic and heavy-haul study	\$69,000
C010	Electrical consultant feasibility	\$115,000
C011	Gas supply feasibility and air screening	\$97,750

Amounts include explicit reserves where applicable. Quantity, unit rate, base, reserve, phase allocation and provenance are in the companion cost register. These are views of one ledger, not additional budgets.

county development requirements • the distribution cooperative construction policy

SECTION 10

Due Diligence and Surveys I Continued

Cost ID	Work package	Estimated budget
C012	Water quality and reuse feasibility	\$51,750
C013	Fiber route feasibility	\$40,250
C014	Noise assessment and receptor survey	\$57,500
C015	Market, land appraisal and tax diligence	\$69,000
C016	Archaeology records and field contingency scope	\$40,250
C070	50 MW hall and thermal feasibility study	\$207,000
C071	Fuel-cell microgrid alternative feasibility	\$138,000

Amounts include explicit reserves where applicable. Quantity, unit rate, base, reserve, phase allocation and provenance are in the companion cost register. These are views of one ledger, not additional budgets.

county development requirements • the distribution cooperative construction policy

SECTION 10

Design and Utility Development

Cost ID	Work package	Estimated budget
C017	Grid concept and utility engagement	\$420,000
C018	Utility system and facilities studies	\$420,000
C019	Substation and connection detailed design	\$6.00 million
C020	Site plan and civil construction documents	\$1.80 million
C021	Planning, plat, access and permit applications	\$360,000
C022	Water, sewage and reuse design	\$300,000
C023	Fiber route design and rights	\$120,000
C024	Air permit for standby generation	\$240,000
C025	Landscape and acoustic design	\$240,000
C026	Procurement and EPC legal documentation	\$600,000
C027	Building architecture and MEP design	\$107.10 million

Amounts include explicit reserves where applicable. Quantity, unit rate, base, reserve, phase allocation and provenance are in the companion cost register. These are views of one ledger, not additional budgets.

county development requirements • the distribution cooperative construction policy

SECTION 10

Horizontal Development Costs

Cost ID	Work package	Estimated budget
C042	Clearing and mobilization	\$624,000
C043	Bulk excavation	\$2.52 million
C044	Compacted embankment placement	\$4.31 million
C045	Imported select material supply	\$2.00 million
C046	Clay subgrade treatment including binder	\$8.47 million
C047	Roads and shared hardstanding	\$2.71 million
C048	Stormwater drainage and detention	\$4.00 million
C049	Public road and entrance upgrades	\$3.90 million
C050	Perimeter fencing and security gates	\$1.07 million
C051	Landscaping and irrigation	\$1.32 million
C052	Construction erosion control	\$720,000

Amounts include explicit reserves where applicable. Quantity, unit rate, base, reserve, phase allocation and provenance are in the companion cost register. These are views of one ledger, not additional budgets.

Turner & Townsend 2025 cost study • T&T cost inclusions and exclusions • TxDOT March 2026 highway cost index

SECTION 10

Horizontal Development Costs I Continued

Cost ID	Work package	Estimated budget
C053	Abnormal foundations and moisture protection	\$22.75 million
C054	Environmental remediation reserve	\$500,000

Amounts include explicit reserves where applicable. Quantity, unit rate, base, reserve, phase allocation and provenance are in the companion cost register. These are views of one ledger, not additional budgets.

Turner & Townsend 2025 cost study • T&T cost inclusions and exclusions • TxDOT March 2026 highway cost index

SECTION 10

Vertical Construction and Equipment

Cost ID	Work package	Estimated budget
C055	Core, shell and architecture	\$486.81 million
C056	Mechanical equipment and fitout	\$1.78 billion
C057	Electrical equipment and fitout	\$2.60 billion
C058	General contractor delivery and preliminaries	\$540.90 million
C059	Owner specification-change reserve	\$270.45 million
C060	Independent commissioning and acceptance	\$8.62 million

Amounts include explicit reserves where applicable. Quantity, unit rate, base, reserve, phase allocation and provenance are in the companion cost register. These are views of one ledger, not additional budgets.

Turner & Townsend 2025 cost study • T&T cost inclusions and exclusions • TxDOT March 2026 highway cost index

SECTION 10

Estimate Basis and Cost Sensitivity

The construction estimate is a benchmark-based planning model, not a high-density equipment quotation. The vertical baseline is \$9.54/W IT for Dallas in the 2025 study, adjusted by the Turner 1552/1485 index ratio and an explicit 8.5% liquid-cooling planning factor. The resulting rate is approximately **\$10.82/W IT**.

