Data Centers: From Approval to Accountability

A regional readiness briefing — and how IBTS & Centralina can help

Centralina Regional Council · Board of Delegates

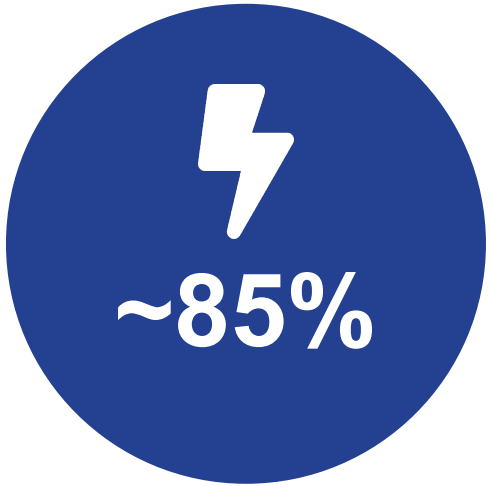
August 12, 2026

THE MOMENT IN OUR REGION

Data center pressure has reached the Charlotte region.



N.C. moratoriums or pauses



of new Carolinas load growth (Duke Energy)



Centralina counties & towns affected

CLOSE TO HOME Rowan County & Kings Mountain have paused. Charlotte's rezoning votes have deadlocked amid resident opposition.

Sources: WRAL; N.C. moratorium tracker; Duke Energy 2025 Carolinas Resource Plan (via UNC Media Hub); WFAE (2025–26).

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WHAT A DATA CENTER REALLY IS

Structurally, it's a large tilt-up concrete building — much like a big-box distribution center. The real complexity is inside: power, cooling, fire protection, and the site.

Big-box construction

Tilt-up concrete, Type 2B — few windows, huge open interior

Massive footprint

Up to ~800,000 sq. ft. on a single graded pad

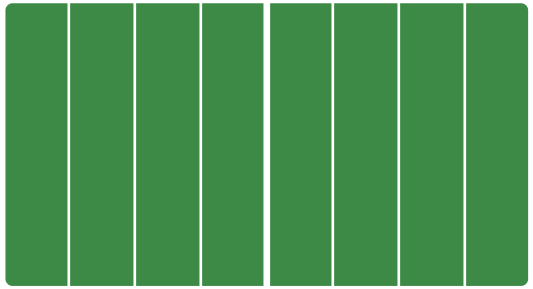
Kept under high-rise

1–4 stories — deliberately below the 75-ft line[1]

Complexity is inside

Power, cooling, fire suppression & site — not the shell

PUTTING 800,000 SQ FT IN PERSPECTIVE



×14

one football field

≈ 14 NFL football fields fit inside a single ~800,000 sq. ft. data center.

[1] *Crossing 75 ft (finished floor) triggers high-rise classification — Type 1A/1B construction with far stricter fire protection on columns, beams, and floors.*

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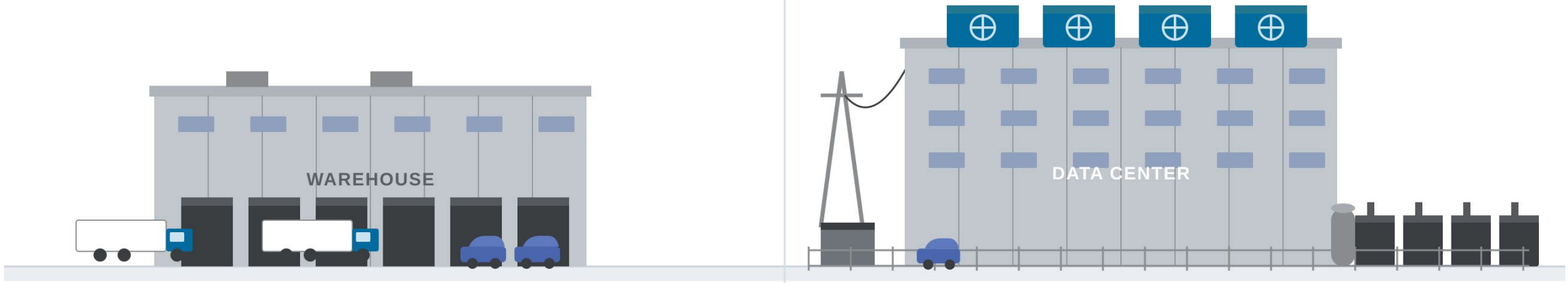
WAREHOUSE VS. DATA CENTER

Same tilt-up concrete shell — the site and systems are what set them apart.

