Land Use Planning and Design

No two communities are totally alike in their land use policies and regulations, and the same can be said of data centre applications. Some communities may be contemplating data centre regulations and zoning in the context of an active data centre proposal, and some may be looking to the future with no applications underway. The tools explored below will be applicable to most communities, but depending on the context, some tools may be more accessible and appropriate than others. For example, Official Community Plan revisions can take considerable time - whereas zoning conditions may be applied more expeditiously.

Create and update definitions for data centres in land use policies

In some jurisdictions, definitions for data centres in zoning bylaws and official community plans lag the current realities of hyperscale AI data centres. For example, Kansas City revised their bylaws after their existing policies treated data centres as communications facilities akin to radio stations (Higgins, 2026). Without a definition for data centres in land use policies, these facilities could be approved as a 'warehousing' or as a 'storage facility' land use, or could include the adaptive reuse of existing buildings in land zoned for commercial or industrial use, despite having significantly more extensive environmental impacts than a storage facility of equivalent.

Case study: Terrace, BC - Directive to Staff on AI Data Centre Zoning

Staff at the City of Terrace have been directed to draft an amendment to the zoning bylaw, including a specific definition for a data centre. This is the beginning of a process of creating zoning rules to govern where the facilities could be located in the future. Currently, data centres are classified as a permitted industrial use and Terrace has industrial land directly in the downtown core.

Without the zoning change, a data centre could be built in the downtown core without triggering a public hearing. The zoning change will allow residents the opportunity to provide their thoughts on data centres during a public hearing.

Define data centres as site-specific zoning within Zoning Codes and Official Community Plans

Data centres are often classified as permitted Industrial land uses in municipal zoning bylaws, meaning that local governments may have limited ability to impose conditions on approval. Defining data centres as a Site-Specific Zoning or Direct Control Zoning, however, enables municipalities to craft tailored rules for a specific site. This can include requirements related to public hearings and consultation, water and wastewater use and discharges, conditions related to on-site energy production, assessment or infrastructure related to flood risk, and proximity to residential or other sensitive uses. The requirements a municipality is able to set varies by province.

Without incorporating data centres as a site-specific land use within the zoning code, council and the community has limited power to weigh in. If the proposal fits the current zoning bylaw and Official Plan, and no variances are required, the permitting process may just go through municipal staff.

Case Study: Burlington, ON - Motion proposing Directive to Staff

Burlington's Councillor Lisa Kearns plans to present a motion asking staff to report back on options to regulate the impacts of a data centre and options for new kind of land use, as well as a temporary bylaws to give the city time to complete additional studies. In Burlington, a two-story, 5,000 sq.-m data centre is at the late planning stage with little council input and no opportunities for public feedback because Burlington currently has no zoning bylaws or rules in its Official Plan related to data centres and no variances or amendments were required. The approval of site plans is delegated to City staff and requires no council vote.

Case Study: Nanaimo, BC - Zoning Bylaw Amendment

In 2023, Nanaimo changed data centre zoning from High Tech Industrial to Site-Specific use. The Zoning Bylaw defines data centres as "a building or buildings used for the storage and operation of networked computers or telecommunications systems and associated components, and may or may not include employees on-site. (4500.200; 2023-APR-03)". The site-specific zoning for data centres requires a noise abatement plan for all data centre uses, and a public hearing process.

Define data centres as a discretionary use

Within Industrial zoning districts, discretionary-uses allow for municipal planners to make recommendations to Council, and to specify standard or specific conditions of approval. Discretionary uses also mean that approvals must come through a public meeting of Council, which enhances public access and transparency.

Municipal planners review the project proposal to ensure it aligns with the Official Community Plan, other policies and community goals. The planner also has the ability to apply Specific Development Standards, or conditions such as applying buffer distances to limit the density of a specific-use, building sound walls, or limiting diesel backup generator hours. However, depending on the province, the proponent can appeal these decisions to the provincial Subdivision Development Appeal Board or equivalent.



Case Study: Toronto, ON - Directive to Staff on AI data Centre Zoning

In March, Councillor Rachel Chemos Lin brought forward a motion asking for greater clarity on whether AI data centres should have special zoning requirements instead of being included in as-of-right industrial zoning. The motion was adopted requiring city staff to report to the Planning and Housing Committee in the first half of 2027 on the subject of new AI data centres land-use compatibility considerations, processes relating to grid capacity and water usage, among other environmental, energy and affordability impacts, and recommendations for improvements.

Create zoning and overlay districts to designate appropriate areas for data centres

Overlay districts can restrict data centres in certain locations where they would conflict with housing, employment, transit or neighbourhood plans or promote the development of data centres within areas where there is existing infrastructure that could adequately support the needs of data centres.

Case study: Saint John, NB - Industrial Park Expansion

Saint John council unanimously supported an expansion of the Spruce Lake industrial zone to attract investment and fuel economic growth. Shortly after rezoning, Calgary-based Beacon AI Centres and Texas-based VoltaGrid submitted a proposal to build a 390 MW data centre on a 120-hectare parcel of land in the industrial park. VoltaGrid will also assemble a 190 MW gas-fired power-generating system on site. While council designated this area as appropriate for data centres, many residents are concerned about the proximity to residential areas (150 metres), the contamination of their well-water, and the loss of old-growth forest and wetlands to create space for the project.