The rate includes the benchmark's normal construction scope and contingency. A separate 5% specification-change reserve covers potential changes outside that reference scope; it must be released or replaced at detailed estimating to avoid overlap. Building design and independent acceptance are separately classified.

At 500 MW IT, a \$1/W change in the selected construction rate changes the benchmark component by **\$500 million**, before dependent fees/reserves. This is more material than rounding individual consultant fees.

The 50 MW non-evaporative hall requires equipment-based pricing. The 8.5% factor does not prove that dry heat rejection, electrical distribution or tenant redundancy can be purchased for the allowance. The estimate identifies this design exposure beside the total.

All budgets are estimated and projected. Existing GIS quantities are screens; contractor grading, foundation, cooling and electrical takeoffs remain necessary.

Turner & Townsend 2025 cost study • T&T cost inclusions and exclusions • Turner Q2 2026 index, July 24 release • Turner 2025 annual index in Q1 2026 table

SECTION 10

Land Price and Holding Costs

Land/owner category	Estimated budget
Land acquisition allowance	\$30.26 million
Closing and title costs	\$332,832
Three-year escrow capital carry	\$726,180
Three years post-close land debt carry	\$4.36 million
Post-close property tax and insurance	\$2.30 million

The selected acquisition allowance is \$250,000 per recorded acre, or \$30.26 million. It reflects a planning premium above an asking-price comparison, not a closed-sale appraisal. Title, entitlement and utility value may change the actual transaction.

The model keeps three years of escrow separate from an illustrative three years after closing. Escrow carry applies to a 10% creditable deposit at 8%; post-close debt carry assumes 60% financing at 8%. Tax/insurance uses a separate 2.2% annual proxy with reserve. These are projected commercial assumptions, not agreed seller or lender terms.

The land deposit is credited against acquisition. It is never added again as a second purchase cost. Ag-use rollback, exact taxes, transaction timing and extension rights require transaction-specific review.

2026 FM455 100-acre asking listing • 2026 Anna acreage comparison

SECTION 10

Funding, Deposits and Economics

Funding item	Projected amount	Treatment
Land escrow deposit	\$3.03 million	Creditable within acquisition; excluded from additional capex
Substation equipment advances	\$15.60 million	20% assumed advances within construction contracts
Vertical equipment advances	\$876.25 million	20% of mechanical/electrical component; within construction, not additional
Utility security stress scenario	\$20.00 million	Unquoted liquidity stress only; actual service deposit remains unpriced
Escalation	\$1.01 billion	4% per year over four-year spend midpoint; projected scenario
Construction interest	\$498.98 million	60% debt at 8% for 1.5 weighted years; projected financing scenario

Projected total under the escalation/finance scenario is **\$7.60 billion**. Refundable security is liquidity exposure; creditable procurement advances are inside contract cost. Unquoted terms may change cash timing materially.

The priced base equates to approximately **\$12.18 million per MW IT**, excluding customer servers and unresolved work. At 9% annual capital charge and 90% leased utilization, this is about **\$102/kW-month** before operating costs. This is underwriting sensitivity, not a lease quote.

Annual energy economics may use a separately assumed 1.35 PUE: \$70/MWh then contributes about \$69/kW-month at continuous IT utilization. That annual input does not determine hot-day electrical sizing.

T&T cost inclusions and exclusions • Turner Q2 2026 index, July 24 release

SECTION 10

First-Phase Occupancy and Cost Exposure

The first phase carries shared infrastructure before full occupancy. The unchanged estimated first-phase allocation is \$1.354 billion. A 9% illustrative annual capital charge produces the following capital-only recovery sensitivities.

Leased IT capacity	Capital recovery per leased kW-month
50 MW	\$203.13
75 MW	\$135.42
100 MW	\$101.56

These are assumed occupancy cases, not rent forecasts or lender terms. They exclude operating costs, customer IT, unresolved backup controls and other unpriced scope. The capital charge is a financing/recovery sensitivity, not an additional construction cost.

Compare grid and onsite generation with identical hot-day duty, outage protection and occupancy. Include actual tariffs, minimum fuel commitments, fixed maintenance, overhaul, commissioning and escalation once quoted. Public construction indices cannot validate a bespoke cooling or 270-generator package.

