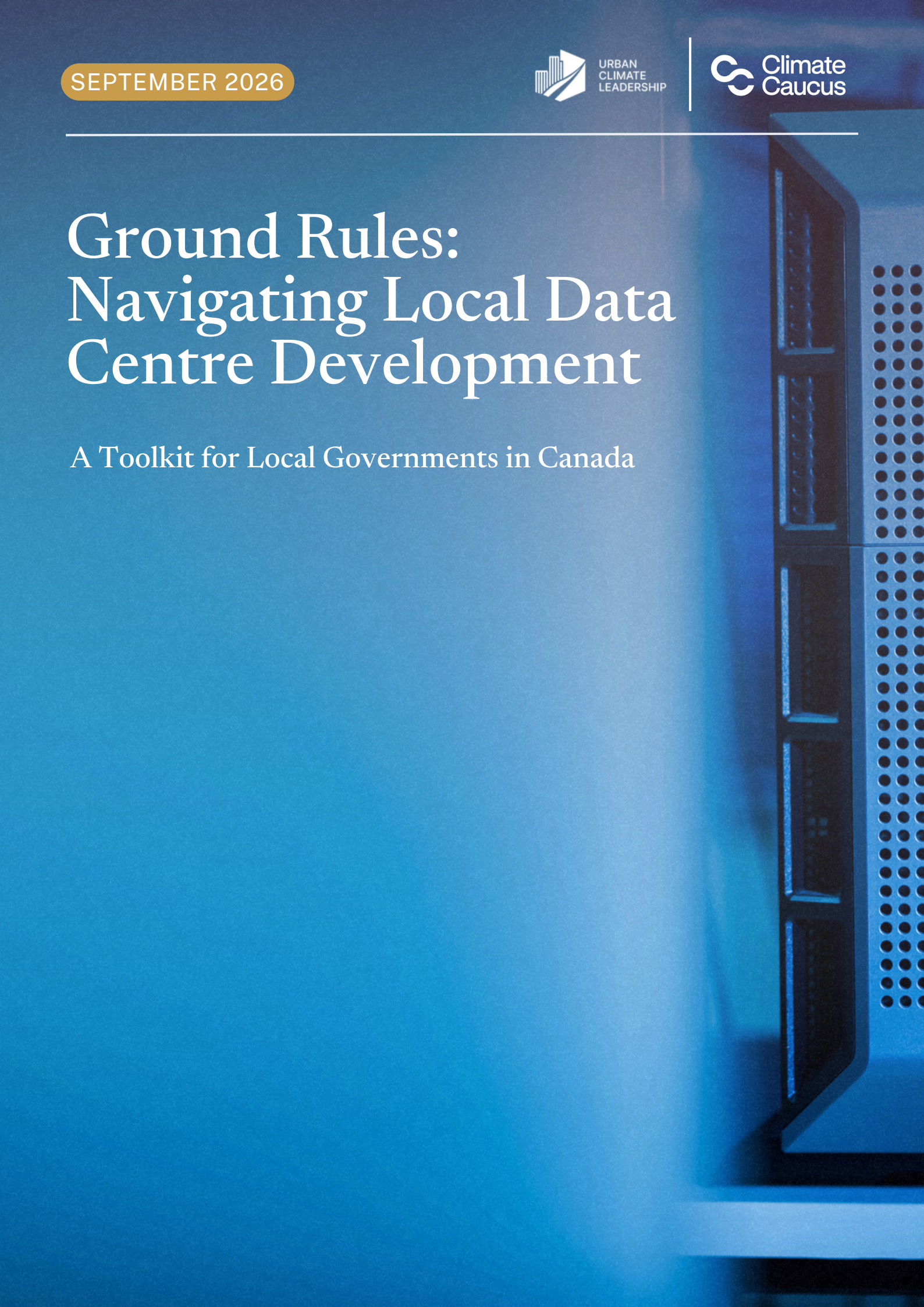
SEPTEMBER 2026

URBAN CLIMATE LEADERSHIP | Climate Caucus

Ground Rules: Navigating Local Data Centre Development

A Toolkit for Local Governments in Canada



About

About Urban Climate Leadership

A project of MakeWay, Urban Climate Leadership is dedicated to dismantling obstacles to equitable climate action by local governments. In acknowledging the distinctive challenges faced by Canadian small and large cities, the initiative assembles a diverse array of stakeholders to collaboratively propel systems-changing solutions.

