SB0116_Nature Forward_Support for Data Center Stud
Uploaded by: Angie McCarthy
Position: FAV

Testimony for SB0116
Support for Data Center Impact Analysis and Report

Bill Sponsor: Senator Lewis Young
Committee: Education, Energy, and the Environment
Organization Submitting: Nature Forward
Person Submitting: Angie McCarthy, Maryland Conservation Advocate
Position: Favorable

nature forward
Connecting people and nature in the Capital Region
natureforward.org

I am submitting testimony on behalf of Nature Forward in strong support of the Data Center Impact Analysis and Report. Nature Forward (formerly Audubon Naturalist Society) is the oldest independent environmental organization protecting nature in the DC metro region, including Maryland's near counties of Montgomery and Prince Georges. Our mission is to inspire residents of Maryland and the Washington, DC, region to appreciate, understand, and protect their natural environment through outdoor experiences, education, and advocacy. We thank the Maryland legislators for the opportunity to provide testimony in support of the Data Center Impact Analysis and Report (SB0116).

Nature Forward has been a fierce advocate for responsible, community driven data center development across the DMV. In our work with the counties of Maryland, the lack of data and clear information has come up repeatedly. **The legislature and public need to understand data centers to ensure that Maryland gets the data center development we deserve.** 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. When we do not have the data we need, we remove the information out of the public process, and we get worse built data centers. This is an environmental justice issue, and we have the chance to do right by Marylanders with the results of this study bill.

There are many environmental and community justice issues we are concerned about that we hope this study bill will help shed light on.

1. In Louisa County, Virginia, an Amazon Web Services data center uses 620,000 gallons of water a day.[1] How is Maryland supposed to plan for hundreds of thousands of drinking water being routed to data center cooling when that impact is not even evaluated? The public deserves to understand data centers'

[1] https://www.louisacounty.gov/FAQ.aspx?QID=274

needs for energy, sewer, water, and other public amenities. Those concerns are not addressed by simply looking at engineering data during planning processes.

2. There are significant concerns for the quality of data and overall transparency of the data center development process as it stands now. [2] Data center developments are shrouded in NDAs so both the public and local governments cannot make informed decisions on what happens in their communities. Business as usual cannot continue; we need clear, factual data to make informed decisions.
3. Data centers consume enormous amounts of energy and we need data to inform how we can best prepare for a stable, reliable grid. The energy demands of a single data center could power 50,000 homes. Data centers typically draw electricity produced by coal because renewable sources, like solar and wind, cannot keep up with their massive 24/7 energy needs. This is especially true in Maryland, where we consume five times more energy than we produce, meaning we are already at the whim of surrounding states' energy markets.[3] Data centers' insatiable demand is keeping coal-powered plants that had been scheduled to go offline in business. They are driving new construction of habitat-disrupting transmission power lines and pushing Maryland farther away from achieving our climate goals of reducing emissions by 60% by 2031 and 100% by 2045.[4] According to the US Department of Energy, data centers currently account for roughly 2% of the nation's total electricity use.[5] The Washington Post estimates that by 2035, the data center industry in Virginia will need four times as much energy, enough to power 8.8 million homes.[6] The JLARC Data Center Study in Virginia illustrates the need for a study bill when it comes to energy planning; without a study, Virginia could not begin to plan for a 183% increase in energy demand from unfettered data center development. This would mean that Virginia has to add new solar facilities at twice the rate they were added in 2024. New wind generation needed would exceed the potential capabilities of all proposed offshore wind sites. This is in addition to the large number of natural gas plants that would be required to be brought online.[7] With the Maryland Data Center Impact Analysis and Report, we have the opportunity to plan for these renewable energy buildouts *before* we have our own Data Center Alley. [8]
4. Data centers can exacerbate health illnesses and conditions. In Maryland, the 2024 General Assembly passed legislation (HB579/SB474) that grants data centers unfettered use of diesel generators, meaning when a data center is built in Maryland, it will certainly use diesel generators. Diesel pollution increases the risk of lung cancer, cardiovascular disease, and worsening respiratory illnesses

[2] Data centers' secrecy often keeps residents in the dark | News | princewilliamtimes.com
[3] https://www.eia.gov/beta/states/states/md/analysis
[4] https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Pages/index.aspx
[5] https://www.energy.gov/eere/buildings/data-centers-and-servers
[6] https://www.washingtonpost.com/business/interactive/2024/data-centers-internet-power-source-coal/
[7] https://jlarc.virginia.gov/landing-2024-data-centers-in-virginia.asp
[8] https://www.washingtonpost.com/technology/2024/09/17/data-center-workers-jobs/

like asthma. However, it is currently unclear how often data centers run their diesel generators. Estimates have said that is only once per month, but what does that effect look like when we have tens of data centers testing their back-up generators?

Most importantly to everyday Marylanders, is that **data centers' costs impact taxpayers**. We do not know the true impact of data centers on ratepayers. The Maryland Office of the People's Counsel put out a report that found that electric bills in Maryland could increase by 2-24% depending on their area; this is coming at a cost-of-living crisis where so many Marylanders are already struggling to pay their bills.[9]

Nature Forward understands the utility of data centers. However, by not having the data that we need to not only keep developers accountable, but simply understand the industry's impact in Maryland, we open the door to the lowest common denominator developers. By allowing data center development without a study bill to give our communities a jumping off point to understand their impacts, we are inviting short term business in exchange for our health, ratepayer's wallets, and our environmental goals. **We ask that you vote FAVORABLE on the Data Center Impact Analysis and Report.**

Angie McCarthy
Maryland Conservation Advocate
Nature Forward

[9] https://www.utilitydive.com/news/pjm-capacity-auction-results-firstenergy-exelon-aep/725952/

Testimony SB 116 - Forever Maryland .pdf
Uploaded by: Ann Jones
Position: FAV

FOREVER
MARYLAND
Enhancing and Advancing Land Conservation

Testimony on SB 116
February 13, 2025 – Education, Energy and the Environment Committee
Data Center Impact Analysis and Report
Kristin Kirkwood, Chair Forever Maryland

Position: Favorable

Forever Maryland represents Maryland's land trust community. Local land trusts are valuable partners in the efforts to preserve the most important farms, forests and ecological areas in the state. We work side by side with state and local government to reach the goal of permanently preserving 40% of the state by the year 2040.

Data centers are a feature of our modern economy, but their development comes with both economic and environmental costs. We support SB 116 which would require a study to quantify those costs and benefits.

Data center development directly impacts land that is currently preserved and ongoing efforts to increase the pace and quality of land preservation in the following ways:

- Energy Supply – Data centers require tremendous amounts of energy. Maryland faces significant challenges in meeting the states' ambitions renewable energy goals. When data centers are added into the equation, the additional solar energy installations needed will require exponentially more land. The annual rental payments offered by solar companies eclipse the amount that can be paid by existing land preservation programs. It is not unusual for a famer or landowner to receive a rental offer of $4,000 an acre from a solar developer for a 25-year period. At the same time a one-time offer for a purchase of an easement is generally $8,000 an acre or less.

- Energy Transmission – The Piedmont Reliability Project is only one of the multiple transmission lines that will be required to meet the region's projected data center growth. These transmission lines have a substantial negative impact on the conservation values protected by existing easements. The threat of transmission lines has led our most conservation-minded farmers and landowners to question the fairness of the decision they made to voluntarily preserve their properties. While they have significantly reduced allowed uses on their farm, they feel threatened by the seemingly random and inevitable placement of industrial scale transmission lines across their property.

We look forward to working with the state to achieve the goal of preserving 40% of the state by 2040. The study proposed by SB 116 is a first step toward ensuring that the impacts of data centers on our most important farms, forests and ecological areas are indeed protected in perpetuity.

SB 616 - Support.pdf
Uploaded by: Anna Griffith
Position: FAV

962 Wayne Avenue, Suite 504 | Silver Spring, MD 20910 | 301.608.1188
www.potomac.org

SB 116 - Data Center Impact Analysis and Report
Position: SUPPORT
Date: February 13, 2025
Contact: Anna Mudd, Potomac Conservancy

Dear Chair Feldman and Committee Members:

Potomac Conservancy requests a FAVORABLE report on Senate Bill 116, Data Center Analysis and Report. The Data Center Impact Analysis and Report will provide accurate and unbiased information that legislators need to determine how to blend hyperscale data centers into our economy. This bill directs the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State and to submit to the Governor and the General Assembly by September 1, 2026.

The power, water and land use requirements of hyperscale data centers will result in a monumental transformation of any locality in which they are built and the effects will reverberate throughout the state. Maryland needs to learn from Virginia's experiences – both in how to maximize benefits and how to protect ratepayers, communities, and the environment in Maryland from the many possible negative effects. **For these reasons, we request a FAVORABLE report on SB 116.**

Sincerely,

Anna Mudd
Senior Policy Director
Potomac Conservancy

support hb 270 sb 116 data center study.pdf
Uploaded by: Caroline Taylor
Position: FAV

Contact:

Caroline Taylor, Executive Director
Montgomery Countryside Alliance
caroline@mocoalliance.org
301-461-9831

Montgomery Countryside Alliance, Sugarloaf Citizens Association and The Climate Coalition Montgomery County (CCMC), composed of 20 grassroots and professional organizations all **strongly support the passage of Bill HB 270/SB116 - Data Center Impact Analysis and Report**. The entire country is experiencing explosive growth in data centers. Before we tax our grid further, push MD's climate goals completely out of reach and burden ratepayers with major increases in their electric bills, it's incumbent upon us to have a better understanding of the consequences of data center construction. This bill would provide us all with an analysis of the likely environmental, energy, and economic impacts of data center development in our state. This bill is even more timely given the upheaval in the AI industry just this week.

We need to ensure consumer protection and enhanced transparency of data center proposals and impacts. The General Assembly needs to require this study, to devise an equitable solution to who will pay for the increased energy costs and what the implications are for Maryland's air quality, climate goals, water resources, health, and the environment prior to the permitting and construction of these facilities.

We urge you to protect your constituents by doing all you can to ensure this bill passes the House/Senate and is enacted into law.

Climate Coalition MoCo Member organizations:

- 350 Montgomery County
- Biodiversity for a Livable Climate
- Elders Climate Action
- Green Sanctuary Committee of the Unitarian-Universalist Church of Silver Spring
- Environmental Justice Ministry Cedar Lane Unitarian Universalist Church
- One Montgomery Green
- Sugarloaf Citizens' Association
- ACQ Climate (Ask the Climate Question)
- Chesapeake Climate Action Network
- Montgomery Countryside Alliance
- Poolesville Green
- Transit Alternatives to Mid-County Highway Extended/M-83 (TAME)
- Takoma Park Mobilization Environment Committee
- Bethesda Green
- Ecosystems Study Group
- Friends of Sligo Creek
- Montgomery County Faith Alliance for Climate Solutions
- Safe Healthy Playing Fields
- The Climate Mobilization Montgomery County
- Zero Waste Montgomery County

SB0116_Data_Center_Impact_Analysis_MLC_FAV.pdf
Uploaded by: Cecilia Plante
Position: FAV

MARYLAND LEGISLATIVE COALITION

TESTIMONY FOR SB0116
Data Center Impact Analysis and Report

Bill Sponsor: Senator Lewis-Young
Committee: Education, Energy, and the Environment
Organization Submitting: Maryland Legislative Coalition
Person Submitting: Cecilia Plante, co-chair
Position: FAVORABLE

I am submitting this testimony in strong support of SB0116 on behalf of the Maryland Legislative Coalition. The Maryland Legislative Coalition is an association of activists - individuals and grassroots groups in every district in the state. We are unpaid citizen lobbyists and our Coalition supports well over 30,000 members.

Data centers are sprouting up all over the country to support the processing required for AI and bitcoin as well as to support our growing need for data. Our neighbors in Virginia have embraced the building and operating of data centers as a revenue and job creation effort. They have paid dearly. Data centers are overwhelming their electric grid (which we share) and consuming vast tracts of land and water. It's too late for Virginia to turn back the clock, but Maryland seems poised to make the same mistakes that Virginia did.

Yes, data centers will provide revenue, but is it enough to offset the changes that we need to make to the grid so that our electric rates don't become unaffordable? We are already a net importer of power. What happens to our environmental goals if we are forced to buy more power from other states? Will they have it to share? Are the jobs that data centers provide enough to offset the loss of land and water use?

Until we know the answers to those questions and more, we are starting down a path that could lead to excessive prices for electricity, more fossil fuel infrastructure, the need to get resources from other states, and problems that we don't even see coming.

This bill will require the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State and to submit to the Governor and the General Assembly by September 1, 2026. We need this!

We strongly support this bill and recommend a **FAVORABLE** report in committee.

SB116_Data Center Impact Analysis and Report_Favor
Uploaded by: Dave Arndt
Position: FAV

Committee: **Education, Energy, and the Environment**
Testimony on: **SB116 - Data Center Impact Analysis and Report**
Submitting: **Dave Arndt**
Position: **Favorable**
Hearing Date: **Feb. 13, 2025**

Dear Mr. Chair and Committee Members:

Thank you for reading my testimony today in strong support of SB116, the Data Center Impact Analysis and Report.

Currently, in Maryland data center just happen, no one manages them at a state level and every county is approaching them differently. We do have the Data Center Maryland Sales and Use Tax Exemption Incentive Program; however, we don't know if it is working, is Maryland bring in new data centers because of it or is it just a corporate subsidy that provides no value to the tax payers of Maryland.

Other states are wrestling with this question, For example, here is a headline from Washington State: How a Washington Tax Break for Data Centers Snowballed Into One of the State's Biggest Corporate Giveaways[1] Here is a story from Ohio: Indefensible tax breaks for data centers will cost Ohio[2] These headlines could also be from Oregon, Minnesota, Indiana, Georgia, Illinois, Louisiana.

Loudoun County Virginia makes a lot of tax revenue on data centers but is it worth it? Dominion Energy, data centers are fleecing Virginia ratepayers[3]

In December, Virginia completed a study on data centers and it is spurring legislation: Bipartisan legislative effort seeks to regulate data center construction in Virginia[4]

Also, we know all this electrical use is going to affect electrical rates; who wins and losses in this scenario? Data centers expected to spike electricity costs[5] and Georgia Power says data center growth will cause electricity demands to triple in next decade[6]

There is also the promise of jobs; are they real, temporary or even being preformed by in state residents? A.I., the Electricians and the Boom Towns of Central Washington[7] and The Mystery Impact of Data Centers on Local Economies Revealed[8]

There are also environmental and climate concerns, what about all the pollution from the diesel generators, the greenhouse gas emissions from all this electrical usages and water usage for cooling. Diesel pollution from data centers[9], Google falling short of important climate target, cites electricity needs of AI[10], US tech groups' water consumption soars in 'data centre alley'[11]

There is also a new concern, what does this constant electric large load do to our grid and the houses and appliances on the grid itself: AI Needs So Much Power, It's Making Yours Worse[12]

This is an industry that uses things as a massive scale that Maryland has never seen before and run by the wealthiest corporations in America's history. I am not against data centers, they are an integral part of today's modern society and economy, however we need to understand all of the ramifications to know how to proceed properly. Let's get ahead of our piece-meal implementation process and understand our decisions to make sure we know what we are doing so we can proactively manage the implementation to protect ratepayers and grow our economy.

For all of these reasons, I strongly support SB116 and urge a **FAVORABLE** report in Committee.

Thank you,

Dave Arndt
Co-Chair Maryland Legislative Coalition – Climate Justice Wing

1. https://www.propublica.org/article/washington-data-centers-tech-jobs-tax-break
2. https://www.policymattersohio.org/research-policy/fair-economy/work-wages/indefensible-tax-breaks-for-data-centers-will-cost-ohio
3. https://richmond.com/opinion/column/dominion-energy-contracts-data-centers-fleece-virginians/article_74bc955a-aa6b-11ef-9011-172582735c49.html
4. https://cardinalnews.org/2025/01/15/bipartisan-legislative-effort-seeks-to-regulate-data-center-construction-in-virginia/?utm_medium=email
5. https://www.fauquier.com/news/data-centers-expected-to-spike-electricity-costs/article_29b519a8-b76b-11ef-b1c7-3b606a3073d4.html
6. https://roughdraftatlanta.com/2024/12/02/georgia-power-data-center-expansion/
7. https://www.nytimes.com/2024/12/25/technology/ai-data-centers-electricians.html?unlocked_article_code=1.kU4.uh7j.e_ay7TPnzrwA&smid=url-share
8. https://www.areadevelopment.com/data-centers/data-centers-q1-2015/impact-of-data-center-development-locally-2262766.shtml
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10. https://apnews.com/article/climate-google-environmental-report-greenhouse-gases-emissions-3ccf95b9125831d66e676e811ece8a18
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12. https://www.bloomberg.com/graphics/2024-ai-power-home-appliances/?accessToken=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzb3VyY2UiOiJTdWJzY3JpYmVyR2lmdGVkQXJ0aWNsZSIsImlhdCI6MTczNTM5NjEyOCwiZXhwIjoxNzM2MDAwOTI4LCJhcnRpY2xlSWQiOiJTUDVUUzhUMEFGQjQwMCIsImJjb25uZWN0SWQiOiJGNDEyNkU5RjlDNzc0OTgwODBCOUE1MzkyQzVEMDRDNiJ9.jJYrj9SV8fSPznQ6RykLBYsAx09b19caM-K8wQ1wDJQ

Sign On Letter_SB0116_Data Center Impact Analysis

Uploaded by: Dave Arndt

Position: FAV

Testimony in SUPPORT of SENATE BILL 116 – Data Center Impact and Analysis Report

Education, Energy, and the Environment

February 11, 2025

Dear Chair Feldman and Members of the Committee,

We are writing to express our enthusiastic support for Senate Bill 116, which would require a comprehensive analysis of the likely environmental, energy, and economic impacts of data center development in Maryland. This important legislation will help ensure that the growth of the data center industry aligns with the state's environmental, energy, and economic goals, and provides critical insights for lawmakers, businesses, and communities moving forward.

Data centers are a rapidly growing sector of the economy, with significant implications for Maryland's environment, energy infrastructure, and local economies. As the demand for data storage and processing continues to increase, it is essential that the state take a proactive and informed approach to assess the potential consequences of this development. Senate Bill 116 will provide a thorough, multi-faceted examination of these issues, involving key stakeholders such as the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business.

The analysis called for by Senate Bill 116 will provide valuable information on:

- The energy implications of data centers, including their energy demands and their influence on the state's future energy needs and ability to meet its greenhouse gas reduction and clean energy commitments.
- The electrical infrastructure implications, including what addition transmission and distribution lines will we need and how are rate payers going to be affected.
- The economic impacts of the data center industry, including its effects on state and local revenues, expenditures, and job creation, particularly in construction and operations.
- The potential environmental impacts of data centers, including air and water quality concerns, the effect on the state's restoration goals for the Chesapeake Bay, and potential mitigation strategies.
- The availability of technologies that could mitigate the environmental impacts of data centers, and the feasibility of implementing these technologies in the State;

The thorough and coordinated effort outlined in Senate Bill 116 will be invaluable in helping policymakers understand the broader implications of data center development and in crafting future policies that balance economic growth with environmental sustainability and energy efficiency. It will also support Maryland's ongoing efforts to meet its environmental goals while fostering innovation and economic development.

We respectfully request a FAVORABLE REPORT FOR SENATE BILL 116. This bill represents a crucial step toward creating a more sustainable and economically vibrant Maryland as we continue to adapt to a rapidly evolving technological landscape.

Individual Signatures

Elaine Arndt
Monica O'Connor
Leslie Wharton
Troy Gharibani
Lee McNair
Carol Amburgey
Janette Wysocki
Terence Ellen
Katrina Mcmillan-zapf
Ted Weber
Mary Morris
Elizabeth Ryznar
Joan Griggs
Alison Farmer
Mary Brenneman
Jonathan Gorman
Karen McGady
Gayle Scroggs
Dorothea Leonnig
Cheralee Von Ancken
Tony Phillips
Madeleine Beller
Janet Gingold
Cathie Nelsen
David Sacks
Victoria Jenkins
Daniel Broder
Rabbi Fred Scherlinder Dobb
Andrew Hinz
Cynthia Miller
Aileen Curfman
Susan Kunkel
Margo Dickison
Maggi Gallaher
Catherine Rice
Britta Hahn
Deborah Cohn
Wendy Hall
Philip Diamond
Jacqueline Crawley
Sr. Mary Jo Stein
Patricia Wellington
Robin Megibow
Mary Bunting
M Langelan
Katherine Martin
Andrew Szwak
Lois Wessel
Zoe Clarkwest
Mary Ellen Pease
Peter McLean
Frances Stewart
Marc Petrequin
Amanda Poskaitis
Laura O'Brien
Tony Hausner, Ph.D.
Vincent Verweij

Endorsing Organizations

Creation Care Ministry of the Delaware-Maryland Synod of the Evangelical Lutheran Church in America (ELCA)

Sugarloaf Alliance

Chesapeake Earth Holders

Cedar Lane Unitarian Universalist Environmental Justice Ministry

The Climate Reality Project: Greater Maryland Chapter

Potomac Conservancy

Nature Forward

Elders for Climate Action

Climate Communications Coalition

The Legacy of a Livable Planet

Chesapeake Physicians for Social Responsibility

HoCo Climate Action

Climate Reality Greater Maryland

Chesapeake Climate Action Network

Tantallon North Area Civic Association

Fellowship of Scientists and Engineers

Maryland Legislative Coalition

Mizrahi Family Charitable Fund (a DAF)

CASA

South County Environmental Justice Coalition

Baltimore 350

Kids for Saving Earth

Interfaith Power & Light (DC.MD.NoVa)

1199SEIU United Healthcare Workers East

The Greenfields Company, Inc.

Unitarian Universalist Legislative Ministry of Maryland

Chesapeake Conservancy

National Aquarium

Envision Frederick County

350 Montgomery County

OPC Testimony SB0116.pdf
Uploaded by: David Lapp
Position: FAV

DAVID S. LAPP
PEOPLE'S COUNSEL

WILLIAM F. FIELDS
DEPUTY PEOPLE'S COUNSEL

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BRANDI NIELAND
DIRECTOR, CONSUMER
ASSISTANCE UNIT

CARISSA RALBOVSKY
CHIEF OPERATING OFFICER

BILL NO.:	Senate Bill 116 – Data Center Impact and Analysis Report
COMMITTEE:	Education, Energy, and the Environment
HEARING DATE:	February 13, 2025
SPONSOR:	Senator Lewis Young
POSITION:	Favorable

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The Office of People's Counsel ("OPC") supports Senate Bill 116. As technological advances like artificial intelligence and cloud computing drive continued demand for data storage, the proliferation of data centers brings substantial risks to residential customers because of their high energy demands. SB 116 would begin to address this uncertainty by requiring the Maryland Department of the Environment, the Maryland Energy Administration ("MEA") and the University of Maryland School of Business to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State.

Data centers require enormous amounts of energy to operate.[1] For example, in Virginia, Dominion Power forecasts 7.5 GW of new data center power demands for 2027. That is more electric demand in three years than the total electric peak demand of Maryland's largest electric utility, Baltimore Gas and Electric, which was built up over 100 years. Depending on where it is located, this unusually fast ramp up of demand has the potential to strain the State's resources and has the potential to require infrastructure expansions, for which Maryland utility customers could be asked to pay.

[1] See Electric Power Research Institute, Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption at 6 (May 2024) ("A typical new data center of 100 to 1000 megawatts represents a load equal to that of a new neighborhood of 80,000 to 800,000 average homes."), https://www.epri.com/research/products/000000003002028905.

At the same time, significant questions remain about when, where, and how much data center demand will materialize in Maryland and elsewhere. Existing data center load forecasts, developed by the utilities and the regional system operator, PJM Interconnection LLC, are uncertain and the details are not publicly shared. There is little transparency in how data center load forecasts are developed, and there is no standard data center load forecasting methodology. Each utility takes its own approach to developing its data center load forecasts, but not all data center load is equal. For instance, projected load from hyperscale data centers—typically developed by cloud computing providers—may ramp up more rapidly than load from co-location data centers—data centers owned and operated by third-party providers that lease out space. Data center companies may be in discussion with multiple utilities in different states about a single project. There is also uncertainty over the extent to which advances in technology and operational procedures will increase data center energy efficiency and make data center load more flexible. As the Illinois Commerce Commission recently found, "many planned data center projects may not come to fruition" and costs associated with data center development are "speculative."[2] Rushing to build out generation, distribution, or transmission resources based on such speculation risks encumbering Maryland ratepayers with investments that may ultimately be underutilized or unnecessary.

While the landscape of data center development continues to evolve, SB 116 would chip away at this uncertainty by obligating MEA to assess the energy impacts of the data center industry in Maryland. Specifically, MEA would assess (1) the energy requirements of data centers; (2) potential impacts of the industry on forecasted energy supply and demand, including effects on infrastructure needs and ratepayer costs; and (3) the impacts of the industry on the State's ability to meet greenhouse gas emissions reduction commitments and clean energy goals. This assessment could help develop the regulatory framework needed to govern large-load requests from entities like data centers and to inform future policy decisions that balance economic development in the State with the interests of residential utility customers.

Recommendation: OPC requests a favorable Committee report on SB 116.

[2] Ill. Commerce Comm'n Order No. 629460 (Dec. 19, 2024) at 149.

SB 116 -Data Center Impact Analysis and Report Act

Uploaded by: Elizabeth Law

Position: FAV

BILL NUMBER:	**Senate Bill 116** **Data Center Impact Analysis and Report**
COMMITTEE:	**Education, Energy, and the Environment Committee**
HEARING DATE:	**February 13, 2025**
SPONSOR:	**Senator Karen Lewis-Young**
POSITION:	**Favorable**

Chair, Brian Feldman, Cheryl C. Kagen and Members of the Committee,

As a professional electric power engineer, I ask for a Favorable report on SB 116.

I have a Master of Engineering in Electric Power from Rensselaer Polytechnic Institute, performed contingency analysis as a transmission planner for Con Edison of New York and worked nearly 10 years for the Federal Energy Regulatory Commission in the Office of Electric Reliability investigating blackouts and prescribing mitigation to bring utilities in compliance with the NERC mandatory reliability standards.

As such I am concerned that there has not been sufficient recognition at the state level of the immense power needs of data centers. At present Maryland generates 11,000 megawatts, which only satisfies 60% of the state's power demand. How will the state supply the power needs of an emerging hyperscale data center industry in Maryland, considering that this state already has a power deficit? Hyperscale data centers consume as much power and water as a small city.