Adopt data centre design standards or guidelines

These standards can address building height, footprint, enclosure of equipment, perimeter landscaping, and noise mitigation to reduce land use and community impacts. Considering building codes are largely provincial jurisdiction, municipalities may be limited in what they can suggest.

Case Study: Toronto, ON - Mayor signs onto Global Urban Data Centres Pact

Councillor Dianne Saxe drafted a motion urging Toronto to sign onto the Global Urban Data Centres Pact, which aims to set a vision for data centres that is sustainable and safe. While the motion was ruled out of order at council, Mayor Olivia Chow nonetheless agreed to sign the pact on behalf of the city. The Pact created by C40 Cities is signed by mayors who agree to a vision for urban data centres that are: strategically integrated into the city, accountable and community-focused, sustainable and resource-efficient, and an engine for cost-security and shared prosperity.

Require liability insurance

As a condition of a Development Permit, Council may require the applicant to provide and maintain liability insurance to protect municipal and public interests. This reduces the risk to the city in the event of concerns or issues flowing from the construction of the project.

Enact temporary moratoria

The speed and scale with which the data centre industry is moving challenges local governments to respond appropriately to the risks — and opportunities — that these projects may present.

A temporary moratorium on data centre development provides the municipality time to assess and improve rules governing data centres in response to rapid market change.

During a moratorium municipal staff will have time to research best practices and safeguards; study the environmental and utility impacts; assess fiscal impacts, including long-term service and infrastructure costs; develop potential zoning or performance standards; pursue other specific directions made by Council, and report findings and recommendations back publicly.

In drought-prone areas, a moratorium specifically on evaporative cooling systems can be used to protect community water sources.



More Councillors have come forward to present Motions in support of a Data Centre Moratorium

- City of Burlington, ON, Councillor Lisa Kearns
- City of Vancouver, BC, Councillor Lucy Maloney
- New Brunswick, MLA Megan Mitton

Passed Data Centre Moratoriums:

- Rocky View County, AB, Councillor Alison Whiting
- City of Mississauga, ON, Councillor Martin Reid
- City of Saskatoon, SK, Councillor Scott Ford
- Town of Oakville, ON
- Township of Centre Wellington, ON

Case Study: Hamilton, ON - Proposed Data Centre Moratorium

At the June 16 planning committee meeting, Hamilton Councillor Nrinder Nann put forward a motion to pause all development of “large-scale” artificial intelligence data centres in Hamilton. Councillor Nann put forward this motion because community members were expressing their concerns about a hyperscale AI data centre coming into the community, and asking important questions about water usage, noise, chemical fall-out, and community benefits, not yet addressed within municipal policies. Nann recognized that Hamilton’s code regulating data centres was outdated, built for data processing establishments that are very different from today’s AI hyperscale data centres.

The motion to pause data centre development passed unanimously at the planning committee meeting. The moratorium was strongly backed by the community with over 40 delegates speaking to offer their insights on AI data centres.

However, when the motion went to council to be ratified, it failed in a 10-6 vote. The day before the vote, an educational meeting for councillors was held with the AI data centre developers. The AI data centres proposed in Hamilton would support research at McMaster University and a nonprofit, Digital Research Alliance. The substantial investment and digital sovereignty arguments persuaded many council members to vote against the moratorium, so as to not jeopardize the proposed projects. A municipal framework to regulate data centres will still be developed by staff, without a moratorium.

Implement development levy agreements or development cost charges

Development levy agreements are fees charged by a municipality to recover the cost of necessary infrastructure to support the facility or growth. These charges prevent taxpayers from bearing the local infrastructure costs associated with development, such as electricity transmission infrastructure, watermains, natural gas pipelines and roads.

Request performance security through a performance bond or letter of credit

As a condition of a Development Permit, Council may require the proponent post and maintain a Performance Security, which may be a performance bond or letter of credit, to ensure the development is constructed and completed in accordance with the time frames and development standards required in the permit. In a rapidly growing industry with considerable speculation, this kind of intervention can protect the local government in the event of an incomplete or otherwise deficient project.

Require Municipal Servicing Agreements

When a development proposal involves a variance, the municipality may require the applicant to enter into a servicing agreement to ensure that the costs for providing appropriate servicing are clearly articulated, and that both parties agree to the cost-sharing for any upgrades. For example, Bell's project in the RM of Sherwood identified new infrastructure would be required for the project, including new watermains - but the public documents did not clarify who would pay for these projects.

These agreement may include: installing or construction of of storm sewers, sanitary sewers, drains, water mains and laterals, hydrants, sidewalks, boulevards, curbs, gutters, street lights, graded, graveled or paved streets and lanes, connections to existing services, area grading and levelling of land, street name plates, connecting and boundary streets, landscaping of parks and boulevards, public recreation facilities, or other works that Council may require, including both on-site and off-site servicing. For off-site servicing fees, council must be able to reasonably demonstrate that fees are commensurate with the future capital costs.

Local governments should also consider reviewing development levies to ensure that they adequately address the unique needs of large hyperscale projects, and the requirements of the municipality for greenfield development projects.

