

Facts About Data Centers



DATA CENTER NOISE

FICTION: Data centers are loud and disruptive.

FACT:

- Designed with advanced sound mitigation systems and required to meet strict local and state noise regulations.
- Typical noise levels are comparable to everyday environments and significantly lower than many industrial uses.

NOISE COMPARISON

(Approximate decibels (dB) Levels):

- Conversation: 60 dB
- Data Center: 65 dB
- Vacuum: 70 dB
- Power Tools: 90+ dB

In most cases, data centers are quieter than many everyday activities.

DATA CENTER WATER

FICTION: Data centers use excessive amounts of water.

FACT:

- Use a closed-loop cooling system, where water is recirculated rather than continuously consumed.
- Water use is limited to small, periodic replenishment (approximately 1% or ~650 gallons).
- Significant investment in advanced, high-efficiency cooling systems beyond traditional designs.

Initial fill expected to use less water than a coffee shop uses in about two months.

DATA CENTER POWER

FICTION: Data centers overload the grid and take power from residents.

FACT:

- Coordinated with utilities, not tied to neighborhoods.
- On-site power reduces grid reliance.
- Reuse existing electrical infrastructure.

Power is planned, managed, and supplemented, not taken from the community.

How Modern Facilities Minimize Community Impact



LOW-FREQUENCY SOUND

- Modern facilities are designed to reduce and control low-frequency sound at the source.
- Newer equipment (including turbines and mechanical systems) is built with improved acoustic performance.
- Intake and exhaust systems use specialized silencers tuned for low-frequency ranges.
- Equipment is enclosed in multi-layer acoustic systems designed to absorb sound.
- Site layout uses distance, orientation, and natural buffering to limit off-site impact.

HOW SOUND IS CONTROLLED

- Systems are modeled in advance using both dBA and dBC metrics.
- Design focuses on what is actually perceptible off-site, not just meeting limits.
- Equipment can be fine-tuned after installation to further reduce sound.

VIBRATION CONTROL

- Equipment is isolated using inertia bases and spring isolation systems.
- Independent foundations prevent vibration transfer.
- Flexible connections stop vibration from moving through structures.
- No perceptible vibration beyond the immediate equipment area.

ENERGY SYSTEM APPROACH

- Uses a hybrid system combining on-site generation and grid support.
- Natural gas turbines provide steady, consistent power output.
- Diesel systems are used only for true backup situations.
- Consistent sound profile is easier to manage and minimize.

**DESIGNED TO OPERATE 24/7
WITHOUT CREATING A NOTICEABLE
PRESENCE BEYOND THE SITE**

**GLOBAL
AI**