About Climate Caucus

Climate Caucus is a non-partisan, national non-profit working at the intersection of two essential pillars of shared prosperity: local democracy and climate policy. As the largest network of climate-forward local elected leaders in Canada, we develop, launch and scale beneficial climate policies for communities and the country.



Contents

Table of Contents

1.0	The Current State of Data Centres in Canada	02
2.0	Summary of Data Centre Risks and Opportunities for Local Governments	04
3.0	Local Government Levers to Impact Data Centre Development & Case Studies	07
3.1	Land Use Planning and Design	08
3.2	Electricity Use	13
3.3	Water Usage	15
3.4	Noise and Air Quality	17
3.4	Economic Development and Community Investment	19
3.5	Community Engagement and Advocacy	21
4.0	Guiding Questions for Councillors	23
5.0	Conclusion	25
6.0	Resources	26

Introduction

The rapid expansion of Artificial Intelligence (AI) is driving unprecedented demand for computing capacity and accelerating the development of data centres globally. In Canada, this transition is supported by the national AI strategy, AI for All, which includes more than $2 billion in spending for programs to increase AI literacy and scale up adoption by businesses and government, with goals to increase AI uptake among Canadian businesses from 12 percent to 60 percent by 2034 and create up to 250,000 AI-related jobs by 2031. As federal and provincial governments signal openness to AI applications and investments, communities across Canada are seeing an influx in data centre proposals.

While data centres can provide opportunities for added tax revenue and community investment, they also raise concerns about energy demand, water use, land use, noise, air quality and alignment with local climate and community goals. The purpose of this toolkit is to support local governments in mitigating the associated risks and maximizing the potential benefits of data centre development in their communities.

This toolkit begins with an overview of the current state of data centres in Canada, providing context to the scale and regional distribution of data centre growth. It then summarizes the opportunities and risks data centres present for local communities, before outlining the policy tools, planning mechanisms, and decision-making levers available to local governments to impact data centre outcomes



The Current State of Data Centres in Canada

Data centres in Canada are increasing in number and scale. As of March, 2026, Canada's data centre landscape included 192 active facilities, but the nature of the industry is shifting dramatically: the 143 announced projects in Canada have an average capacity of 116 MW, which is more than ten times the average of the existing facilities (Carlo & Rolheiser, 2026). As the scale of infrastructure increases, the impacts are being felt in communities across the country - from Saint John, New Brunswick to the RM of Sherwood, Saskatchewan to Sturgeon County, Alberta. In Ontario alone, there are 15 planned data centre projects with a combined capacity of 2,202 MW (Logan & White, 2026). The data centre sector is forecast to represent about 13% of new electricity demand in Ontario by 2035 (Logan & White, 2026).

Although Canada is experiencing substantial data centre growth, the national picture remains distinct from other countries - notably the United States - in its scope and density. According to Data Center Map, the U.S. has roughly one data centre for every 63,000 people, compared to one for every 124,000 in Canada. This places Canada fifth for data centre density in the world on a population basis (MaRs & Mantle Climate, 2026).

Canada's data centre growth is taking place in the context of the federal government's AI for All strategy, which emphasizes the need for increased sovereign compute capacity. Ownership and use of existing data centre infrastructure in Canada has been characterized as 'highly international', with significant ties to US-headquartered users and financiers (Carlo & Rolheiser, 2026).

