Data Centers in the Charlotte Region: Facts, Myths & What You Need to Know

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
CHARLOTTE CHAPTER

A resource guide for policymakers, commercial real estate professionals, and community stakeholders.

Data centers power nearly every digital interaction in modern life: from telehealth appointments and mobile banking to university coursework and AI-assisted research or basic social media scrolling. Yet as demand for data center space surges across the Carolinas, so has public confusion about what these facilities actually are, what they cost communities, and what they contribute.

Executive Summary

Data centers are essential infrastructure, but public debate often treats them as a single, uniform land use—masking major differences in size, power demand, and community impact. This report clarifies the spectrum of data center types and addresses common myths about jobs, environmental effects, and local fiscal outcomes. When projects are planned transparently and matched with appropriate infrastructure, data centers can deliver outsized tax-base benefits and support high-wage construction and long-term operations. The goal is to equip policymakers and stakeholders with clear, comparable facts to evaluate proposals on their actual scale and impacts.

Introduction

Much of that confusion stems from a single problem: the term "data center" is applied to facilities that have almost nothing in common with one another. A 30,000-square-foot edge facility tucked inside an office building and a 3-million-square-foot hyperscale AI campus on rural farmland serve different users, draw different amounts of power, and carry entirely different community impacts. But in public debate, they are treated as one and the same.

This guide separates fact from myth, drawing on firsthand insights from an April 2026 NAIOP Charlotte panel featuring land use attorney Collin Brown (Alexander Ricks PLLC), developer Robert Combs (The Keith Corporation), construction executive Amy Landis (DPR Construction), facilitated by economic development leader Scott Millar (Catawba County EDC); along with operational data from a Duke Energy briefing on large-load power requests.

Understanding the Spectrum: Not All Data Centers Are the Same

The first step toward informed decision-making is recognizing that "data center" describes a spectrum of fundamentally different facilities.

Edge data centers are **50 kW to 5 MW** (0.05–5 MW) small-footprint installations, often under 100,000 square feet, designed to sit close to end users for speed. They can occupy space inside urban office buildings, generate minimal traffic, & draw modest power. As Collin Brown told the NAIOP audience, some projects his firm handles are as small as 30,000 square feet, roughly the footprint of a car wash, yet face the same opposition as facilities fifty times their size.

Colocation facilities typically are **1 MW to 5 MW** and serve multiple tenants, typically financial institutions and enterprise clients who need proximity to major business corridors. Digital Realty's Charlotte-area operations, for example, are driven by the region's concentration of banking customers.

Hyperscale and AI campuses are the largest category, typically **5 MW to 20 MW+**, built for large tech companies like Apple, Microsoft, Google and Meta. These facilities can span hundreds of acres, require hundreds of megawatts of power, and represent billions of dollars in capital investment. They are the projects most likely to trigger community concern, & they warrant different regulatory treatment than their smaller counterparts.

Any productive policy conversation must begin by distinguishing between these categories. A regulatory framework that treats a 30,000-square-foot edge facility the same as a gigawatt-scale AI campus will either over-restrict small projects or under-regulate large ones.

Myth #1: "Data Centers Don't Create Real Jobs"

The reality is more nuanced — and more favorable — than critics suggest.

It is true that a single data center does not employ 1,500 people the way a manufacturing plant might. But the job creation picture extends well beyond the building itself.

Construction employment is substantial. Data center construction generates jobs at wages typically running 60% above local median earnings. Virginia's Joint Legislative Audit and Review Commission (JLARC) estimated in 2024 that data centers generate 74,000 jobs statewide, the majority in construction, along with $5.5 billion in labor income and $9.1 billion in GDP annually. NAIOP's 2026 Economic Impact Report found that every $1 of construction spending generates $2.46 in total economic output, $2.28 of which stays within the state.

Permanent jobs are fewer but high-wage and stable. Apple's campus in Maiden, North Carolina, now employs approximately 400 people, up from an initial commitment of 50 direct and 150 support roles, plus a network of long-term local contractors in HVAC, electrical, security, & landscaping that have served the facility continuously for 15 years.

