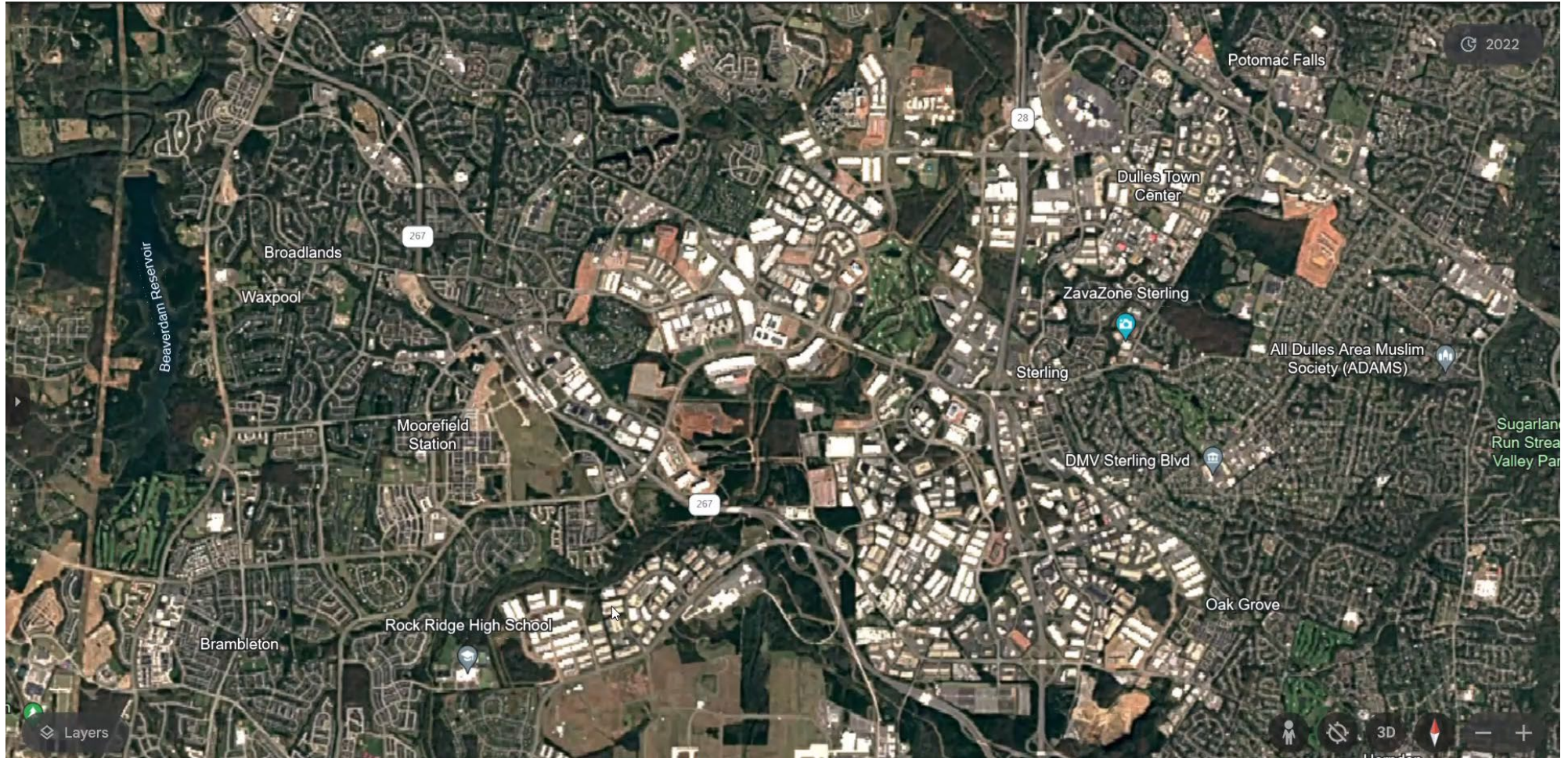


Data Center Alley

Jefferson County Development Authority

BUBBLE, BURST, BUBBLE, BURST, BOOM



RESIDENTIAL AND COMMERCIAL TAX BASE

2007