DISTRIBUTION WAREHOUSE
~200,000 sq ft

VS

DATA CENTER
~200,000 sq ft



- Many loading docks
- Trailer & truck yard
- Employee parking

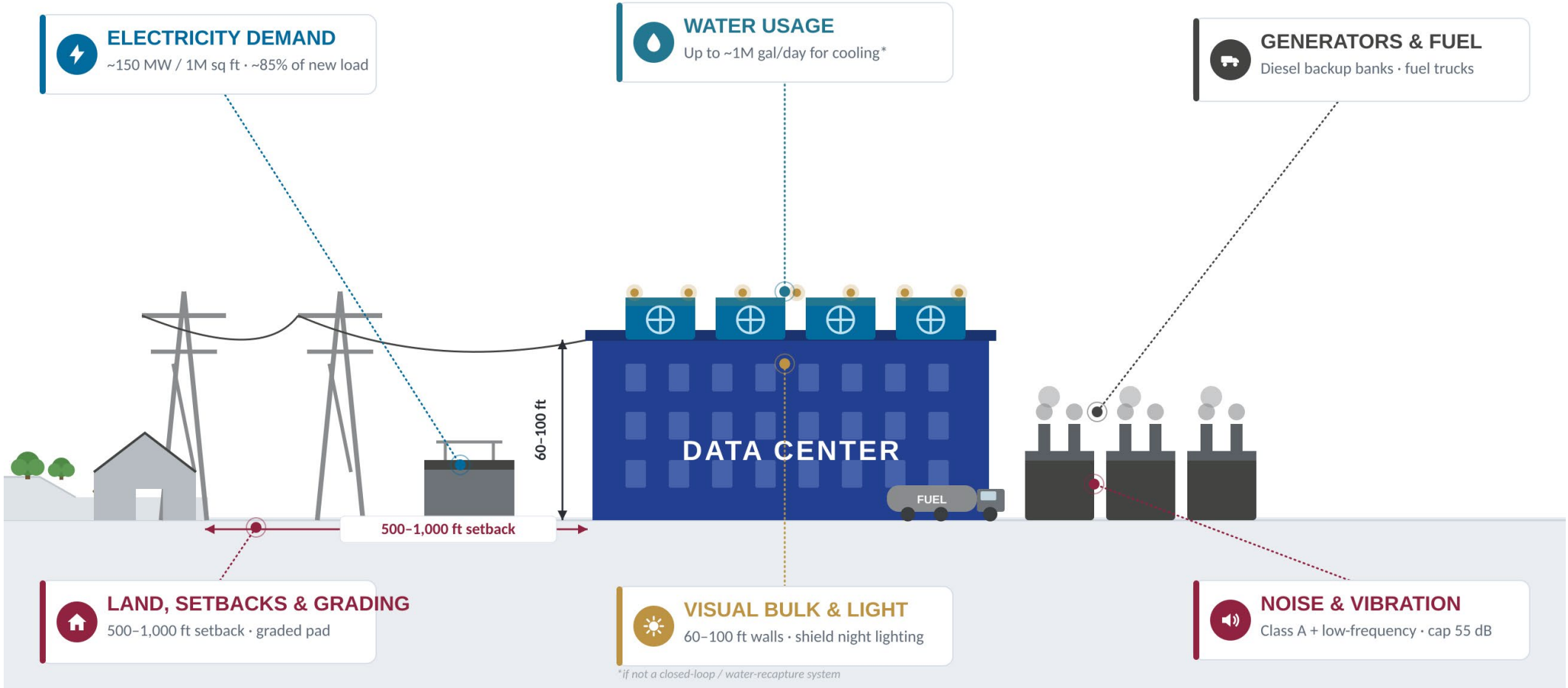
- Rooftop cooling
- Generators, fuel & substation
- Secured · few vehicles

Same tilt-up concrete shell — the site and systems make it a data center.

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UNDERSTANDING DATA CENTER IMPACTS

The technical realities behind the debate — what jurisdictions must plan for, review, and inspect.



Sources: Loudoun County "A Strategy for a Changing Paradigm" (IBTS Vice Chair Mike Turner); electricity-demand share per Duke Energy (2025 Carolinas Resource Plan).

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IMPACTS & MITIGATION MEASURES

Most mitigation measures require ongoing monitoring by local government — not just a one-time plan review.