INDEX primary source · Checked September 10, 2026

SECTION 11

Delivery Program

No first-power date is established. Current provider intake status, reinforcement and the permitted backup system control grid-led opening. For onsite supply, firm gas, equipment output, air approval and gas-interruption protection control delivery.

Workstream	Evidence before schedule commitment
Utility	Accepted intake path, system studies, connection scope and milestone conditions
Land and civil	Deeded access/easements, survey, drainage/outfalls, fire and truck access
Operating design	50 MW hall cooling and backup guarantees with integrated installed layout
Permits	Land-use, environmental, whole-source air and fuel/fire approvals
Procurement	Matched EPC scope, vendor slots, deposits and commissioning sequence
Customer acceptance	Load ramp, redundancy, outage autonomy and test criteria

Run these workstreams in parallel while respecting dependencies. The retained 100 → 300 → 500 MW progression is a planning sequence, not a contracted program. Land-control duration must accommodate the eventual service timeline; three years in escrow cannot be assumed sufficient.

ERCOT primary source · BATCH primary source · the distribution cooperative primary source · Checked September 10, 2026

SECTION 12

Qualification Budget and Decision Gates

Authorize targeted feasibility before broad development spending. The wider estimated early envelope is **\$2.58 million**, a subset of the total cost register, not additional capital.

Gate	Estimated release	Acceptance criterion
A: decision basis	\$500,000	Validate title/boundary, initial power paths and equipment/hall feasibility
B: availability and layout	\$1,000,000	Utility/gas response scope, thermal supplier concept, two carrier route options and water logistics
C: close major site exposures	\$1.08 million	Field findings, drainage/access design basis, costed preferred power architecture

The independent hall/thermal feasibility allowance is \$180,000 base plus 15% reserve; the fuel-cell alternative study is \$120,000 plus 15%. Boundary/ALTA and topographic surveys remain separate \$45,000 and \$55,000 base line items, each with 15% reserve.

Stop or rescope if neither power route can meet the required cost/schedule/reliability, if the selected hall cannot meet thermal duty within an acceptable footprint, if access/drainage approval fails, or if fiber routes cannot satisfy tenant requirements. An unanswered request does not meet a gate. Gate releases are proposed and overlap ledger work packages only once.

Gate A must select a backup architecture and obtain a scope for the whole-campus emissions inventory and layout. Gate B requires a credible air-authorization path and modeled receptor impacts. A scope and fee reconciliation must establish whether existing study allowances cover this work; no additional study fee has been invented.

county development requirements • the distribution cooperative construction policy • ERCOT large-load integration

SECTION 13

Investment Recommendation

Retain the 121-acre candidate site for bounded first-phase qualification; hold unconditional acquisition and major procurement. The candidate assembly and physical infrastructure justify continued evaluation. They do not establish available power or operable 500 MW capacity.

The next decision is whether a grid-led first 100 MW phase with permitted independent backup outperforms a separately designed onsite-power alternative. Compare equal loads, outages, occupancy and time-to-service. Fuel cells remain one alternative, not a preferred outcome based only on ozone status.

Close the coordinated hall cooling, backup-yard, fuel, road and emissions case before relying on compact density. The larger support layout is a design sensitivity requiring the same tests. Resize or reconfigure if equipment, access, permits or economics fail the agreed customer requirements.

Section 12 sets staged qualification ceilings; scoped supplier and professional proposals determine actual releases. No unanswered inquiry is treated as service approval. Confirm at least one credible power route, safe access, water/fire supply and independent communications before committing to the first operating phase.

Preserve expansion land without selling the 500 MW spatial scenario as committed capacity. The estimate remains a priced-scope planning model with material backup and utility exposures outside its reconciled total.

the distribution cooperative primary source · AIR primary source · ERCOT primary source · Checked September 10, 2026

SECTION 14

Methodology and Estimate Basis

Assessment date: September 8, 2026. The parcel, hazard, soil, pipeline and terrain evidence was recovered on September 6, 2026 and retained with its original scope. Equipment, utility-process, cost-index and selected regulatory sources were checked for this engineering revision. GIS coordinates use the recorded projection; the layout uses UTM zone 14N meters.

The candidate boundary is the union of two county parcels, pending owner/title/survey confirmation. Distance means closest mapped parcel-edge distance unless an assumed construction route is explicitly stated. Historical mapped infrastructure establishes leads, not available service.

Land calculations remove overlapping screening exclusions once, then account for common reserves, local blocks and shared roads separately. Road corridors and median-level pad calculations are computational screens, not swept-path, drainage or grading designs. Local gradient arrows do not constitute a complete watershed study.