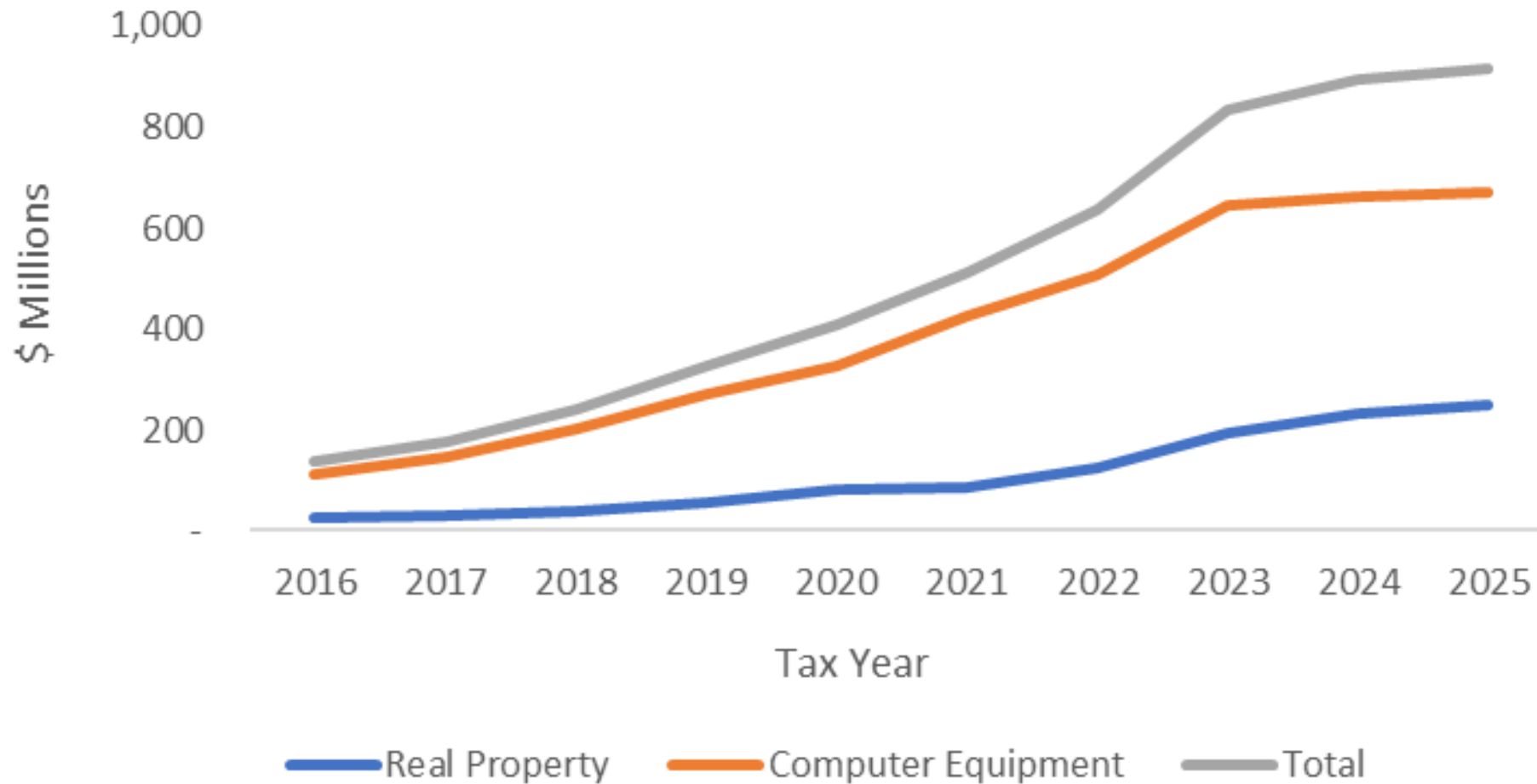
2024



LOUDOUN'S DATA CENTERS BY THE NUMBERS

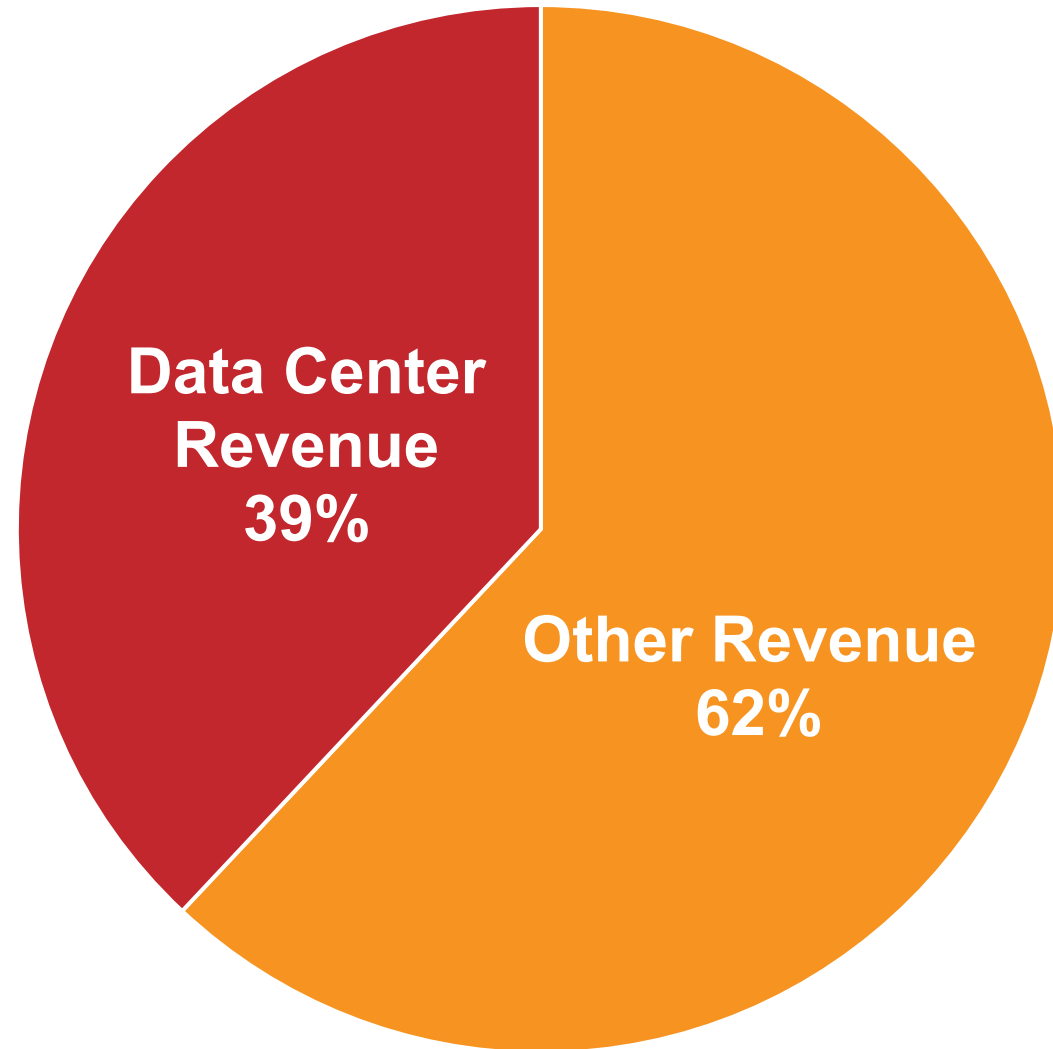
\$1,000,000,000
53,500,000 (+4m)
15,000
26 / 1
<1