The first hyperscale data center in Maryland, Quantum Frederick is projected to require as much as 2000 megawatts at full build out, per TPG, the site's current owner.[1] The power demands of using AI are ten times that of a traditional Google search so this number is but an

[1] "The campus is part of the wider data center park owned by TPG Real Estate being built on the site of a former aluminum plant. The company is developing a 2,100-acre, 2GW data center park for other developers to build data centers in. Quantum Loophole was previously involved in the project until TPG had the company removed." https://www.datacenterdynamics.com/en/news/rowan-secures-975-million-financing-for-maryland-data-center-campus/

estimate. Note that the proposed PSEG Maryland Piedmont Reliability Project transmission line will only carry 1000 megawatts. This means one hyperscale data center would require two or three such transmission lines if the site is not near a large generating facility.

I am deeply concerned that in a rush to satisfy a new industry full of financial promises Maryland officials risk making decisions that will stress the electric grid to the point of instability. The cost to ratepayers for providing the necessary power infrastructure is also unknown.

Most of what has been broadcast about hyperscale data centers comes from industry press releases and studies paid for by industry lobbyists. At present the state does not have an accurate account of how many data centers exist, how many are projected, and what the cumulative power demand will be. The only information so far has been gathered by citizen advocates.[2] This is not an acceptable way for the state to make such momentous decisions.

The *Data Center Impact Analysis and Report Act* is necessary to provide our elected officials and state agencies with accurate information to make prudent decisions. The agencies that would conduct the study have proven they can provide informed and practical recommendations. The time frame of 25 months for producing the report is reasonable and not an undue burden on the data center industry and its associates. Finally, the small cost for the research by the University of Maryland of Maryland School of Business is an investment that will pay dividends in orders of magnitude in savings from costly mistakes due to lack of information.

Thank you,

Elizabeth Law, P.E. (retired)
1758 Wheyfield Drive.
Frederick, Maryland 21701

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[2] Climate Justice Wing, an environmental advocacy group created this tracking. CJW worked with Office of Peoples Council to verify numbers through web searches and news articles. CJW has located ~24 commercial data centers using ~ 235MW of power. Currently, there are 11 new data centers proposed which will use approximately 5-7GW of power or 25 times as much power of what is currently used by data centers. Also, there are non-commercial data centers in MD, i.e. NIH, NSA and private companies selling web services. The Governor just announced a data center at UMD.
https://vcu.maps.arcgis.com/apps/mapviewer/index.html?webmap=bdde5f36ea574365b59826e2ba1c3c6f

ECA testimony SB 116 Data Center.pdf
Uploaded by: Frances Stewart
Position: FAV

SB0116 - SUPPORT
Frances Stewart, MD
Elders Climate Action Maryland
frances.stewart6@gmail.com
301-718-0446

SB0116 – Data Center Impact Analysis and Report

Meeting of the Education, Energy, and the Environment Committee

February 13, 2025

Dear Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the Environment Committee, on behalf of Elders Climate Action Maryland, I urge a favorable report on SB0116, Data Center Impact Analysis and Report.

Elders Climate Action is a nationwide organization devoted to ensuring that our children, grandchildren, and future generations have a world in which they can thrive. The Maryland Chapter has members across the state.

Hyperscale data centers are being built at an increasing pace across the country. Many are proposed or under construction in Maryland. Data centers are vital for much of what we do in daily life, and they are playing an expanded role with the growth of artificial intelligence. We support the development of data centers, but we have concerns.

Hyperscale data centers have massive electricity demands, which could result in more fossil fuel emissions, problems with grid reliability, need for more transmission capacity, and increased costs for residential and other commercial customers. There are also issues with water use, land use, air pollution from backup generators, and noise.

We need to also understand their economic impacts. How much in tax revenues can the state of Maryland and the counties that host these centers expect? Many jobs will be created during construction, but fewer people work in a data center during operation than in other industrial operations that could need those same energy supplies.

There are solutions to all of these problems, but to solve them, we need much more information. A study such as the one proposed in this bill is the most appropriate way to get that information in the timeframe required.

Please pass the Data Center Impact Analysis and Report bill, so that we have the information we need to ensure that data centers will be a benefit to Maryland and her people. We urge a favorable report.

SB0116_ Favorable_PSC.pdf
Uploaded by: Frederick Hoover
Position: FAV

STATE OF MARYLAND

PUBLIC SERVICE COMMISSION

Chair Brian Feldman
Education, Energy and the Environment Committee
2 West, Miller Senate Office Building
Annapolis, MD 21401

RE: SB 116 – FAVORABLE – Data Center Impact Analysis and Report

Dear Chair Feldman and Committee Members:

Senate Bill 116 requires the Maryland Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State. Pending the work conducted by the aforementioned entities, the bill requires the Department of Legislative Services to submit a report summarizing the findings to the Governor and the General Assembly on or before September 1, 2026. To assist with the analysis required by this legislation, under section (c)(2) of the language, the Maryland Department of Legislative Services can request from the Maryland Public Service Commission (and the Commission shall provide) any information necessary to complete the analysis.

The Maryland Public Service Commission is the main regulatory body overseeing the operations of electric utilities in Maryland and therefore houses extensive data and information on the energy industry within Maryland. The Commission anticipates an increased workload amongst Commission Technical Staff due to the provision and compilation of data necessary to complete the required analysis. While the Commission cannot currently quantify the exact fiscal impact at this time, the Commission urges favorable consideration of SB 116.

If enacted, the report and analysis generated through this legislation will be valuable in determining the impacts of data center development in Maryland and the Public Service Commission supports this proposed legislation. I appreciate the opportunity to provide favorable testimony on SB 116. Please contact the Commission's Director of Legislative Affairs, Christina M. Ochoa, if you have any questions.

Sincerely,

Frederick H. Hoover

Frederick H. Hoover, Chair
Maryland Public Service Commission

SB 116 - MoCo DEP - Fitzgerald (GA 25) FAV.pdf
Uploaded by: Garrett Fitzgerald
Position: FAV

Montgomery County
Office of Intergovernmental Relations

ROCKVILLE: 240-777-6550 **ANNAPOLIS: 240-777-8270**

SB 116 **DATE: February 13, 2025**

SPONSOR: Senator Lewis Young

ASSIGNED TO: Education, Energy, and the Environment Committee

CONTACT PERSON: Garrett Fitzgerald (garrett.fitzgerald@montgomerycountymd.gov)

POSITION: Favorable (Department of Environmental Protection)

Data Center Impact Analysis and Report

This legislation will direct the Maryland Department of the Environment (MDE), the Maryland Energy Administration (MEA), and the University of Maryland School of Business (UMD), in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in Maryland.

MDE will analyze potential impacts on air and water quality, bay restoration, and other environmental objectives, as well as the availability and feasibility of mitigating technologies.

MEA will analyze the energy requirements of data centers and their potential impacts on Maryland's energy supply, transmission infrastructure, ratepayer costs, and ability to achieve greenhouse gas emissions and clean energy goals.

UMD will analyze the potential economic and fiscal impacts of data center development on State and local revenues and expenditures as well as job creation from data center construction and operation.

The data center industry is expanding rapidly in our region. This study will empower State and local policymakers with information they need to address important challenges as they position Maryland as a leading state in data center development.

We respectfully request that the Education, Energy, and the Environment Committee issue a favorable report on Senate Bill 116.

Letter to Committee 02.11.24 SB0116 favorable.pdf
Uploaded by: Janet Galloway
Position: FAV

Janet Earp Galloway
21602 N. Ruhl Road
Freeland, MD 20153
marshja@earthlink.net
443-798-4331

February 11, 2025

Re: SB0116 - FAV

Dear Committee Members:

I have lived in Northern Baltimore County for over 47 years. I treasure the open space and country environment. I have worked hard for my property and do not accept projects like data center expansions to take it away without a full-scale analysis of the environmental, energy and economic impacts. Transmission projects like MPRP need to provide the true cost and detailed financial analysis of the data center's benefit to me as a Maryland resident. Putting a project like MPRP on the fast track claiming that Maryland's power grid needs upgrades to support increasing demand, but is really for the high energy data centers and private corporations. I strongly urge you to Support and vote "Yes" on SB0116 to protect Maryland farmland, homes and property rights from unnecessary overhead transmission projects.

Thank you for your support.

Regards,

Janet Earp Galloway

Testimony in Support of Data Study bill - Jennifer
Uploaded by: Jennifer Mizrahi
Position: FAV

MIZRAHI
Family Charitable Fund

Testimony in Support of SB116 – Data Center Study
Submitted by: Jennifer Laszlo Mizrahi, Co-Founder, Mizrahi Family Charitable Fund
Hearing Date: February 13, 2025, at 1:00 PM
Committee: Energy, Education, and Environment Committee

Honorable Chair Feldman, Vice Chair Kagan and Esteemed Committee – I'd like to offer my support for this study in the form of a poem.

A study's needed, clear and bright,
To guide our state through data's might.
As Maryland builds, we must beware,
The impact on water, land, and air.

From power needs to jobs at stake,
We must ensure the right steps we take.
For each new site that comes to town,
The costs and benefits must be laid down.

What's the price for water and land?
How will we meet the future demand?
Air, noise, and emissions must be weighed,
Before these centers are fully made.

Let's learn from states that came before,
So Maryland can open its door,
To data centers, but with care,
Ensuring progress, fair and square.

A study bill, to guide us true,
To build with wisdom, not askew.
Let's chart the course, let's lead the way,
For Maryland's bright and balanced day.

MDE SB116 SUP.pdf
Uploaded by: Jeremy D. Baker
Position: FAV

The Maryland Department of the Environment
Secretary Serena McIlwain

Senate Bill 116 - Data Center Impact Analysis and Report

Position: Support
Committee: Education, Energy, and the Environment
Date: February 13, 2025
From: Jeremy D. Baker, Director of Government Relations

The Maryland Department of the Environment (MDE) **SUPPORTS** SB 116**.**

Bill Summary

Senate Bill 116 would require MDE, alongside the Maryland Energy Administration (MEA) and the University of Maryland School of Business, and in coordination with the Department of Legislative Services (DLS), to conduct a comprehensive analysis of the environmental, energy, and economic impacts of data center development in Maryland. Specifically, MDE would be required to conduct an assessment of the potential impacts of the data center industry on the State's natural resources, including: (1) the potential impacts on air and water quality, including the State's ability to meet its bay restoration goals and other environmental objectives; and (2) the availability and feasibility of implementing technologies that could mitigate the environmental impacts of data centers in the State. Following each agency's assessment, DLS would be responsible for coordinating a final report for the Governor and the Maryland General Assembly, on or before September 1, 2026.

Position Rationale

Overall, MDE supports a collaborative effort to ascertain the environmental, energy, and economic impacts of data centers. To begin the process, the Department could rely on existing research on the environmental impacts of data centers, including already released research and reports on the industry in Virginia. However, because Maryland does not currently have an existing data center industry, MDE would likely need to hire a consultant to fully understand the sector's potential impacts on natural resources in the State. Based on past studies, the estimated cost of this study that would consider air and water policy would be potentially $250,000. Ultimately, SB 116 proposes a deliberative approach to exploring the potential of a robust data center industry in Maryland, and the Department would welcome the opportunity to work in partnership to learn more about the sector and its impacts.

Accordingly, MDE asks for a **FABORABLE** report for SB 116.

SB 116 FAV FCG OCE LS25.pdf
Uploaded by: Jessica Fitzwater
Position: FAV

Jessica Fitzwater
County Executive

FREDERICK COUNTY GOVERNMENT

OFFICE OF THE COUNTY EXECUTIVE

SB 116 - Data Center Impact Analysis and Report

DATE:	February 13, 2025
COMMITTEE:	Senate Education, Energy, and the Environment Committee
POSITION:	Favorable
FROM:	The Office of Frederick County Executive Jessica Fitzwater

As the County Executive of Frederick County, I urge the committee to give **SB 116 - Data Center Impact Analysis and Report** a favorable report.

As you may know, Frederick County is the site of a brownfield currently under development to be a data center campus, often referred to as the Quantum Loophole campus. In anticipation of this development, the Frederick County Council established a local critical digital infrastructure (CDI) ordinance in 2022. As County Executive, I created a Frederick County Data Centers Workgroup in 2023, with the charge to examine existing laws and to provide thoughtful guidance on shaping the growth of a relatively new and rapidly changing technology industry poised for expansion in Frederick County.

This workgroup, which was comprised of community members, industry representatives, organized labor, environmental organizations, business leaders, a representative from the Farm Bureau, and local elected officials, has provided several policy recommendations that are being addressed through our legislative process. However, there were several matters, such as energy consumption and climate impacts, transmission infrastructure, water consumption, and sustainability practices, that should be further studied in partnership with state agencies and academic/research institutions.

Additionally, there are several policy areas where state agencies delegate authority to local government but may need to provide more guidance regarding this new and evolving industry. Because the data center industry is often resource intensive and is relatively new to the State of Maryland, a collaborative and comprehensive study of the impacts of this industry would be beneficial to inform our regulatory framework both at the state and local levels.

As the County Executive of a county at the forefront of this development industry, I stand ready to work in partnership with the Maryland General Assembly and our Maryland state agencies to ensure our community can harness the benefits of the data center industry while protecting the environment and our quality of life.

Thank you for your consideration of SB 116 and I urge a favorable report.

Jessica Fitzwater

Jessica Fitzwater, County Executive
Frederick County, MD

FAV_SB0116_StopMPRPInc.pdf
Uploaded by: Joanne Frederick
Position: FAV

WRITTEN TESTIMONY
BILL NO.: Senate Bill 116 – Data Center Impact Analysis and Report
COMMITTEE: Senate Education, Energy, and the Environment Committee
HEARING DATE: February 13, 2025
SPONSOR: Senator Lewis Young
POSITION: Favorable

On behalf of **Stop MPRP, Inc.**, I respectfully submit this testimony in **strong support** of **Senate Bill 116**, which mandates a thorough analysis of the environmental, energy, and economic impacts of data center development in Maryland. This legislation is **essential to ensuring responsible infrastructure planning** that protects Maryland's natural resources, agricultural lands, and rural communities while addressing the state's significant energy supply challenges.

Data Centers and the Growing Energy Crisis in Maryland
Maryland already **imports approximately 40% of its electricity**, making it one of the most energy-deficient states in the nation. The rapid expansion of energy-intensive **data centers** will significantly **increase demand for imported power**, further straining the grid and **forcing more transmission infrastructure**—much of which will come at the **expense of Maryland's farmland, forests, and communities**.

The **Maryland Piedmont Reliability Project (MPRP)** is a prime example of how **data center-driven energy demand** directly leads to the expansion of **high-voltage transmission lines**. The proposed project would:

- Clear 394 acres of forested land,
- Destroy 522 acres of cultivated farmland,
- Encroach on 245 acres of conservation land,
- Cross 101 streams and waterbodies,
- And permanently take 224 acres of farmland protected under Maryland's Agricultural Land Preservation Foundation (MALPF) program.

This is the price Maryland is paying to accommodate **large-scale, high-consumption data centers** that provide limited long-term benefits to residents. **Maryland cannot afford to sacrifice its land, water, and agricultural economy simply to accommodate data centers that will drive even more energy imports from Pennsylvania and beyond.**

Data Center Expansion and Clean Energy Goals Are Incongruent

Maryland's **clean energy goals** are fundamentally **at odds** with the rapid expansion of data centers. These facilities require massive, **uninterrupted baseload power**, which cannot be met through **wind and solar energy alone**. Unlike states with large, open landscapes for renewable development, **Maryland lacks the available land area to build enough solar and wind capacity to support large-scale data center growth.**

Additionally, Maryland is **at least 8 to 10 years away** from adding new **nuclear energy**, the only realistic zero-carbon source capable of providing the reliability and scale necessary to meet data center demand. Until Maryland has a **secure, long-term clean energy supply**, the expansion of data centers will **inevitably lead to higher fossil fuel reliance and greater dependence on energy imports from states like Pennsylvania and West Virginia.**

Rather than advancing Maryland's climate commitments, unchecked data center development will **drive increased transmission expansion and greater reliance on out-of-state fossil fuel generation**, putting Maryland further from its clean energy targets.

No More Data Centers Without Energy Self-Sufficiency

Maryland must recognize that **data center development is fundamentally an energy policy decision**. Until Maryland has a **comprehensive strategy** to supply the necessary power—including **requiring data centers to bring their own power generation**—no new data centers should be permitted. Otherwise, Maryland will be forced to build **even more transmission infrastructure** to import additional power, exacerbating the destruction of our state's **environment, farmland, and rural communities**.

Without clear policies ensuring energy adequacy, Maryland risks becoming even more dependent on out-of-state energy sources, driving up costs for residents while forcing unnecessary infrastructure expansion. A responsible approach would require that any new data centers meet **self-sufficiency criteria**, such as on-site generation or dedicated energy procurement, before approval.

We Must Understand the True Costs and Benefits

Maryland must fully evaluate the **true potential benefits** and **true potential costs** of data centers before making long-term commitments to support their expansion. We **cannot rely solely on data presented by data center developers**, who have **their own financial interests** in mind. Their reports often highlight short-term economic benefits while **ignoring long-term consequences**, such as:

- Increased energy imports and transmission expansion,
- Environmental and agricultural destruction,
- Higher energy costs for Maryland residents, and
- Strained grid reliability, forcing additional ratepayer-funded infrastructure.

Additionally, **we must not trade Maryland's long-term future for short-term economic gains**. While data centers may provide an initial economic boost, **once forests, farmland, and clean water are lost, they cannot be recovered**. This bill ensures Maryland makes **data-driven decisions** before allowing further expansion of **energy-intensive industries** that jeopardize our **environment, economy, and rural way of life**.

Recommendation

Stop MPRP, Inc. **strongly urges** the committee to issue a **favorable report on SB 116** to protect Maryland's environment, farmland, and energy security. Maryland must adopt an energy-first approach—ensuring new data centers do not force more transmission expansion at the cost of our communities and rural lands. Until that policy is in place, no new data centers should be permitted.

Respectfully submitted,

Joanne Frederick
President
Stop MPRP, Inc.
joanne.frederick@stopmprp.org
443.789.1382

2025 SB 116 Written Testimony for Senate hearing -

Uploaded by: John Garofolo

Position: FAV

Senate Bill 168 – SUPPORT

Senate Bill 116 – Data Center Impact Analysis and Report

Senate Committee on Education, Energy, and Environment

My name is John Garofolo. I am a recently retired senior federal test and measurement scientist, a computer scientist, an Anne Arundel Watershed Steward Academy (WSA) - Master Watershed Steward, a citizen environmentalist, and I have previously been on the board of directors of my community association. I have lived in the community of Stoney Beach for 20 years – a 62-acre peninsula community in Curtis Bay in Northern Anne Arundel County.

I am very concerned about the unchecked proliferation of data centers on several fronts. These include pollution that they will directly and indirectly create – e.g. forcing antiquated coal and fossil fuel power generation plants to remain open, their use of enormous amounts electricity and fresh water for cooling, and their massive impact on our already fragile power grid and our electricity prices. We're already seeing these impacts from what has happened in Virginia. We don't want to create even graver problems in Maryland with ungrounded decisions based on the promise of profits to companies which will profit on the backs of Maryland taxpayers and electricity rate payers and pollution overburdened communities. We need to bring wisdom and a strong analysis framework to bear to regulation of data center development that considers risk as well as costs and benefits. I believe that strong measurement frameworks are critical to decision making. And with this issue, they need to incorporate many factors - spanning economics, energy, and environment. The regulation of data centers should not be a political football. The data needs to tell us empirically that the decisions we make will support both the taxpayers and the environment.

One example of an uncaptured risk in the discussion about data centers hits my community directly. I live within 1000 feet of the coal-powered Brandon Shores power generation station and even closer to the Wagner power-generation station which was recently converted from coal to other fossil fuels. Our community literally chokes on the fumes of these polluters. And we've now been told that they must be kept open until 2029 because the PJM grid operator and BG&E and the state made poor decisions about electricity reliability as they transitioned away from fossil fuel power plants. I have been in discussions with Talen Energy since 2019 on behalf of my community. They planned then to shudder these power plants by 2025. Unfortunately, given the ravenous demand of data centers for electricity – both in VA and now MD, I don't see that these extreme polluters will ever be shuttered – or they'll be replaced with natural gas boilers which are almost just as unhealthy for nearby residential communities. There are thousands of homes within 5 miles of these power plants. And now the future of our health rests on decisions that the state makes about electricity usage and regulation and data centers which will significantly increase electricity demand. **Our communities will pay for data centers in our taxes, our electricity bills, and our health. Yet, we foresee little benefit on the ground for the taxpaying citizens of our state from these corporate follies. The tradeoffs and risks must be fully measured.**

We have anecdotal evidence of higher respiratory, cardiac, cancer, and neurological disease in our community – likely due to the power plants next to us. But, the state refuses to implement proper air quality monitoring in our area or conduct a health study for fear that it might uncover an inconvenient truth. Moreover, our health is threatened by many polluters within just 5 miles of our community including the enormous expanding MPA Cox Creek Dredge Material Containment facility, a petroleum/asphalt processing plant, a chemical plant, multiple toxic material dumps, the horribly polluting Curtis Bay Energy medical incinerator - which is the largest in the country, the CSX coal terminal, and even a radioactive Superfund site. And, we are only two and a half miles directly across the Patapsco from Sparrows Point in which cleanup operations from the pollution from Bethlehem Steel have been ongoing for years. And there are countless other highly contaminated legacy pollution sites within our Zip Code. We have suffered environmental injustice for decades and data centers in the state will only make that worse.

It is critically important for the future of our state, our economy, energy affordability, our environment, and our health that the quantitative analyses described in SB 116 are incorporated into planning and regulation of data centers in our state and that we not make knee jerk decisions to move forward with data center proliferation which would create massive economic and environmental burdens for the state and especially its citizens. Moreover, these analyses need to include quantitative measures of risks and uncertainties and impacts to overburdened communities, and they will need to be updated continuously.

I strongly support Senate Bill 116 and its commitment to perform a rigorous multi-variate analysis of data centers for Maryland and that these analyses are used quantitatively in the regulation of data center development and that these decisions are made scientifically rather than politically. This bill is a landmark for future bills that regulate and evaluate the deployment of data centers based on solid cross-cutting quantitative analyses. The state cannot afford not do this analysis.

Sincerely,

John S. Garofolo

Stoney Beach, Curtis Bay, MD

inbound3346300771121376643.pdf
Uploaded by: Julie Frye
Position: FAV

Support SB0116: Ensuring Responsible Data Center Growth in Maryland

Dear Senator,

As a constituent of Baltimore County Maryland, I urge you to support SB0116. This bill is critical for ensuring the responsible growth of data centers in Maryland and protecting our state's resources, energy grid, and economy.

Data centers are a growing presence in our state, and while they offer certain economic benefits, their rapid expansion raises concerns about their long-term impact. SB0116 takes a proactive approach by mandating a comprehensive analysis of these impacts *before* further expansion occurs.

This crucial study, to be conducted by the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, will address key areas of concern.

By supporting SB0116, you will ensure that Maryland makes informed decisions about data center growth, balancing economic benefits with potential environmental and energy-related costs. This is a responsible and necessary step to protect our state's future.

Thank you for your consideration of this important matter.

Sincerely,

Julie Frye,

18111 Bunker Hill Road

Parkton, MD 21120

MF_SB 116_Data Center Study.docx.pdf
Uploaded by: Kathy Kinsey
Position: FAV

Committee: Education, Energy, and the Environment
Testimony on: Senate Bill 116 – Data Center Impact Analysis and Report
Organization: Mobilize Frederick
Submitting: Karen Cannon, Executive Director
Position: Favorable
Hearing Date: February 13, 2025

Dear Chair Feldman, Vice-Chair Kagan, and Committee Members:

Thank you for the opportunity to comment on Senate Bill 116 – Data Center Impact Analysis and Report. Mobilize Frederick urges the Committee to issue a **favorable** report on this bill.

Mobilize Frederick is a nonprofit community advocacy organization formed to assist with implementing the recommendations of the 2021 Climate Response and Resilience Report (CRRR). The CRRR is a comprehensive climate action plan chartered by the City of Frederick and Frederick County designed to put Frederick City and County on the path to safer, healthier, and more resilient communities through innovative and effective local solutions to address climate change.

Frederick County has first-hand experience with data centers. The State's first hyperscale data center campus is currently under development on a Frederick County brownfields site of more than 2,000 acres in size. Mobilize Frederick has been deeply engaged with Frederick County planning and elected officials for more than two years as an advocate for sustainable growth of critical digital infrastructure, having served on a Frederick County Data Center Workgroup formed in 2023 at the direction of County Executive Jessica Fitzwater to study the impact of data centers on the County's energy supply, environmental resources, and quality of life. The Workgroup's March 2024 Final Report offered a set of recommendations to promote data center development in a manner that is sustainable.

The critical digital infrastructure sector is a rapidly changing and expanding resource-intensive industry with significant implications for power consumption, allocation of electricity costs among ratepayer classes, renewable energy needs, greenhouse gas emissions, water resources, and the ability of the State to timely meet its climate and renewable energy goals. Senate Bill 116 is a straightforward bill that simply requires the Department of Legislative Services to coordinate a comprehensive analysis of the economic,

fiscal, energy, and environmental impacts of data centers by the University of Maryland School of Business and State agencies with relevant expertise.

Although not explicitly mentioned in the bill, we urge the study to include an analysis of the potential impacts to water supply resources, the risks and costs associated with the potential for stranded transmission system assets if the industry transitions in whole or part to on-site co-generation or operating data centers shut down before full cost recovery has occurred, and any other emerging issues not identified in the bill.

It is imperative that Marylanders, regulatory agencies, and the General Assembly fully understand these impacts before further significant expansion of the industry occurs in the State. Only with a sound understanding of the impacts can the State and local governments take proactive measures to ensure that the benefits of data centers don't come at an unacceptable cost to our environment and our communities.

For all the foregoing reasons, we urge the Committee to issue a **favorable** report on Senate Bill 116.

Karen Cannon
Executive Director

cc: Kathy Kinsey
Chair, Government Affairs and Policy Committee

SB116- Data Center Analysis and Report SUPPORT.pdf
Uploaded by: Kristen Harbeson
Position: FAV

MARYLAND LEAGUE OF CONSERVATION VOTERS

February 13, 2025

SUPPORT: HB116 - Data Center Impact Analysis and Report

Chair Feldman and Members of the Committee:

Maryland LCV supports HB116: Data Center Impact Analysis and Report, and we thank Senator Lewis Young for her leadership on this issue. We believe that this bill is essential for ensuring our state's economic and climate future by providing the groundwork necessary for informed and responsible decision making around this emerging, and challenging, industry.

The rapid expansion of the data center industry in Virginia has given a boost to their local economies, however it has also provided a strain on their energy sector (and the energy capacity of the region, including Maryland), and raised significant concerns about pollution and threats to their water supply. In response, the Joint Legislative Audit & Review Commission of the Virginia General Assembly commissioned a report to help guide future policies, even as they struggle to contain the impacts of the industry that has already been established. Maryland has the opportunity to learn from Virginia's example to build healthier and more sustainable infrastructure here.