IMPACT	MITIGATION MEASURE	WHO MONITORS
Electricity & grid demand	Written utility power & delivery plan; substation; microgrid	Ongoing · Local gov
Water use for cooling	Closed-loop / recapture systems; usage reporting	Ongoing · Local gov
Noise & vibration	55 dB cap at property line; pre- & post-construction studies	Ongoing · Local gov
Generators & fuel	Tier IV + SCR[2]; fuel-truck routing & spill containment	Ongoing · Local gov
Visual bulk, height & light	Setbacks, berms & screening; shielded lighting	Plan review
Site grading & stormwater	Grading & stormwater plans; tree preservation	Ongoing · Local gov

[2] *Backup emissions per Tier IV / SCR standards; server-hall suppression uses clean-agent systems; substation review under the National Electrical Safety Code (NESC). Measures reflect Loudoun County best practices & IBTS plan-review experience.*

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THE REAL GAP: READINESS, NOT APPROVE-OR-DENY

A moratorium is a symptom — not a solution.

WHY COMMUNITIES PAUSE

- No enforceable performance standards
- Limited in-house review capacity
- Substation & high-voltage beyond scope

WHAT READINESS TAKES

- Clear, inspectable conditions
- Neutral third-party plan review
- Specialized review & commissioning

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WHERE LOCAL CAPACITY ENDS

A jurisdiction can review the building — but data centers add layers most departments aren't staffed for.

TYPICALLY WITHIN LOCAL CAPACITY

- Building shell & structural (tilt-up, 2B)
- Zoning, site plan & setbacks
- Standard building systems & occupancy
- Standard water fire sprinklers

REQUIRES SPECIALIZED REVIEW

- High-voltage substation (NESC)[3]
- Clean-agent fire suppression
- High-rise reclassification (>75 ft)
- Major grading & stormwater

→ IBTS covers the full scope — including the parts most jurisdictions can't.

[3] NEC (National Electrical Code, also published as NFPA 70) = building wiring that local departments review. NESC (National Electrical Safety Code) = utility high-voltage lines & substations — specialized, outside typical building-department scope.

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WHAT IBTS BRINGS

Proven where data centers are most concentrated — and built to review the full scope.



PROVEN IN THE FIELD

Reviewing live data centers now — **~5 Amazon campuses** in Fairfax County and a **~1M sq ft two-building campus**. Framework from **Loudoun County** (VC Mike Turner); **Matt Rea** on Prince William County's task force.



FULL-SCOPE REVIEW

Structural, MEP, **clean-agent fire suppression** (in-house engineers), and coordinated **high-voltage substation review (NESC)** — the parts most departments can't cover.



NEUTRAL & NONPROFIT

No stake in approval — only in safe delivery. Local through the **Centralina partnership**.

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FROM APPROVAL TO ACCOUNTABILITY

Four phases where a neutral resource makes the difference.

A P P R O V A L

A C C O U N T A B I L I T Y



Ready to implement?

Conditions → permits

Built as approved?

Do commitments hold?

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SECTION 1 — POST-DECISION READINESS

CORE QUESTION ***Is the jurisdiction ready to implement what it approved?***

Alignment

Plans & zoning become clear, enforceable standards.

Governing-body oversight

No “by-right” approvals — review is the checkpoint.

Coordination

Planning, building, fire & utilities aligned early.



WHERE IBTS HELPS We translate approval conditions into enforceable standards and coordinate departments from day one.

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SECTION 2 — PLAN REVIEW & PERMITTING

CORE QUESTION ***Are conditions integrated into permits that can be inspected?***

Specificity wins

Systems backed by drawings, calculations & specs.

Enforceability secured

Broad commitments become verifiable requirements.

Define verification

How LEED / Green Globes standards get confirmed.



WHERE IBTS HELPS We provide neutral third-party plan & peer review — turning commitments into inspectable requirements.

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SECTION 3 — CONSTRUCTION & OPERATIONAL INSPECTIONS

CORE QUESTION ***Was what was approved actually built — and does it work?***

Scoped special inspections

Generators, fuel & electrical exceed routine checks.

Test, don’t just look

Prove power, fuel & suppression under failure.

Verify in the field

Setbacks, routing & noise can shift on site.



WHERE IBTS HELPS We deliver scoped inspections, functional testing & commissioning — including remote support.

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SECTION 4 — LONG-TERM COMPLIANCE & ACCOUNTABILITY

CORE QUESTION ***Will commitments hold 5, 10, 15 years later?***

Data centers are dynamic

Power, workloads & equipment keep evolving.

