

Fairfax County Board of Supervisors  
12000 Government Center Parkway  
Fairfax, VA 22035  
Transmitted by Email

Re: Proposed Data Centers Zoning Ordinance Amendment

July 9, 2024

Dear Board of Supervisors,

The 14 organizations signed below work on behalf of tens of thousands of Fairfax County residents to protect the natural environment, air and water, public health and to reduce the impacts of climate change.

We are collectively writing to share our recommendations for reasonable and necessary regulation of data centers in Fairfax County. This unique land use creates a complicated and significant array of negative impacts, and our current county policies do not adequately protect residents or the environment. Together, we encourage you to both support the Planning Commission's recommendations and go further to take stronger measures than those currently in the proposed Zoning Ordinance Amendment (ZOA).<sup>1</sup>

**We ask you to support the amendments, adopted by the Planning Commission at its June 6<sup>th</sup> meeting, to strengthen the proposed Zoning Ordinance Amendment (ZOA):**

- Require data centers be located at least 1 mile from a metro station entrance. The county should be investing in walkable communities, housing and jobs near transit, not building data centers in these valuable areas. Data centers have few on-site employees and, as such, building them within walking distance of transit undermines the county's smart growth and transportation goals to support residential, jobs, and mixed-use development near transit.
- Require that noisy and polluting data center equipment be setback at least 500 feet from adjacent residences. We support the amendment by the Planning Commission that generators and HVAC equipment be located away from (not adjacent to) residential, public and commercial uses, in order to reduce air, noise and aesthetic impacts to adjacent properties. We must strengthen protections for all residents, especially the most vulnerable according to the One Fairfax Policy, such as the residents of the Meadows of Chantilly Mobile Home community in the Sully district who are facing an otherwise by-right data center proposed just 50 feet from their community.
- Preserve the provision that clearly states that new rules in the ZOA would apply to submitted, but not yet approved, data center site applications.

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<sup>1</sup> <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/Assets/Documents/PDF/data-centers-staff-report.pdf>

**We ask that all data center developments be subject to Special Exception review.**

We urge you to require the “data center use” to be subject to a Special Exception across the county. A Special Exception gives the board more flexibility to ask developers to address issues - such as best available technology for diesel generators - that cannot currently and adequately be otherwise regulated. This flexibility could also reduce future climate mitigation costs resulting from emissions associated with data centers. As the county’s Policy Plan does not currently have adequate standards for data centers, this additional process and negotiation is key to ensure we get better protections and address site specific issues *now*. Fairfax County would not be setting new precedent by removing by right data center zoning. The Town of Leesburg recently moved to require a Special Exception<sup>2</sup> and Loudoun County is removing data centers as a by right use.<sup>3</sup>

**We ask that the county establish a specific data center “use”, with the requisite “use-specific standards” designed to mitigate the full range of impacts, to acknowledge the unique set of environmental and resource challenges that data centers present.**

*The data center land use is not like other land uses*

The data center land use differs significantly from other industrial uses with noise that *never* stops, the associated infrastructure to power the plants, the increasing demand for water resources, and the astronomical energy uses which today map directly to trending increases in carbon emissions. The possibility that, under emergency conditions, data centers could function 24/7 as a pollution-generating, diesel-fueled power plant must also be taken into consideration.

*Unique protections are needed now for this unique land use*

Several significant issues were addressed in Data Centers: Report and Recommendations<sup>4</sup> (1/9/2024) that were excluded from the proposed ZOA language. The best way to avoid negative externalities of this next generation of data centers is to prepare now to address the emerging and more intense resource demands, by any mechanism possible, of any proposed data center development.

The county’s current strategy to defer addressing key data center standards contributes to bad data center developments, introducing additional risk into the power grid, increased carbon emissions and risks of depleting our limited local water resources.

*Drinking water must be protected*

All localities in Virginia are currently under a drought warning or drought watch. Fairfax County is among those that is under drought warning advisory, which indicates a significant drought is “imminent.”<sup>5</sup> The possibility of more frequent drought conditions should be a wake-up sign to jurisdictions servicing data centers, particularly because those siting data centers that process

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<sup>2</sup> [https://www.loudountimes.com/0local-or-not/1local/leesburg-eliminates-by-right-data-center-zoning/article\\_84a5de86-1312-11ef-bce2-4b43e9ae29ed.html](https://www.loudountimes.com/0local-or-not/1local/leesburg-eliminates-by-right-data-center-zoning/article_84a5de86-1312-11ef-bce2-4b43e9ae29ed.html)

<sup>3</sup> <https://www.datacenterdynamics.com/en/news/virginias-loudoun-county-to-remove-data-centers-as-by-right-use/>

<sup>4</sup> <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/Assets/Documents/PDF/data-centers-report.pdf>

<sup>5</sup> <https://www.wric.com/weather/severe-weather/all-of-virginia-under-drought-watch-or-warning-advisory/>

intensive applications such as Artificial Intelligence (AI) and cryptocurrency, have seen huge increases in water consumption and applications for water withdrawal.

