

# **XAI in Memphis — What you need to know**

## **What is xAI?**

- XAI is a company founded by Elon Musk. Its South Memphis data center powers X's chatbot 'Grok.'
- The data center is located near predominantly Black communities in South Memphis, including Boxtown.
- In order to meet its enormous power needs, xAI installed 35 polluting methane gas turbines at its South Memphis data center without any permits.
  - XAI essentially built a power plant without any permits or oversight.

## **What's up with the gas turbines?**

- The methane gas turbines at the xAI facility emit smog-forming pollution and hazardous chemicals like formaldehyde.
- Pollutants from these kinds of turbines are tied to increased rates of asthma, heart disease, respiratory illnesses, and even cancers.
- Despite claims from some local leaders, these turbines are not using the best available pollution controls, known as Selective Catalytic Reduction (SCR).
  - Aerial images showed that none of the turbines at the xAI facility were fitted with SCR technology.
  - During a webinar held by the Greater Memphis Chamber of Commerce, a representative from xAI said the turbines would have to be "retrofitted" with SCR technology.
  - If it receives an air permit for 15 turbines, xAI would not be required to install SCR technology until September—after this year's peak smog season.
- The number of types of turbines at the xAI facility likely made the data center the top emitter of smog-forming nitrogen oxides in Shelby County—emitting more NOx than the airport and the Valero oil refinery nearby.
- While some of the 35 turbines have been removed from the xAI site, it's unclear how many are still on the site. There are also concerns that some turbines and simply been moved closer to xAI's second South Memphis location in Whitehaven.

## **Did xAI's gas turbines need a permit?**

- XAI's polluting methane gas turbines needed permits before they began operating.
- There is no local, state, or federal exemption that allows xAI to run its polluting gas turbines for a year without a permit.

- The Shelby County Health Department, the Greater Memphis Chamber of Commerce, and Mayor Paul Young have never pointed to a specific exemption that would apply to turbines the size of those at the xAI site.
- Local rules make it clear that xAI's turbines require a permit, saying:
  - “No person shall begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the [Health Officer] a construction permit...”
- Former high-ranking officials at the Environmental Protection Agency debunked “loophole” claims, telling a reporter “There needs to be a permit beforehand...you don't just get that first year for free.”

### **Lack of local leadership**

- An unknown number of local officials signed non-disclosure agreements with xAI, presumably preventing them from sharing information about the project with the public.
- This spring, aerial images revealed there were 35 turbines at the xAI data center, nearly double what was previously known. Either local leaders like Mayor Young were unaware of what is happening at the xAI site or were withholding important information from the community—both are unacceptable.
- After it was discovered that there were 35 turbines on site, Mayor Young claimed that only 15 of the turbines were being operated. But follow-up thermal images quickly debunked that claim, showing that 33 of the turbines were emitting significant amounts of heat, indicating they were running. The mayor has continued to double-down on this claim, despite the thermal images.
  - Mayor Young has already seemingly been duped by xAI once, why should we trust him?
- Mayor Young has drawn significant criticism for touting the financial benefits of xAI. Even Shelby County Mayor Lee Harris has questioned xAI's commitment to consistently paying taxes, telling reporters “It is just what companies say in my experience. They say that and then they end up not paying taxes.”

### **Failure to be transparent**

- Throughout xAI's presence in Memphis there has been a concerning lack of transparency around the company's operations.
- Even local leaders were caught off guard by the announcement of the new facility. Many were also surprised to learn that the data center would be powered by dozens of polluting gas turbines.
- XAI has failed to answer basic questions about its operations and the impact they may have on Memphis families.

## **Air pollution in the Memphis metro area**

- Residents of the Memphis area are being exposed to unhealthy levels of air pollution—especially ozone pollution, which is better known as smog.
  - Smog hurts communities and can cause increased rates of asthma and other respiratory illnesses.
- The last four years of air monitoring data show that the Memphis metro area is violating national smog standards. The number of monitors in the Memphis metro area with ozone concentrations that clearly violate federal standards has doubled.
  - Just last week, community groups filed a petition to the EPA, urging the agency to redesignate the Memphis metro area as in nonattainment of national standards for ozone.
- The American Lung Association recently gave Shelby County an “F” for ozone pollution.
- Last fall, Memphis was named an asthma capital of the United States.
- Shelby County has the highest rate of children’s asthma-related emergency room visits and hospitalizations in Tennessee.
- Studies show that Boxtown, the neighborhood closest to the xAI data center, faces a cancer risk four times the national average.

## **What’s going on with xAI’s second data center in Whitehaven?**

- Right now, xAI is building a second South Memphis data center, this one in the Whitehaven community.
- Again, there is a stunning lack of transparency around this site, creating significant questions. How will it be powered? Will xAI build another methane gas turbine installation? Where will it get its water?
- We know that xAI had explored building as many as 90 polluting methane gas turbines at the Whitehaven data center.
- It’s been reported that xAI may be constructing a large turbine installation just across the state line in Southaven, Miss. The reported site is roughly a mile from the Whitehaven data center.
  - Air pollution doesn’t know borders. It doesn’t stop at the state line. Running dozens of polluting turbines at this location would threaten air quality for families in South Memphis as well as those in Southaven.

## **What can be done?**

- The Shelby County Health Department can and should deny the pending air permit for 15 of xAI’s turbines.
- Memphis’ charter gives the director of the Shelby County Health Department the emergency powers to require companies to reduce or discontinue emissions. SCHD should use this power to shut down xAI’s turbines.

- MLGW's own charter and policy manual appear to give the MLGW Board a role in deciding the terms on which the utility will add or improve infrastructure, which means it has a role in regulating xAI's data centers.
- Both the Memphis and Shelby County Mayors should prioritize creating zoning changes and increasing transparency around major industrial projects like this one to ensure this does not happen again.