New York's Data Center Crisis

Data centers in New York are seeking more than 9,000 megawatts (MW) of new electricity — about 1.5 times the power consumption of every household in the state in 2024.[1] This gold rush for electricity comes after New York experienced a 44 percent increase in residential rates between 2020 and 2025, above the national rate increase of 32 percent.[2] Greenlighting these data centers will further drive up power bills, harm local communities, and undermine the state's Climate Leadership and Community Protection Act (CLCPA).

Data Centers Are a Fast Track to Unaffordable Electricity

Experience from New York's disastrous venture into cryptocurrency mining shows that increased electricity demand will result in higher prices, regardless of who pays for new infrastructure. Demand for cryptocurrency-driven computing power is costing upstate households $204 million in additional electricity bills annually.[3] And unlike crypto-mining computers, which are sensitive to electricity prices, data centers that power artificial intelligence (AI) plan to run even during times of peak electricity demand, raising the total volume of grid infrastructure needed to keep the lights on and thereby increasing costs.[4]

All New Yorkers are part of the same, single market for wholesale power generation, managed by the New York Independent System Operator, or NYISO. As a result, both in-state and out-of-state power demand impacts electricity prices.[5] When demand peaks, transmission chokepoints cause localized price variation — but high prices in one region will also raise prices across the state.[6] That's because new demand from data centers must be met by additional electricity generation and raises wholesale prices across NYISO's electricity market.[7] These increased costs are passed to ratepayers through a supply charge or purchase price adjustment.[8]

According to NYISO's annual reliability plan, data center expansion poses a risk to reliability because additions far exceed the ability to build new electricity sources.[9] As electricity demand begins to outstrip supply statewide, expensive emergency resources like dirty old power plants will be called into service more frequently, and blackouts may become more likely.[10] If NYISO determines that the market is unlikely or unable to meet the shortfall in generation, the system operator may side-step the market entirely by allowing utilities to directly recover the cost of building new power plants from ratepayers.[11]

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There Is No Quick Fix to the Data Center Electricity Problem

Governor Kathy Hochul claims that New York can continue to build data centers without impacting electricity prices, so long as data centers cover the costs of utility expansion.[12] Unfortunately, while this assurance could mean almost anything,[13] there are no easy solutions to the basic supply-demand mismatch created by data centers. Additionally, any proposal to charge special rates will run up against legal limits. For example, federal law does not give states discretion to charge data centers higher rates, and the U.S. Federal Energy Regulatory Commission (FERC) has overturned higher rates for crypto mining.[14]

Requiring data centers to pay for their own grid upgrades ignores a whole range of transmission costs that will arise from building additional power plants to meet demand; these costs would likely be passed onto ratepayers. New generators are often forced to pay for transmission upgrades to connect to the grid, which impacts their bidding price in the wholesale market.[15] It's also possible that the bursting of the AI bubble will leave New York with extra electricity infrastructure that, if not paid for by data centers, will instead be covered by regular ratepayers.[16]

Another way for data centers to "pay their fair share" is for them to opt out of the grid entirely and rely on off-grid generation.[17] Because new generation is experiencing supply chain bottlenecks, data centers compete with existing grid-connected customers for a limited number of newly built power plants.[18] Off-grid data centers may alternatively procure their power by simply taking existing generation off the network.[19] This leaves behind unused power lines built to support those power plants[20] and may necessitate new transmission spending to fill the gaps.

Data centers also often build less efficient, dirtier gas plants to serve their off-grid operations.[21] Increased natural gas consumption squeezes on-grid power plants by creating severe volatility in local gas markets, straining pipeline capacity as these plants buy transmission rights from the secondary market on short notice.[22] Because the price of electricity is often set by the most expensive gas generator in use, even off-grid gas consumption raises electricity prices across the board.[23]

Data Centers Imperil New York's Climate Goals

Data centers disproportionately use dirty energy, and nationally their carbon footprint is 48 percent higher than electricity generated for other uses in the U.S.[24] Claims of growing reliance on renewable energy are misleading; research shows that even when data centers increase renewable electricity deployment, they still increase overall emissions.[25] That's because while some data centers claim that they will use renewables, there is no reason to believe that this renewable energy would not have been built and used to serve other consumers in lieu of fossil fuels. In fact, data center demand is already leading to a surge in natural gas generation and will bolster coal use nationally.[26]