Maryland LCV understands the importance of industries that support public health and safety, including the jobs they create and the expansion of technology hubs which provide safe and reliable storage of data. We also remain committed to goals of climate emissions reduction, community engagement, and environmental justice.

As Maryland seeks to attract this emerging industry to our state, we have the opportunity to take a more responsible approach by conducting a similar report to help create a more sustainable path of development. SB116 takes a forward thinking approach to identifying the potential impacts of data centers on greenhouse gas emissions, job opportunities, as well as energy. In the face of anticipated elevated energy costs - in large part due to the expansion of AI technology and data centers in the region - the study's examination on energy demands and ratepayer impact is essential information for future legislative and regulatory actions on the industry.

Maryland LCV urges a favorable report on this important bill.

MOS SB0116 Data Centers.pdf
Uploaded by: Kurt Schwarz
Position: FAV

MARYLAND ORNITHOLOGICAL SOCIETY

January 11, 2025

Bill: https://mgaleg.maryland.gov/2025RS/bills/sb/sb0116F.pdf

Committee: Education, Energy, and the Environment

Testimony on: SB0116—Data Center Impact Analysis and Report

Position: Support SB0116

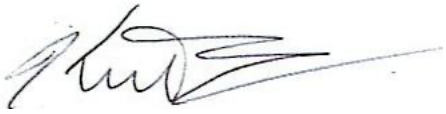
The Maryland Ornithological Society (MOS) strongly supports SB0116 and urges the Committees to issue a favorable report. This bill will require the Maryland Department of Environment, the Maryland Energy Administration, and the University of Maryland School of Business to conduct an analysis of the impacts of data center development on the environment, energy usage, and the economy.

We support this bill because data centers have an outsized impact on wildlife habitat, energy consumption, air and water quality. We have watched data centers in northern Virginia gobble up open space, and place heavy loads on the energy grid. Indeed, a power line project to power northern Virginia data centers, the Maryland Piedmont Reliability Project (MPRP) will cut through the Monocacy Grasslands Important Bird Area (IBA) in Frederick and Carroll Counties, and come close to the Pretty Boy Reservoir in Baltimore County. It will cross 483 acres of Tier II Watersheds, 47 acres of wetlands, and 125 acres of riparian buffers. 377 acres of forest will be removed. As can be seen, it is not just data centers, but also the power lines that supply them, that negatively impact wildlife habitat, water and air quality.

Wide open spaces, home to many grassland bird species, are prime targets for data centers. Our grassland birds are in steep decline.

Before Maryland starts to build such centers, we should be fully cognizant of the impacts such centers will have on wildlife habitat, energy usage, and air and water. Therefore, MOS supports this bill, and urges a favorable Committee report.

Sincerely,



Kurt R. Schwarz
Conservation Chair Emeritus
Maryland Ornithological Society
www.mdbirds.org

NPCA Favorable Comments on SB0116 - Data Center Im

Uploaded by: Kyle Hart

Position: FAV

February 11, 2025

Senate Education, Energy, and Environment Committee
Maryland General Assembly
Room 2 West
Miller Senate Office Building
Annapolis, Maryland 21401

Re: SB0116: Data Center Impact Analysis and Report

Chair Feldman, Vice Chair Kagan, and Members of the Senate Education, Energy, and Environment Committee:

Thank you for this opportunity to comment on SB0116, Data Center Impact Analysis and Report, brought forward by Senator Karen Lewis Young. I write to you today on behalf of the National Parks Conservation Association (NPCA). NPCA is a nationwide nonprofit, nonpartisan organization dedicated to protecting and enhancing America's national parks for present and future generations. We are proud to have more than 1.6 million members and supporters nationwide, with more than 32,000 of those members in Maryland. We write today with in full support of SB0116, which presents a critical first step towards the sustainable development of data centers in the state of Maryland.

Data centers are large, warehouse-like buildings, often 250,000 or more square feet each, that essentially store and operate the world's internet. These buildings are filled with racks of computer systems that store data like pictures and videos, as well as provide the computational power for the growing Artificial Intelligence (AI) sector. There are many types of data centers, from small and innocuous facilities in the basements of colleges or hospitals that store only that locations' data, to facilities that operate solely for the purpose of mining cryptocurrency, to large facilities operated solely for the needs on one company like Amazon or Google, and finally for massive colocation data center facilities operated by companies like QTS and Compass Data Center, which essentially rent data storage space or computational power to other offsite entities.

Data centers require a tremendous amount of land, energy, and water to operate. That is why proper study and planning before the industry dramatically expands in Maryland is essential to ensuring the state continues to meet its various land and tree preservation, Chesapeake Bay restoration, and carbon reduction goals. In Virginia, data centers are currently consuming approximately 5 gigawatts of electricity, more than 3.5 times the generation capacity of the Brandon Shores coal-fired power plant. In Virginia, the state's leading electric utility, Dominion Energy, is predicting demand to rise to approximately 13 gigawatts in 15 years[1], more than double the amount of energy consumed by New York

[1] Virginia State Corporation Commission eFiling, Rebuttal Testimony of Virginia Electric and Power Company, Figure 2, Filed 9/5/23, https://www.scc.virginia.gov/docketsearch/DOCS/7%25h501!.PDF.

City on an average day[2]. This explosive energy demand is threatening state and regional climate goals as more natural gas is planned to be brought online to meet this energy demand.

A recent study by Virginia's Joint Legislative Audit and Review Commission called meeting rising energy demand from data centers in the state as "very difficult."[3] This report highlighted the potential energy needs for meeting this rising demand. In the report, analysists state that Virginia would need to add a new natural gas plant to the state every 18 months, would need to double its current rate of solar energy deployment, would need to significantly exceed planned offshore wind capacity, and relies on nuclear technologies not yet developed. All of this combined would cost billons of dollars to execute, and would cause Virginians electricity bills to rise by as much as $444 annually.

Moreover, this rising energy demand is causing a strain in the regional grid managed by the Pennsylvania-New Jersey-Maryland Interconnection (PJM). In December of 2023, PJM unveiled a proposal to meet current data center energy demand in Northern Virginia. This proposal is set to cost more than $5 billion, and the cost of these upgrades will be borne by ratepayers in Virginia, Maryland, and other nearby states that are planning to construct new electric generation and transmission systems to meet this need. Currently, no rate structure system exists to ensure that these costs are footed by the data center industry instead of average ratepayers across the region. On segment of this planned infrastructure reboot around the PJM territory to meet this demand is the now-well-known Maryland Piedmont Reliability Project (MPRP). New massive transmission lines often pose threats to national parks, as they are currently planned to cross parks like the Chesapeake and Ohio Canal National Historical Park and the Appalachian Trail. Large, new transmission lines also spark fierce local community opposition, as we have seen around the MPRP.

Data centers also use a tremendous amount of water. A large data center, according to the Washington Post, can consume between 1-5 million gallons of water a day. That water is either let off as steam into the atmosphere or put back into the wastewater treatment system contaminated with coolant chemicals. Some localities across the United States are actively struggling to meet rising water demands of both a growing population and the data center industry. In one Oregon town, only three operational data centers use more than ¼ of the total water of the entire town, with more than 355 million gallons being used annually. Localities in Arizona are grappling with climate change induced droughts and already-permitted water withdrawals for data centers, possibly threatening the supply of drinking water for the region.

Lastly of concern, data centers require extensive amounts of land to operate. One proposed data center mega-facility in Prince William County, Virginia has secured a rezoning permit for more than 2,000 acres of land. As the industry's footprint continues to grow, developers are increasingly seeking to site these developments out of existing industrial zones and on sites that are currently forest or farms and often near important sites like national or state parks. For instance, the Prince William proposal is directly

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[2] New York City, Mayors Office of Climate and Environmental Justice, https://climate.cityofnewyork.us/subtopics/systems/#:~:text=NYC%20uses%20about%20the%20same,of%20power%20(NYISO%202022).

[3] Joint legislative Audit and Review Commission (JLARC), "Data Centers in Virginia," https://jlarc.virginia.gov/landing-2024-data-centers-in-virginia.asp.

adjacent to Manassas National Battlefield Park. In Maryland, data center complexes have currently been proposed near Monocacy National Battlefield Park and the Chesapeake and Ohio Canal National Historical Park. The significant air and water pollution from these data center developments could harm the visitor experience for both tourism and outdoor recreation at these park units, as well as damage sensitive habitat for wildlife.

Taken collectively, data centers pose a tremendous threat to Maryland's national parks, air, water, and climate. And while NPCA is not opposed to Maryland developing data centers and enjoying the economic benefits that they provide, it must proceed with the utmost caution, and the state should only develop data centers in a sustainable and thoughtful manner. For these reasons, an extensive study and the development of a statewide plan for data center development is a critical first step in ensuring the state continues to meet its ambitious climate, land preservation, and Chesapeake Bay goals.

Thank you for your consideration, and don't hesitate to contact me with any questions.

Kyle Hart
Mid-Atlantic Program Manager
National Parks Conservation Association
202-400-1193 | khart@npca.org

SB0116 (HB0270) - FAV - Data Center Impact Analysi

Uploaded by: Landon Fahrig

Position: FAV

Maryland Energy Administration

TO: Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the Environment Committee
FROM: MEA
SUBJECT: SB 116 - Data Center Impact Analysis and Report
DATE: February 13, 2025

MEA Position: FAVORABLE

This bill would require the Department of the Environment (MDE), the Maryland Energy Administration (MEA), and the University of Maryland School of Business, in coordination with the Department of Legislative Services (DLS), to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State. This includes an assessment by MEA of the energy requirements of data centers and forecasted impacts on energy demand and supply in the state.

PJM, the Regional Transmission Operator that serves Maryland, is forecasting greater loads in its long-term forecast. A report by GridStrategies indicates that the power sector nationwide does not have a clear understanding of just how much demand will come from data centers in the near future. "Industry specialists estimate five-year data center demand growth from as little as 10 GW to as much as 65 GW through 2029."[1]

It is important that Maryland be better able to understand the full impact of data center growth. Specifically, the State must have an understanding of how data center development will affect electrical demand and supply in order to properly plan for its energy future. For these reasons, MEA urges the committee to issue a **favorable report**.

Our sincere thanks for your consideration of this testimony. For questions or additional information, please contact Landon Fahrig, Legislative Liaison, directly (landon.fahrig@maryland.gov, 410.931.1537).

[1] gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf

SB116_Data Center Impact Analysis and Report_EEE_C
Uploaded by: Laurie McGilvray
Position: FAV

Committee:	**Education, Energy and the Environment**
Testimony on:	**SB116 - Data Center Impact Analysis and Report**
Organization:	**Maryland Legislative Coalition Climate Justice Wing**
Submitting:	**Dave Arndt, Co-Chair**
Position:	**Favorable**
Hearing Date:	**February 13, 2025**

Dear Mr. Chair and Committee Members:

Thank you for allowing our testimony today in support of SB116. The Maryland Legislative Coalition Climate Justice Wing, a statewide coalition of nearly 30 grassroots and professional organizations, urges you to vote favorably on SB116.

Currently, Maryland may have around 26 commercial data centers; we used the word "around" because this business is not tracked or monitored currently. How many people are employed, how much tax revenue is generated, how many diesel generators do they have, how much power do they use? These are unknowns. This is why SB116 is critically important because the bill requires an analysis of the likely environmental, energy, and economic impacts of Maryland data centers to be completed and submitted to the Governor and General Assembly.

We do know from the Department of Commerce, that four companies have received benefits from the Data Center Maryland Sales and Use Tax Exemption Incentive Program from 2021-2023 for a total of $2.465M. Is this good or bad for the State of Maryland, again, we don't know. We believe it is imperative to find answers to these and other questions before proceeding along a path that has severe implications for the Maryland economy, customer electric rates, and climate plans.

Currently, there are 12 newly proposed data centers, which on paper will use 200 times the estimated power of the existing data centers. Again, for the State of Maryland is this good or bad? From looking at Virginia, we know these data centers will require new transmission distribution lines and substations. What is this going to do to the electrical rates of Marylanders? In Virginia, they expect rates to perhaps double in four years. We have people struggling to pay their electric bills now, how many more are going to suffer and struggle if planned data centers are built?

Adding planned data centers will be equivalent to doubling all the household electricity consumption in Maryland. What is this going to do to greenhouse emissions and our Climate Solution Now goals? Estimates put emissions at an additional ~8 million new MTCO2e per year. How are we going to make up this deficit?

What tax revenue will new data centers bring in at the state level and at the county level? Do the counties even have the ability to get any significant revenue with their current tax structures?

For jobs, what are the short-term job numbers? Will the builders and electricians be state residents or will they, as in the case in other states, move from job to job and state to state? They could be Virginia residents since that is where the main workforce resides now. For long term jobs, how many are there really? Can most of the work be done remotely? Again, will they be Maryland residents?

If they use water cooling as expected, where do they get the water and what do they do with it after they are done with it? How or will the water use be in conflict with drinking water or farm use?

What is the best location for the centers, and what resources do we need at a local and state level to manage them? This is an industry that uses things on a massive scale that we have never seen before.

We are not against data centers; we just need to understand the ramifications to know how to proceed properly and wisely. Other states, like Virginia, Georgia, Minnesota, Oregon, Washington, Ohio are reactively looking to put up some guardrails. Let's get ahead of this process and understand our decisions to ensure we know what we are doing and can proactively manage the implementation and impacts.

We strongly support the bill but think it does not go far enough. The study should look at the role and impact that incentives can play for the addition of new wind and solar power production and batteries for emergency backup, which can support sustainability goals. Also, since the state does not collect or report any data on data centers, we also recommend that a reporting requirement be added so that State agencies be mandated to track, plan and report data center locations, energy requirements, backup generators, new wind and solar additions and water usage.

For all of these reasons, we strongly support SB116 and urge a **FAVORABLE** report in Committee.

350MoCo
Adat Shalom Climate Action
Cedar Lane Unitarian Universalist Church Environmental Justice Ministry
Chesapeake Earth Holders
Chesapeake Physicians for Social Responsibility
Climate Parents of Prince George's
Climate Reality Project
ClimateXChange – Rebuild Maryland Coalition
Coming Clean Network, Union of Concerned Scientists
DoTheMostGood Montgomery County
Echotopia
Elders Climate Action
Fix Maryland Rail
Glen Echo Heights Mobilization
Greenbelt Climate Action Network
HoCoClimateAction IndivisibleHoCoMD
Maryland Legislative Coalition
Mobilize Frederick

Montgomery County Faith Alliance for Climate Solutions
Montgomery Countryside Alliance
Mountain Maryland Movement
Nuclear Information & Resource Service
Progressive Maryland
Safe & Healthy Playing Fields
Takoma Park Mobilization Environment Committee
The Climate Mobilization MoCo Chapter
Unitarian Universalist Legislative Ministry of Maryland
WISE

SB0116_FAV_Data_Center_Study_EEE_HoCoCA.org.pdf
Uploaded by: Liz Feighner
Position: FAV

HoCoClimateAction.org
Howard County, Maryland

Bill: **SB0116 - Data Center Impact Analysis and Report**
Hearing Date: **February 13, 2025**
Bill Sponsor: **Senator Lewis Young**
Committee: **Education, Energy, and the Environment**
Submitting: Liz Feighner for **HoCo Climate Action**
Position: **Favorable**

HoCo Climate Action is a 350.org local chapter and a grassroots organization representing approximately 1,400 subscribers. We are also a member of the Climate Justice Wing of the Maryland Legislative Coalition.

Howard County Climate Action supports **SB0116, Data Center Impact Analysis and Report** which is critically important because the bill requires an analysis of the likely environmental, energy, and economic impacts of Maryland data centers to be completed and submitted to the Governor and General Assembly.

HoCo Climate Action has been advocating for clean, renewable energy for years along with advocating for decarbonizing buildings since October 2020 and campaigned for the Climate Solutions Now Act of 2022 (CSNA). These data centers are estimated to put emissions at an additional ~8 million new MTCO2e per year. The CSNA is law and we will not be in any position to meet this mandate if we do not have a handle on this issue and study the impacts of data centers.

This bill directs the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State and to submit a report to the Governor and the General Assembly by September 1, 2026.

Adding planned data centers will be equivalent to doubling all the household electricity consumption in Maryland. Decisions on permitting data centers are made at the local and county level, while the impacts affect all Marylanders. The power, water, and land use requirements of hyperscale datacenters will result in a monumental transformation of any locality in which they are built and the effects will reverberate throughout the state. We must protect taxpayers and ratepayers from skyrocketing costs while the companies that own these data centers reap all the benefits.

The study should look at the role and impact that incentives can play for the addition of new wind and solar power production and batteries for emergency backup, which can support sustainability goals. Also, since the state does not collect or report any data on data centers, we also recommend that a reporting requirement be added so that State agencies be mandated to track, plan and report data center locations, energy requirements, backup generators, new wind and solar additions and water usage.

Maryland needs to learn from Virginia's experiences – both in how to maximize benefits and how to protect ratepayers and communities in MD from the many possible negative effects.

We urge a **favorable report on SB0116**.

Howard County Climate Action
Submitted by Liz Feighner, Steering and Advocacy Committee
www.HoCoClimateAction.org
HoCoClimateAction@gmail.com

SB 116 - CBF - FAV.pdf
Uploaded by: Matt Stegman
Position: FAV

CHESAPEAKE BAY FOUNDATION

Environmental Protection and Restoration
Environmental Education

Senate Bill 116
Data Center Impact Analysis and Report

Date: February 13, 2025
To: Education, Energy, and the Environment Committee
Position: **FAVORABLE**
From: Matt Stegman, MD Staff Attorney

Chesapeake Bay Foundation (CBF) **SUPPORTS** SB 116, which will direct the creation of an accurate, unbiased, and comprehensive report that will provide information legislators need to develop a thoughtful policy on the development of hyperscale data centers in Maryland. The bill directs the Department of the Environment (MDE), Maryland Energy Administration (MEA), and the University of Maryland School of Business to conduct a thorough analysis of the foreseeable environmental, energy use, and economic impacts of data center development in the State and to submit their findings to the Governor and General Assembly by September 1, 2026.

Maryland can learn from the experiences of our neighbor, Virginia, and position ourselves to maximize the benefits of potential data center development to our economy, utility ratepayers, communities, and the environment and to better recognize potential negative trade-offs. The immense physicals footprints and resource needs of hyperscale data centers mean they cannot help but have a significant impact on the communities where they are placed.

While the charge of the study group is broad, we would hope that they would investigate and report on at least the following potential environmental impacts of data center development:

- Impacts of data centers on local waterways, including the impact of facility discharge on water temperature, water consumption, and the need for appropriately-scaled stormwater remediation measures;
- The production of e-waste associated with data center operations; and
- The need for and feasibility of establishing a regional planning body to monitor electric grid reliability and power consumption attributable to data centers.

Data centers have the potential to be an economic boost for our state, but policymakers should be thoughtful on how, when, and under what circumstances to allow their development. A comprehensive study is an appropriate vehicle to ensure legislators and other stakeholders have the information they need to pursue, or elect not to pursue, these opportunities moving forward.

CBF urges the Committee's FAVORABLE report on SB 116.

For more information, please contact Matt Stegman, Maryland Staff Attorney, at mstegman@cbf.org.

Maryland Catholic Conference_FAVSB116_.pdf
Uploaded by: Michelle Zelaya
Position: FAV

MARYLAND CATHOLIC CONFERENCE

February 13th , 2025
SB 116
Data Center Impact Analysis and Report
Education, Energy, and the Environment
Position: FAVORABLE

The Maryland Catholic Conference offers this testimony in support of **Senate Bill 116**. The Catholic Conference is the public policy representative of the three (arch)dioceses serving Maryland, which together encompass over one million Marylanders. Statewide, their parishes, schools, hospitals and numerous charities combine to form our state's second largest social service provider network, behind only our state government.

Senate Bill 116 would mandate a collaborative analysis involving the Department of the Environment, Maryland Energy Administration and the University of Maryland School of Business. The analysis will assess the potential environmental, energy, and economic impacts of data centers development in Maryland.

This legislation recognizes the complexities that Data centers bring. Particularly regarding energy consumption, environmental impacts, and economic consequences for surrounding communities. They demand significant amounts of energy and water, often placing strain on local resources and contributing to carbon emissions. Without a thorough understanding of these impacts, we risk compromising the health of our environment, overburdening our infrastructure, and exacerbating inequalities in communities most affected by this development.

Pope Francis, in Laudato Si', emphasizes that "everything is interconnected," urging us to protect the earth as our common home. This bill aligns with that call, ensuring that we assess the environmental toll of data centers and work to minimize harm to our ecosystems. Analyzing the economic effects ensures that communities benefit equitably from development and are not disproportionately burdened by their costs.

The MCC appreciates your consideration and, for these reasons, respectfully requests a favorable report on **Senate Bill 116.**

favorable sb116 2025.pdf
Uploaded by: Nina Cardin
Position: FAV

Nina Beth Cardin
nina.cardin@gmail.com

Favorable: SB116
Data Center Impact Analysis and Report

Dear Chair Feldman, Vice Chair Kagan and Esteemed Members of the Committee,

I write in favor of SB 116.

The full truth of the necessity of rapid expansion of data centers with all their potential negative environmental impacts has not yet been written.

Before moving precipitously and perhaps recklessly (potentially wreck-lessly), we need to be certain to do our due diligence and see what we might need here in Maryland, and after that, where and how to build it.

We are seeing the havoc it is wreaking in Virginia. And while AI offers incredible benefits, we still do not know its full demands on water, energy, land use, etc.

American has a history of over-indulging industry in the building of infrastructure. Yet there is reason to believe that we build and maintain too much unused, or unwisely used, infrastructure, wasting resources, time and money.

And with technology advancing, we do not yet know if future energy (and hence land and water_ demands will be as great as we now imagine.

It only makes sense to take a breath and invest in a review of what we need, and how to best meet that need.

I urge your support of SB116.

Cordially,

Nina Beth Cardin

SB116_IndivisibleHoCo_FAV_Peter Alexander.pdf
Uploaded by: Peter Alexander
Position: FAV

IndivisibleHoCoMD

SB116

Data Center Impact Analysis and Report Act

Testimony before the Education, Energy, and the Environment

Hearing February 13, 2025

Position: Favorable

Dear Chair Feldman and Vice-Chair Kagan, and members of the committee, my name is Peter Alexander, and I represent the 900+ members of Indivisible Howard County. Indivisible Howard County is an active member of the Maryland Legislative Coalition (with 30,000+ members). We are providing written testimony today **in support of SB116.** We appreciate the leadership of Senator Lewis-Young for sponsoring this important legislation.

The power, water, and land use requirements of hyperscale datacenters will result in a monumental transformation of any locality in which they are built and the effects will reverberate throughout the state.

For example, a typical data center has power requirements on the order of 1200 megawatt, an enormous amount of electrical power. Further, they will require emergency diesel generators to provide power equal to the power it gets from the electrical grid - 400 diesel generators that are tested monthly. One hyperscale data center will add about 8 million new MTCO2e of GHG emissions annually. Regarding water and land use, the Quantum Frederick data center site will receive 1.5 million gallons/day of potable water to supply only a small portion of the site's buildout. A hyperscale data center could require one or two 500 kV transmission lines that could grossly affect land use.

The Datacenter Study Bill will provide accurate and unbiased information that legislators need to determine how to blend hyperscale data centers into our economy. This bill directs the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State and to submit a report to the Governor and the General Assembly by September 1, 2026.

Maryland needs to learn from Virginia's experiences – both in how to maximize benefits and how to protect ratepayers and communities in MD from the many possible negative effects.

Thank you for your consideration of this important legislation.

We respectfully urge a favorable report.

Peter Alexander, PhD
Woodbine, MD 21797

Written Testimony in Support of SB0116.pdf
Uploaded by: Rebecca Sparks
Position: FAV

Rebecca Sparks
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Baltimore, MD 21211
Hello@beccasparks.com
443-605-3620
February 11, 2025

Testimony in Support of Senate Bill 0116

To: The Committee on Energy, Education, and the Environment
From: Rebecca Sparks

Dear Chair Feldman, Vice Chair Kagan, and Members of the Committee on Energy, Education, and the Environment:

I am writing to ask you to support SB0116 and require thorough analysis of the energetic, environmental, and economic impact of data centers before constructing them or connecting them to the electrical grid. I recently submitted a few other pieces of written testimony in which I highlighted my expertise as an Environmental Scientist. While I do come to this issue through that lens, I also want to speak to you simply as a young person that you represent.

I am in my late twenties. In my lifetime, we have gone from controversial whispers about Global Warming, to a more accurately named but equally disparaged concept of Climate Change, and now - thanks to decades of misinformation and inaction - we are in the thick of the Climate Crisis. Nomenclature aside, do you remember what Maryland's seasons used to be like? I used to play in 2-3 feet of snow in the famous Hereford-Zone winters. We used to have to put our winter coats on underneath our Halloween costumes. I remember galaxies of fireflies, dazzling in summer evenings. Monarch butterflies used to build chrysalises on the siding of my parents home. Do you remember? Now, we have longer and longer droughts in the summer, and the fireflies and butterflies are more sparse. Last October, it was over 80 degrees for most of the month. A few inches of snow is seen as a major storm. From elementary school tree plantings to running climate model equations at Boston University, I have always tried to do something, to understand more, and to create community in and around nature. Along the way, I realized that many people - whether through failings in education, political manipulation, or willful ignorance - simply do not see that human beings are part of interdependent global systems. Please know that we depend on having balanced ecosystems, whether you realize it or not.

Throughout history, there are turning points for the trajectory of our ecosystems. The Industrial Revolution, the creation of the National Parks, the popularization of motor vehicles, the Clean Air Act, the Clean Water Act, the Endangered Species Act, the publication of Silent Spring by Rachel Carson, the Paris Climate Agreement, the USA's subsequent withdrawal from the Paris Climate Agreement, and so many more. At each of these moments, people in positions of power had a choice to make. They could

exploit resources for temporary profit and cause long-term degradation and loss of life. Or they could stand up, speak out for those whose voices are not heard, and preserve natural resources for future generations. We have seen it go both ways, time and time again. Amid progress and regression, my generation is already paying the price for past investment in harmful exploitation: Asheville is destroyed by floods, LA burns to the ground, infrastructure crumbles under extreme weather, and all so fossil fuel companies can get rich.

With the sudden rise in Artificial Intelligence technologies, massive tech companies led by billionaires are trying to claim land and resources for their own benefit. While AI presents some exciting opportunities for technological advancement, its current demands are too great. Data Centers use as much energy as 80,000 homes, running 24/7 on fossil fueled electricity at a time when emissions reduction should be our top priority. They use millions of gallons of precious fresh water daily, depleting reservoirs and aquifers, while fresh water becomes more and more scarce. All of that for a technology that is so new and continuously changing in an unreliable market. Exorbitantly wealthy private companies *must* be prevented from exploiting our resources in this way.