Water demand is an emerging area of concern, voiced both via discussion by the industry<sup>6</sup> and in many local communities. Data centers that run these new applications utilize evaporative and other water-intensive cooling technologies, to combat the extra heat generated by computationally heavy applications. This cooling method has increased cooling capabilities, but also unfortunately is far more water intensive. This is already evident in Loudoun County. Even with a significant reclaimed water system in place, between 2019 and 2023, data center use of potable water has increased 260%, while both the population and numbers served are up 6%. Further, six of the seven top “principal customers” of Loudoun Water are data centers.<sup>7</sup>

**In addition to the few standards offered in this draft ZOA, it is essential that additional impacts specific to data centers that must be better mitigated include:**

- Increasing setbacks to at least 500 feet for adjacent residential, parks, public lands, schools and other public amenities;<sup>8</sup>
- Protecting residents from siting of substations, and other related infrastructure, close to their homes.
- The 24/7 noise problem (noise ordinance<sup>9</sup>);
- Comprehensive energy efficiency standards;
- Procurement of new renewable energy by companies;
- Requiring that energy and water use data be made public;<sup>10</sup>
- Mitigation of highly toxic diesel generator pollution;
- Water impact studies to be performed before approval and the data should be publicly available;
- Reducing the demand for withdrawing from local drinking water supplies:
  - Drinking water for residents be designated as a priority use during drought conditions;
  - Water should be recycled or reclaimed and should neither deplete nor imperil surface, groundwater and well sources needed for drinking water;
- Reducing and mitigating tree loss to the greatest extent practicable;
- The use of sustainable and bird-safe building materials;

## Conclusion

Greenlighting data centers means greenlighting fossil fuels. Growth in data center development will impair the county’s ability to meet its Community-wide Energy and Climate Action Plan (CECAP) goals. This industry’s pollution creates additional burdens on already socially vulnerable communities which have a multiplier effect on their health, wellness and upward economic mobility, often causing them to use their limited resources to address health issues

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<sup>6</sup> <https://www.datacenterknowledge.com/industry-perspectives/data-center-liquid-cooling-moving-niche-mainstream>

<sup>7</sup> <https://www.loudounwater.org/about/annual-comprehensive-financial-reports>

<sup>8</sup> In part, the protective nature of that to adjacent neighbors and uses is also predicated on the efficacy of the noise ordinance and/or noise mitigations incorporated by the developer.

<sup>9</sup> We support pre and post construction studies along with adequate standards to protect adjacent properties 24/7.

<sup>10</sup> Fairfax County data centers should be in the top 10% nationwide for efficiency and water use.

created by dangerous sitings such as these.

Projects of this magnitude should require thorough analyses of their impact on the county's carbon footprint. The county has not specifically addressed sustainability measures for data centers in CECAP, so what will the county do to ensure that its carbon emissions do not increase?

Newly approved transmission lines will soon bring coal-fired energy to Virginia to power data centers and as a result, coal plant closures are being delayed.<sup>11</sup> Dominion has also revived pre-pandemic plans to build a natural gas peaker plant in Chesterfield County to meet growing grid demand to service data centers.<sup>12</sup> Because growth of the data center industry is driving Dominion's reliance on fossil-fueled generation, Dominion has projected to **double** greenhouse gas emissions to 36,000,000 metric tons by 2048.<sup>13</sup> Next door, Loudoun County's GHG emissions have increased by over 50% due to data centers.<sup>14</sup> With this unprecedented industrial build out and its requisite energy needs, the work to clean the grid requires strong and swift **local** policies to mitigate these impacts. With the suggestions above, Fairfax County will be doing its part to ensure a sustainable future for county residents.

Temperatures this June in Fairfax County exceeded 100 degrees.<sup>15</sup> This not only imperils human health, but it also pressures the grid to cool data center equipment in an increasingly hot region.

The limited provisions under consideration are inadequate. Please demonstrate to Fairfax County residents that you are willing to protect them from the long-term costs for carbon mitigation, poor air quality, and higher energy and water bills.

Thank you for consideration of these recommendations,



Ann Bennett  
Land Use Chair, **Sierra Club Great Falls Group**  
Data Center Issues Chair, **Sierra Club, Virginia Chapter**

<sup>11</sup> <https://www.washingtonpost.com/business/interactive/2024/data-centers-internet-power-source-coal/>

<sup>12</sup> <https://virginiamercury.com/2023/06/14/dominion-reviving-plans-to-build-a-natural-gas-peaker-plant-in-chesterfield/>

<sup>13</sup> Dominion Energy's 2023 IRP, page 7, preferred plans B and C summary. <https://www.dominionenergy.com/-/media/pdfs/global/company/desc-2023-integrated-resource-plan.pdf>

<sup>14</sup> Metropolitan Washington Council of Governments.

<sup>15</sup> <https://www.ffxnow.com/2024/06/24/just-in-drought-warning-issued-for-n-va-including-fairfax-county>

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