Governor Hochul's administration has cited an alleged insufficient market capacity to deliver renewable energy as a justification to gut the CLCPA, which requires the state slash fossil fuel use by scaling up renewable energy.[27] Meanwhile, Governor Hochul has also claimed that data centers should simply bring their own new clean energy.[28] While renewable energy is capable of displacing fossil fuel use on the electric grid, the need for storage and power lines to balance renewable

production across large areas may limit the ability for data centers to "bring [their] own new clean energy."[29] Some of the proposed data centers in New York have power needs as high as 500 MW (enough to power over 600,000 households in the state).[30] Providing this power entirely with on-site wind or solar would require renewable farms over 4 and 12 times the size of the largest currently operating wind and solar facilities in the state, respectively, combined with battery storage to guarantee 24/7 power.[31]

Marginal Economic Benefits Come at Significant Public Cost

Data center developments enrich corporations by consuming massive quantities of electricity while creating minimal permanent jobs. For example, the private equity firm Apollo owns Stream Data Centers, which proposed an $11.2 billion, 500 MW data center at the STAMP (Science, Technology & Advanced Manufacturing Park) economic development site in Genesee County.[32] This project is promising a scant 125 permanent jobs paying an average of $88,461 each per year — $11 million total.[33]

At the STAMP location, the New York Power Authority (NYPA) frequently offers cheap power to encourage investment.[34] Some data centers have attempted to access these deals, although it's unclear to what degree Stream will benefit from NYPA-subsidized power.[35] Based on the tax information provided by the Genessee County Industrial Development Agency, Food & Water Watch estimates that the facility will pay $225 million per year for electricity — 5.1 cents per kilowatt-hour (kWh).[36] In contrast, residential customers in the same service area pay 17.22 cents per kWh.[37] At the residential rate, this data center would pay $754 million annually for electricity.[38]

In addition to cheaper electricity, the Stream data center project is receiving tax breaks. Over 30 years, these tax exemptions are worth $774 million (after accounting for the additional $26.7 million that Stream is providing in its Payment in Lieu of Taxes, or PILOT, agreement). This far exceeds the 30-year cost of the salaries for the 125 permanent jobs ($330 million).[39] A government cost-benefit analysis of this project does not compare the value of these exemptions to the additional tax revenue and employment income that the project would bring, but instead finds that the project is better than nothing.[40] Evidence from the New York cryptocurrency mining boom found that the resulting higher electricity prices more than offset any additional PILOT revenue, and that these rising prices negatively impacted other manufacturing investment.[41]

Data Centers Are Bad Neighbors

Water is another resource under threat from the data center boom. The amount of water consumed by U.S. data centers more than tripled from 2014 to 2023.[42] By 2028, U.S. data centers could use as many as 720 billion gallons of water each year just to cool AI servers. This is equal to over 1 million Olympic-size swimming pools — or enough water to meet the indoor needs of 18.5 million American households.[43]

The industry is touting "closed-loop" cooling systems to reduce this water footprint. But these use either air cooling (requiring giant fans) or evaporation to some degree, and it is not uncommon for them to lose 25 percent of their water volume per month.[44] But all of this is just a drop in the bucket compared to the water used when producing the electricity required to power data centers — making up an estimated 71 percent of data centers' water footprint.[45]

Water withdrawn to cool data centers can lower water levels from the source, impacting fish and other aquatic life.[46] Additionally, the cocktail of chemicals added to minimize corrosion and other issues will eventually be released when water systems are flushed, consuming more water and posing water quality concerns.[47]

Data centers also have noisy cooling systems that create headaches for nearby communities and disrupt their sleep.[48] Residents in Loudon County, Virginia, a data center epicenter, liken the constant buzzing of data centers to a big fan or lawn mower running 24 hours a day, even with their windows closed.[49]

In addition to the noisy fans, data centers rely on backup generators more than any other type of development, with some housing hundreds of generators.[50] Diesel generators emit harmful pollutants like nitrogen oxides (NO_x) at levels 200 to 600 times higher per unit of electricity produced compared to newer gas plants.[51] NO_x, along with additional hazardous air pollutants like carbon monoxide and particulate matter, contribute to smog[52] and exacerbate childhood asthma cases and elderly cognitive decline.[53] Such air pollution can travel far from the source, exacerbating asthma and costing millions in public health costs.[54]

Conclusion

Amid rapidly increasing energy costs and renewed pressure to weaken environmental laws, a data center boom threatens to impoverish New Yorkers in order to enrich big tech corporations. The decision is simple: New York must choose climate protection and affordability over data centers. Promises of a regulated, affordable data center industry are inherently flawed, especially as the development of those regulations is rushed and incomplete. Instead of half measures, New York's legislature must pass S9144 / A10141, a bill which would impose a moratorium on data centers until these complex issues can be truly understood and addressed in a way that protects our communities.[55]

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