Canada's AI strategy highlights the country's "sustainable and predictable, but currently constrained" electrical grid as a foundation for AI infrastructure in Canada. The strategy draws attention to Canada's strategic advantage as of "one of the cleanest electricity grids in the world" (ISED, 2026). The strategy does not speak to local governments in the context of this infrastructure, but does forecast that Canada's approach will be to "link new data centre development with clean energy expansion, robust environmental standards, and tangible benefits for local communities, ensuring that Canada remains at the forefront of sustainable high-performance computing infrastructure" (ISED, 2026).

While much of Canada's existing data centre infrastructure is located in BC, Ontario, and Quebec, its future growth trajectory is largely rural. 92% of Canada's proposed data centres are planned for Alberta, despite the fact that the province's grid has an emissions intensity of three times the national average (Carlo & Rolheiser, 2026). Environment and Climate

Change Canada has confirmed that “data centres with their own power generation, not connected to the commercial grid, would not be covered” by Canada’s clean energy regulations (Noakes, 2026).

Alberta’s Bill 8 facilitates on-site gas generation for data centre projects, while requiring that projects pay for any transmission upgrades required for their projects (French, 2025). However, the Alberta Electric System Operator (AESO) is considering policy changes for a new “bridging” pathway to facilitate qualifying projects to access the electrical grid for up to three years. This would be a substantial increase from the previous cap Alberta had established for large-load customers (Potkins, 2026).

Behind-the-meter projects are not limited to Alberta: a data centre in Tantramar, New Brunswick will make a significant draw on the grid despite getting about half its power from on-site gas generation (Poitras, 2025). The Bell project in the RM of Sherwood, Saskatchewan has identified the need for future on-site natural gas-powered energy generation, and Canada’s largest data centre, the Meta project announced in Sturgeon County, Alberta, will feature a $4.6 Billion natural gas power plant on-site in combination with grid connectivity to power the gigawatt-scale project (Varcoe, 2026).

As data centres become increasingly common in Canada, local governments are important decision-makers in a complex regulatory environment, playing a critical role in ensuring that data centres are sited appropriately, that risks are mitigated, and potential benefits can be realized. The next section of this toolkit explores these variables further.



Summary of Data Centre Risks and Opportunities for Local Governments

Risks Associated with Data Centres

Public opposition to AI data centres is growing across Canada driven by concerns about how much land, electricity, and water these massive facilities consume. Polling from Angus Reid found that two-thirds (68%) of respondents would oppose a large AI data centre being built within a few blocks of where they live, suggesting widespread opposition (2026). Concerns are well-founded, considering the following:

Energy use:

- On average, a single query run through the generative artificial intelligence chatbot ChatGPT needs nearly 10 times more electricity than a standard Google search (International Energy Agency, 2024).
- A typical 100 megawatt data centre has the equivalent electricity consumption of roughly 40,000 to 64,000 Canadian households (Carlo & Rolheiser, 2026).
- Globally, data centres consumed an estimated 448 terawatt-hours of electricity in 2025; if data centres were a nation, they would be the world's 11th largest electricity consumer (UNU INWEH, 2026).

Water use:

- Data centres globally consumed 4.5 trillion litres of water in 2025, enough to meet the needs of more than 600 million people in sub-saharan Africa (UNU INWEH, 2026).
- The global AI demand is projected to account for 4.2 – 6.6 billion cubic meters of water withdrawal in 2027, which is more than the total annual water withdrawal of four to six Demarks or half of the United Kingdom (Li et al., 2025).
- Many facilities in Canada boast lower-usage, closed-loop cooling technology. While this technology uses less water, it also requires more energy (Han et al., 2026).
- Closed-loop cooling systems have also been linked to wastewater contamination, and can create environmental contaminants (James, 2026).

Noise

- Data centres emit constant and repetitive noise from industrial fans. This noise can be heard for hundreds of feet around them, impacting quality of life (Yañez-Barnuevo, 2026).