Loudoun County Data Center Tax Revenue



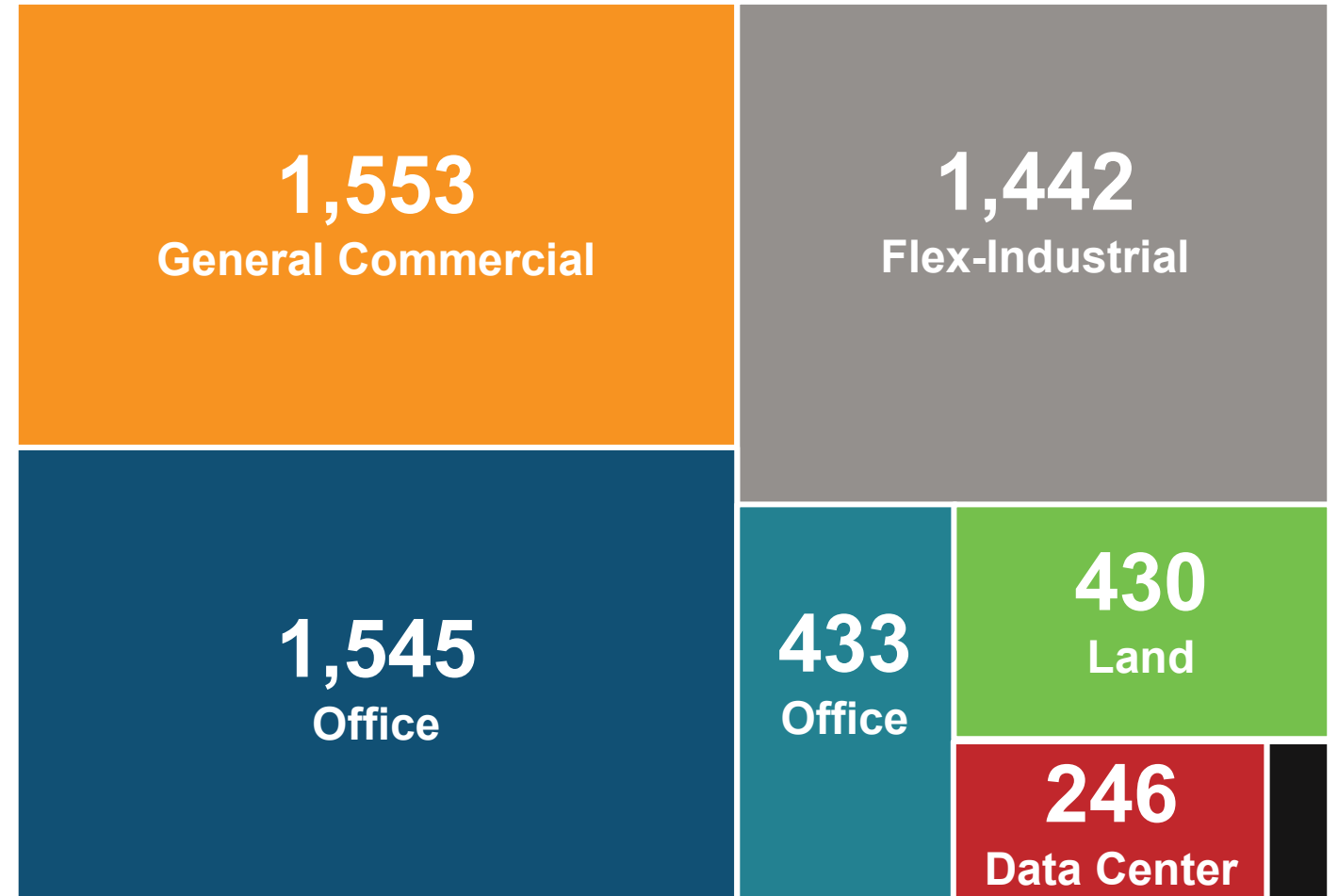
**Data centers
generate 39% of
the County's
General Fund
revenues on less
than 3% of its
land**