This is your turning point. Do you choose a future where private companies can claim property and deplete resources just to leave us in the dust when they've used up what they can get? Or do you choose a future in which Maryland's natural resources are robustly protected by our legal systems? A future in which fresh water is prioritized for drinking, bathing, and cleaning, instead of cooling servers? A future where electricity is generated renewably, transported safely, and helps to decrease our dependence on fossil fuels? This is your turning point. Please, support Senate Bill 0116 and do what needs to be done to protect our planet and regulate data centers.

Thank you for your time,
Rebecca Sparks

sb116 testimony.pdf
Uploaded by: Renee Hamidi
Position: FAV

VALLEYS
PLANNING COUNCIL

thevpc.org | info@thevpc.org | 410.337.6877
118 W. Pennsylvania Avenue, Towson, Maryland 21204
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Committee: Education, Energy, and the Environment
Testimony on: SB116 "Data Center Impact Analysis and Report"
Position: Support
Hearing Date: February 13, 2025

Valleys Planning Council, a non-profit that conserves land and resources, preserves historic character and maintains the rural feel and land uses in northwestern Baltimore County, urges a favorable report on SB116, which would require an analysis of the environmental, energy, and economic impacts of data center development in the State.

Data centers require enormous amounts of electricity to run service, storage, and networking equipment. Much more energy generation and transmission will be required. One data center uses as much electricity as tens of thousands of homes. An analysis to determine how to meet the energy demands of data centers without unduly burdening rate payers, reducing our ability to reach our climate goals, or requiring the use of farmland, preserved land, and environmentally sensitive land for transmission lines, must take place before committing to data center development.

Data center cooling systems prevent equipment damage and require significant amounts of energy. They also require a great deal of water. Water is a limited resource. An analysis to determine just how much water can be used for data centers without leaving households and businesses short of water must be performed. The analysis should also determine how and where data center waste water can be discharged.

Data centers must run 24 hours a day, seven days a week, 365 days a year. Backup energy in the form of storage units will always be required. This backup energy, usually generators, presents issues and risks of its own. Any study of data center impacts should include the effects of onsite backup energy.

Once a data center is built, relatively few people will be employed to run it. Those who are employed must have specialized skills. The economic impacts of data centers, including tax incentives, tax revenues, sales tax exemptions, and long-term job creation, must be assessed.

Requiring an analysis of the impacts of data center development on Maryland will reveal the ramifications of these large-scale users of energy and resources **before** they are built. Valleys Planning Council urges a favorable report on SB116.

Renée Hamidi
Executive Director
Valleys Planning Council

SB0116 Data Center testimony 2-13-25 - Kranz.pdf
Uploaded by: Rhonda Kranz
Position: FAV

Committee: **Education Energy and the Environment**
Testimony on: **SB0116 – Data Center Impact Analysis and Report Act**
Submitting: **Rhonda Kranz**
Position: **Favorable**
Hearing Date: **February 13, 2025**

Dear Mr. Chairman and Committee Members:

Thank you for accepting my written testimony is support of SB0116 - The Data Center Impact Analysis and Report Act. I have been a resident of Montgomery County for over thirty years and with that long term perspective in mind I will share why I support this bill. I have been closely following data center issues over the last year and the plans for increasing numbers of new and larger centers in Montgomery and other counties in the state. I believe the growth in data centers is one of the most momentous issues Maryland is facing. It has the potential to benefit the state but also has the potential to do incredible harm. The world is increasingly dependent on information technology and places to house the machines that drive it. I am not opposed to development of the technology nor of data centers themselves. What is essential is how we plan for and regulate them in Maryland. At this juncture we do not have the information needed to proactively plan for these facilities. The Data Center Impact Analysis and Report Act will provide much of this essential information.

At present, data centers are exploding across the state. There is no state-wide oversite on key issues such as where they are located; how much electricity will be needed and where it will come from; what technology is being use or the type of energy sources; where transmission grids will be placed or if they can be placed in ways to incorporate other needs for our lacking electrical grid; how it will impact the communities nearby; climate and other environmental impacts; the amount of water used for cooling and where it comes from; and numerous others. Most of the decisions on data centers are made at the county level with little thought to how these decisions impact the rest of the state. MD is a modest sized state, nothing that happens in one part of state is isolated from the rest of the state.

We need information that will allow for good decision making. Maryland has seen how data center development can be done wrong by looking south at our neighbors in Virginia. We need to think before we leap.

The Data Center Study Bill will provide accurate and unbiased information that legislators need to determine how to blend hyper scale data centers into our economy. This bill directs the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State and to submit to the Governor and the General Assembly by September 1, 2026,

We want to bring revenue to our state, but what are the actual economics of the data center venture. At this point data centers are seen as an economic miracle for the state. But without a good economic study we have no bases for that belief. This bill will provide information that will help us understand how to best design data centers so that everyone benefits, including rate payers, farmers, community members, and the state. We also need to minimize what can be lost.

Things are moving very fast in our state and the country. To benefit we need to plan proactively. For the reasons above and many more I urge you to vote favorable for SB0116 the Data Center Impact Analysis and Report Act. We need a Data Center Study for Maryland.

Testimony in support of SB0116 - Data Center Impac

Uploaded by: Richard KAP Kaplowitz

Position: FAV

SB0116_RichardKaplowitz_FAV
02/13/2025

Richard Keith Kaplowitz
Frederick, MD 21703

TESTIMONY ON SB#/0116 – FAVORABLE
(Data Center Impact Analysis and Report)

TO: Chair Feldman, Vice Chair Kagan and members of the Education, Energy and the Environment Committee
FROM: Richard Keith Kaplowitz

My name is Richard K. Kaplowitz. I am a resident of District 3, Frederick County. I am submitting this testimony in support of SB#0116, Data Center Impact Analysis and Report

Good decisions by government can only occur when all relevant data needed to guide that decision is collected and made available to stakeholders and decision makers. Among the questions that must be answered when considering data centers impacts are:

- What is the financial impact of data centers?
- What are the water requirements for data centers?
- What is the land use environment for data centers?
- What are the power requirements of data centers?
- What are the effects on air quality/noise issues around data centers?
- What resources do we need at a local and state level to manage them?

This bill identifies who can obtain the data to help answer these questions. It will require the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State. On completion of the data aggregation, it will mandate the Department of Legislative Services to coordinate preparation of the final report to be submitted to the Governor and the General Assembly by September 1, 2026.

We have seen how our neighbors in Northern Virginia have had to deal with multiple problems and issues from the proliferation of data centers in their counties. [1] WRIC news in Virginia reported *Booming data center industry both helps and hurts Virginia, JLARC study finds* [2] Maryland has an opportunity to learn from this and do the work to avoid the problems our neighboring jurisdictions have faced and remediate them for Maryland.
I respectfully urge this committee to return a favorable report on SB#0116.

[11] https://www.vpm.org/news/2024-12-10/unprecedented-energy-demand-from-data-centers-poses-big-challenges-for-virginia-commission-says

[2] https://www.wric.com/news/taking-action/jlarc-report-data-centers-virginia/

FAV_SB116 - Data Center Impact Analysis & Report.p

Uploaded by: Robin Broder

Position: FAV

February 11, 2025

SB116 - Data Center Impact Analysis & Report
Hearing Date: Thursday, February 13, 2025, at 1:00pm

Position: FAVORABLE

Dear Chair Feldman and the members of the Education, Energy, and the Environment Committee:

Waterkeepers Chesapeake and the below signed organizations respectfully request a **FAVORABLE report on SB116** which requires an analysis of the likely environmental, energy, and economic impacts of data center development in the State, and generally relating to data centers.

The role of data centers in storing, managing, and distributing data has remained largely obscured from public view. Maintaining this insatiable information chamber uses vast amounts of energy and water, produces excess heat and noise, and releases extra carbon into the atmosphere. The cloud may be invisible, its impact on the environment and our communities is not. The rise of generative AI is driving the growth of data centers and increased demand for energy and water.

Data centers need to be kept cool to house the thousands of computers that hold all our data. Typically, water is the preferred method to cool these massive facilities. Total U.S. data center water usage is 1.7 billion liters per day, compared to the overall U.S. daily water consumption of 1.218 trillion liters per day. Much of that water use comes from electricity use, but about a quarter from using water for direct cooling.

Virginia, particularly Northern Virginia, hosts the largest data center market in the world with around 300 facilities and counting. The Financial Times reports that Virginia's data centers consumed at least 1.85 billion gallons of water in 2023, compared to 1.13 billion gallons in 2019.

On average, data centers' traditional cooling methods use 300,000 gallons of water each day. Traditional methods involve using conventional air conditioning equipment, large fan systems, and smaller fans inside the equipment to pull in cooler air and reject warm air. In addition to their high water usage and the chemical pollution caused by air conditioning coils, these methods are the least energy-efficient and increase operational costs, highlighting the need for more sustainable and efficient alternatives.

Although it is known that data centers use a lot of water, there are many gaps in the data and information currently available. This is partially because data center water usage is not as well studied as energy usage. Data centers are not always required to document their direct water consumption; less than one third of data centers measure their water consumption. And among the ones that do, it is suggested that water consumption in data centers is higher than what is reported.

Big data is a multi-billion dollar industry, yet these facilities are not being made to account for their impacts on our watersheds, nor are the laws sufficient to require them to reduce the impact. There are also numerous issues with local permitting processes granting these facilities the right to use our waters and hampering communities' ability to respond to proposed new developments. There is a great need for further studies to quantify the impact of these facilities, before they are constructed, as well as monitoring the ongoing impacts to our waters.

Waterkeepers Chesapeake and the below signed organizations urge state lawmakers to not allow this global industry consisting of the largest companies in the world to devastate our local rivers and aquifers. SB116 will give Maryland the information needed to craft regulations and oversight that will protect our water, air, natural resources and communities. Waterkeepers Chesapeake and the below signed organizations urge this committee to issue a favorable report on SB116.

Contact: Robin Broder, Acting Executive Director
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ShoreRivers

arichards@shorerivers.org

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Taylor Swanson, Executive Director & Assateague Coastkeeper
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SB 116 Data Center Impact Analysis and Report Writ

Uploaded by: Senator Karen Lewis Young

Position: FAV

KAREN LEWIS YOUNG
Legislative District 3
Frederick County

Budget and Taxation Committee

THE SENATE OF MARYLAND
ANNAPOLIS, MARYLAND 21401

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February 13, 2025
Senate Bill 116 - Data Center Impact Analysis and Report

The Honorable Brian Feldman
The Honorable Cheryl Kagan
Education, Energy, & Environment Committee
Miller Senate Office Building
11 Bladen Street
Annapolis, MD 21401

Chair Feldman, Vice Chair Kagan, and distinguished members of the Committee,

It is my pleasure to come before you and offer my testimony in support of Senate Bill 116 - Data Center Impact Analysis and Report. This bill commissions a study of the likely energy, economic, and environmental impacts of data center development in the state of Maryland.

Due to our current energy supply challenges, it is clear that we must have a comprehensive forecast of projected energy demands. With this knowledge we can plan for non-obtrusive infrastructure and avoid being saddled with projects like the Maryland Piedmont Reliability Project. By analyzing the energy requirements of data centers and their potential effect on rate costs and necessary infrastructure, this study will provide the information needed to protect ratepayers and increase transmission capacity without disruption.

Senate Bill 116 also addresses one of the state's long-term priorities: environmental health. By leveraging the resources of the Department of the Environment, this bill will provide a thorough analysis of Maryland's ability to meet certain environmental objectives, such as bay restoration and clean energy goals. This bill will also study potential impacts on air and water quality, as well as the availability and feasability of technologies that could mitigate the environmental impacts.

Data centers have been heralded as influential drivers of economic development for the states they call home. Accordingly, legislation has been passed over the past few years to attract them to Maryland. In 2020, Senate Bill 397 granted data centers exemptions from sales and use

taxes and personal property taxes. Last year the Critical Infrastructure Streamlining Act of 2024 exempted data centers from the requirement for a Certificate of Public Convenience and Necessity (CPCN) or review by the Maryland Public Service Commission in order "to supercharge the data center industry in Maryland."[1] Based on the experience of other states, concerns emerged as to data centers' claims of significant financial and economic benefits. This study will provide an independent examination of these projections.

In order to properly balance the state's investment in this industry and the economic returns, policymakers and residents need an objective and incisive evaluation of projected risks and opportunities of data centers. The results of the Virginia study that this bill is modeled on show that the benefits of data centers mostly occur during the construction period. Only 20% of jobs created by data centers last beyond construction and into the operational phase. Conversely, revenue losses from Virginia's data center tax abatement program have ballooned from $65 million in 2017 to $136 million in 2022 and then to $750 million in 2023. Similarly in Illinois, in just one year, 2022 to 2023, the state's lost tax revenue to data centers rose 628% to $370.6 million. Maryland must have a complete understanding of the economic impacts of data centers in order to accurately evaluate our economic, environmental, and energy needs.

Senate Bill 116 will give us a comprehensive analysis of how data centers are likely to impact Maryland. It does not prevent, postpone or delay the development of data centers nor does it negatively impact job creation with currently planned data centers. SB116 will provide the knowledge and tools we need to make the informed, prudent decisions that Marylanders require of us.

I respectfully urge a favorable report.

Sincerely,

Senator Karen Lewis Young

[1] Governor Wes Moore at the May 9 bill signing.
https://www.datacenterfrontier.com/site-selection/article/55039349/maryland-reboots-data-center-business-with-new-critical-infrastructure-streamlining-act

Tax breaks for data centers have huge costs for Oh

Uploaded by: Senator Karen Lewis Young

Position: FAV

Policy Matters Ohio

Press Release - January 7, 2025

Tax breaks for data centers have huge costs for Ohio

by: Ben Stein

Revenue losses, modest job creation, energy demands make exemption indefensible

A sales-tax break offered by the state of Ohio to data-center operators like Amazon, Google, and Microsoft could siphon giant sums from state and local governments. A new report released today by Policy Matters Ohio found that if the tax break covers all the announced investments over the last two years by just those three giant companies, it could cost almost $1.6 billion in state and local sales-tax revenue.

"The Ohio General Assembly needs to rein in this huge giveaway," said Zach Schiller, report author and Policy Matters Ohio research director. "That's urgent, since these data centers are also giant users of electricity, so they could drive up electric rates for Ohioans and threaten progress fighting climate change. Why do we want to provide massive subsidies to some of the wealthiest corporations when the result could be higher costs for Ohioans and Ohio businesses?"

Data centers aren't big job creators; in fact, the state subsidies often amount to $1 million or more for each new job created. And a Microsoft

executive recently noted, “I can’t think of a site selection or placement decision that was decided on a set of tax incentives.”

Yet agreements with some companies grant the sales-tax break far into the future if they make certain amounts of investment—in Amazon’s case, till 2055.

The General Assembly should end this costly tax break. Short of an outright end of the sales-tax exemption, the Policy Matters report outlines steps the General Assembly can take to limit and create guardrails on it.

WA Governor Orders a Study of Data Centers' Energy

Uploaded by: Senator Karen Lewis Young

Position: FAV

Environment

Washington Governor Orders Team to Study Data Centers' Impact on Energy Use, Job Creation and Tax Revenue

Last year, The Seattle Times and ProPublica reported on how the state created a massive tax break for data centers, encouraging the growth of an industry whose energy use conflicts with a goal for utilities to go carbon neutral by 2030.

Washington Gov. Bob Ferguson Lindsey Wasson/AP Photo

by Lulu Ramadan and Sydney Brownstone, The Seattle Times

Co-published with The Seattle Times

Feb. 5, 2025, 10:20 a.m. EST

This article was produced for ProPublica's Local Reporting Network in partnership with The Seattle Times. Sign up for Dispatches to get stories like this one as soon as they are published.

Washington Gov. Bob Ferguson on Tuesday signed an executive order forming a team to evaluate the impact of data centers on energy use, state tax revenue and job creation.

The order follows a Seattle Times-ProPublica investigation last year into the clean-energy and economic impacts of the state's power-guzzling data center industry, the backbone of the modern internet. Data centers — warehouse-like structures filled with computer servers — receive some of Washington's largest corporate tax breaks. They require enormous amounts of electricity, a need that is only expected to grow with increasing reliance on artificial intelligence.

"We must ensure Washington remains a leader in technology and sustainability — these experts will help us do that," Ferguson said in a news release. "This group will help us balance industry growth, tax revenue needs, energy constraints and sustainability."

Ferguson's order, one of his earliest actions since he took office this year, authorizes a workgroup of state officials and industry stakeholders to study the impact of data centers and recommend policies that balance industry growth with tax revenue needs, energy constraints and sustainability, according to the executive order. That includes evaluating the state's robust tax incentives for the data center industry, according to the governor's office.

State lawmakers encouraged the dramatic growth of the data center industry by offering lucrative tax breaks in the name of bringing jobs to rural areas. The Times and ProPublica reported last year that data centers have grown into a major consumer of electricity in some of Washington's greenest counties, threatening the region's ability to meet power demand while phasing out fossil fuels.

In 2022, then-Gov. Jay Inslee blocked efforts to study data center electricity use, the news organizations reported. State lawmakers included a provision to measure how much power data centers use in a bill that expanded tax breaks for the industry. Inslee signed into law the tax break expansion but vetoed the study.

Inslee's office said last year that the study would have duplicated work underway by regional power planners, who have produced wide-ranging forecasts about data centers' power use in the Pacific Northwest. Still, no agency or entity has assessed the industry's growing energy demands in Washington specifically or the impact of the state's tax break on its power grid.

As of July, Washington was home to at least 87 data centers, according to the industry-tracking website Baxtel.

Ferguson's workgroup will be led by the Department of Revenue, the state agency responsible for determining the eligibility of data centers for tax breaks.

Ferguson's team will include participants from state agencies responsible for tax incentives, clean energy goals, the environment and utility regulation, as well as private representatives from labor organizations and the data center industry.

In addition to examining energy use, Ferguson's office said the workgroup will review data on job creation in the industry — a key measure for understanding the success of Washington's tax incentive program, which has been shielded from transparency and accountability for years.

It's unclear how many high-paying tech jobs the tax break has created at individual data centers because state revenue officials aren't allowed to say.

The group is tasked with producing findings and recommendations by December, according to the governor's office.

2025S116TestimonyPDF.pdf
Uploaded by: Sharon Davlin
Position: FAV

Testimony Supporting SB116
Senate Education, Energy, and the Environment Committee
January 13, 2025

Position: SUPPORT

Dear Chair Fieldsman, Vice Chair Pagan and Members of the Committee,

As a long-time resident of District 43, a home owner, and a Maryland rate-payer, I express my strong support for SB116, Data Center Impact Analysis and Report.

This bill directs the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative services, to conduct an analysis of the environmental, energy, and economic impacts of data center development in the State, and to submit this analysis to The Governor and General Assembly by September 1, 2026.

We should learn from Virginia's experiences on how to maximize benefits and how to protect residents, communities and rate-payers from the many possible negative impacts.

As Maryland residents, we must know:

Financial Impact – How successful have the tax incentives been in other states versus the tax revenue and job creation? What is the cost to ratepayers to finance the What is the cost to ratepayers to finance the electric infrastructure to supply the power? What is the financial impact to ratepayers of increasing electrical demand by 5-7GW, more than double the electrical usage of all Maryland households. Each county will help underwrite the cost of water, sewage and storm water management and water treatment upgrades. What are the total tax revenue projections, both state and county? What are the projected costs of the sales tax exemptions? How many short and long term jobs are created and will they be staffed by people living in the state of Maryland? Basically, what is the ultimate cost/ benefit of huge data centers?

Water requirements - The Quantum Frederick data center site will receive 1.5 million gallons/day of potable water to supply only a small portion of the site's buildout.How many such sites can Maryland supply water to? Who gets priority when we have a drought? Households, farmers, other businesses or data centers?

Implications for land use – What is the effect of multiple transmission lines on Maryland's farmers and landowners? Each hyper data center site may require one or two 500 kV transmission lines. Is preserved land, which has been paid for by the state and counties sufficiently protected?

Power Requirements –How should data centers be supplied? Should data center pay for and locate near their power source? How can we supply all this power and still reach our climate goals? One hyper data center will add about 8 million new MTCO2e of GHG emissions. Can data centers be required to provide a certain percentage of new carbon free energy for their operation?

The impacts on air quality and noise – for current implementations, each data center will require emergency diesel generators to provide power equal to the power it gets from the electrical grid. A 1200 megawatt site would require 400 diesel generators that are tested monthly. The resulting air and noise pollution will negatively affect on the nearby population.

The impacts on our local governments – what resources do we need at rhe State and local level? This is an industry that uses things on a massive scale that Maryland has never experienced. We all need to understand the ramifications to know how to proceed properly. My family have relatives and friends in Oregon and Washington states. They all say their states did not know their full impact before approving huge data centers. Their cost to tax and rate payers has skyrocketed.

SB0116 - Data Center Impact Analysis and Report.d
Uploaded by: Shore Progress
Position: FAV

SB0116: Data Center Impact Analysis and Report

Position: Support

Chairman Feldman, Vice Chair Kagan, and Members of the Committee,

Shore Progress supports SB 116 - Data Center Impact Analysis and Report. SB 116 calls for a comprehensive, independent analysis of the data center industry's true costs and benefits to Marylanders. While these developments promise economic growth, the unchecked expansion of data centers particularly in rural areas - threatens to strain our already strained energy grid, burden taxpayers, and deplete our natural resources.

Infrastructure costs frequently fall on working families. The Maryland Piedmont Reliability Project exemplifies how large-scale developments are imposed on communities with little public input. Rural residents, farmers, and environmental advocates are left to fight against decisions made without fully understanding the long-term impacts.

The Moore administration has established a data center stakeholder group to discuss these pressing concerns. However, without legislative oversight, the public risks being left out of critical decisions that will shape our economy and environment for decades. Marylanders deserve economic policies that put people first. SB 116 ensures that any promised economic benefits are independently verified and that working families aren't left footing the bill for unchecked corporate expansion. Thoughtful planning and community-driven policies must be at the core of Maryland's approach to data centers.

A favorable report on SB 116 is a vote for transparency, accountability, and the long-term well-being of Marylanders.

Thank you for your time and consideration.

Shore Progress

SB0116_DataCenterImpacts_FAV_ClimateCC.pdf
Uploaded by: Sonia Demiray
Position: FAV

SB0116 - SUPPORT

Sonia Demiray
Climate Communications Coalition
sonia@demirayink.com
202-744-2948

SB-0116- Data Center Impact Analysis and Report

Education, Energy, and the Environment Committee
February 13th, 2025

Dear Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy and the Environment Committee:

My name is Sonia Demiray, I am the Executive Director of the Climate Communications Coalition, a member of the Mid-Atlantic Justice Coalition, and of the MLC Climate Justice Wing. The Climate Communications Coalition strongly supports SB0116.

As we have learned from our neighbors in Virginia, hyper-scale datacenters, the likes of which are being considered in Maryland, require such large amounts of power, water, and land that they monumentally transform any locality in which they are built. In Frederick County, where I live, a 2,100 acre site is transforming bucolic Adamstown through an imposing gigawatt-scale Quantum Loophole datacenter campus.

We need to fully understand any potential impact from datacenters before we hurtle towards irreversible land-conversion, exploitation of natural resources, and a reversal from our clean energy transition to dirty energy generation sources (i.e. gas, biogas, biomass, nuclear) all in the name of a technology which very soon may not require these installations. For example the recent DeepSeek technology development is putting the need for massive servers for AI into question.

In Frederick County, concerns have already been raised over the drilling of a 41-mile fiber optic tunnel which has resulted in the repeated release of harmful drilling mud into creeks leading to the nearby Monocacy River. Large concerns are being raised over diesel-back up power generators which spew toxic nitrogen oxides (NOx), particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO2), and carbon dioxide (CO2) into local communities and add to greenhouse gases warming our climate. We know that Maryland cannot produce the amount of power required by these data centers, hence backup power will be key. In addition to the air pollution, what about the light and noise pollution?

We must refrain on rushing into these large projects without fully understanding the need and the impact. Can datacenters bring their own clean power (solar, wind, or geothermal)? What sort of power-storage systems are being considered? Where will the water be drawn from? Please take the time to conduct an analysis of the actual need, the environmental, energy, and economic impacts of datacenter development. We urge a favorable report on SB0116. ###

SAonSB116approval011825.pdf
Uploaded by: Stephen Black
Position: FAV

SUGARLOAF ALLIANCE

SB116 : Data Center Impact Analysis and Report

Position: Favorable

Date: January 18, 2025

Contact: Steve Black, 240-416-0714

Our organization requests a FAVORABLE report on SB116: Data Center Impact Analysis and Report, from the Education, Energy, and Environment Commitee.

Sugarloaf Alliance supports legislation to require an objective, rigorous, and unbiased cost/benefit analysis of the potential impacts of data center development in the State of Maryland. The State and its counties stand on the precipice of land use decisions that will have enormous environmental and economic consequences beyond the functional life span of this and subsequent technologies.

Given Frederick County's negative multi-year experience thus far with proposed and approved data center development at the former EastAlco brownfield site (formerly Quantum Loophole, now TPG/Catellus), and the fact that Frederick County, unlike its neighboring counties in Maryland and Virginia, does not currently levy a business personal property tax, Sugarloaf Alliance anticipates that any promised economic benefit to this County will be eclipsed by the immediate and long term public costs of hosting this industry.

In Sugarloaf Alliance's response to the October 2023 Sage Report, which was contracted by the Maryland Tech Council and focused only on purported Quantum Loophole project benefits, our research indicated that rather than presenting a much-touted economic development, employment and tax revenue "opportunity," data centers would cause a net annual loss of $31 million due to added services for schools and other public services. These calculations, based on Frederick County and Frederick County Public Schools' FY2024 operating budgets, focused on schools and jobs and did not include other short- and long-term environmental and natural resource costs to the County and to its residents and businesses.

In our view, the State-wide Impact Analysis and Report required by SB116 is urgent and essential and should:

- Be completed promptly and transparently and precede any further county and state data center development decisions or commitments.
- Be distributed and available widely, to county and state officials who are responsible for protecting the public's well-being and trust, and to the members of county and state communities whose quality of life and business success will be directly and indirectly impacted by data center development.
- Be distributed and discussed with officials in other jurisdictions that stand to be affected by data center development in Maryland (for example, parties to the Potomac River Co-Op Water Supply Agreement).

- Provide specific environmental and economic impact requirements to be added to local and state land use regulations.
- Account for jurisdictions such as Frederick County that do not stand to benefit from business personal property tax revenues.
- View the impacts of data center development through the lens of climate change and the overriding necessity of reaching and surpassing State and County climate goals.
- View the impacts of data center development on regional, not just county, natural resources including water supplies, air quality, land uses including agriculture and forestlands, as well as the communities', businesses' and residents' rising costs associated with data center competition for these resources.
- Calculate the environmental and economic costs for affected Maryaland residents and businesses of any additional power transmission lines required by data center development in Maryland or in other states (e.g., MPRP), and impacts on Maryland residents' electric bills.
- Require PJM to plan and coordinate Maryland's power supply requirements to include regional reconductoring through existing power line rights of way, more efficient residential and business systems, and other efficiencies and technologies as proven in other nations.