Raising electricity bills for residents

- Depending on the size of the data centre, residents may see an increase in their electricity bill.
- To meet the greatly increased electricity demand of hyperscale AI data centres, utilities may pass along infrastructure upgrades and new generation costs onto customers (Enoch & Pettigrew, 2026).
- Meta's data centre project near Edmonton could add up to $270–$460 to Albertans' electricity bills each year from 2027 to 2031, with the impact varying depending on each household's electricity provider and rate plan (Pembina Institute, 2026).
- Even when data centres bring their own power and pay for infrastructure upgrades, data centres powered by natural gas generators can increase costs for ratepayers by driving up demand (Rissman & Gimon, 2026).

Air quality

- Many data centres utilize backup diesel generators that emit fine particle matter (PM2.5), carbon monoxide, nitrogen oxides, and other air pollutants.
- The growing demand for AI is projected to push the total annual public health burden of U.S. data centers up to more than $20 billion in 2028, rivaling that of on-road emissions of California (Han et al., 2025).

Land use

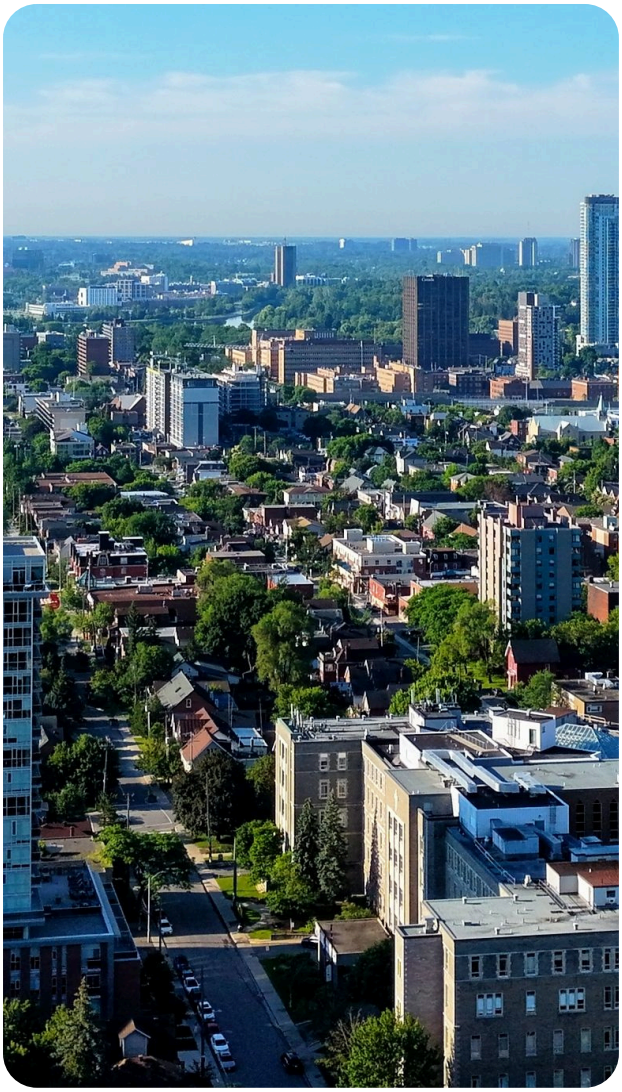
- Traditional data centres have a land footprint of about 10 acres but new AI hyperscale data centres can require thousands of acres. Projections for the Kineticor Data Centre in Alberta indicate this project will occupy 1,120 acres of land (Rinaldi, 2026). This data centre was publicly revealed to be a Meta data centre in July, 2026, and will be the largest data centre in Canada at completion (Varcoe, 2026).

Speed and scale of development

- Canada currently has about 337 MW of AI data centre capacity. Projects under planning or development will increase our AI capacity by 20,000 MW (Karadeglija, 2026).
- The scale and speed of AI development can be an impediment to transparency and meaningful public engagement.

Heat Islands

- Research suggests that data centres can increase surrounding land surface temperatures by an average of 2 degrees Celsius, and by as much as 9 degrees Celsius (Marinoni et al.. 2026).
- Another study observed 'substantial warming' in areas as far as 500 meters from these facilities (Shepherd, 2026).