Total General Fund Revenue



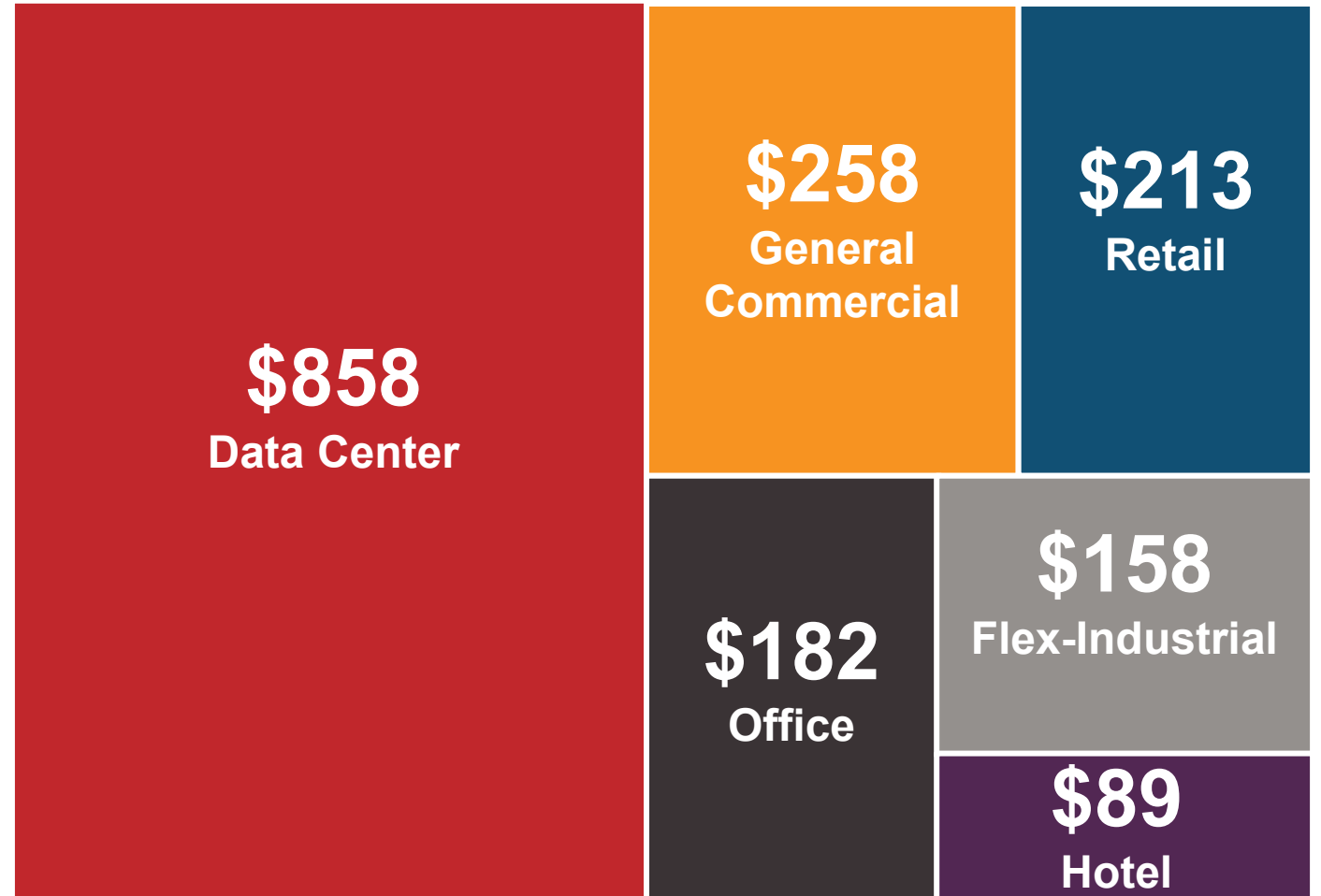
Total Commercial Parcels

Data parcels
constitute 4%
of total
commercial
parcels



Assessed Value per Square Foot

Data center
value per
square foot is
3 times more
than next
highest use





- In FY2012, Loudoun's tax rate was \$1.285 per \$100
- In FY2026, Loudoun's tax rate will be \$0.805 per \$100



That is a \$0.48 per \$100 tax reduction over 13 years

At Loudoun's averaged assessed value of \$735,800, a homeowner saves about \$3,531 a year in taxes.