We strongly urge the committee to support SB116. Thank you for your consideration.

Sugarloaf Alliance

Sugarloaf-Alliance.org

The Sugarloaf Alliance represents over 600 stakeholders in the Sugarloaf region. The Alliance's mission is to protect the unique natural and historical aspects of the Sugarloaf Mountain area and its environment through education and initiatives in support of watersheds, streams, meadows, forests, and historic sites. Working with volunteers, civic groups, and local, state, and federal agencies, the organization's primary goal is to preserve the unique character and serenity of the area for future generations. Sugarloaf Alliance is a 501(c)(3) organization.

Testimony supporting SB 116.pdf
Uploaded by: Susan Hanson
Position: FAV

Testimony supporting SB 116

Senate Education, Energy, and Environment Committee

January 21, 2025

POSITION: FAVORABLE

Dear Chair Feldman and Members of the Committee:

My husband and I have lived on the same rural property now in District 6 for almost 50 years. Our beautiful rural county has changed a lot in those years – now Frederick County is considered the fastest growing county in Maryland! Not only has this put a tremendous amount of pressure to keep up with the residential infrastructure, it has incentivized commercial uses to increase the tax base: thus the attraction of bringing data centers into Frederick County and Maryland! But data centers are NOT the treasure at the end of the rainbow!

We do not know what the negative or positive impacts bringing data centers will create. We can learn from experiences in Loudoun County, VA., and other active data centers, and be proactive with our guidelines and policies BEFORE the data centers are approved.

Having clear knowledge of these data center operations and specifically how they will impact the county's and state's initiatives must be calculated as part of the approval process. These initiatives include preservation goals and our clean energy targets.

Thank you for your support of this initiative. "An ounce of prevention (planning) is worth a pound of cure."

John and Susan Hanson

2025.01.30 EFG Review-of-Large-Load-Tariffs-to-Ide

Uploaded by: Susan Miller

Position: FAV

ENERGY FUTURES GROUP

Review of Large Load Tariffs to Identify Safeguards and Protections for Existing Ratepayers

By: Stacy Sherwood

On behalf of Earthjustice

Final Version

January 28, 2025

Table of Contents

Introduction

Cloud computing, artificial intelligence ("AI"), and cryptomining have resulted in an unprecedented projected growth in power demand throughout the nation, and many forecasts find that such demand will continue to grow significantly over the next decade. In its February 2024 analysis, EIA estimated that cryptocurrency mining in the U.S. may represent up to 2.3% of the annual total U.S. electricity demand.[1] Between May and August of 2024, there were predictions that data centers alone could reach as much as 7.5-9% of the United States' total electricity consumption by 2030.[2] [3] Due to the size and frequency of requests, forecasted load related to data centers and cryptomining are ever changing evolving and can change every few months.

The increase in power demand for data centers and other large consumption activities can negatively impact existing customers on the electric system and limit or eliminate progress on renewable energy and greenhouse gas emissions goals.[4] Negative impacts can include increased electricity demand that cannot be met with current capacity and increased congestion, a new customer's operations ceasing after a utility's significant investment in distribution and/or transmission infrastructure and procurement of new capacity. These translate into increased and abandoned costs left to be recovered from existing ratepayers.

For data centers, the full operating capacity does not typically occur for the first few years of a utility service contract, which impacts the timing of cost recovery and cash flow from servicing the load for the utility. Therefore, it's pertinent to include safeguard provisions in tariffs and special contracts to protect ratepayers and environmental goals, such as ensuring the facility is paying its fair share of transmission and distribution costs associated with service, requiring a certain number of jobs for economic development rates, and meeting decarbonization plans and goals of both the host jurisdiction and the host utility.

This report consists of four sections. The first section briefly considers why technology giants, such as Microsoft and Amazon, have an interest in designing their own contracts related to data centers and clean energy procurement. Second, this report summarizes a review of high-density tariffs and special contracts established for large load customers. Through this review, common provisions were identified, as well as details on how certain provisions can serve as

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[1] *Tracking Electricity Consumption from U.S. Cryptocurrency Mining Operations*, U.S. Energy Information Administration, Feb. 1, 2024, https://www.eia.gov/todayinenergy/detail.php?id=61364.

[2] *How Data Centers Can Set the Stage for Larger Loads to Come*, Alexandra Gorin, Roberto Zanchi, and Mark Dyson, May 3, 2024, https://rmi.org/how-data-centers-can-set-the-stage-for-larger-loads-to-come/, accessed October 18, 2024.

[3] *Clean energy Resources to Meet Data Center Electricity Demand,* U.S. Department of Energy, August 12, 2024, https://www.energy.gov/policy/articles/clean-energy-resources-meet-data-center-electricity-demand#:~:text=Data%20center%20deployment%2C%20partly%20driven,of%20total%20load%20in%202023, accessed October 18, 2024.

[4] Although some may use the terms data center and cryptomining facility interchangeably, there is a distinction between the two, particularly when it comes to operation. Cryptomining facilities operate depending on the price signal from the crypto markets, with facilities operating up to 24 hours a day depending on the financials. Data centers have high load factors and operate on a 24/7 basis.

safeguards for ratepayers and/or environmental goals. The third section identifies ongoing proceedings and efforts to monitor as they could have a significant impact on the structure of high-density tariffs in the future. The final section of this report discusses certain safeguards more in-depth and identifies specific language for consideration in future tariffs and special contracts to serve as safeguards for ratepayers.

With the evolving market surrounding the electric service of data centers and large loads, it should be noted that this report was drafted based upon the information available throughout the latter half of 2024. The cases summarized in the third section of this report are based upon the information available at the time and will not include all details of the case, such as settlement proposals and commission orders. For clarity, in this document, a reference to a data center or cryptocurrency mining customer that the tariff would be applicable to will be identified as "customer," the utility will be referred to either as "utility" or "company," and those already on the power system will be referred to as "ratepayers."

Tech Giants' Interest

Technology giants, such as Amazon, Google, Microsoft, and Meta, all have significant stakes in locating and developing their data centers to support cloud computing and artificial intelligence. In addition to trying to develop a competitive edge in the data center world, each organization has corporate goals related to clean energy. Additionally, the technology giants may also have policies related to the implementation of their data centers. For example, requirements for onsite backup power. Price signals in the market help the companies determine which types of onsite power back up is procured (storage versus fossil fuel generators).

Corporations pursuing data centers may be proactively working with utilities on tariff development to find ways to reduce costs around onsite generation back up, energy costs, and achieving renewable energy goals. If a corporation is working with a utility to develop a tariff, the corporation can ensure the tariff supports its efforts to develop a competitive edge, while achieving corporate goals and requirements for siting data centers.

Review of Existing Tariffs and Special Contracts

A multitude of tariffs and special contracts were reviewed, from which a total of ten tariffs, each from a different state, were identified as being models for consideration based upon the safeguards included in the tariff language.[5] Regardless of the location, there are common rate structure elements, including:

- Contract length, requirements for investment by the new customer, and cost assignment.
- Demand, load factor, and power factor.
- Requirements to shed load and/or participate in demand response.

[5] A detailed summary of the reviewed tariffs and special contracts are provided in Appendix A of this report.

- Resource adequacy and requirements related to renewable or clean energy.

There is not one perfect tariff design that can adequately address the potential concerns related to large loads, and it is likely that large load tariffs will have to evolve over time, as loads and customers' requirements continue to change. However, there are elements of a rate structure that can serve as safeguards for existing ratepayers, ensure new customers pay their fair share of system costs, promote more efficient electricity usage, and minimize adverse impacts to clean energy and climate goals.

Figure 1 below provides the prevalence of safeguard provisions throughout the ten tariffs examined. A more detailed review of each of the requirements is provided in Appendix A, along with a link to the tariff or special contract. A green circle indicates that a safeguard is included as part of the tariff, while a red circle indicates that it is not a tariff requirement. If the circle is white, then it is considered not applicable, either because it was not mentioned, or in the case of demand response, it is not offered by the utility. As noted below, not one of the tariffs includes all the safeguard provisions discussed in this report. That is because safeguards are dependent upon a service territory's needs, which could pertain to ensuring the customer base does not suffer from stranded asset costs or to capacity and transmission constraints. For example, if there is excess capacity in a service territory, stakeholders may not be as concerned with having a robust demand response program or interruptible tariff.

Figure 8 Safeguards Included in Data Center and Cryptocurrency Tariffs

State	Utility	Document Type	Contract Length	Minimum Demand	Minimum Load Factors	Range for Power Factor	Requirements for Investment	Cost Assignment	Requirement to Shed Load	Load Subject to Interruptible Service	Maximum Hours of Interruptible Per Year	Demand Response
WY	Cheyenne Light, Fuel and Power Company d/b/a Black Hills Energy	SC	●	●	○	○	●	●	●	●	●	●
AR	Entergy Arkansas LLC	T	○	○	○	○	●	●	●	●	●	○
ID	Idaho Power Company	T	●	●	○	●	●	○	●	●	●	●
NY	New York Municipal Power Agency	T	○	●	○	○	●	●	●	○	○	○
SD	Montana-Dakota Utilities Company	T	●	●	●	●	●	●	●	●	●	●
WA	Grant County Public Utility District	T	●	●	○	○	●	●	●	○	○	●
IN	Indiana Michigan Power	T	●	●	○	○	●	○	●	○	○	●
KY	Kentucky Power	SC	●	●	○	○	○	○	●	●	●	●
MO	Evergy Missouri Metro	T	●	●	○	○	○	●	●	○	○	●
ND	Montana-Dakota Utilities Company	T	●	●	●	●	●	●	●	●	●	●

Note: For document type, “T” indicates a tariff and “SC” indicates a special contract.

Below is a more in-depth discussion of the safeguards in existing contracts and how they could be applied to future contracts for large loads.

Contract and Minimum Demand

The most prevalent safeguards include establishing a contract term length and minimum monthly demand to qualify for the tariff. The latter is a typical element of a commercial or industrial rate structure. This allows for targeting certain, or significant, energy loads. By establishing a monthly demand minimum for participation, the tariff can allow smaller load customers to receive service through another tariff, where the associated risks are not as significant. Minimum demand should be determined:

- in relation to the overall demand from the commercial and industrial customers and sector,
- in relation to the overall service territory's demand; and,
- through consideration of the available capacity in the system and the need for additional capacity builds.

Caution: The tariff should indicate if the minimum demand is based upon the location, service point, or customer. There is potential for customers to find ways to avoid paying the tariff by structuring the demand in a manner that stays below the minimum demand threshold, such has having multiple meter points for a single customer

Not only can demand serve as a minimum requirement for a tariff, but there can also be a demand threshold that requires customers above a certain level of demand to have a special contract. This can be useful in large load scenarios as it will allow for the utility to ensure safeguards are in place for existing ratepayers, the Company, and the customer. Idaho Power Company's Speculative High-Density Load tariff is offered to those with metered usage exceeding 2,000 kilowatt hours ("kWh") for at least three billing periods and requires customers with a minimum demand threshold of 1,000 kilowatts ("kW") to be served under this tariff. The tariff specifies that a special contract is required for loads over 20,000 kW.[6] The tariff language is provided below.

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD

If the aggregate power requirement of a Customer who receives service at one or more Points of Delivery on the same Premises exceeds 20,000 kW, the Customer is ineligible for service under this schedule and is required to make special contract arrangements with the Company.

Service under this schedule is applicable to electric service supplied to a Customer at one Point of Delivery and measured through one meter delivered at the primary or transmission service level. This schedule is applicable to Customers whose metered energy usage exceeds 2,000 kWh per Billing Period for a minimum of three Billing Periods during the most recent 12 consecutive Billing Periods. Where the

[6] Idaho Power Schedule 20 Speculative High-Density Load: https://docs.idahopower.com/pdfs/AboutUs/RatesRegulatory/Tariffs/20.pdf.

The contract term length is not related to the offering of the tariff; rather, this is a feature of the special customer service agreement. There are various lengths used by utilities and are likely dependent upon risk associated with the customer's service load. Of the arrangements reviewed, contract terms varied from two to ten years. In addition to the overall contract, some utilities required terms for renegotiation and/or pricing terms. Longer-term contracts, such as contracts of ten years or more, may have a shorter term related to pricing, as that is harder to accurately forecast over an extended period. Most of the contracts had contract length options within the three- to five-year span. This allows for limited forecasting on price and can accommodate ramp up in load, while also allowing for cost recovery of improvements to the system.

Some large load tariffs, such as those for facilities with a load greater than 50 MW, are proposing longer contract terms, such as 20-year minimums, with termination of the contract only if the facility ceases operation along with a penalty payment.[7] Large loads, like those more than 100 MW, will require significant investment in the electric system, both in capacity and the transmission system. Investments of that size are riskier given the level of cost recovery, depreciation of assets, the need for large capacity resource builds, and the fact that the significant load increased will be limited to one customer class rather than spread across multiple customer segments. The benefit of a longer contract term for this size of customer is that the cost recovery of the investment can be spread over the contract term. This will also allow for cost allocation that enables these customers to pay for their share of the utility investment needed to provide them with electric service. A negative of a long contract term, particularly if there is not much diversity in the customer class, is that an economic downturn or changes in the industry could significantly impact the load and need for service. For example, if the industrial customer class primarily consists of cryptocurrency mining customers, then a decrease in proof-of-work cryptocurrency value could limit the utility's revenue from that class. Therefore, it is important to develop a guardrail to alleviate the risk throughout the years of the contract. As noted in the Investment Requirement and Cost Assignment subsection below, the requirements for deposits throughout the life of the contract can offset some of this risk. A deposit can offset stranded costs if usage is below a minimum threshold or if the customer shuts down.

The contract itself can outline cost allocations to the customer, deposit terms, and credits to be returned to the customer for continued electric service and initial infrastructure investment to support the customer's load. Any known increases in load throughout the contract period can be addressed at the time of the contract being drafted, or through contract amendments, particularly if there is additional investment required to bring that load onto the system.

[7] Examples of these proposed tariffs include Kentucky Power Company's New Tarif Industrial General Service: https://psc.ky.gov/pscscf/2024%20cases/2024-00305/20240830_Kentucky%20Power%20Tariff%20Filing.pdf and Appalachian Power Company and Wheeling Power Company's Application for Approval of Revisions of Schedules LCP and IP https://www.psc.state.wv.us/scripts/WebDocket/ViewDocument.cfm?CaseActivityID=625853&NotType=WebDocket.

Load and Power Factors

In addition to contract and minimum demand levels, tariffs and special contracts also may establish a minimum load factor or a range for power factor to encourage consistent monthly energy usage. Encouraging consistent energy usage will ensure that utilities can cover the fixed cost to serve the load. Demand ratchets, discussed below, are another method of ensuring fixed costs are covered.

Load factor is the average power usage compared to peak power usage during the same period, measured as a percentage. The higher the percentage indicates the more efficient use of electricity. The desired effect of a minimum load factor is to smooth out demand peaks to lower the strain on the power infrastructure and increase reliability.

Power factor, also measured as a percentage, indicates the effectiveness of the use of incoming power by a specific load or equipment. The higher the power factor, the more efficient performance of the load/equipment. More efficient usage of power can reduce energy costs and system losses, which translates into savings for all customers.

Load factors are dependent upon the customer's usage. For example, an office building, which has low usage on weekends, can experience a load factor of 40-60%, whereas a cryptomining facility that is dependent on the value of the currency may have a lower load factor due to spikey monthly usage. A large load data center, since it is constantly active, will have a high load factor of 90-100%. Ultimately, the load factor is dependent on the type of customer/industry. The utility can include a load factor charge to penalize those customers that do not maintain a certain load factor, based on the type of customers being served under that tariff.

Demand Ratchet

While residential customers are billed on energy usage, commercial and industrial tariffs also include a demand charge component. A demand charge, which is used to cover fixed costs associated with a customer's load, is based upon the peak demand during the billing period.[8] The demand charge typically reflects a per kilowatt hour charge based upon the highest level of demand during a billing period. This charge allows the utility to recover the cost of providing a reliable service during those high peaks. Utilities must provide reliable service at those maximum demand levels; however, a customer may have significant shifts in demand by hour, day, or month.

[8] Peak demand is based on the level of demand over a 15-minute period.

Demand Ratchet Tariff Example

Here is an example of an 80% demand ratchet over an 11-month period. In this example, the demand charge is based upon the greater of the actual peak demand in the billing month or 80% of the highest peak demand recognized in the prior 11-month period.

Ex. In September, a facility's maximum peak demand was 400 kW and in the prior 11-months, the facility recognized its highest demand peak of 560 kW in July. The demand ratchet dictates that the demand charge for the month of September would be based on the greater of the 400 kW of actual usage or 448 kW (80% of 560 kW). Therefore, the facility would be charged a peak demand of 448 kW, since that is greater, resulting in the customer paying for 48 kW of demand it did not actually use.

One way that utilities reduce risks of serving customers that have large swings in demand is to assess demand charges using a demand ratchet.[9] The demand ratchet establishes the level of the demand charge based upon the actual peak demand, or a percentage of the highest demand recorded during the previous certain number of months, whichever is greater. The percentage of demand typically ranges from 80-85% of the previous period's demand, and the previous period can range from 9 to 11 months. Utilizing a demand ratchet encourages the customer to maintain a level of demand that is consistent as the customer would have to pay for demand not utilized if it does not.

Demand Shedding

Another safeguard that is often included or available is the opportunity to shed load, either through an interruptible tariff or through a demand response program. The availability of an interruptible tariff or a formal demand response program appears to be dependent upon the size of the service territory and utility type (investor-owned / cooperative / municipality). Even without a formal avenue to shed load, such as an interruptible tariff or demand response program, some tariffs included language for the utility to be able to enter into demand shedding agreements directly with customers. The highlighted language below identifies Black Hills Energy's Blockchain Interruptible Service requirements for interruptible service that is detailed in individual service contracts.[10]

[9] For more information on demand, please visit; https://www.santeecooper.com/rates/understanding-your-demand/#:~:text=Ratchet%20%E2%80%93%20A%20ratchet%20charge%20is,work%20and%20is%20being%20lost..

[10] Cheyenne Light Fuel and Power Company d/b/a Black Hills Energy, Electric Rates Blockchain Interruptible Service: https://ir.blackhillscorp.com/static-files/5c33d769-2d19-43f8-8898-a37af25481ef#:~:text=This%20tariff%20is%20applicable%20to,Agreement")%20with%20the%20Company.

ELECTRIC RATES

BLOCKCHAIN INTERRUPTIBLE SERVICE ("BCIS")

The Agreement shall be in accordance with the provisions of this BCIS tariff and at a minimum shall include:

1. Electric service is for new interruptible load expected to be 10,000 kW or greater;
2. A term of at least two (2) years;
3. Specific pricing for all electricity purchased, with the pricing terms being subject to renegotiation at least every three (3) years;
4. Identification of Customer and Company costs for any required new electric infrastructure;
5. Details specifying how service will be interrupted by the Company;
6. Negotiated service interruption provisions (size of interruptible load, notice of planned interruption, duration of interruption, and maximum hours of interruption per year) ;
7. BCIS customers that fail to interrupt service as required by the Agreement shall be responsible for all costs incurred by the Company due to such failure;
8. A release of liability of the Company for any losses or damages, including consequential damages, caused by or resulting from any interruption of service;

With the level of some proposed data centers' load being equivalent to 50% or more of an entire system's load, utilities and their systems would benefit from having a tariff that allows for interruptible service, either through a formalized tariff or on a case-by-case basis, which can be negotiated with or without a special contract. As these loads are large and unique compared to past loads, having a flexible interruptible tariff will likely allow a utility to accommodate customers while accounting for risk and available system capacity. Not one of the tariffs reviewed identified the maximum or minimum level of load that can be interruptible, rather the tariffs required the service agreement to identify the level of firm load, or the amount of demand that cannot be interrupted. Some contracts did include a maximum number of hours or interruption events; however, it is not necessary to establish a maximum number of hours or event durations within the tariff. This can be negotiated based upon the load and customer. For transparency and fairness purposes, the utilities may want to disclose in the tariff the compensation for interruptible service.

Commercial and industrial ("C&I") demand response and interruptible load programs are typically more cost-effective than residential demand response programs. Depending on program saturation, C&I can provide a more significant shed load than a residential program due to a higher level of load per customer.

It is important that pricing of interruptible and demand response efforts be done in moderation, with enough incentive to the ratepayer to offset the inconvenience of shedding load and reducing activity, but not too high as to incentivize high profitability from shedding load as it can be costly to other ratepayers. Pricing structure, limitations on overall hours of interruption, and having the utility determine when an interruptible or demand response event occurs can eliminate concerns related to profitability. Compensation for demand response efforts should be considered based upon the level of load that can be shed and how quickly the load can respond to a request. Commercial and industrial customers, depending

on their industry, can typically shed higher amounts of load and in a short period of time (within 30 minutes to an hour). The ability to provide large amounts of load shedding quickly should be compensated appropriately to encourage customers to do so when necessary. Demand response or interruptible tariff compensation for load shedding should be compared among similar rate classes and rate design elements, such as number of hours and events and duration of the event. These factors, along with the need for capacity in a service territory, can influence the level of compensation offered for demand shedding.

Interruptible tariffs can have several elements to establish safeguards for the grid and to ensure that load reductions do occur. In Texas, there have been capacity issues when an interruptible service client does not respond to the request to reduce load. Some provisions that can be included in an interruptible service agreement include:

- Number of annual events and total hours. The number of events and overall hours for interruption per year should not be detrimental to the business.
- Event duration and seasonal requirements. There may be periods of time when demand reduction is more valuable than others, depending on the utility's peak season. This can influence the length of events, typically around two to four hours, and the timing of the events.
- Details of compensation that could be based on the level of demand or energy reduction, such as the dollar per megawatt, or could be offered through a discounted energy price throughout the year for participating.
- Penalty for not responding to an interruption event. The utility is relying on the reduction in load; however, if a customer does not respond, it can increase energy costs for others. Therefore, a penalty should be assessed to offset that increase in cost for not responding to the event and to encourage customer participation.

Investment Requirements and Cost Assignment

One way to limit risk to existing ratepayers from the addition of the customer's load is to assign costs to the customer, require contributions in aid of construction for system upgrades, and require surety bonds or minimum bills equivalent to a portion of the annual bill. These safeguards can lessen the risk to ratepayers by requiring the customer to be invested in the location. Assignment of costs for new or expanded electric service is not a new concept. Customers, both residential and commercial, can be responsible for line

extensions and other identified costs to receive service. Cost assignments should be designated in the tariff, including guidelines on how to calculate the minimum bill.[11]

Depending on the size and characteristics of the load, there is potential for other customers throughout the service territory subsidizing the cost of service for a large load customer, particularly when discounted rates are provided to the large load customer. One way to avoid subsidization for a particular customer is to evaluate if the revenues received from the large load customer exceed the cost to serve the customer. An example of this is Evergy Missouri Metro's Special High-Load Factor Market Rate ("Schedule MKT"), noted in Table 1 below, which requires the utility to track all costs to serve each customer under this tariff and verify that the revenue collected is higher.[12] This provision is designed to ensure that non-Schedule MKT customers are not held liable for any deficiencies in revenues or from stranded investment or costs from serving the customer over the length of the contract. To track the costs and revenues associated with this, the tariff outlines the following:

Concern: The cost assignment concerns are not only limited within a service territory but also across state lines for transmission infrastructure. In April, the Federal Energy Regulatory Commission ("FERC") approved a regional cost assignment for the PJM. The transmission upgrades are being implemented to support a cluster of data centers in northern Virginia. While the location of the data centers is in Virginia, ratepayers in Maryland have been assigned 10%

- Utility must identify costs and revenues with each customer on the Schedule MKT in its books and records.
- During a rate proceeding, the portion of the revenue requirement associated with the costs to serve the customer shall be assigned to the customer and not the overall customer base.
- If the customer's rate revenues do not exceed the cost to serve the customer in the customer's revenue requirement, there must be an additional revenue adjustment to cover the shortfall in a true-up period.
- The customer served by Schedule MKT can argue whether a specific quantifiable societal or other benefit (e.g., added jobs or tax revenue) should be considered to offset the deficiency.

One example of a cost assigned could be for a feasibility study. As large new loads are requested on an electric system, a feasibility study is usually conducted to understand what system upgrades may be needed to accommodate the load safely, depending on size thresholds, including transmission and distribution upgrades.[13] Sometimes, the tariff includes

[11] Source for orange box: *Utilities poised for datacenter earnings boost, want clarity on cost recovery,* Allison Good, April 18, 2024, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/utilities-poised-for-datacenter-earnings-boost-want-clarity-on-cost-recovery-81249390, accessed October 18, 2024.

[12] Evergy Missouri Metro's Special High-Load Factor Market Rate Schedule MKT can be found here: https://www.evergy.com/-/media/documents/billing/missouri/detailed_tariffs_mo/special-high-load-factor-market-rate.pdf

[13] Requirements for a feasibility study is dependent upon the service territory and the jurisdiction.

a provision that assigns the cost of the feasibility study on the customer, like in New York, which is shown below.[14]

RIDER A

RATES AND CHARGES FOR CUSTOMERS REQUESTING HIGH DENSITY LOAD ("HDL") SERVICE

B. APPLICATION FOR SERVICE:

b. Upon payment of security acceptable to the Utility, the Utility shall conduct, or cause to be conducted a feasibility study to evaluate whether the requested load can be safely served by the Utility.

a. The feasibility study will identify what, if any, upgrades to the Utility's facilities are required to serve the customer.

B. CUSTOMER COST CONTRIBUTION

A Customer requesting service under this Rider will be responsible for:

a. reasonable costs of conducting the feasibility study; and

If the system can accommodate the load with minimal system upgrades, the risk associated with the customer's electric service is likely limited. However, if significant upgrades are required, then those costs serve as potential risks to existing ratepayers. The cost for the feasibility study should be assessed to the customer seeking interconnection; sometimes this is done through a flat fee. Furthermore, the charges associated with upgrades, including the proportional cost of acquiring or building new generation to serve the customer, should be required to be funded by the customer and tied to a deposit or contribution in aid of construction, to limit risk exposure of stranded assets to the existing customer base.

Historically, a large load facility, like an Amazon warehouse or industrial process, is more permanent and will contribute towards cost recovery immediately, as the plant ramps up in its first year of operation and then will remain on the system for the foreseeable future. On the contrary, cryptocurrency mining facilities are seen as volatile as they are price sensitive and can be operated in non-permanent facilities, and traditional data centers can take years

[14] See Leaf 95-96 of Rider A Rates and Charges for Customers Requesting High Density Load ("HDL") Service, https://ets.dps.ny.gov/ets_web/search/showPDF.cfm?%3B%3AIS%20%3B%2A%29LOUNWD%5CJ%5E8%2B"%2B5%2F0MD%2F0%28%231V%28S<WX%0A, accessed November 11, 2024.

to get to full capacity, which can delay cost recovery and place the burden on existing ratepayers.