The design basis uses 50 MW IT hall targets, 40,000 sq ft applicable IT area and explicit coincident electrical loads. Rack ratings provide a reasonableness check. Cooling availability remains unknown until vendor site-condition performance is supplied. The same operating cases are used for demand, heat rejection and outages; annual PUE is separate.

Water quantities are preliminary inventory and domestic-demand allowances. Hauling, filling, makeup, fire demand and sanitary reuse are different flows. Generation heat rates use HHV with gas heating value stated. Firm fuel and utility capacity remain unestablished.

All budgets are estimated and projected. The workbook holds quantity, rate, source/basis, base, reserve and phase allocation. Technical targets and budget allowances must not be marketed as committed capacity or binding prices.

Backup emissions use a dated manufacturer example and a 500-hour rated-output sensitivity. Electrical horsepower is used only as a lower bound on engine brake horsepower. These calculations are not a complete regulatory PTE inventory, actual annual forecast or ambient compliance result.

NVIDIA rack hardware; checked September 8, 2026 • DOE data-center design guide • T&T cost inclusions and exclusions

Supplemental public-source checks were completed September 10, 2026. The September 6 spatial evidence is retained after a zero-difference CAD geometry comparison. Terrain, hazard and utility-map vintages remain those of their cited datasets. Construction rates remain the existing indexed planning basis; refreshed public information provides no new supplier quotation.

SECTION 14

Source Register

Source	Scope / link
county appraisal district parcel records	Open primary source
Archived transmission geometry	Open primary source
the distribution cooperative construction policy	Open primary source
ERCOT large-load integration	Open primary source
RRC pipeline GIS	Open primary source
Mustang February 2026 rate order	Open primary source
a local fiber carrier	Open primary source
TCEQ major-source thresholds and offsets	Open primary source
TCEQ major-source thresholds and offsets	Open primary source
Turner Q2 2026 index, July 24 release	Open primary source

GIS and third-party records retain their source vintage and positional limits. Reopened equipment and public policy pages support method/status checks, not parcel-specific approvals.

SECTION 14

Source Register I Continued

Source	Scope / link
T&T cost inclusions and exclusions	Open primary source
county development requirements	Open primary source
ETJ polygons	Open primary source
municipal and ETJ GIS	Open primary source
Esri World Imagery	Open primary source
USGS 3DEP elevation service	Open primary source
NRCS Soil Data Access	Open primary source
TxDOT March 2026 highway cost index	Open primary source
FEMA National Flood Hazard Layer	Open primary source
USFWS National Wetlands Inventory	Open primary source

GIS and third-party records retain their source vintage and positional limits. Reopened equipment and public policy pages support method/status checks, not parcel-specific approvals.

SECTION 14

Source Register I Continued

Source	Scope / link
NVIDIA rack hardware; checked September 8, 2026	Open primary source
county drainage standards	Open primary source
Caterpillar 3516E LEHE2570-05, May 2023; retrieved September 2026	Open primary source
Oncor 2025 FERC Form 1, filed April 2026	Open primary source
PUC cooperative service areas	Open primary source
SPP April 2026 filed interconnection amendment	Open primary source
Texas August2026 data-center audit directive	Open primary source
TCEQ emergency engines and general PBR conditions	Open primary source
Energy Transfer Paris Loop commissioning record	Open primary source
Atmos interconnection requirements	Open primary source

GIS and third-party records retain their source vintage and positional limits. Reopened equipment and public policy pages support method/status checks, not parcel-specific approvals.

SECTION 14

Source Register I Continued

Source	Scope / link
Bloom Energy Server specifications	Open primary source
Bloom Energy Server current product page	Open primary source
Energy Transfer Q1 2026 capital update	Open primary source
PUC water service areas	Open primary source
municipal reuse and conservation plan	Open primary source
DOE data-center design guide	Open primary source
a national backbone carrier	Open primary source
EPA ECHO facilities	Open primary source
TCEQ leaking tank records	Open primary source
EPA emergency-generator PTE memorandum, 1995	Open primary source

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SECTION 14

Source Register I Continued

Source	Scope / link
EPA/TCEQ ambient NO2 modeling guidance	Open primary source
TWDB well completion reports	Open primary source
Turner & Townsend 2025 cost study	Open primary source
Turner 2025 annual index in Q1 2026 table	Open primary source
2026 FM455 100-acre asking listing	Open primary source
2026 Anna acreage comparison	Open primary source

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