

## AI DATA CENTERS COMING TO A COMMUNITY NEAR YOU

We are told AI data centers represents progress — economic growth, innovation, leadership in technology. But before we measure its benefits, we must measure its footprint. Not just in dollars — but in land, air, water, and what can be called ether: *the digital layer that now overlays our physical world.*

### First, **Land.**

Data centers are not small facilities and Lancaster County, alone, has 6 proposed sites. They permanently transform acres of soil into concrete and steel. That land will no longer absorb rain, grow food, or support habitat. Transmission corridors follow. Substations expand. What begins as one structure often becomes an industrial footprint. Once sealed, land rarely returns to its natural state. Additional land is required in order to create a waste area for all the electronic parts and chips associated with the vast number of computers. We must ask: is this the highest and best use of this ground, and is the community truly consenting to that transformation?

### Second, **Air.**

These facilities demand massive, uninterrupted electricity. Even in regions with renewable energy, increased demand often triggers backup generation — natural gas plants, diesel generators, and/or peaker units. That means emissions: nitrogen oxides, fine particulate matter, ozone precursors. PM2.5 does not stay within property lines. It enters lungs. It affects children, the elderly, and those with asthma or heart disease. If this project increases regional load, what is the cumulative air impact? And who bears that burden?

### Third, **Water.**

AI data centers generate intense heat. Cooling systems can consume millions of gallons of water annually. In some designs, that water is evaporated. In others, warmer water is discharged back into local systems. In Lancaster County, we have been informed that a closed-loop system will be used. In other areas of the country where closed-loop systems were said to be in use, the water was eventually injected deep within the ground, mixing with the underground waters, drawn on for wells and water towers. The reason the mixing of waters is an issue, is because the water used to cool the systems, picks up the heavy metals and toxins in the system and becomes a carrier of that contamination. What might be the long term health risks of that contaminated water? In a time when aquifers are stressed and drought cycles are intensifying, we must ask: what is the long-term draw on our watershed? Will local residents and farmers compete with servers for water?

### Fouth, **Ether** — *the digital realm this facility serves.*

We are told that data is intangible, that AI exists “in the cloud.” But now, complexes are being constructed to host the “cloud”. This cloud breathes air, drinks water, makes a continuous noise, and emits high levels of Electromagnetic frequencies. Ether is not weightless. It has a footprint and a cost, which is borne locally.

## **Fifth, Sound and Vibration**

Noise is generated from the data center's cooling system and the backup generators. This noise is often characterized as buzzing, whining, or a low-pitched roar. This low pitched roar is low frequency sound waves which travel longer distances through the air and through the ground. Low frequency sound waves are not able to be absorbed as well as other sound waves, thus not blocked by the typical sound barriers. During the day, with all the day-time noises, it can be tolerated by those living a distance from the data centers, but those living in the general area, are at risk of stress which can impact health. At night, when the typical day noises are silent, these frequencies interrupt sleep cycles. The quality of life of local residents, becomes at risk. Frequencies too high or low for people's physical ears to hear, are heard by birds and animals in the area. It can interfere with animals communication with each other. It can produce stress which negatively affects reproductive systems. Stress triggers hormonal responses, such as cortisol and adrenaline. These hormones divert energy away from normal living and cause a drop in overall productivity, such as seen in cows' milk production.

## **Sixth, Electrical Consumption**

Large-scale data centers often demand 50 to 100 megawatts of electricity or more, comparable to the electricity used by a small city. More than just the demand for adequate electricity, more high tension power lines and sub stations are needed to get electricity to the data centers. Who pays for the installations of the power lines and sub stations? Who pays for the volume of electricity needed to run a data center? In order to offset electricity usage, they are urging municipalities to move toward green energy for the general public. A solar field can produce 50 MW of power and would require approximately 400 acres of land, besides setbacks, access roads, etc. This turns into more than extra costs, it also turns into a land grab to create green energy for us. Spiking energy costs are already a reality for some of us. It is not that we are consuming more, it must be that we are paying for someone else to use it.

Our city and county officials ...which are our public servants... have been moving forward in plans to build these AI Data Centers. They have been paid very liberally to allow them to be built. This is not intended to be an anti-technology article. It is a pro-accountability article. Are we just going to sit idly by and allow our communities and lives to be disrupted without holding our local officials/public servants accountable?

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