A definition and summary of how each requirement serves as a safeguard is provided in Table 1 below. In addition, each requirement has an example and is linked to one of the tariffs discussed in Appendix A.

Table 1 Common Tariffs Requirements

Requirement	Definition	Serves as a Safeguard?	Example
Contract Term Length	Length of the service agreement. It can be limited to a minimum and/or maximum number of years. In addition to a contract term, there could be a term length for pricing terms.	Yes. A limited term could limit potential risk to customers, as well as ensure that system upgrades or investment in new generation are paid for by the new customer rather than existing ratepayers.	Evergy Missouri Metro limits contract lengths to 10 years, with pricing terms no more than 5 years
Minimum Demand	Level of demand needed to qualify for the tariff	Yes. Provides a threshold for customers to qualify for the tariff and can be designed to target high demand users	Contracts varied significantly between 500 kW and 100,000 kWh per month. This will be dependent on the service territory's load compared to the new customer load.
Minimum Load Factor	Average power usage compared to peak power usage during the same period. The higher the percentage, the more efficiently the electricity is being used.	Yes. Establishing a penalty for not achieving a minimum load factor will encourage the customer to have energy usage consistent with its maximum peak. Smoothing out peaks can lower the strain on power infrastructure and reliability.	If required, the minimum load factor required was 85%. The reduces the opportunity for significant fluctuations in load and thus the reliability of service is more easily predictable by the utility.

Requirement	Definition	Serves as a Safeguard?	Example
Range for Power Factor	Effectiveness of incoming power by a specific load (or equipment) at a given time. The higher the power factor, the more efficient the load's performance.	Yes. Inefficient power usage can result in additional costs on the system. Establishing a power factor range can reduce energy costs, reduce system losses, and improve voltage regulation, which can limit outages and allow for additional loads to be added to the system from that customer.	If required, this would be 90% or greater. The Montana-Dakota Utilities Company requires a power actor between 97% lagging and 97% leading.
Requirements for Investment	Designated cost elements that are funded directly by the new customer, sometime viewed as a deposit in the form of Contributions in Aid of Construction ("CIAC"), bonds, or actual payments. This investment may be returned to the customer overtime.	Yes. Delineating expenses for the customer to pay or cover with a deposit eliminates concerns about discriminatory rates. Additionally, it encourages investment by the new customers, thus removing the risk from existing ratepayers, and ensures a term commitment to the service territory.	This requirement varied by utility, but could include new electric infrastructure, line extension or system upgrades, and feasibility studies. Other utilities require bonds for Value of Lost Load dependent upon the RTO requirements or a bond for the average bill for a time period.
Cost Assignment	Designation of which expenses related to providing service to the customer is the responsibility of the customer and not socialized to other ratepayers.	Yes. Eliminates the risk of a customer not paying their fair share of the investment in providing electric service. Some commissions have required utilities to track all costs related to the customer to ensure during rate cases that the revenues from the customer offset expenses to provide service to the customer.	Evergy Missouri Metro has a requirement to track all costs to serve the customer and verify that revenue collected is higher. The New York Municipal Power Agency requires costs associated with the purchased power adjustment and rate statement to be allocated to the customer.

Requirement	Definition	Serves as a Safeguard?	Example
Requirement to Shed Load	Utility requires the customer to drop a portion of its load during events with notice.	Yes. Increases system reliability and reduces capacity costs, depending on the type of event requiring load shedding. This could be done through an interruptible service rider, service agreement, or a formal demand response program.	Approximately half of the tariffs have a load shed requirement. The majority vary by contract. If there is an interruptible schedule, the customer is typically not subject to a demand response program. If there is not an interruptible program, then demand response programs were often, but not always available. Grant County Public Utility District does not offer an interruptible tariff or a demand response program through tariffs but does do arrangements on a customer-by-customer basis.
Load Subject to Interruptible	Can be a determined capacity subject to interruptible service (such as non-firm demand) or the amount of time when an interruption event may be announced.	Yes. While the tariff language can indicate a cap on the level of interruptible load to be included or excluded, it is recommended that the level of load be negotiated on a per customer basis.	For those requiring interruptible load, the amount of load subject is established in the contract with the customer. It is often limited to non-firm demand.
Maximum Hours of Interruptible per Year	A defined limitation on the number of hours that load can be interrupted per year. This is typically accompanied by penalty language in the event the customer does not respond to the interruptible load request.	Yes. Designating a maximum number of events or hours, or even length of events, can encourage participation from customers in an interruptible schedule.	There is a significant range in the number of hours, if any were specified in the tariff. Entergy Arkansas limits the maximum number of hours to 40 or 80 hours, depending on notice time, while other utilities such as Idaho Power Company set limits of 225 hours per year.

2024 Proposed Large Load Tariffs

Ohio

In Ohio, there are opposing opinions between the utility, AEP Ohio, and the technology giants like Amazon, Google, Meta, as well as the Data Center Coalition on the structure of large load tariffs. In July 2024, AEP Ohio, in its role as a distribution utility, proposed two new tariff designs as a result of an influx of data center load requests in its service territory in May 2024.[15] The initially-proposed tariff included two components, a Data Center Power designed for customers with a monthly demand of 25 MW or more, and a second Mobile Data Center component for cryptomining facilities with a monthly demand of 1 MW or greater.[16]

As of January 2025, there were two competing settlements that diverged substantially from the initial proposal, and the case is still pending before the Ohio Public Utilities Commission, with hearing dates in December 2024 and January 2025.[17] Depending on the decision in the case, it could set precedent and baseline safeguards throughout the nation as the filing's proposed terms have not been collectively included in any other utility tariffs for data centers.

The primary components of the initial proposal were changes to an existing rider, known as the Basic Transmission Cost Rider ("BTCR").[18] Currently the BTCR sets the minimum demand charge for a customer at 60% of the contracted capacity. AEP Ohio's initial proposal indicated that the amount was too low and sought to increase the minimum demand charge to 90-95% of the contracted demand. This is due to the significant difference for large load customers between the minimum and actual bill if all contracted load is utilized. In addition, AEP Ohio initially requested that data centers enter into 10-year service contracts to ensure funding for the significant investment that the utility will need to make over the next decade to accommodate the data center load interconnection requests. An exit fee was proposed for customers in the 10-year contract to pay to leave the contract after 5 years. As noted in the safeguard above, AEP Ohio is implementing elements to provide safeguards not only for ratepayers but also for the utility itself as it endeavors to grow the system. If the data centers are not located in the service territory after AEP Ohio builds out the transmission system, the unneeded capacity costs will be passed along to ratepayers located throughout PJM.

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[15] Application for approval of New Tariffs By Ohio Power Company, *In the Matter of the Application of Ohio Power Company for New Tariffs Related to Data Centers and Mobile Data Centers,* Case No. 24-508-EL-ATA, https://dis.puc.state.oh.us/ViewImage.aspx?CMID=A1001001A24E13B42822J00948.

[16] Direct testimony of Matthew S McKenzie on behalf of Ohio Power Company, *In the Matter of the Application of Ohio Power Company for New Tariffs Related to Data Centers and Mobile Data Centers,* Case no. 24-508-EL-ATA, tariff pages begin on page 32, https://dis.puc.state.oh.us/ViewImage.aspx?CMID=A1001001A24E13B43247C00950.

[17] Full docket available at: https://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=24-0508

[18] Direct testimony of Matthew S McKenzie on behalf of Ohio Power Company, *In the Matter of the Application of Ohio Power Company for New Tariffs Related to Data Centers and Mobile Data Centers,* Case no. 24-508-EL-ATA, tariff pages begin on pages 15-16, https://dis.puc.state.oh.us/ViewImage.aspx?CMID=A1001001A24E13B43247C00950.

Provisions within the initially-proposed tariff that can serve as safeguards for ratepayers are summarized below:

- Minimum Load Eligibility
  - Tariff is applicable to customers requesting a minimum demand of 25 MW of service at a single location. The tariff would also be applicable to a parent company with multiple data centers that have an aggregate monthly maximum demand greater than 25 MW within a 24-month period.
    - By establishing aggregate demand for parent companies, this ensures that data centers locating around the service territory are not circumventing the eligibility requirements for the tariff.
- Minimum Billing Demand
  - Load ramp period which establishes monthly peak load requirements as the facility comes online and requires that the overall requested load of the facility commence service within three years. During the ramp up period, billing demand shall not be less than 90% of the customer's load ramp contract capacity.
    - This ensures that the fixed costs associated with serving this customer's level of load are paid for by the customer. Even if the customer has not reached that level of demand, the utility is already incurring the cost to provide services at the contracted demand levels.
  - Monthly billing demand once a customer is beyond the load ramp period shall not be less than 90% of the greater of (a) customer's contracted capacity or (b) customer highest previously established monthly billing demand during the past 11 months.
    - The inclusion of a demand ratchet ensures the customer is paying the fixed charges associated with this customer's demand.
- Range for Power Factor
  - Includes an excess reactive demand charge, assessed for each kVAR of reactive demand, leading or lagging, in excess of 50% of the metered demand.
    - This ensures that the customer is paying its fair share of the fixed charges to provide service, as it is based on the level of capacity contracted and not used.
- Retail Supplier Notice
  - If a customer wants to switch from standard offer service to a competitive supplier, then the customer must provide the utility with notice 60 days prior to the end of the supply period covered by the auction. The customer must remain on standard offer service for the six month period in which the customer has been receiving standard offer service.
    - This ensures that the utility does not over procure energy through the supply auctions.
- Contract Period
  - The initial contract period cannot be less than 10 years, including the load ramp period. There is an exit fee, equal to the minimum charges for 36 months after the notice of the termination, if the customer elects to leave after the completion of the 5th year of the contract.

        - The contract term is the average contract length and has an exit fee schedule that is designed to avoid stranded asset costs.
- Collateral Requirements
    - Customers must meet a credit and cash collateral requirement relative to 50% of the total minimum charges for the full contract term. The amount of collateral is reduced by one year's minimum charges for each year the customer is energized and makes on-time electric service payments. If the financial position of the customer changes over the term of the contract, the Company may ask for updated information and re-evaluate the collateral requirements.
        - This provision is unique compared to others reviewed, as the collateral is for the full contract term and the reduction of the collateral is based upon timely payments. Furthermore, the collateral provisions are typically calculated ahead of the contract signing and do not have re-evaluation requirements. This last provision would be useful as the industries related to cryptomining and data centers are ever evolving and dependent on a number of factors, such as contracts and price signals.
- Demand response
    - The initially proposed contract lacks a provision related to interruption outside of a requirement for the customer to reduce its demand during an RTO- or company-declared emergency event. There is a lack of detail related to the emergency events and no mention of voluntary interruptible events. While it is important to be able to react to emergency events, given the size of the loads anticipated, the ability to interrupt load for reliability purposes, particularly to address local reliability issues, would be of significant benefit to the system. While it may not be a standard provision, this tariff should have a special contract provision to determine interruptible load levels from large load facilities.

As noted above, as of this publication date, the case was ongoing with a multi-day hearing held on many of the issues covered above.

Indiana

On November 22, 2024, Indiana Michigan Power Company (I&M) introduced a settlement, involving all parties to the case including tech giants Amazon and Google and the Indiana Office of Utility Consumer Counselor, to amend their industrial power tariff.[19] This tariff is applicable to new or expanded facilities seeking to contract capacity of 70 MW or more or 150 MW of aggregated load across a company. Loads meeting this requirement are required to

[19] Before the Indiana Utility Regulatory Commission, *In the Matter of Verified Petition of Indiana Michigan Power Company for Approval of Modifications to its Industrial Power Tariff – Tariff I.P.*, Cause No. 46097, filed November 22, 2024, https://iurc.portal.in.gov/_entity/sharepointdocumentlocation/4aae5d78-18a9-ef11-8a6a-001dd80bd98a/bb9c6bba-fd52-45ad-8e64-a444aef13c39?file=46097_IndMich_Submission%20of%20Unopposed%20Settlement%20Agreement%20and%20Unopposed%20Motion%20for%20Acceptance%20of%20Out%20of%20Time%20Filing_112224.pdf.

have initial contracts of at least 12 years. The contract for the full load can start after a five-year ramp up period. Additionally, without incurring any fees, after the first five years of the contract, a customer can reduce its contract capacity by up to 20 percent, as long as the customer notifies I&M through written notice 42 months prior to the start of a PJM Interconnection delivery year. Contracts can be terminated, or contract capacity can be reduced beyond 20%, if an exit fee is paid and done so under the conditions listed above for reduced capacity.

In addition to these contract terms, the I&M settlement put forth several provisions related to I&M's integrated resource planning ("IRP"), interconnection, demand response, and clean tariffs. As part of its IRP, I&M has agreed to study grid enhancing technologies and tools to maximize the transmission grid efficiency and to relay the study's result in the next IRP. I&M also agreed to discuss any changes to its interconnection process with stakeholders, including large load entry requirements to the utility's queue, interconnection requirements, and load ramping requirements. To address emergency load reduction plans, I&M will meet with the parties to the settlement to discuss emergency response procedures and demand response opportunities for customers under this tariff. Finally, I&M agreed to collaborate with settling parties to develop a clean transition tariff proposal that will allow participants to support investment in carbon-free resources and ensure that all program costs are covered by participants and remain consistent with the five pillars in Indiana Code §8-1-2-0.6.

As part of the agreement, beginning six months after approval, I&M would provide semi-confidential reports to the Indiana Utility Regulatory Commission on new and pending large load customers. The settlement, which as of the publication of this report, has not been approved yet by the Commission,[20] also requires Amazon Web Services, Microsoft, and Google to each give $500,000 annually, for five years, to the Indiana Community Action Association, which supports low-income individuals in Indiana.

North and South Carolina

In North and South Carolina, Duke Energy has several initiatives they have proposed or adopted to address the growing demand from high energy users, including from data centers.

New rates for Data Centers and Industrial Customers

Duke Energy conducted a study which evaluated ways that high-volume users could pay their fair share into the system. The reason behind the focus has to do with the constrained power supply on their system compared to a few years ago. Duke is anticipating 18,000 gigawatt hours of additional load from new customers by 2028, with 25% of that load coming from data centers.[21] As a result of the study, Duke is adding electric supply contract terms for data centers and factories which require a minimum-take clause and upfront payments for infrastructure investments. The minimum-take clause requires qualifying customers to pay

[20] Full docket at https://iurc.portal.in.gov/docketed-case-details/?id=b8cd5780-0546-ef11-8409-001dd803817e

[21] *Duke Energy seeks take or pay power contracts for data centers,* Laila Kearney, May 7, 2024, https://www.reuters.com/business/energy/duke-energy-seeks-take-or-pay-power-contracts-data-centers-2024-05-07/ , accessed October 18, 2024.

for a certain amount of power regardless of actual use and requires upfront contributions for investment in system upgrades.

Clean Energy Tariff Options

In May 2024, Duke Energy signed memorandums of understanding with Amazon, Google, Microsoft, and Nucor to explore carbon-free energy generation and clean tariff options, called the Accelerating Clean Energy ("ACE") tariffs. The ACE framework includes a Clean Transition Tariff where Duke Energy would be able to provide commercial and industrial customers with new carbon-free energy options, while providing protection for non-participating customers and potentially lowering the long-term costs of investing in clean energy technologies.[22] The framework being proposed will occur in phases, with the purpose of helping customers meet their clean energy goals through tariff design and financing options.

One of those items that occurred outside of the framework included a green tariff proposal called the Green Source Advantage Choice Program, which was approved by the North Carolina Utilities Commission in July 2024. [23] The rider is offered to non-residential customers "who elect to direct the Company to procure renewable energy on behalf of the Customer's behalf" and who have a minimum maximum annual peak demand of 1 MW or an aggregated annual peak demand of 5 MW.[24] The tariff allows for large customers to increase Duke Energy's investment in solar energy by 150 MW per year, through a resource acceleration option in which customers can sponsor projects not selected in the company's annul competitive bidding process. The program limits procurement of renewables by the Duke Energy companies in North Carolina as follows:

- 4,000 MW of renewable energy from Duke Energy Carolinas ("DEC") and Duke Energy Progress ("DEP")
- DEP and DEC can only collectively own 2,200 MW of the capacity under this tariff
- The remaining 1,800 MW of renewable energy facilities must be developed by third parties that have entered into PPA's with one of the Companies or an eligible Green Source Advantage Choice customer.
- Annually, the Company must reserve 10% of the capacity for subscription by qualifying economic development customers. At the end of the third quarter each year, any unsubscribed economic development capacity can be released to all other qualified customers.

Some of the projections in place for the service territories customers include:

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[22] *Responding to growing demand, Duke Energy, Amazon, Google, Microsoft, and Nucor execute agreements to accelerate clean energy options,* Duke Energy News Center, May 29, 2024, https://news.duke-energy.com/releases/responding-to-growing-demand-duke-energy-amazon-google-microsoft-and-nucor-execute-agreements-to-accelerate-clean-energy-options, accessed October 18, 2024.

[23] Docket Nos. E-2, SUB 1314 and E-7, SUB 1289, Before the North Carolina Utilities Commission, *In the Matter of Petition of Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, Requesting Approval of Green Source Advantage Choice Program and Rider GSAC,* Commission Order dated July 31, 2024, *https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=acd1a9a3-9b00-4a3a-9700-4dae3a293cc2.*.

[24] Compliance tariff currently under review by the North Carolina Utilities Commission, Rider GSAC Green Source Advantage Choice, dated August 14, 2024, https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=0d45934a-06ea-478d-8301-7a3b4377415a.

- Customers can pay for their portion of clean energy costs either through an up-front contribution in aid of construction payment or on their bill over time through a levelized demand charge payment.
- If a customer elects battery storage, the charging cost will be assessed as a charge to the customer and the discharging value will be assessed as a credit to the customer, effectively netting the amounts on the customer bill.

The docket for this item is ongoing and the tariff has not yet been approved by the Commission. Additionally, the overall ACE framework is an ongoing process that should continue to be monitored.

West Virginia and Kentucky

On July 18, 2024, Appalachian Power Company and Wheeling Power Company filed proposed revisions to its Schedules LCP and IP to include tariff terms related to the addition of customers with loads of 200 MW or greater in West Virginia.[25] On August 30, 2024, Kentucky Power Company filed revisions to its Tariff Industrial General Service ("Tariff I.G.S.") to address customers with loads of 150 MW or greater in Kentucky.[26] The initially-proposed changes to the tariffs were the same and include the following:

- Initial contract period of 20 years
- Either the customer or utility must provide at least five years' written notice to discontinue service of the terms of the schedule; however, this shall not reduce the 20-year initial contract term.
- If a permanent closure by the customers occurs in the first five years of the contract, the customer must pay a one-time exit fee equal to five years of minimum billing.
- A customer must provide written notice five years in advance to reduce the contract capacity by up to 20 percent of the contract capacity; however, mutual agreement can result in reduce contract capacity in less than five years.
- Demand ratchet requirement of no less than 90 percent of the greater of (a) the customer's on-peak contract capacity, or (b) the customer's highest previously established monthly billing demand during the past 11 months, or (c) the customer's maximum demand created during the billing month.
- Collateral is based upon creditworthiness of the customer. The collateral shall be equal to 24 times the customer's previous maximum monthly non-fuel bill.

[25] Before the West Virginia Public Service Commission, *In the Matter of Appalachian Power Company and Wheeling Power Company Application for Approval of Revisions to Schedules LCP and IP,* Case No. 24-0611-E-T-PW, https://www.psc.state.wv.us/scripts/WebDocket/ViewDocument.cfm?CaseActivityID=625853&NotType=WebDocket.

[26] Before the Kentucky Public Service Commission, *In the Matter of Kentucky Power Company's First Revised Tariff Sheet 1-1 (Index), First Revised Tariff Sheet 8-2 (Tariff I.G.S.), and Original Tariff Sheet 8-3 (Tariff I.G.S.),* Case No.2024-0830, https://psc.ky.gov/pscscf/2024%20cases/2024-00305//20240830_Kentucky%20Power%20Tariff%20Filing.pdf.

As of January 2025, this case is still pending before respective Commissions.[27] Notably, on January 22, 2025, the parties in the West Virginia proceeding filed a joint stipulation and settlement agreement signed by all parties. Under the terms of the settlement agreement, which is still pending approval, the large load tariff will apply to customers seeking to contract capacity of 100 MW or more or 150 MW of aggregated load across a company. Many of the settlement's terms mirror the terms of the Indiana settlement discussed above: for example, terms pertaining to minimum contract length, monthly billing demand, and reducing capacity during the contract period. The settlement also requires the utilities to track revenue and capital investments related to new large load customers, with the customers having the ability to seek confidentiality protections. The utilities, with input from the settling parties, must also conduct or utilize analyses to minimize transmission needs, but the cost of such analysis cannot exceed $50,000 pending further agreement.

Additional Considerations

Powering large loads from cryptocurrency mining and data centers is still evolving, which means there are changes announced monthly. In addition to reviewing the tariffs, several proceedings before public service commissions were reviewed to assess the fairness, reasonableness, and non-discriminatory elements of various contracts considered by public service commissions, in order to to better understand which safeguards have legal standing or precedent. Using the information from those proceedings and the tariffs discussed in the second section, there are additional rate provisions that should be considered when designing a large load tariff. These provisions will not only safeguard existing ratepayers, but also the efforts to achieve clean and renewable energy goals.

Avoid Discriminatory Rate Structures

As established by the Robinson-Patman Act, the Federal Trade Commission prohibits public service commissions from allowing unduly discriminatory rates. Public service commissions require approved rate structures to be just, reasonable, and non-preferential. While some commissions have approved tariffs that explicitly identify cryptomining and data centers, concerns regarding discriminatory rates and tariffs have been rising up throughout the states, as well at the federal level.

To avoid discriminating against certain industries, tariffs can include definitions and categories of service that can be related to the volatile and non-permanent nature of cryptomining and data centers.

Rather than explicitly naming cryptomining or data centers, utility tariffs have used the following definitions for high density tariffs:

- "Load that is portable and distributable"
- "High energy use density"
- "High variable load growth or load reduction"
- "permanency of service cannot be reasonable assured"
- "Evolving Industry"

[27] Joint Stipulation and Agreement for Settlement, Case No. 24-0611-E-T-PW, filed Jan. 22, 2025, https://www.psc.state.wv.us/scripts/WebDocket/ViewDocument.cfm?CaseActivityID=634939&NotType=WebDocket.

Black Hills Energy in Colorado offers a service tariff for "Indeterminate Service," which is defined below.[28]

BLACK HILLS COLORADO ELECTRIC, LLC
d/b/a BLACK HILLS ENERGY

K. Indeterminate Service: Service that is of an indefinite or indeterminate nature where the amount and permanency of service cannot be reasonably assured in order to predict the revenue stream from applicant. For purposes of uniform application, "Indeterminate Service" may include such service as may be required for the speculative development of property, mobile buildings, mines, quarries, oil or gas wells, sand pits and other ventures that may reasonably be deemed to be speculative in nature.

In the Grant County Public Utility District ("PUD") service territory, in Washington, rather than adopting a tariff explicitly for cryptomining facilities and volatile users, the PUD adopted a new rate class, known as "evolving industries." Rather than explicitly call out specific users, it defined characteristics that those industries are known for. The definition of Evolving Industries rate class is based on three risk factors as shown below.[29] This rate class is charged a different rate than other C&I customers.

To decide if an industry falls into the evolving industries class, the district used a test focused on certain risk factors presented by the industry in question. These risks are:

- Regulatory risk — risk of detrimental changes to regulation with the potential to render the industry inviable within a foreseeable time horizon;
- Business risk — potential for cessation or significant reduction of service due to a concentration of business risk in an evolving or unproven industry or in the value of the customer's primary output; and
- Concentration risk — potential for significant load concentration within the district's service territory resulting in a meaningful aggregate impact and corresponding future risk to the district's revenue stream. Evaluation would begin to occur when industry concentration of existing and service request queue customer loads exceeds 5% of the district's total load.

[28] Black Hills Colorado Electric LLC d/b/a/ Black Hills Energy tariffs: https://www.blackhillsenergy.com/sites/blackhillsenergy.com/files/coe-rates-tariff.pdf, see PDF page 220.
[29] *A Blow to Crypto Miners Disputing Local Energy Rates,* James Gatto and Andrew Mina, April 10, 2020, https://www.sheppardmullin.com/media/publication/1859_A%20Blow%20To%20Crypto%20Miners%20Disputing%20Local%20Energy%20Rates.pdf, accessed October 18, 2024.

Renewable Energy Requirements

To date, most tariffs related to cryptomining and data centers do not have renewable energy or clean energy procurement requirements. Most efforts to have clean energy used to power these services are achieved through renewable energy credits pushed by a corporate goal rather than from a utility. Of the tariffs and proceedings reviewed, only one had an explicit renewable energy provision. Renewable energy requirements or clean energy tariffs should be designed in accordance with the "three pillars" of clean energy:

1. Incremental – energy is from a clean energy source that incremental to existing generation.
2. Temporality or being time-matched – power is generated in the same hour it is consumed.
3. Deliverable – power is deliverable in the same grid region.

In the Evergy Missouri Metro service territory, customers are subject to the Renewable Energy Standard Rate Adjustment Mechanism ("RESRAM") charge, which is an adjustable rate to allow for the utility to recover prudently-incurred costs related to procurement of renewable energy standard costs that are above and beyond the renewable energy costs already included in base rates. The provision included below states that a customer on Schedule MKT must pay future RESRAM charges unless they have renewable attributes that support its load which are greater than or equal to the existing Renewable Energy Standard.[30] As written, the provision rewards customers under this tariff if they are procuring renewable attributes on their own. Please note that the provision does not require actual investment in renewable energy resources to directly serve the load.

Special High-Load Factor Market Rate
Schedule MKT

6. A Schedule MKT Customer shall be subject to any future RESRAM charges imposed by Evergy Metro unless a Schedule MKT customer does have renewable attributes supporting its load greater than or equal to the then existing Renewable Energy Standard including any solar portfolio requirements. For Schedule MKT customers with renewable attributes supporting its load greater than or equal to the then existing Renewable Energy Standard, including any solar portfolio requirements, the MKT Customer's entire load will be subtracted from the calculation of total retail electric sales in in 20 CSR 4240-20.100. Renewable attributes means Renewable Energy Credits and solar Renewable Energy Credits that the MKT Customer has retired, or had retired on its behalf, documented annually from an established renewable registry.