The indirect employment effect is enormous. As Brown argued at the panel, data centers are the backbone of Charlotte's healthcare, banking, and education sectors. Atrium Health's virtual doctor program, the region's financial trading infrastructure, and university online learning platforms all depend on fast, reliable data processing that sits inside these facilities. A decade ago, most offices maintained their own server rooms. Today, that work has been migrated to data centers, meaning the jobs those centers support are distributed across the entire regional economy.

Per NAIOP’s 2026 Economic Impacts report, private data centers constituted 43.3% of private office construction put in place in the 12 months ending in July 2025 across the U.S., up from 19.7% just two years prior, a signal that this sector is not a niche but a structural pillar of commercial real estate.

Myth #2: "Data Centers Are an Environmental Disaster"

The environmental footprint is real — but it is smaller, and improving faster, than public perception suggests.

Data centers and their associated transmission networks account for approximately 1% of global energy-related greenhouse gas emissions which is comparable to the global aviation industry, while underpinning a far larger share of economic activity.

Roughly 56% of data center electricity currently comes from fossil fuels, which is the honest starting point for any environmental conversation. But the trajectory is sharply positive. According to a 2025 Cornell University study published in *Nature Sustainability*, advanced liquid cooling and server efficiency improvements can reduce carbon emissions by up to 73% and water consumption by up to 86% with optimized siting and design.

On the ground, operators are already making voluntary investments in sustainability. Apple recycles and reuses every gallon of water 37 times before releasing it from its Maiden facility. Operators across the industry are adopting AC/DC power conversion systems that deliver 30% greater energy efficiency. Campus designs increasingly feature much higher sustainability features than more manicured developments. For example, large acreage supports native landscaping allowing tall grasses and wildflowers to grow naturally, which has restored habitat for birds, butterflies, & pollinators at multiple sites and even wildlife to return.

But the bigger story is that the water conversation itself is becoming obsolete for new construction. At least 69 jurisdictions in the U.S. have already implemented some form of restriction or moratorium, with many focusing on water consumption. Some jurisdictions, such as the Southern Nevada Water Authority (SNWA**)** enacted a comprehensive policy that effectively requires closed-loop or water-free systems for new data center approvals, setting a regulatory floor that the largest operators are already exceeding voluntarily. Older data centers relied on open evaporative cooling, which cycles water two to five times before it

evaporates or is discharged, a method that consumes large volumes of fresh water, particularly in hot climates. The next generation of facilities is moving rapidly toward closed-loop and zero-water-evaporated designs that fundamentally change the equation.

In a closed-loop system, water is added once during construction and circulates continuously between servers and chillers. Heat is rejected to outside air through heat exchangers rather than through evaporation. The water never leaves the loop, so day-to-day fresh water draw approaches zero. Microsoft's newest AI-optimized campuses are designed to use zero water for cooling, even in desert climates, a standard that delivers up to 90% less water consumption than traditional evaporative systems and an estimated 125 million liters in annual savings per site.

Where evaporative cooling is still used occasionally, operators are increasingly partnering with municipal utilities to substitute treated wastewater for potable supply. Major operators now publish Water Usage Effectiveness (WUE) metrics by site, with leading designs targeting 0.30 liters per kilowatt-hour or lower, a level of transparency that was nonexistent five years ago. Site selection itself is evolving: climate, watershed health, & grid water-intensity now factor into where hyperscalers locate, and the Carolinas' moderate climate positions the region favorably for efficient builds.

Myth #3: "The Community Gets Nothing and Bears All the Costs"

Where projects are managed transparently, the fiscal impact has been overwhelmingly positive.

Data centers are among the highest-assessed properties per acre of any asset class. The tax base impact is immediate and measurable.

The Maiden, North Carolina Case Study: When Apple arrived in 2011, the town's tax rate was $0.40 per dollar of assessed valuation. Fifteen years and more than $6 billion in cumulative investment later, the rate has dropped to $0.38, even as the town built a new fire station, fire headquarters, police headquarters, town

hall, & community center. During the 2008 recession, when tax rates were rising across the state, Maiden's went down.

The Loudoun County, Virginia Case Study: The county reported a $200 million budget surplus it had not even projected, driven by data centers coming online faster than fiscal models anticipated.

The Charlotte comparison. Robert Combs described a site his firm, The Keith Corporation, had originally planned for an e-commerce warehouse, a property that would have been assessed at roughly $150 million. As a data center, the same site is expected to carry an assessed tax value on the low end of $1.5 billion, more than 10 times the tax contribution from a single parcel.