Build in triggers

Tie changes to monitoring & re-inspection.

Transparency builds trust

Clear records improve future approvals.



WHERE IBTS HELPS We help build monitoring triggers, re-inspection & documentation so commitments hold over time.

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DATA CENTERS: BENEFITS & CONSIDERATIONS

APPENDIX · FACTORS COMMUNITIES WEIGH — PRESENTED WITHOUT ADVOCACY

COMMUNITY BENEFITS

Significant local tax revenue

Often the largest new revenue source

Funding for community initiatives

Capacity for local priorities

Low demand on roads & schools

Minimal daily traffic or enrollment

Construction-phase employment

Skilled trades during the build

PLANNING CONSIDERATIONS

Building scale & visual design

60–100’ structures; screening & setbacks

Noise & low-frequency vibration

Cooling systems; measurable at the line

Electricity demand

~150 MW per 1M sq. ft.

Water use for cooling

Unless closed-loop / recapture

Nighttime lighting

Shielding & controls

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BEST PRACTICES — LOUDOUN COUNTY, VA (1 OF 2)

SOURCE · LOUDOUN COUNTY, VA — "A STRATEGY FOR A CHANGING PARADIGM" · IBTS VICE CHAIR MIKE TURNER

Planning & Governance

1. Align Comprehensive Plan & Zoning — keep current
2. No "by-right" — require governing-body approval

Noise Management

3. Cap noise at 55 dB at the property line
4. Pre- & post-construction noise studies
5. Measure low-frequency noise (expert)

Power & Emissions Equipment

6. Tier IV diesel backup generators
7. Gas turbines: require SCR (cut NOx / CO)
8. Long-duration storage (ELDES) over lithium

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BEST PRACTICES — LOUDOUN COUNTY, VA (2 OF 2)

SOURCE · LOUDOUN COUNTY, VA — "A STRATEGY FOR A CHANGING PARADIGM" · IBTS VICE CHAIR MIKE TURNER

Siting & Community

9 500' residential setback (1,000' ideal)

10 Waste-heat recapture ("district heat")

Grid & Transmission

11 On-campus microgrid for load balancing

12 Advanced transmission conductors (ACSS+)

13 Underground HVDC on a separate grid

Sustainability & Accountability

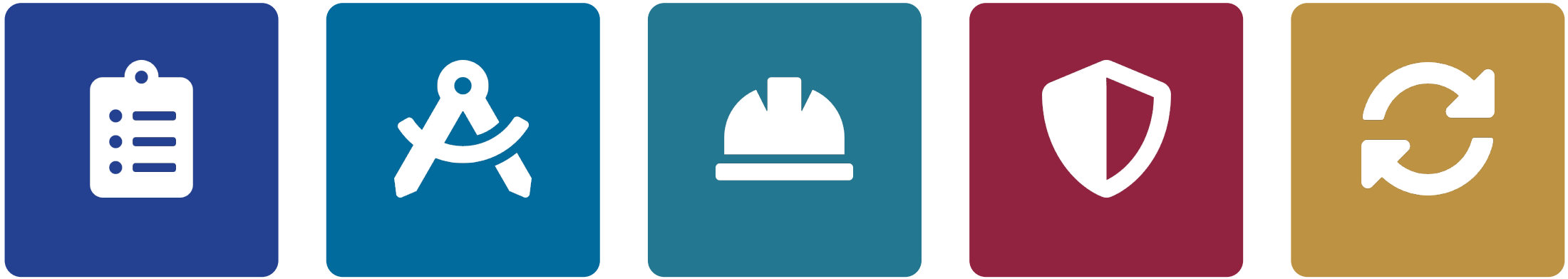
14 Add "Three Green Globes" alongside LEED

15 Utilities specify power & delivery in writing

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A SHARED REGIONAL RESOURCE

*Through the **IBTS–Centralina partnership**, one neutral resource — scaled to any jurisdiction.*



Readiness & ordinance support

Third-party plan review

Specialized inspections

Life-safety verification

Compliance monitoring

No community staffs up alone — the region shares one standard.

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An Invitation to Explore

Projects are arriving now. Readiness beats reaction — and no community should face it alone.

MEET

Working session with Centralina & IBTS to scope a regional resource.

IDENTIFY

Interested jurisdictions — and where the need is most immediate.

PILOT

Review or inspection support for one live or upcoming project.

The ask: *the Board's openness to a follow-up conversation.*