While renewable energy credits are a step in the right direction, it is essential to include provisions to require data centers to invest in renewable energy in the surrounding community, either through investment in community solar, wind, roof top solar, and storage. Adding significant levels of load in communities, particularly those with clean energy targets,

[30] Evergy Missouri Metro Special High-Load Factor Market Rate Schedule MKT, https://www.evergy.com/-/media/documents/billing/missouri/detailed_tariffs_mo/special-high-load-factor-market-rate.pdf.

can derail clean energy achievements to date and could potentially result in increased environmental and health impacts due to increased generation needs. One of the three pillars of clean energy is incrementality. To achieve this, data centers must work to accelerate achievement of clean energy goals and/or offset any additional load powered by fossil fuel power plants. Utilities should work with potential customers to identify avenues to support the growth of renewable energy generation. For example, Meta worked with the Tennessee Valley Authority ("TVA") to develop a green tariff that supports the development of solar energy across the service territory to support Meta's corporate energy goals.[31] Depending on the economic development provisions, the green tariff is likely driving investment in the nearby community.

The clean transition tariff proposed by NV Energy in Nevada and Google and currently before the Public Utilities Commission of Nevada is another example of having clean energy serving large loads. The proposed tariff would allow for Google to power one of its data centers by purchasing power that NV Energy buys from the 115 MW Corsac Station Enhanced Geothermal Project at a price slightly higher than that paid by NV Energy. The tariff design prevents impacts to other ratepayers and allows Google to operate towards its 24/7 carbon free energy goal by 2030.

Power Purchase Agreements

Data center and cryptomining facilities are working with power plant operators and markets to establish power purchase agreements ("PPAs") to procure low-cost power options.[32] A power purchase agreement is between the buyer and seller, where a buyer commits to purchase an agreed amount of electricity over an established period. PPAs require approval from a utility commission if they involve a regulated utility.[33] There are two types of PPAs, physical and prepaid. A physical PPA is when the buyer takes physical delivery of the electricity generated either onsite in a behind-the-meter arrangement or offsite at a pre-determined point on the grid. A prepaid PPA is when the buyer pays the discounted cost of the PPA upfront. There is also something known as a virtual PPA, which is not a PPA but rather a financial instrument for a contract for difference.[34] Ultimately, state and local regulations on retail choice and electricity franchises establish the type of PPAs that are available by state.

As noted in Texas and by a case being considered by FERC, PPAs could have negative implications for other ratepayers. In Texas, a cryptocurrency company purchased low-cost electricity behind-the-meter through a PPA, which means that the energy utilized by the

[31] More information on the green tariff is provided here: *Meta Partners with Silicon Rand for Seven New Solar Projects in Georgia and Tennessee,* December 15, 2022, https://www.siliconranch.com/stories/meta-partners-silicon-ranch-walton-emc-tva, accessed October 18, 2024.
[32] For more information on power purchase agreements, please see: *Customer Power Purchase Agreements,* United States Environmental Protection Agency, https://www.epa.gov/statelocalenergy/customer-power-purchase-agreements, accessed October 18, 2024.
[33] Wholesale power sales, which do not involve an end user, are within the purview of the Federal Energy Regulatory Commission.
[34] Virtual PPAs are considered a financial instrument and are regulated by the Securities and Exchange Commission.

PPA customer is not offered in the ERCOT market. During a heat wave in summer 2023, ERCOT issued a request for curtailment of power. In response, the cryptomining company, through its wholesale agreements, sold its power into ERCOT, making over $24 million on energy savings, more than three times the revenue it made from cryptomining the prior month.[35] Due to the load flexibility and price sensitivity of cryptomining, the facilities are able to game the system to create additional profits at a significant cost to ratepayers, who are less flexible to respond to demand pressures and are not compensated for doing so, as ERCOT does not currently offer residential demand response programs.

Another case where ratepayers may not benefit is for the interconnection service agreement ("ISAs") change for a facility to provide power to a co-located data center or mine. Currently, the 2,228-MW Susquehanna nuclear facility in Pennsylvania provides power to PJM as a baseload resource.[36] However, in March, Talen Energy, which owns the nuclear plant and had a cryptomining facility and data center on site, sold the data center to Amazon and planned to sell up to 980 MW of nuclear power to Amazon through a behind-the-meter power purchase agreement. In late November 2024, FERC denied the application.[37]

Economic Development

The potential for economic development through increased tax revenues and potential jobs from large load projects is intriguing and viewed as a positive element of potential load growth by politicians and utilities. However, the opportunities of increased tax revenue are often offset by state and local government tax credits used to entice certain industries or large loads to locate in a specific area. Additionally, utilities often offer discounted rates to large loads, which means that there is potential for existing ratepayers subsidizing that customer and lower potential tax revenue from the electric service. These discounts do not have to come from an economic development tariff, rather they can be supported by existing laws and incentives which provide these to new loads and entities building in certain areas.

The issue with economic development for cryptomining facilities and data centers is that they typically do not produce a substantial number of full-time equivalent jobs compared to the level of load added to the system. Furthermore, with the tax credits, there is limited net tax revenue being provided to the area.[38] As a result, the economic development discounts provided to customers result in limited to no benefits to the area and can expose those living in the area to added risks and increased bills, as previously identified.

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[35] "Texas Leaders worry that Bitcoin mines threaten to crash the state power grid," Keaton Peters, The Texas Tribune, July 10, 2024, https://www.texastribune.org/2024/07/10/texas-bitcoin-mine-noise-power-grid-cryptocurrency/, accessed October 18, 2024.

[36] *Talen-Amazon interconnection agreement needs extended FERC review: PJM Market Monitor,* Ethan Howland, July 11, 2024, https://www.utilitydive.com/news/talen-amazon-interconnection-agreement-ferc-constellation-vistra/721066/, accessed October 18, 2024.

[37] https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20241101-3061&optimized=false; https://www.utilitydive.com/news/ferc-interconnection-isa-talen-amazon-data-center-susquehanna-exelon/731841/

[38] Reference for the orange box text: *Protect SC Consumers From Data Center Costs,* Frank Knapp, South Carolina Daily Gazette, September 12, 2024, https://scdailygazette.com/2024/09/12/protect-sc-consumers-from-data-center-costs/, accessed October 18, 2024.

With the focus from politicians on attracting new industries, utilities may want to consider reviewing and revising their economic development riders that allow for discounted rates. One AEP utility, Indiana Michigan Power in Indiana, sunset its Economic Development Rider tariff and adopted its Economic Development Rider 2 tariff, which increased the level of minimum demand and the minimum number of full-time equivalent jobs and capital investment guidelines. A summary of the differences to qualify for a discounted rate through the Economic Development Rider 2 is provided below.[39]

INDIANA
Economic Development Rider 2 (EDR 2)

To qualify, a new or expanding business must meet the following minimum criteria:

New Customer Criteria

- Add 500 kW or greater to one metered account
- Create at least 20 full-time equivalent (FTE) jobs or make a capital investment of $2,000,000 or more at the service location.

Existing Customer Criteria

- Increase billing demand by 250 kW or more above the Average Billing Demand during the 12 months prior to the date of application on one metered account
- Achieve a score of 100 or greater using the following calculations:
    - Base Score = New FTEs created X 10 + Capital Investment / 10,000
    - Load Multiplier = Estimated Load Increase (kW) / Base Average Billing Demand (Maximum of 1.0)
    - Final Score = Base Score X Load Multiplier.

Customer Account Status	Final Score	Discount Percentage on Total Non-Fuel Bill				
		Years 1 - 4	Year 5	Year 6	Year 7	Year 8
New	--	12.0%	9.0%	6.0%	3.0%	0.0%
Existing – Higher	> 200	6.0%	4.5%	3.0%	1.5%	0.0%
Existing – Lower	100 - 200	4.0%	3.0%	2.0%	1.0%	0.0%

Siting with Generation

As part of large load facilities procuring low energy costs, some are locating themselves near the power sources to ensure availability of low-cost energy. Not only are consuming companies looking to site near low-cost generation, but so are utilities. Several coal power plants have been revived or experienced increased run time in order to support new large loads.

[39]Indiana Michigan Power, Indiana Economic Development Rider 2, https://www.aep.com/assets/docs/economic-development/IN-EDR-2023-App.pdf.

While there is an option to build new generation, co-locating the data center or cryptocurrency facility with an existing coal or gas plant slated for retirement or transition to a gas-fired plant can be an attractive energy source for larger users. This can result in increased greenhouse gas emissions and local air and water pollution due to smaller, less efficient plants being built or from the proliferation of coal-fired plants that may have difficulty with emission compliance. Additionally, while some large loads are considering nuclear power sources, there are concerns about capacity limitations and increased wholesale market prices if such power plants dedicate power directly to a customer rather than to the open market.

Including Projected Loads in Forecasts

Prospective data load centers and cryptomining facilities are seeking the best electricity rates and terms. This can result in utilities over-forecasting new load additions and capacity needs. Inclusion of the loads into utility forecasting needs a level of certainty as to whether a project will move forward or not, and sensitivity analyses need to properly account for the level of load that may not come to fruition. A utility's capacity planning cycles will likely never match up with discussions of potential customers' loads. Therefore, utilities should assess the likelihood of the load addition using elements such as where the new load is in the interconnection process, whether a feasibility study has been conducted, and whether the location has been procured, such as through a land sale/lease contract or local zoning approval.

Providing reasonable estimates of large new loads is extremely important, as it can require investment in not only new generating capacity, but also the transmission and distribution systems. If utilities utilize their planning processes, such as integrated resource planning ("IRP"), or a regional transmission operator does long-term planning of new transmission infrastructure, those entities could invest in capacity and grid system upgrades that end up not being needed if the large loads do not come to fruition. This results in existing customers footing a bill for stranded assets and less load and fewer customers to share those stranded assets costs across.

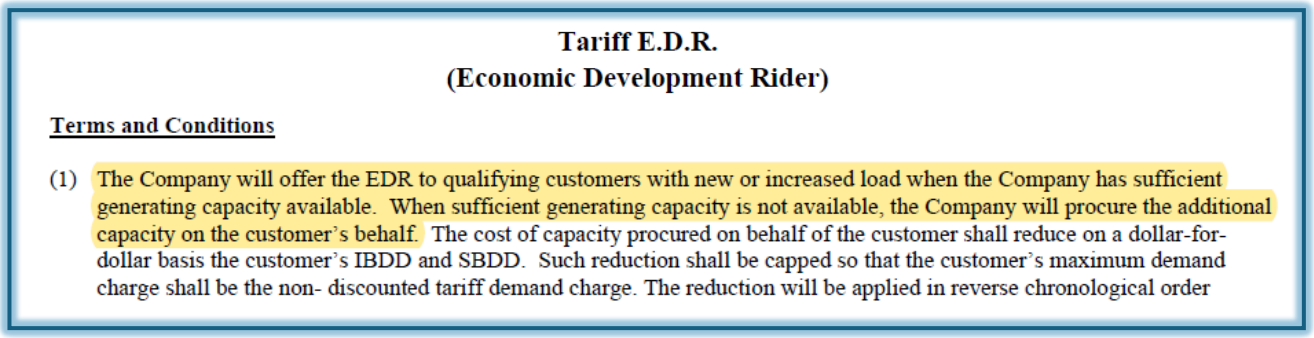
Mitigating over- and under-building of assets ultimately resides with the utilities and their planning models.[40] The planning models themselves need to not only account for customer load growth requirements over a long-term, but they also need to assess transmission and distribution opportunities and investments in distributed energy resources, such as energy efficiency, demand response, renewable energy, and storage. With all that said, there does not seem to be a utility or transmission operator that has established a process that can properly account for large load additions. For example, in 2023, Georgia Power submitted a one-year update to its 2022 IRP filing, indicating that the utility's demand increased by 20% by 2030 compared to the prior year's filing. There was significant uncertainty among the added load, particularly as to where this projected increase in demand was in the process of

[40] *Demand Better: How growing demand for electricity can drive a cleaner grid*, Jeremy Fisher, Laurie Williams, Dori Jaffe, Megan Wachspress, Sierra Club, September 2024, https://www.sierraclub.org/sites/default/files/2024-09/demandingbetterreportfinal_sept2024.pdf, p. 24, accessed October 18, 2024.

being interconnected. Transparency regarding potential new loads in the planning process—including the timing of the interconnection process and feasibility studies and ramp up of load over time—can be beneficial in ensuring sufficient investment in capacity.

Adequate Available Capacity

Kentucky Power's Economic Development Rider ("EDR") tariff requires there to be sufficient capacity to accommodate the increased or new load proposed by the customer. If sufficient capacity is not available, the cost of capacity to serve the new load must be passed on to the customer, by decreasing the discounted rate received by the customer. This provision is made to ensure that if capacity is needed to serve the load, that those costs are not passed on to the existing ratepayers. Not limited to EDRs, tariffs can include limitations on the level of load served by a certain tariff, such as Idaho Power Company's Schedule 20 Speculative High-Density Load.[41]



Tariff E.D.R.
(Economic Development Rider)

Terms and Conditions

(1) The Company will offer the EDR to qualifying customers with new or increased load when the Company has sufficient generating capacity available. When sufficient generating capacity is not available, the Company will procure the additional capacity on the customer's behalf. The cost of capacity procured on behalf of the customer shall reduce on a dollar-for-dollar basis the customer's IBDD and SBDD. Such reduction shall be capped so that the customer's maximum demand charge shall be the non- discounted tariff demand charge. The reduction will be applied in reverse chronological order

Conclusion

An ideal tariff will limit risk based upon the load being added to the system. There are several ways to achieve this and therefore, there is not one uniform set of safeguards that should be established. However, at a minimum, tariffs or special contracts should include the following:

1. For large loads under 50 MW, contract terms are not longer than 10 years, and loads larger than 50 MW should consider longer contract terms such as 12-20 years. Either contract term should come with pricing and negotiation terms set intermittently throughout the overall contract term.
2. Minimum or tiered monthly load requirements to qualify for the tariff.
3. Penalties for not maintaining a good load factor (typically 85% or greater) or power factor (typically 90% or greater). Examples of this are provided in Table 1 above.
4. Establish minimum demand charges or a demand ratchet to ensure that a large customer's fixed charges for peak demand levels are recovered.
5. Identification of costs that should be assigned to the customer or the requirement for a bond or deposit to offset the cost risk to existing ratepayers. Requirement of

[41] Idaho Power Company Schedule 20 Speculative High-Density Load: https://docs.idahopower.com/pdfs/AboutUs/RatesRegulatory/Tariffs/20.pdf.

contributions in aid of construction for any grid upgrades related directly to providing service will offset potential for stranded assets costs.

6. To ensure that the large load customer is not being subsidized by the service territory's other customers, the utility should track costs and revenues from the large load customer and assess a true up mechanism if the revenues do not exceed the customer costs.
7. An interruptible service requirement that can be negotiated between the utility and the customer. An interruptible service agreement should include the number of events and total annual hours, length of events, load reduction requirement, and penalty payment for failure to respond. It should also have term limits to allow for renegotiation.
8. Adequate available system capacity, with a requirement for procuring new capacity to be backed by the customer or through the purchase of renewable energy.

While these elements can be considered as part of any tariff related to serving large loads that may be considered volatile or a significant impact to the system, these terms will vary based upon the service territory's characteristics and current ratepayers.

In addition to establishing safeguards in tariffs, utilities need to put forward reasonable forecasts which consider whether large loads will move forward to interconnection. As part of those forecasts, utilities and IRPs should take into consideration how large loads can be served by a variety of services including transmission and distribution upgrades and investments in distributed energy resources. Using distributed energy resources such as solar, storage, and energy efficiency can also assist utilities and states to meet their environmental goals.

State	Utility	Document Type	Link	Contract Length	Minimum Demand	Minimum Load Factors	Range for Power Factor	Requirements for Investment
Wyoming	Cheyenne Light, Fuel and Power Company d/b/a Black Hills Energy	Special Contract	https://ir.blackhillscorp.com/static-files/5c33d769-2d19-43f8-8898-a37af25481ef#:~:text=This%20tariff%20is%20applicable%20to,Agreement")%20with%20the%20Company.	Min 2 years; renogotiation at least every 3 years	10,000 kW	N/A	N/A	New electric infrastructure, line extension or system upgrades
Arkansas	Entergy Arkansas LLC	Tariff	https://cdn.entergy-arkansas.com/userfiles/content/price/tariffs/eal_lphlds.pdf	N/A	N/A	N/A	N/A	Security deposit equal to 3 months of average estimated bill. Contributions in Aid of Construction for all network upgrades. Security Bond equal to Value of Lost Load Per MISO Schedule 28
Idaho	Idaho Power Company	Tariff	https://docs.idahopower.com/pdfs/AboutUs/RatesRegulatory/Tariffs/20.pdf	Special Contract required for over 20,000 kW	1,000 kW	N/A	90% or greater	Upgrades for interconnection facilities
New York	New York Municipal Power Agency	Tariff	https://ets.dps.ny.gov/ets_web/search/showPDF.cfm?%3B%3AIS%20%3B%2A%29LOUNWD%5CJ%5E8%2B"%2B5%2F0MD%2F0%28%231V%28S<WX%0A	N/A	>300 kW or load density exceeds 250/kWh/ft^2/year	N/A	N/A	Feasibility study, entire cost of new facilities necessary to supply requested service, cash deposit or Letter of Credit
South Dakota	Montana-Dakota Utilities Company	Tariff	https://puc.sd.gov/commission/Tariffs/Electric/mdu/Section3/20.pdf	3-5 years	10,000 kW	85%	Between 97% lagging and 97% leading	No
Washington	Grant County Public Utility District	Tariff	https://www.grantpud.org/templates/galaxy/images/Rate_Schedule_No_17.pdf	N/A	No minimum- separatedby greater or less than 200 kW	N/A	N/A	No
Indiana	Indiana Michigan Power	Tariff	https://www.aep.com/assets/docs/economic-development/IN-EDR-2023-App.pdf	N/A	500 kW	N/A	N/A	Create at least 20 full-time equivalent jobs or make a capital investment of $2 million or more at the service location, must apply and receive economic development assitance from the state, local government, or other public agency
Kentucky	Kentucky Power	Special Contract	https://psc.ky.gov/tariffs/Electric/Kentucky%20Power%20Company/Tariff.pdf	10 years	500 kW	N/A	N/A	N/A
Missouri	Evergy Missouri Metro	Tariff	https://www.evergy.com/-/media/documents/billing/missouri/detailed_tariffs_mo/special-high-load-factor-market-rate.pdf	No more than 10 years, with pricing terms no more than 5 years	100,000 kW/month or projected to be 150,000 kW within 5 years of being a new customer	85% or greater	N/A	N/A
North Dakota	Montana-Dakota Utilities Company	Tariff	https://www.montana-dakota.com/wp-content/uploads/PDFs/Rates-Tariffs/NorthDakota/Electric/NDElectric38.pdf	3-5 years	10,000 kW	85%	Between 97% lagging and 97% leading	N/A

State	Utility	Cost Assignment	Requirement to Shed Load	Load Subject to Interruptible Service	Maximum Hours of Interruptible Per Year	Demand Response	Requirement for Renewables or Traditional Generation	Requires Adquate Available Capacity	Notes
Wyoming	Cheyenne Light, Fuel and Power Company d/b/a Black Hills Energy	N/A	As defined in contract	As specified in contract	As specified in contract	No	No	N/A	
Arkansas	Entergy Arkansas LLC	N/A	Yes	Non-firm demand	40 or 80 hours	N/A	N/A	N/A	
Idaho	Idaho Power Company	N/A	Yes	Unclear	225 hours	N/A	N/A	Yes	
New York	New York Municipal Power Agency	Purchased Power Adjustment and Rate Statement	No	N/A	N/A	Not Offered	N/A	N/A	
South Dakota	Montana-Dakota Utilities Company	No	Yes	Specified in electric service agreement	200 hours	N/A	N/A	N/A	
Washington	Grant County Public Utility District	No	No	N/A	N/A	Customer by Customer Basis	N/A	N/A	Classified as an "Evolving Industry"
Indiana	Indiana Michigan Power	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Economic Development Rider. Requires that the customer provide to the Company's satisfaction that absent the availabity of the ridre, the new or increased demand would be located out of the Company's service territory or not place into service.
Kentucky	Kentucky Power	N/A	Yes	Specified in electric service agreement	N/A	N/A	N/A	N/A	Economic Development Rider
Missouri	Evergy Missouri Metro	Revenues must exceed costs	No	N/A	N/A	Special Interruptible Contract	A Schedule MKT Customer shall be subject to any future RESRAM charges imposed by Evergy Metro unless a Schedule MKT customer does have renewable attributes supporting its load greater than or equal to the then existing Renewable Energy Standard including any solar portfolio requirements.	N/A	
North Dakota	Montana-Dakota Utilities Company	N/A	Yes	Specified in electric service agreement	200 hours	N/A	N/A	N/A	

Earthjustice Support Letter Data Center Study Bill
Uploaded by: Susan Miller
Position: FAV

EARTHJUSTICE

February 13, 2025

Chair Brian J. Feldman
Members of the Senate Education, Energy, and the Environment Committee

Re: Earthjustice support for SB 116:
Data Center Impact Analysis and Report

Earthjustice[1] strongly supports the passage of SB 116. This legislation will require the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State and to submit a report to the Governor and the General Assembly by September 1, 2026.

The explosive growth of high-energy-use facilities represents a major challenge to Maryland. These facilities consume quantities of electricity so vast that they have begun to tax entire energy grids, greatly increasing the costs for all ratepayers as well as compromising states' ability to achieve its clean energy goals. There are many issues which the General Assembly needs to examine and resolve before the proliferation of data centers makes the resolution of these issues impossible.

Virginia represents a cautionary tale regarding how **not** to introduce large-scale data centers into a state. Data center development in Northern Virginia has been accelerating for years. As of late 2022, data centers accounted for 21% of Dominion Energy's electricity sales in Virginia. Disturbingly, Dominion's Integrated Resource Plan filed in 2023 uses this anticipated load growth from data centers as the rationale for leaving in place existing fossil-fuel generation (which would have been retired) and as a justification for the construction of a new 1000 MW gas-fired generating station. One effect of this growth is that Virginia now imports roughly 40% of its power needs versus 18% in 2020. The cost to Virginia of that imported power is almost 10 times higher than it was just one year ago.[2] This growth in energy usage and imports has increased Virginia ratepayers' bills by approximately $3,000 a year.

Without the prompt implementation of robust consumer protections and enhanced transparency, existing ratepayers are at extraordinary risk from these new large loads. Thus, the study will be vital to determining how best to protect Maryland ratepayers from burdensome rate increases where those increases are the result of the desires of one competitive industry.

[1] Earthjustice is a non-profit public interest environmental law organization that represents other non-profits free of charge.
[2] Virginia now imports more electricity than any other state - Cardinal News

These new large loads will require millions if not billions of dollars in investments for electric service. Unlike Virginia, which is now trying to close the barn door after the horse has escaped, Maryland has the opportunity to examine the best methods for both encouraging the data center industry and protecting Marylanders from unfairly having to bear the costs of that industry. Methods to protect ratepayers could include tariff changes to address the different needs and unique risks that these large load customers present; adopting a new rate class for high loads; and minimum bills to ensure that the fixed costs associated with serving the data center's level of load are paid for by the customer. These are just a few of the myriad of ratepayer protections which the study should examine.

Similarly, the General Assembly should find ways to protect Marylanders from the negative effects the overbuilding of these facilities may cause. It appears that a substantial portion of the power needs for large, new "hyperscaler" data centers is for so called AI, a nascent technology which is still in the development stage and which may not ultimately meet expectations, despite computer companies claims to the contrary. Each data center will use hundreds of megawatts of power or more, further concentrating risk at just a small handful of facilities. Data centers are a competitive business. Negative impacts to the tech industry, less than expected demand for AI and computational power, or the failure of specific data center facilities to gain sufficient customers could end up creating an unfair economic burden on Marylanders. Overzealous investment in data centers can lead to an overbuild that would result in bankruptcies for some data centers or simply result in the operator walking away from a specific data center because that data center has proved unprofitable.[3] Existing customers should not be required to foot the bill for stranded assets and less load.

For example, a new artificial intelligence model, DeepSeek, called into question whether the rush to build new, mostly fossil-fueled power plants to run data centers is premature. The new AI model uses less electricity. The news of more efficient AI means the plans and promises for unlimited electricity load growth from AI points to the likelihood that energy needs have been overstated. If data centers switch to a more energy efficient technology, like DeepSeek, residential and other customers could be left paying for new energy infrastructure that is not needed. More consumer protections are necessary so data center operators can't walk away from a power plant built for its use. The concerns aren't just hypothetical. In early January, Microsoft stated it was pausing construction of its $3.3 billion data center in Wisconsin to evaluate recent changes in technology.[4]

Maryland will potentially undergo a massive economic, technological, and environmental upheaval, all centered around the activities of a few high energy using facilities. The General Assembly should resolve the issues concerning who is going to pay for the increased energy costs and what are the implications for Maryland's air quality, climate goals, water resources,

[3] This is not hyperbole. The internet boom of the late 1990s put data centers on the map, with companies like Exodus Communications pioneering the concept of large-scale data centers. But as with many tech trends, the early 2000s saw a crash. Overzealous investments led to an overbuild that left many data centers underutilized for years. The difference is that in the current instance Marylanders may pay the economic price for this overbuilding.

[4] Microsoft pauses construction on portions of Mount Pleasant project - WPR

health, and the environment prior to the construction of high energy using facilities. The proposed study should assess of impacts of these facilities on Maryland's natural resources, historic and cultural resources, current and forecasted energy demand and supply, policies to transition from fossil fuels to renewable energy sources, siting considerations and the impact on local residents.

Finally, Earthjustice thanks Senator Lewis Young for her leadership on this important issue.

Earthjustice strongly urges a favorable report for SB 116.

Thank you in advance for your support. Should you have any questions, please contact me at smiller@earthjustice.org.

Respectfully submitted,

Susan Stevens Miller
Senior Attorney, Clean Energy Program
Earthjustice

FirstEnergy FAV SB-116 - Data Center Impact Report

Uploaded by: Timothy Troxell

Position: FAV

Timothy R. Troxell, CEcD
Senior Advisor, Government Affairs
301-830-0121
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10802 Bower Avenue
Williamsport, MD 21795

SUPPORT – Senate Bill 0116
SB 0116 – Data Center Impact Analysis and Report
Education, Energy, and the Environment Committee
Thursday, February 13, 2025

Potomac Edison, a subsidiary of FirstEnergy Corp., serves approximately 285,000 customers in all or parts of seven Maryland counties (Allegany, Carroll, Frederick, Garrett, Howard, Montgomery, and Washington). FirstEnergy is dedicated to safety, reliability, and operational excellence. Its ten electric distribution companies form one of the nation's largest investor-owned electric systems, serving customers in Ohio, Pennsylvania, New Jersey, New York, West Virginia, and Maryland.