[cbsnews.com/news/loudoun-county-data-centers-virginia-technology/](https://www.cbsnews.com/news/loudoun-county-data-centers-virginia-technology/)



matteroffact.tv/more-data-centers-spark-concerns-for-virginia-residents/



LAW & ORDER

ORGANIZED CRIME



#LoudounPossible

LoudounPossible.com

ESSENTIAL COMPONENTS



Land



Fiber



Utilities



Taxes

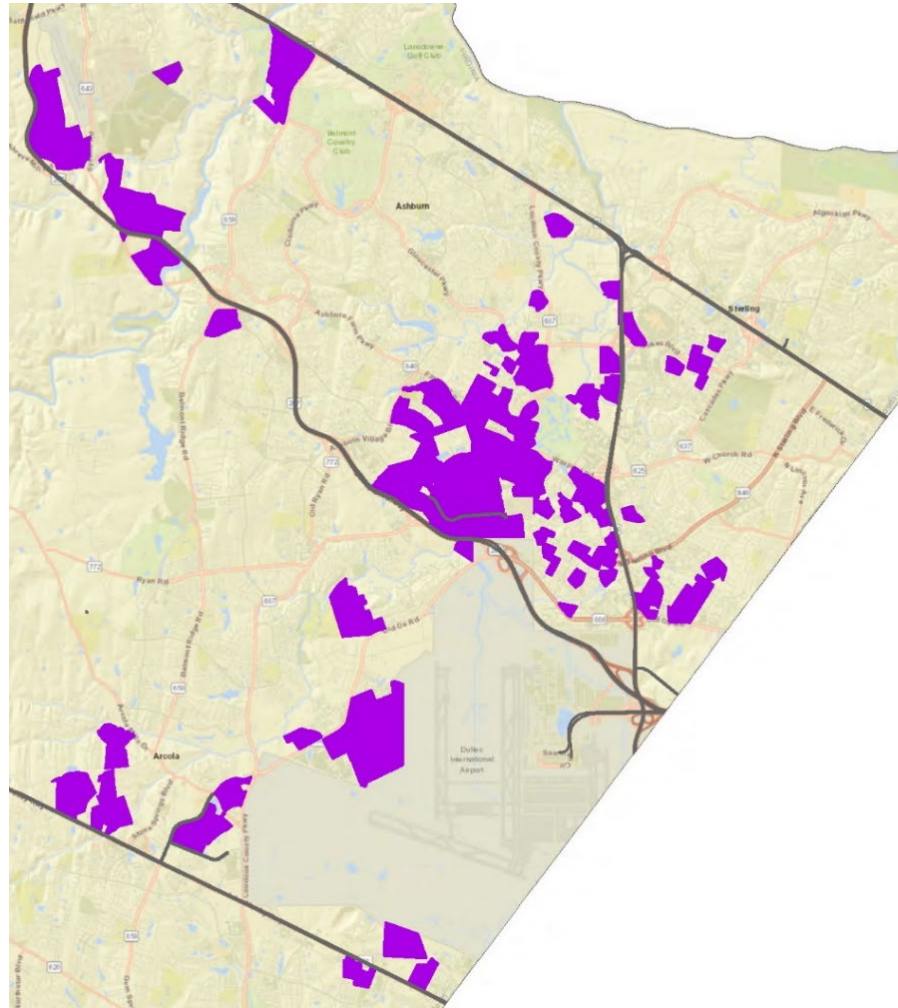


Business Environment



Workforce





THE MOST CONNECTED PLACE ON EARTH

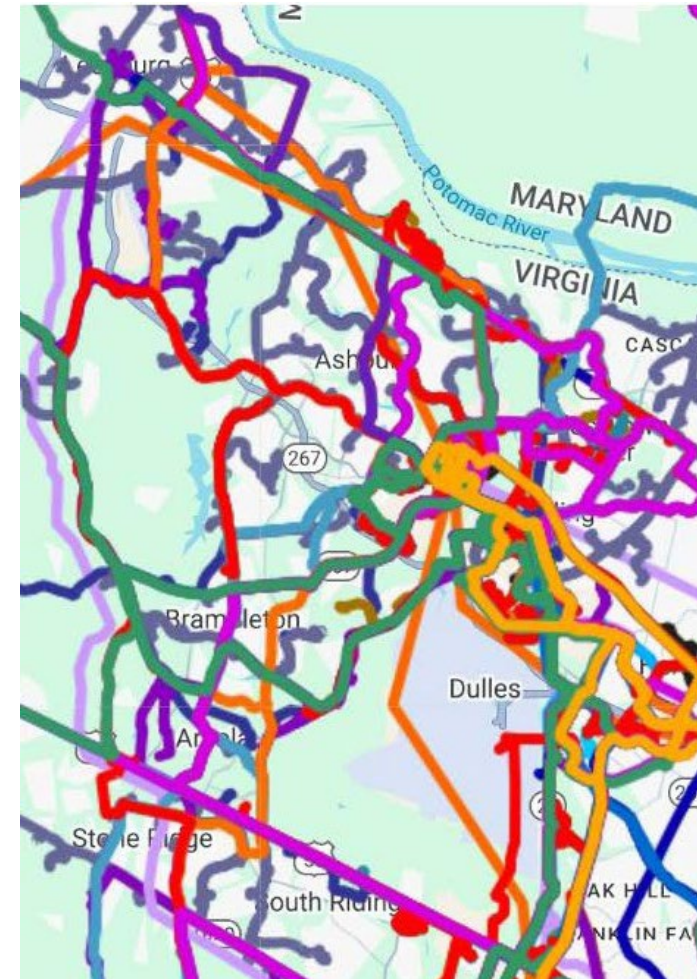


**“The internet
lives in
Ashburn,
Virginia.**

— Voice of America

**We didn’t build
the internet
here—but
we sure keep
it running.”**

— Buddy Rizer



Electricity



- **Actual Peak Load: Over 5GW of Load**
- **Annual Load Increase: 100-200 MWs**
- **500kV Transmission Ring (the first of its kind) feeding multiple 230kV transmission networks in Ashburn**
- **New “Southern” high-voltage line has been completed (constraint lifted)**
- **New “Northern” high-voltage line to be completed in 2027**
