Electricity Use

Support clean energy procurement for the facility's load

Vocalize support for clean energy generation to developers and other orders of government when a data centre is proposed. When possible, include clean energy projects within community benefits agreements. This ensures that the additional power demand from data centres adds to local renewable energy capacity, and helps to retire outdated, costly, and harmful fossil fuel generation.

Support on-site storage or microgrid capabilities

Encourage facilities to include on-site battery storage or microgrid capabilities to reduce strain on the grid during peak demand, extreme weather, and other contingency events. Vocalize this support, and any grid strain concerns, to your provincial/territorial government so they consider requiring microgrid capabilities for data centres.

It is important that behind-the-metre power generation comes in the form of clean energy and battery storage to reduce the environmental cost, as in North America the majority of this power is natural gas generated (S&P Global, 2026). Additionally, behind-the-metre power generation can increase the difficulty of ensuring transparent disclosures around power usage.

Require high-efficiency operations

When jurisdiction allows, update building codes and design guidelines to require best-in-class efficiency standards - minimizing overall electricity consumption and reducing pressure on grid capacity and infrastructure.

Resource: Best Practice Guide for Canadian Data Centres by Natural Resources Canada, 2025

The objective of this guide is to present the most up-to-date international best practices for optimizing data centre energy use and essential operations. The best practices are suitable for use by operators and users of the different types of existing data centres in Canada.



Condition land use approval on written assurance from the utility provider

Data centres should pay for the infrastructure required to serve them (including new generation, substations, feeders, and transmission upgrades) so that these costs are not passed on to ratepayers through rate increases. Before approving land use agreements, municipalities should press their electric utilities, project owners, and developers to demonstrate that their project will not increase residential electricity bills. Local governments could require written confirmation from the utility that required grid upgrades will be funded by the developer and not recovered from other ratepayers, and assurance that the project will not impact local grid reliability.

Case Study: Brooks, AB - Zoning Bylaw Amendment

The City of Brooks amended their Land Use Bylaw to classify data centres as a "discretionary use," meaning that any proposal requires a public hearing and must pass through the municipal development permit process. During this amendment they also added a definition of data centres, and requirements to the development permit application including:

- Submittal of a copy of Fortis' agreement allowing connection to their system,
- Submittal of a water consumption and disposal plan, including anticipated water usage and wastewater produced, and steps to be taken to minimize water consumption, and
- Noise level limits.



Water Use

Conduct water availability assessments and environmental screens

It is critical to have an understanding of the current state of your community's water security before adding a data centre to the mix - especially the groundwater, aquifers, and ecosystems on or adjacent to proposed data centre sites. These assessments should include existing sources of heavy water consumption (like agriculture or other industrial activity) and water system capacity constraints (like failing wastewater infrastructure) to better project cumulative impacts. Findings should be made publicly available and used to inform data centre permitting approvals.

Case Study: Mississauga Prologis Data Centre Proposal

During a Town Hall, Peel Region staff explained that the proponent (Prologsis) is required to submit a "maximum day demand" estimate, which is tested through a hydraulic model simulating the entire water network to identify any potential pressure or flow issues. Prologisis was also required to provide its maximum demand figures, which staff ran through the model and determined there was no concern with existing service levels (The Pointer, 2026).

Require the proponents identify water use needs , source of water and cooling technology (i.e. evaporative or closed-loop)

Make sure your community has all of the information on the facility's water impacts, including water use needs, water sources, wastewater discharge management, and cooling technology. Data centres should utilize the most water efficient cooling systems available to them, according to their load size and local environmental conditions. The construction process and day-to-day operation should integrate water-efficiency measures and onsite wastewater recycling. When possible, waterless cooling should be prioritized, followed by a closed-loop system with water recycling. Closed-loop systems may have unique implications for wastewater discharge, as they require chemical processes related to the recycled water. Proponents should disclose water use and wastewater needs to the local government to ensure appropriate processes are in place to manage these uses and any related risks.



Include water-use requirements in permitting approvals, or building codes with penalties for non-compliance

Data centre permitting approvals should include a maximum, peak-demand water use estimate, not just an annual water use estimate - and a penalty if they surpass the limit. Building codes and design guidelines should require or recommend real time water and wastewater monitoring systems. Municipalities should seek disclosure of water use from the facility or utility provider on a regular basis to ensure water consumption does not exceed the maximum allowable limit.