Favorable

Potomac Edison / FirstEnergy supports Senate Bill 0116 – *Data Center Impact Analysis and Report.* This bill would require the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State.

Potomac Edison / FirstEnergy requests a Favorable report on SB-116 for the following reasons:

Senate Bill 0116 represents a proactive and comprehensive approach to understanding the multifaceted impacts of data center development within the State of Maryland -- and we are supportive of this strategic initiative. The attraction of jobs and investment into Potomac Edison's service territory has always been an important part of our company's mission, and we believe data centers will create good paying jobs and result in increased capital investments into the state.

From an energy perspective, understanding the substantial energy demands of data centers and their effects on the current and future energy supply is vital. The analysis from this report will help inform infrastructure planning and ensure that the growth of the data center industry aligns with Maryland's commitments to greenhouse gas emissions reduction and clean energy targets.

The environmental assessment in SB-116 will help provide critical insights into how data centers may affect natural resources, including air and water quality, and the state's capacity to achieve its environmental objectives. Identifying available technologies to help mitigate potential environmental impacts is essential for sustainable development.

Economically, the evaluation of potential impacts on state and local revenues, expenditures, and job creation associated with data center construction and operation will help guide policymakers in making informed decisions that balance economic growth with fiscal responsibility. Growing the economy and attracting high-wage jobs and investment could certainly help plug some of the budgetary holes the state is currently facing.

Potomac Edison / FirstEnergy supports the *Data Center Impact Analysis and Report* bill. This forward-thinking measure will help equip Maryland with the necessary data to foster the responsible and sustainable development of jobs and investment from data centers into our service territory.

For the above reasons, Potomac Edison / FirstEnergy respectfully request a Favorable vote on SB-116.

Testimony supporting SB116.pdf
Uploaded by: Virginia Strasser
Position: FAV

Testimony Supporting HB270
House Economic Matters Committee

January 21, 2025

Position: SUPPORT

Dear Chair C.T. Wilson and Members of the Committee,

As a resident of Montgomery County, Maryland, I am concerned with the proposed and pending expansion of data centers in Maryland. I am concerned with the increased demands on electricity and water that these data centers will require to meet the needs of AI searches and responses. Our transmission grid within PJM is already under strain, especially during peak demands that are increasing in frequency and duration due to climate change. The large scale expansion of demand required by new data centers will likely make it next to impossible for Maryland to meet its clean energy goals and to meet its commitments to reduce greenhouse gas emissions. I am also concerned with the demands these facilities will make on our water supply, as they will need access to on site facilities to cool the servers. Other concerns I have include land use designations, and increased taxes and ratepayer bills to finance the cost of data centers.

Therefore, I am writing to express my strong support of HB270, the Data Center Impact Analysis and Report Act.

Sincerely,
Virginia Strasser
8400 Beech Tree Road
Bethesda, MD 20817
301-728-9536

Testimony SB0116.pdf
Uploaded by: Debbie Cohn
Position: FWA

Committee: **Education, Energy and the Environment**
Testimony on: **SB0116 Data Center Impact Analysis and Report**
Submitting: **Deborah A. Cohn**
Position: **Favorable with Amendments**
Hearing Date: **February 13, 2025**

Dear Chair Feldman, Vice Chair Kagan and Committee Members:

Thank you for allowing my testimony today in support of SB0116. I have resided in Maryland since 1986, and most of my descendants reside in Maryland. I write to you with them in mind.

Many Marylanders benefit from and depend on the services that data centers provide. Data centers bring short-term construction and a limited number of longer-term higher paying jobs; they also bring certain costs.

A Department of Energy Report indicates that data centers consume 10-50 times the energy per floor space of a typical commercial office building. But an Environmental Protection Agency *Energy Star* report identifies several steps that can be taken during design, construction and operation of data centers to curtail this demand. The JLARC study indicates that without guardrails on data centers, power demand in Virginia could nearly double within the next 10 years. Maryland can anticipate similar significant, rapid increases in energy demand as more Maryland data centers are built.

Maryland needs to determine whether increased electricity supply can keep pace with increased demand and if so, at what long-term dynamically modeled fiscal impacts, what costs to ratepayers and taxpayers, burdens on natural resources, public health costs, pressure on state decarbonization goals, and benefits to economic activity, productivity and growth.

SB0116 requires such an analysis. It would address many of the relevant questions about (i) natural resources, (ii) environmental quality, (iii) energy demand and supply, (iv) implications for ratepayers, and (v) fiscal pressures. This analysis is prudent and necessary; hence my support for SB0116.

But the bill does not go far enough. SB0116 should also require that the study analyze the impact that incentives could play in encouraging new wind and solar power generation and battery storage that could supplant or curtail the use of diesel generators for emergency backup.

Moreover, with the analysis due by September 1, 2026, any legislative response imposing guardrails likely would not take effect until sometime in 2027. What happens in the interim?

First, since Maryland does not collect and report data on data centers, SB0116 should require state agencies to collect and make available in one location information on existing and proposed data center locations, energy requirements, sources of energy, water usage and disposal, noise levels, use of backup generators, use of on-site geothermal, and development by or for Maryland data centers of incremental solar, wind, battery storage and other energy generation sources within Maryland or nearby states.

Second, several states are *reactively* looking to impose guardrails; Maryland should learn from their experiences. To that end, SB0116 should impose a temporary moratorium on new data centers to give

Maryland the time to appreciate the ramifications of data center growth in this state. Then we can proceed wisely, with confidence and appropriate guardrails, to welcome data center development.

For these reasons and with these amendments I support SB0116 and urge a FAVORABLE report in Committee.

Thank you.

SB0116-EEE_MACo_SWA.pdf
Uploaded by: Dominic Butchko
Position: FWA

Senate Bill 116

Data Center Impact Analysis and Report

MACo Position: **SUPPORT WITH AMENDMENTS**

To: Education, Energy, and the Environment Committee

Date: February 13, 2025

From: Dominic J. Butchko

The Maryland Association of Counties (MACo) **SUPPORTS** SB 116 **WITH AMENDMENTS**. This bill requires certain departments within the State Administration to conduct an impact analysis of the data center industry on Maryland.

Data centers in neighboring Virginia have had a significant impact on that economy, providing predictable revenue streams, offering job opportunities, and driving technological growth. For Maryland, the sensibly managed growth of the data center industry may yield a similarly beneficial result. However, without a deeper understanding of this new industry's indirect effects, data centers' environmental and infrastructure challenges could outweigh their benefits over time. High energy and water consumption from data centers in Virginia are not only straining local resources but are now weighing heavily on neighboring jurisdictions. Balancing these factors is crucial for future sustainable development, especially for a state already grappling with the challenges of climate change.

Recognizing this need for a delicate balance, counties request the Maryland Department of the Environment's analysis also include a review on the impact of data centers on agricultural and conserved lands.

MACo Amendment:

On Page 1, After Line 23, Insert, **"(IV) THE POTENTIAL DIRECT AND INDIRECT IMPACTS ON AGRICULTURAL AND CONSERVED LANDS."**

Data Centers can prove to be a key to help unlock a future of prosperity for Marylanders, but without a more complete understanding of their impact, they could also prove to be a factor toward decline. For this reason, MACo urges the Committee to issue SB 116 a **FAVORABLE WITH AMENDMENTS** report.

SB 116 02 11 Testimony.pdf
Uploaded by: Karen Holcomb
Position: FWA

Testimony in Support With Amendments SB116

Senate Energy, Education, and Environment Committee 2/13/25 at 1:00 pm
Submitted on 2/11/25 at about 9:45AM

To Chair Feldman and Committee Members,

My name is Karen Holcomb. I live in Chestertown, Maryland, and I urge a favorable with amendment report on SB116. Thank you in advance for your consideration of support.

The findings of the proposed Data Study bill will provide policy makers with needed information surrounding Data Centers. Currently, the State is not collecting this information, which is a critical first step that allows for comprehensive planning, collaboration between the State and private utility entities.

But the Data Canter Study does not go far enough. Whether it be the power needed for Data Centers, residential or commercial sectors, we need to address another driver of increased cost to ratepayers. We may need to review and amend prior well-intended climate and environment state mandates* ,with which regional grid operators such as PJM ,must comply resulting in the utilities companies incurring substantial increased costs for compliance that are passed on to the ratepayer. *(EmPower Maryland Efficiency Act (2008),Renewable Energy Portfolio Standard (2004) and the Greenhouse gas Emissions reduction Act (2009).

PJM has repeatedly warned that Maryland's rapid phase out of fossil fuel generation is outpacing the ability to bring in new renewable sources of energy. In addition, consideration needs to be given to the impact of the forced fossil fuel closures and an over-reliance on current unreliable renewables. The utility provider is paying billions of dollars on expensive compliance mandates. In addition, the Reliability Must Run (RMR) agreement to prevent immediate grid instability is at a premium cost to the ratepayer.

Currently, the legislator's, the appropriate government agencies and community stakeholders have too little information to develop a comprehensive statewide flexible plan of how to generate cost effective reliable and environmental friendly sustainable energy. While related to shipping , the renowned climate scientist, Prof. James Hanson recently published groundbreaking research suggesting the change in shipping regulations has caused the planet to heat up. For some, his work raises serious concerns and questions over the rush to push out green initiatives without fully scrutinizing the wider impact they may have. This same concern may be a valid one for all of us as we take the opportunity to find future solutions to Maryland's current energy and environment issues.

The Data Center Study is a subset of the larger concern of a potential energy crisis in Maryland resulting from moving away to quickly from using, coal, natural gas and nuclear to maintain a stable reliable and affordable rates in producing electricity.

Can the Data Center Study be amended to include language that allows for future more comprehensive relevant studies around information needed to show the environment and cost impact of the transition to past and future Green Energy legislative mandates, best practices of mixed energy options and solutions to provide reliable and affordable energy to ratepayers. The end result could be a coordinated State and Environment Energy Generation and Distribution plan of fiscal stewardship , collaboration in partnerships around our energy and environment sustainability issues that impact both the taxpayer and the utility ratepayer?

Specific to Data Centers. Can the cost burden to generate the needed power the Data Center be placed on the Data Center entity using geothermal or other options that consider the impact on environment and ratepayer?

My hope is that together we can negotiate a bipartisan win-win situation for all the Maryland ratepayers, the environment and the public utilities grid operators. To accomplish the above we definitely do need the Data Center Study as proposed with amendment.

SB0116_MDSierraClub_fwa_13February2025.pdf
Uploaded by: Mariah Shriner
Position: FWA

SIERRA CLUB
MARYLAND CHAPTER

P.O. Box 278
Riverdale, MD 20738

Committee: Education, Energy, and the Environment
Testimony on: SB 0116, Data Center Impact Analysis and Report
Position: Favorable with Amendments
Hearing Date: February 13, 2025

The Maryland Chapter of the Sierra Club supports SB 0116 but urges the Committee to consider amending the bill to better protect ratepayers, taxpayers, and the environment.

The bill requires a study of the "likely environmental, energy, and economic impacts of data center development" in Maryland. It requires participation of the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, with overall coordination provided by the Department of Legislative Services. Participation of other agencies, including the Department of Natural Resources, the Department of Assessments and Taxation, the Department of Commerce, and the Public Service Commission is also required, where necessary. The report required by the bill is due no later than September 1, 2026.

We applaud the sponsors in crafting a bill that will provide the general public and policy makers in the General Assembly and the Administration with useful information on the current and anticipated impacts of data centers. Data centers use vast amounts of electricity, among other impacts, and their potential proliferation in Maryland has the potential to negatively affect ratepayers and the environment.

Despite the potential scale of impact in Maryland, the current data and transparency on plans for both the near and longer term are surprisingly lacking. Data centers will have a substantial impact on electric power use and the grid. While systematic collated data is not readily available from the State, the best estimates that we know of – based on data collected by the Maryland Legislative Coalition Climate Justice Wing – indicate that Maryland has about two dozen commercial data centers that currently use about 235 megawatts (MW) of power. About a dozen new data centers have been proposed that, if all constructed, would use on the order of 5 to 7 gigawatts GW (i.e., 5,000 to 7,000MW) of power. If this growth occurs, it would require twenty to thirty times as much power as is currently used by data centers. For perspective, the 5 to 7GW of power is more than double all the electrical use by the 2.3 million households in Maryland.

In addition, data centers require backup power. While use of battery storage or green hydrogen (hydrogen gas produced by clean renewable sources) is a possibility, if backup power is supplied by diesel generators, the air pollution impacts from periodic testing can be significant. Emergency diesel generators tend to have high rates of air pollution, including particulates and nitrogen oxides. Moreover, in addition to periodic testing of hundreds of generators at each center, if the generators need to operate for weeks or more after a major power disruption, the greenhouse gas and regional air quality impacts could be substantial and comparable to or greater

than a large fossil-fueled electric generating plant.[1] Data centers can also require considerable volumes of cooling water and can have noise impacts.

In addition, the transmission and distribution implications of adding these large users to our state's grid can be substantial, as demonstrated by the current environmental concerns surrounding the Piedmont Reliability Project. It would also be valuable for the study to consider whether rate designs should be adjusted to ensure that costs of infrastructure added to the system are borne by the expected large new users. These rate designs should aim to protect general ratepayers, who should not bear the financial risk if planned centers do not come online. Finally, while data centers can strengthen the economy and tax base, because of tax preferences provided by the State and some local jurisdictions, those revenue benefits will be reduced.[2]

While the bill is a commendable step, we urge the Committee to consider two amendments that would strengthen it. First, we recommend that the study examine the merits of targeting state tax incentives to data centers that meet desired impacts on the environment, such as use of clean energy. Data centers could, in principle, be a significant source of funding for clean energy in our State, and we strongly encourage policies that will help bring these new sources online. [3] However, if data centers use fossil energy or simply cannibalize clean energy which is already planned to address Maryland's existing needs, this will lead to increased greenhouse gases as well as harmful particulates and ozone precursors that harm people's health.

In addition, because the State does not systematically collect data on these centers, we also strongly recommend that a reporting requirement be added so that State officials and other stakeholders can track and plan for these large users. This includes reporting on planned energy demand levels, sources, and backup power plans. We recognize that reporting on internal business plans is difficult, and urge the authors, in consultation with experts at the Public Service Commission and Office of People's Counsel to develop practical and transparent advance reporting requirements that will help policy officials, electricity-system planners, and the general public best anticipate and mitigate future growth. Policy makers need to plan for growth of capacity, yet at the same time avoid overbuilding that places future costs on ratepayers for projects that do not come to fruition.

SB 0116 offers a common-sense approach to improving the information available on these major energy users and with minor amendments it would be even more helpful. We believe that well-informed residents, State policy makers, and grid planners offer the best chance for navigating the potential challenges and benefits of data centers for our state.

Randy Lyon
Legislative Chair
Randy.Lyon@MDSierra.org

Josh Tulkin
Chapter Director
Josh.Tulkin@MDSierra.org

[1] Sierra Club Prince George's County Group, Testimony to the Prince George's County Council on CB-52-2024: Subdivision Regulations: Exemptions for Qualified Data Centers, November 14, 2024.
[2] See, for example, Marty Schladen, "Serious concerns raised over proliferation of Ohio data centers," Ohio Capital Journal, January 13, 2025.
[3] Fisher, Jeremy, Laurie Williams, Dori Jaffe, and Megan Wachspress. Demanding Better: How Growing Demand for Electricity Can Drive a Cleaner Grid. Sierra Club. September 2024.

OPPOSE SB 116 – Data Center Impact Analysis and Re
Uploaded by: Jason Ascher
Position: UNF

Mid-Atlantic Pipe Trades Association

Education, Energy, and Environment Committee

To: Senator Brian Feldman, Chair; Senator Cheyl Kagen, Vice Chair; Members of the Committee
From: Jason Ascher, Political Director, Mid-Atlantic Pipe Trades Association.

OPPOSE SB 116 – Data Center Impact Analysis and Report

On behalf of the Mid-Atlantic Pipe Trades Association and our five United Association of Plumbers and Steamfitters Locals, which represent 10,000+ Plumbers, Steamfitter, Welders, HVAC Techs, and Sprinkler Fitters across Maryland, I ask you to **OPPOSE SB 116.**

For the better part of the last 20 years, the data center industry in Northern Virginia has continued to grow and provide significant tax revenue. At the center of that expansion are the United Association of Plumbers and Steamfitters members, especially the members of Steamfitters 602 and Plumbers Local 5. These jobs have allowed Steamfitter 602 to grow to a 6000-member Local Union. They provide jobs both during the construction and in the service/maintenance.

The industry is looking to move into Maryland and bring much-needed tax revenue to the state. With the loss of manufacturing and the old-style power plants data centers are the new heavy industry. While many sectors in construction have moved to the Labor Brokers and Wage Theft business model, the data center industry has worked to ensure their contractor are not violating labor laws, while providing a needed service that is not going anywhere.

For the reasons previously mentioned, I ask you to **OPPOSE SB 116**

Sincerely,

Jason Ascher
Political Director

7050 Oakland Mills Road, Suite 180
Columbia, MD 21046

M&A_Aaron Bast_Ironworkers_HB320 SB116_UNFAV.pdf
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TESTIMONY OF AARON BAST, BUSINESS MANAGER AND FINANCIAL SECRETARY TREASURER, IRON WORKERS LOCAL 5

BEFORE THE HOUSE ECONOMIC MATTERS COMMITTEE AND THE SENATE EDUCATION, ENERGY AND ENVIRONMENT COMMITTEE

IN OPPOSITION TO HB 270 / SB 116 – DATA CENTER STUDY BILL

Dear Chairs Wilson and Feldman, and honorary members of the House Economic Matters Committee and the Senate Education, Energy and Environment Committee:

I am Aaron Bast, Business Manager and Financial Secretary Treasurer of Iron Workers Local 5. Our union represents over 1,200 highly skilled ironworkers who contribute to major infrastructure projects across Maryland. We are proud to be part of the state's economic engine, supporting safe and reliable construction projects that provide family-sustaining wages and benefits to our members. I am here today to express our strong opposition to HB 270 / SB 116.

This legislation threatens to impede the development of crucial infrastructure projects, particularly the proposed hyperscale data center at Calvert Cliffs nuclear power plant. This $7 billion investment has the potential to create thousands of high-quality union jobs, from construction to long-term maintenance and operations. The passage of this bill would introduce unnecessary delays and regulatory uncertainties that could discourage investors and jeopardize these opportunities.

Our members have the expertise and training to deliver complex projects safely and efficiently. We work under stringent regulations to ensure compliance with environmental and safety standards, and we believe the existing regulatory framework is sufficient to address any concerns related to data center development. Additional studies and bureaucratic hurdles will only serve to stall progress and threaten the livelihood of thousands of workers who depend on these projects.

Beyond job creation, the Calvert Cliffs project represents a significant economic boost for Maryland, driving revenue for local businesses, generating substantial tax contributions, and positioning the state as a leader in clean energy infrastructure.

Iron Workers Local 5, 9301 Peppercorn Pl, Upper Marlboro, Md 20774

Delaying or complicating this project through HB 270 / SB 116 sends the wrong message to investors and could push similar opportunities to other states.

Iron Workers Local 5 urges the committee to reject this legislation and allow Maryland to continue fostering economic growth and job creation. Our union stands ready to support responsible development that benefits both our workforce and the communities we serve.

Thank you for your time and consideration.

Sincerely,

Aaron Bast
Business Manager and Financial Secretary Treasurer
Iron Workers Local 5

Iron Workers Local 5, 9301 Peppercorn Pl, Upper Marlboro, Md 20774

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Journeymen Pipe Fitters and Apprentices

602
STEAMFITTERS

Local Union No. 602

8700 ASHWOOD DRIVE • 2ND FLOOR • CAPITOL HEIGHTS, MD 20743

TELEPHONE: (301) 333-2356 • FAX: (301) 333-1730

AFFILIATED WITH AFL-CIO

Testimony of Chris Madello

Business Manager / Financial Secretary Treasurer, UA Steamfitters Local 602

Before the House Economic Matters Committee and the Senate Education, Energy and Environment Committee

In Opposition to HB 270 / SB 116 – Data Center Study Bill

Dear Chairs Wilson and Feldman, and honorary members of the House Economic Matters Committee and the Senate Education, Energy and Environment Committee:

On behalf of UA Steamfitters Local 602, our more than 6,031 Journeymen, Apprentices, and Helpers, and approximately 200 signatory contractors under the Mechanical Contractors Association of Metro Washington, I write today to express our strongest opposition to House Bill 270 and Senate Bill 116.

UA Steamfitters Local 602 represents highly skilled workers who are essential to the construction and maintenance of critical infrastructure, including data centers. While we recognize the importance of environmental and economic considerations, we believe that this bill imposes unnecessary delays and regulatory burdens that could stifle job creation and economic growth in our state.

The construction and operation of data centers, and specifically a hyperscale data center at Calvert Cliffs nuclear power plant, represents significant employment opportunities for union workers, offering family-sustaining wages and benefits. Our members are trained professionals who prioritize safety, efficiency, and sustainability in their work. Any prolonged study or additional regulatory hurdles could result in lost opportunities for our workforce and hinder Maryland's competitive edge in attracting data center investments.

Furthermore, Maryland has existing regulatory frameworks in place to address environmental and energy concerns. Adding another layer of analysis will only serve to delay projects that are already subject to rigorous review and compliance requirements. We urge the General Assembly to prioritize policies that promote workforce development and economic growth rather than imposing redundant studies that could deter investment.

In conclusion, UA Steamfitters Local 602 respectfully requests an unfavorable report on HB 270 / SB 116. Our members stand ready to support the responsible development of data centers in Maryland, ensuring that projects are completed safely and efficiently while providing economic benefits to local communities.

Thank you for your consideration.

Sincerely,

Christopher M. Madello

Chris Madello
Business Manager / Financial Secretary Treasurer
UA Steamfitters Local 602

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Position: UNF

PLUMBERS LOCAL UNION NO. 5

UNITED ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF THE PLUMBING AND PIPE FITTING INDUSTRY OF THE UNITED STATES AND CANADA, AFL-CIO

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Testimony of Terriea "T" Smalls, Business Manager and Financial Secretary Treasurer

UA Plumbers & Gasfitters Local 5

Before the House Economic Matters Committee and the Senate Education, Energy and Environment Committee

In Opposition to HB 270 / SB 116 – Data Center Study Bill

Dear Chairs Wilson and Feldman, and honorary members of the House Economic Matters Committee and the Senate Education, Energy and Environment Committee:

I am Terriea "T" Smalls, Business Manager and Financial Secretary Treasurer of UA Plumbers & Gasfitters Local 5, representing over 1,900 dedicated members and 400 apprentices. I am here today to express our strong opposition to HB 270 / SB 116, which seeks to mandate an extensive study on data center development in Maryland. While we acknowledge the intent of the bill, we believe it undermines economic opportunities and threatens job security for our highly skilled union workforce.

Data centers are a critical component of Maryland's infrastructure and economic growth, providing well-paying jobs for tradespeople like our members. The construction and ongoing maintenance of these facilities create long-term employment opportunities, supporting families and strengthening local economies. HB 270 / SB 116, however, introduces unnecessary bureaucracy and regulatory uncertainty, which could delay or deter future projects and investment in our state. Of particular concern is the envisioned hyperscale data center at Calvert Cliffs, which you currently oppose, and which this legislation certainly hampers.

Our union members possess the expertise to install and maintain complex mechanical systems that meet the highest industry standards for safety and environmental compliance. The regulatory processes already in place ensure that data centers operate within established environmental and energy guidelines. Additional studies and oversight, as proposed in this legislation, would only serve to duplicate existing efforts, leading to project delays and potential job losses.

Moreover, the economic benefits of data centers extend beyond direct employment. These projects stimulate local supply chains, generate significant tax revenue, and contribute to Maryland's goal of becoming a leader in technology and innovation. HB 270 / SB 116 could hinder this progress by introducing new layers of compliance that could discourage future investment.

In conclusion, we urge the committee to oppose HB 270 / SB 116. Our members stand ready to support responsible development that balances economic growth with environmental stewardship. We believe that Maryland can continue to attract and sustain data center investments without imposing additional burdens that threaten jobs and progress.

Thank you for your time and consideration.

Sincerely,

Terriea "T" Smalls
Business Manager / Financial Secretary Treasurer
UA Plumbers & Gasfitters Local 5

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Position: UNF

Mechanical Contractors Association of Metropolitan Washington

Testimony of Thomas Bello, Executive Vice President
Mechanical Contractors Association of Metropolitan Washington (MCAMW)

Before the House Economic Matters Committee and the Senate Education, Energy and Environment Committee

In Opposition to HB 270 / SB 116 – Data Center Study Bill

Dear Chairs Wilson and Feldman, and honorary members of the House Economic Matters Committee and the Senate Education, Energy and Environment Committee:

I am Thomas Bello, Executive Vice President of the Mechanical Contractors Association of Metropolitan Washington (MCAMW). I am here today to express our strong opposition to HB 270 / SB 116.

Our organization represents 200 construction contractors, employing some 10,000 workers and 1,000 apprentices across the DMV region. This includes local unions, hiring halls, and apprenticeship training centers of the Mid-Atlantic Pipe Trades Association throughout Maryland, as well as our affiliates within the Building Trades who operate additional hiring halls and training programs in the state. Together, our economic footprint generates approximately $2 billion in annual revenue and contributes $500 million in state, federal, and local taxes every year.

While we recognize the intent of this bill to study the environmental, energy, and economic impacts of data center development, we firmly believe that it introduces unnecessary bureaucratic hurdles that threaten critical economic opportunities and job creation. Maryland is currently poised to host a transformative project with the envisioned hyperscale data center at Calvert Cliffs nuclear power plant. This project represents some $7 billion in state and local investment and promises to create thousands of union jobs, including opportunities for skilled tradespeople in our industry.

The proposed legislation introduces uncertainty and potential delays to this significant development, which could jeopardize the economic potential and long-term viability of the project. Our members possess the specialized expertise to build and maintain the sophisticated mechanical systems required by such large-scale facilities. Further regulatory reviews and studies, as proposed in this bill, would only duplicate existing oversight mechanisms and delay much-needed employment opportunities for our highly skilled workforce.

Mechanical Contractors Association of Metropolitan Washington

Additionally, the hyperscale data center at Calvert Cliffs would provide substantial benefits to Maryland's economy, including boosting local businesses, generating sustainable revenue streams for state and local governments, and positioning Maryland as a national leader in clean energy and technology infrastructure. The passage of HB 270 / SB 116 risks sending a message that Maryland is a difficult place to do business, potentially driving this and other investments to neighboring states.

We urge the committee to consider the long-term economic and employment implications of this legislation and to oppose HB 270 / SB 116. Our members and contractors are ready and committed to ensuring the responsible and efficient development of data centers in Maryland that will benefit both workers and communities alike.

Thank you for your time and consideration

Respectfully submitted,

Thomas L. Bello
Executive Vice President
Mechanical Contractors Association of Metropolitan Washington