- **New “Central” high-voltage line to be completed in 2028**
- **Substations served multiple 230kV sources**
- **Dominion Energy currently has more than 15 substations in service or under development in approximately a 1.5-mile radius**

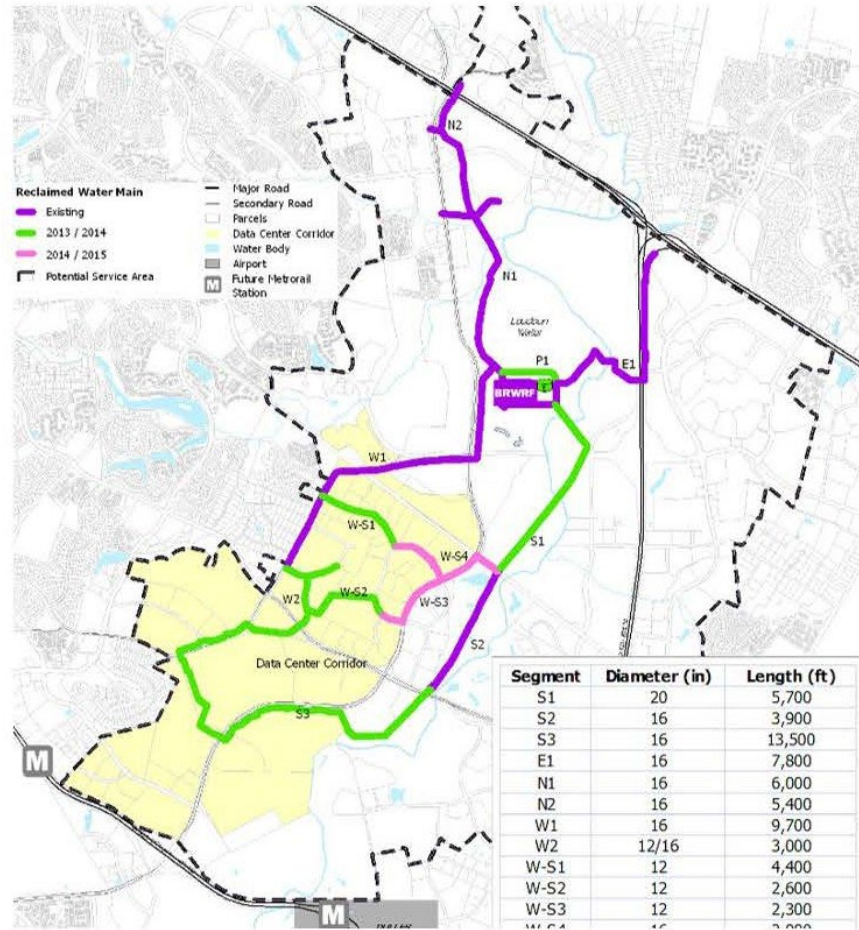
COMMITMENT TO SUSTAINABILITY

- Currently generate 2,600 MW of clean energy in ten states.
- Coastal Virginia Offshore Wind project is the first offshore wind initiative in the mid-Atlantic.
- Committed to 3,000 megawatts of solar and wind energy under development or in operation by later this year.
- 16,000 MW planned.



RECLAIMED WATER

- 20 miles of pipeline
- 40 facilities connected
- 675 million gallons of reclaimed water used



TAX POLICY AND FINANCIAL ADVANTAGES



- Stable tax environment
- Stable energy prices
- World-class sales and use tax incentive
 - More than 70 data centers are eligible for the sales tax break
 - \$124.5 million saved by data centers in 2021
 - Spurred more than \$1.2 billion in taxes in Virginia in 2021