The concern about community cost-bearing is legitimate when projects are managed poorly. But the antidote is transparency and early engagement, not blanket opposition. More than $64 billion in data center projects were delayed or canceled between May 2024 and March 2025 due to organized community opposition, according to the World Resources Institute. Communities that shut the door entirely risk losing generational investment to jurisdictions that plan proactively.

The Power Question: What Everyone Needs to Understand

Power infrastructure is the single most decisive factor in whether a data center project is viable, and the single most misunderstood issue in public debate.

The scale of demand is unprecedented. Duke Energy reported that requests escalated almost overnight from projects requiring tens of megawatts to projects requesting as much as 1,000 megawatts. In 2025 alone, Duke received more than 300 leads from prospective large-load users. Of those, 48 projects moved forward, representing $24 billion in capital investment and 40,000 jobs across North Carolina.

Timelines are measured in years, not months. Even a project requiring only a new substation faces a two-to-three-year timeline for engineering, equipment procurement, and construction. More complex requests requiring new

transmission lines or substation rebuilds can take significantly longer. Equipment bottlenecks compound the problem: lead times for generators and Uninterruptible Power Supply (UPS) systems now stretch to 42 weeks or more, and even alternative solutions like natural gas combustion turbines face five-year equipment backlogs.

Cost allocation has shifted. Duke Energy implemented a policy within the last 18 months requiring data center end users to pay for substation improvements and upgrades needed to serve their facilities. New contracts may include minimum billing demands, curtailment obligations during system emergencies, and early termination fees. Prospective customers may also be required to provide upfront refundable capital equal to the estimated cost of infrastructure improvements, a newer concept designed to prevent speculative projects from creating stranded costs borne by residential ratepayers.

Rate impacts are statewide, not local. North Carolina is a regulated utility state. While overall generation costs may rise as the grid expands, those costs are distributed across the entire rate base, not concentrated on neighborhoods adjacent to data center sites. The argument that a family living next door to a data center will see their power bill spike is not how regulated utility pricing works.

The Opposition Landscape: Organized, National, and Often Disconnected from Local Facts

Multiple panelists at the NAIOP event described encountering opposition that did not appear to be organic or locally driven. Brown described community meetings where attendees arrived with nationally coordinated talking points and where subsequent media coverage bore little resemblance to what was actually discussed. He noted that some of the most active opposition groups in the data center space operate at a national level, deploying AI-driven tools to identify and mobilize against new proposals wherever they appear.

That does not mean every concern is illegitimate. Questions about power

consumption, water usage, noise, & visual impact deserve honest answers. But policymakers evaluating data center proposals should distinguish between locally grounded concerns and nationally manufactured campaigns and should evaluate each project based on its actual size, type, & impact profile rather than treating the category as monolithic.

Key Takeaways

The data center conversation in Charlotte and across the Carolinas is moving faster, in many cases, than the facts can travel. For anyone navigating this landscape, a few principles stand out:

Differentiate by type. An edge facility and a hyperscale campus are as different as a neighborhood pharmacy and a chemical plant. Regulatory frameworks should reflect that and treat 20+ MW facilities differently.

Follow the fiscal math. Data centers generate some of the highest tax revenue per acre of any land use, with minimal demand on schools, roads, & emergency services compared to residential or large-employer commercial development.

Engage Duke Energy early. The utility's new intake process includes a $100,000 non-refundable study fee, multi-year timelines, & upfront capital requirements. Developers and landowners who engage before site commitments are made will move through the process faster.

Lead with facts, not fear. The environmental, employment, & fiscal data on well-managed data center projects is strong. The industry's challenge is not the evidence - it is the speed at which misinformation travels.

Sources: *NAIOP Charlotte Panel, April 24, 2026; NAIOP 2026 Economic Impact Report; Virginia JLARC Data Center Study, 2024; Cornell University / Nature Sustainability, 2025; World Resources Institute, February 2026; BDO Industry Report, 2026; Duke Energy Large-Load Briefing Summary, 2026; Closed-Loop Cooling: The Standard for Next-Generation Data Centers; Data Centers Magazine.*

About NAIOP Charlotte: NAIOP is the premier association for commercial real estate development, uniting professionals across industrial, office, retail, and mixed-use sectors. www.naiopclt.org

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