Case Study: Nanaimo Water Usage Covenant

During the Development Permit Stage of the proposed data centre on East Wellington Road, staff were able to secure a covenant placed on the property's title pertaining to water usage. Water consumption was a key concern for residents, as over the course of a day the data centre is anticipated to use more than 61,000 litres, equivalent to about 200 people, or one car-wash facility (Rawnsley, 2025).

The covenant states, "[t]he average flow of water delivered to the Land does not exceed 6.5 litres per second over any 60-second period, and the average flow of water delivered to the Land does not exceed 0.8 litres per second over any 12-month period." If water usage goes beyond this limit, an annual charge of $60,000 is applied. Should water usage exceed the limits, owners would have 14 days to pay the rent charge, while escalated court actions are also possible for extended violations.

Engage in regional water resource coordination

Water use does not just impact the municipality where the data centre is located but can have downstream impacts on neighbouring communities. For this reason, it is critical to engage with neighbouring municipalities and watershed organizations within your watershed to ensure that the added water consumption from the proposed data centre will not present a risk to their water security. Additionally, engaging regionally on data centres can help to develop and strengthen approaches to assessing water risks, and promote environmental conservation and protection.

Require that operators pay for water infrastructure needed to service their data centre

The cost of upgrades or new construction of water or wastewater infrastructure to service data centres should not be passed on to ratepayers. **The developer should pay for any infrastructure requirements through development cost charges**, and the municipality should retain ownership of new and upgraded infrastructure.

Case Study: Sturgeon County Meta Data Centre

According to a Sturgeon County news release, Meta will invest approximately $60 million in local infrastructure improvements, including roads and water infrastructure. The province of Alberta requires large data centres to bring their own power and pay for the infrastructure needed to support their operations.

Noise & Air Quality

When evaluating permitting applications, conduct an independent environmental screen of existing sources and levels of noise

Mandate independent noise impact studies both before construction (modeling) and within 60 days of occupancy to ensure actual operational noise meets limits. Noise impacts should be evaluated in the context of existing industrial activity and clustered data centre development, not assessed project-by-project in isolation. These assessments should be made available for public comment and review.

Establish strict noise limits and noise monitoring

Noise bylaws should include special care to limit noise at night, with clear consequences for non-compliance, recognizing that continuous low-frequency noise and intermittent generator testing can have outsized health and quality-of-life impacts. Monitoring data on noise should be regularly collected - paid for by the operator - and made publicly available upon request, and when possible, studies should seek an understanding of the effect of noise on wildlife. A robust public noise complaint system should be in place. Meaningful fines should also be in place for operators that violate noise limits. If necessary, cities should update their zoning codes to increase maximum fines.

Case Study: Nanaimo acoustic requirements within development permit

For the 200,000 square-foot data centre planned on East Wellington Road, Nanaimo, the development permit includes strict conditions for acoustic mitigation. An acoustic engineer provided a report of recommendations to minimize potential noise, and as part of the conditions of the permit, the development must be in substantial compliance with the noise abatement plan. The actions listed in the plan include:

- screening of rooftop chiller units to meet predicted noise levels,
- screening of the emergency generator with enclosure and exhaust muffler, and
- submission of testing to confirm actual noise from the site once the project is operational and any additional management, operational, or mitigation measures that may be necessary to reach predicted noise levels.

Update design codes and guidelines to reduce noise and light pollution

Mandate that exterior HVAC equipment, backup generators, and other industrial equipment are enclosed with acoustic barriers, through zoning, building codes and/or noise bylaws. Ensure data centres align with municipal light pollution policies.

Collaborate with Provincial/Territorial government to regulate impacts to air quality

Engage with provincial/territorial governments on air quality concerns in your community. Many municipalities will need to collaborate with higher levels of government to regulate the use of backup generators, and requirements around energy load management and grid flexibility.

Discourage on-site fossil fuel generation for primary or routine operations

Municipalities may limit the use of on-site fossil-fueled generation (including natural gas turbines or engines and diesel generators) as a primary or extended power source, allowing fossil fuel-based systems only for true emergency backup where no feasible alternative exists. This can be done through land use powers, and building codes (when possible).