BUSINESS ENVIRONMENT

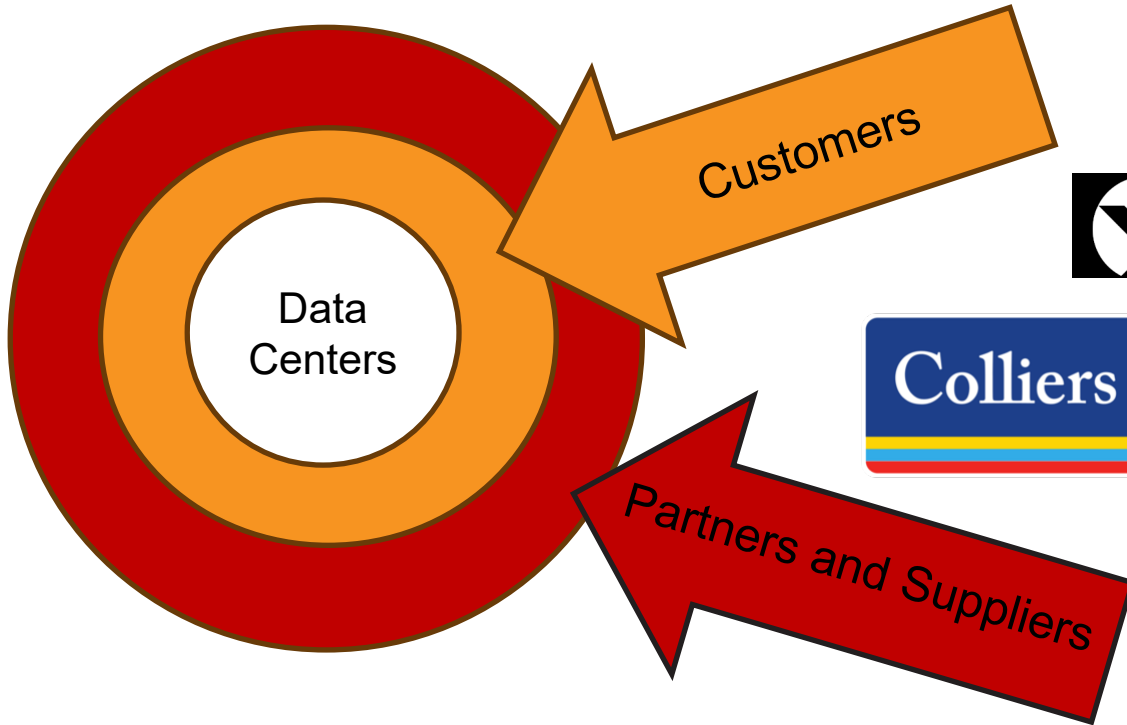
- Predictable Process
- World-Class Time to Market
- Fast Track Program



“One of the greatest treasures of Loudoun County is the Department of Economic Development. They know what is important to us, they know what's important to business owners.”

- Loudoun Business Owner

EMPLOYMENT AND THE ECOSYSTEM



For every job in a data center, there are SIX jobs in the ecosystem!

