March 2024

Data centers are quickly emerging as the environmental issue of this decade. Nature Forward recognizes their importance in our society but also acknowledges the drastic energy, water, and land impacts they are having on our environment and communities. There is an urgent need to better regulate this growing and expanding industry to ensure a sustainable future.

- The US is the largest market for data centers with the most facilities concentrated in Northern Virginia, Portland, Dallas, Phoenix, Atlanta, Chicago and Silicon Valley. The demand for increased data center support due to expanding Artificial Intelligence (AI) technology has opened up secondary markets all over the country.[1]

- With most of the world's data centers (39%) located in the US, the US has an excellent opportunity to be an international leader in renewable energy, sustainable energy grids and data center infrastructure by creating common sense environmental restrictions and incentives to encourage data center developers to build data centers, and energy providers to provide energy, in a way that protects Americans' health and wellbeing as well as our country's environment.[2]

- In Northern Virginia, there are now over 4,000 commercial diesel generators of sizes ranging from 600- 3500kW (larger than a typical household generator which varies from 10-26 kW) to ensure data centers can continue to run even if the grid fails.[3]

- One data center can use up the same amount of energy as 50,000 homes.[4]

- Prince William County, VA saw a rise of 19% of GHGs emissions between 2005 to 2018, a time-period that matches the data center expansion increase in the county.[5]

- A data center may consume, on average, 5,000,000 gallons of water *per day* to cool off its machinery.[6]

- A 2022 study done by NPCA in Virginia on the impact of data centers to local waterways found that tons of sediment and stormwater would be discharged into local waterways and stormwater, putting people and wildlife in danger.[7]

- Data Centers & Energy Demand. Piedmont Environmental Council. [8]

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[1] Americas Data Center Update. H2 2023. https://tinyurl.com/4j2unx5y
[2] The world's data explained: how much we're producing and where it's all stored. May 2021. https://tinyurl.com/435sedzy
[3] Fairfax, Loudoun, and Prince William Air Quality in Jeopardy. 2023. https://tinyurl.com/ykb6dh97
[4] The Staggering Ecological Impacts of Computation and the Cloud. https://tinyurl.com/5fkh8trr
[5] Metropolitan Washington Climate Planning. June 2022. Page 19. https://tinyurl.com/ym9292ed
[6] A new issue for Nature Forward: data centers. What's the big worry? 2024. https://tinyurl.com/45f9s2xn
[7] New Report Finds Proposed Data Centers in Northern Virginia Threaten National Parks, Drinking Water. NPCA 2022. https://tinyurl.com/yc8c76yj
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