WORKFORCE

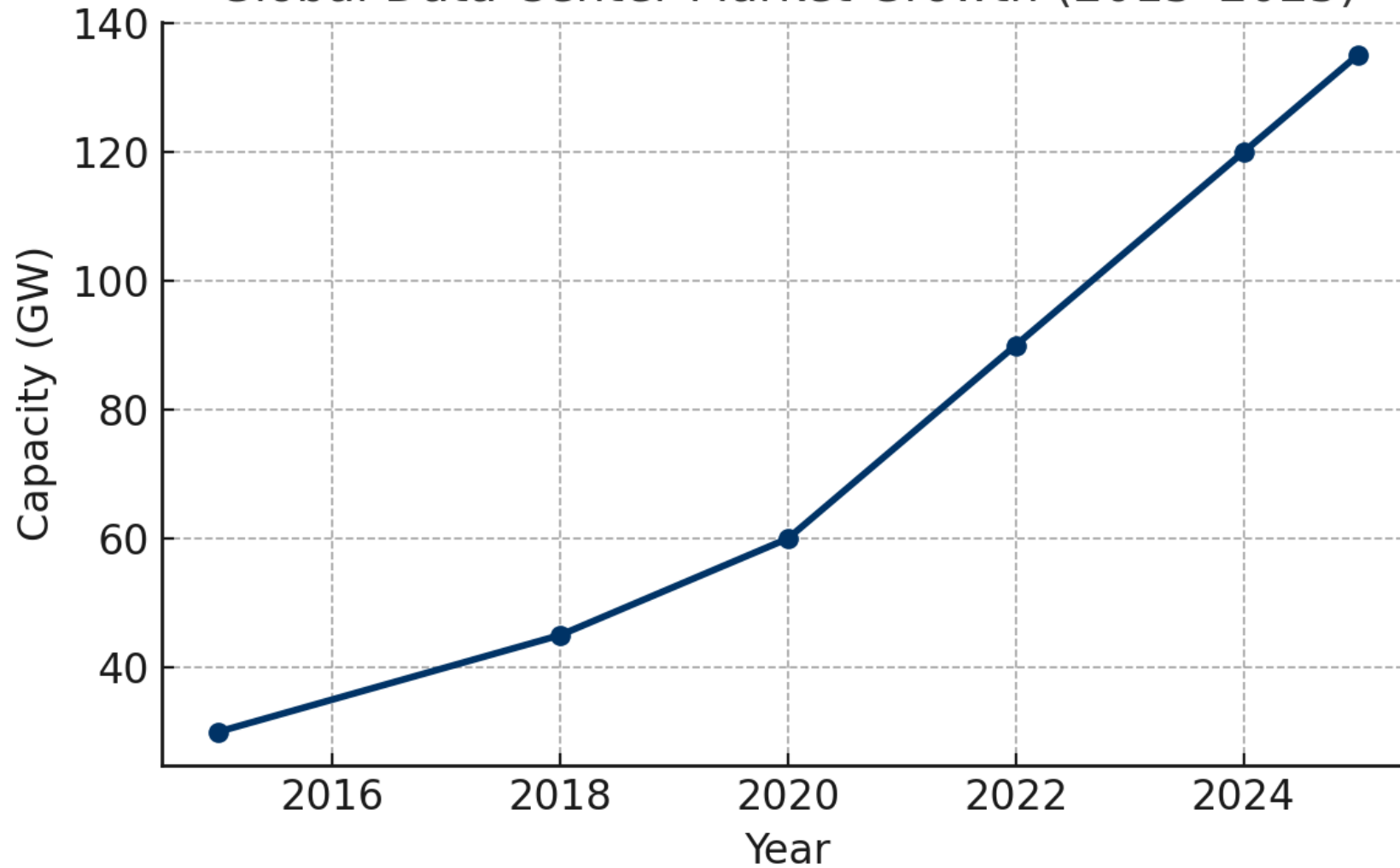


NOVA | Northern Virginia
Community College

A.A.S. Associate of Applied Science
C.S.C. Career Studies Certificate

**MAKE YOUR CAREER
IN DATA CENTER OPERATIONS**

Global Data Center Market Growth (2015-2025)



THE THREE Ps – INDUSTRY CHALLENGES

- **Power – Access and reliability remain top challenge**
- Perception – Community trust and visibility are increasingly critical
- Policy – Major policy changes adopted

Today, the demand for power **shapes where and when digital infrastructure is built.**

THE ABILITIES OF POWER

- Availability
- Scalability
- Reliability
- Affordability
- Sustainability



THE THREE Ps – INDUSTRY CHALLENGES

- Power – Access and reliability remain top challenge
- **Perception – Community trust and visibility are increasingly critical**
- Policy – Major policy changes adopted

Digital infrastructure industry members that are “of the community” share the community’s values, participate in local events and invest in the well-being and development of the community.

THE THREE PS – INDUSTRY CHALLENGES

- Power – Access and reliability remain top challenge
- Perception – Community trust and visibility are increasingly critical
- **Policy – Major policy changes adopted**

**Policy Shifts Are Reshaping
the Data Center Playbook**



If we can help you in any way,
please call Buddy Rizer at
703-777-0592 or email
Buddy.Rizer@Loudoun.gov



SUSTAINABILITY

Get Off My Lawn ... You Crazy Data Centers!

CHRIS STOKEL-WALKER BUSINESS AUG 1, 2022 7:00 AM

Data Centers Are Facing a Climate Crisis

Companies are racing to cool down their servers as energy prices and temperatures soar. And th

VERIFY

What's all the data center noise about?

Neighbors say Northern Virginia data centers emit a noise they just can't tune out. We took to the streets and dove in to the science to figure out why.

The staggering ecological impacts of computation and the cloud



Drought-stricken communities push back against data centers

As cash-strapped cities welcome Big Tech to build hundreds of million-dollar data centers in their backyards, critics question the environmental cost.

CLIMATE

Data centers, backbone of the digital economy, face water scarcity and climate risk



SUMMARY – DATA CENTER REGULATORY LANDSCAPE 2025

Biggest Shifts:

- Data centers must go through SPEX process.
- Fast-track eligibility eliminated.
- Phase 2 will define stricter design and performance standards.
- State regulatory changes may impact rates, classifications, and tax advantages.

DED Role:

- Serve as liaison and resource for navigating regulatory updates.
- Support ongoing business operations and project planning.
- Advocate for balanced, forward-looking policies.



LOOKING AHEAD

- Sustainability and “Greener” Data Centers
 - Sustainable design, renewable energy integration, efficient cooling, and carbon-neutral operations.
 - Innovations like liquid cooling, immersion cooling, and green building certifications (e.g., LEED, Green Globes).

LOOKING AHEAD

- AI-Optimized Data Centers
 - Greater demand for AI-specific infrastructure, particularly for training large models. This will drive power density requirements far beyond traditional cloud data centers.
 - Enhanced use of machine learning for optimizing power usage, predictive maintenance, and efficient load balancing.

LOOKING AHEAD

- Edge Computing Expansion
 - Surge in edge data centers to support IoT devices, 5G networks, and low-latency applications.
 - Decentralization of data processing closer to end-users to reduce latency and bandwidth costs.
- Hyperscale Growth
 - Continued expansion of hyperscale data centers, driven by cloud providers like AWS, Google, Meta, Oracle, and Microsoft.
 - Focus on multi-megawatt deployments in strategic regions with reliable power and connectivity.

LOOKING AHEAD

- International Expansion and Emerging Markets
 - New US markets emerging as companies “chase power”
 - Data center growth expanding into international markets like Southeast Asia, Africa, and South America.
 - Localized data storage to comply with national data sovereignty laws.

LOOKING AHEAD

- Energy Autonomy and Microgrids
 - Integration of microgrids for energy independence and resilience.
 - Use of onsite renewable energy generation (solar, wind) coupled with battery storage solutions.
- Integration with Smart Grids
 - Collaboration with smart grid technologies to optimize power distribution and manage demand during peak loads.
 - Enhanced energy efficiency through grid-connected demand-response programs.