Opportunities Associated with Data Centres

Communities can receive some benefits from hosting a data centre. Local governments should evaluate how the proposed data centre can be mutually beneficial for all parties. Potential benefits of the project that extend beyond the community could also be considered. For example, will the proposed data centre support health care, research, or science by providing scalable digital infrastructure?

Added tax revenue

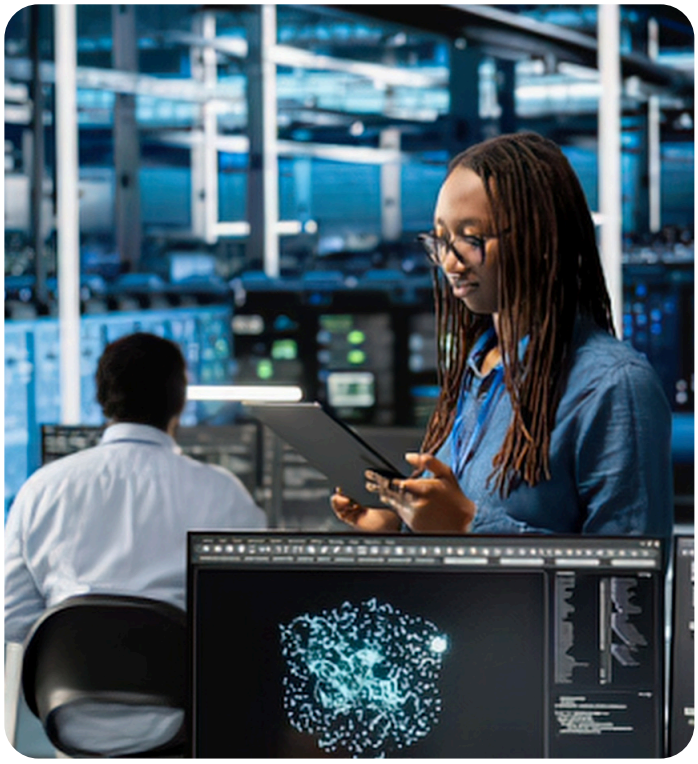
- Data centres can provide significant tax revenues, as long as the local government does not provide incentives in the form of tax exemptions or abatements to attract data centres.
- The exact revenue a municipality can bring in from property taxes depends on what the province allows to be taxed, and what business tax incentive policies and discretion are in place in individual communities.

Jobs

- The construction phase can create thousands of short-term jobs on site in some capacity (Enoch & Pettigrew, 2026).
- However, once operational, a data centre does not employ many workers. For example, the 101 MW Bitdeer data centre announced in Fox Creek, Alberta will create 30 long-term jobs once operational (Quarin, 2026). Proponents have been found to overpromise on the job creation opportunities of data centres to placate local opposition (Srivastava, 2025).

Community investment

- Through community benefit agreements/frameworks data centres can help fund essential public services and infrastructure.
- Proponents may voluntarily support various community assets including infrastructure, clean energy systems, conservation projects and more.



Heat waste capture/reuse

- 70 percent of the energy used by buildings in Canada goes towards space and water heating (Chandler, 2026). Harvesting the heat data centres generate could play a role in displacing the electricity and natural gas used to heat our homes and water.
- For example, a data centre in Markham ON reuses its waste heat, capturing the hot air produced by its computer servers and sending it to Markham District Energy which is then used to warm nearby homes, offices, a hospital and a hotel in downtown Markham (Mondesir & Nkongequinix, 2025).

Local Government Levers to Impact Data Centre Development & Case Studies

Local governments have access to a suite of levers to impact data centre development. The following actions are not prescriptive, nor feasible in every context; the availability of these levers will vary depending on the municipality's size and in-house capacity. Rather, the following list of actions is intended to serve as a practical menu of options that local governments can draw from based on their unique circumstances. Seeking advice about these options from your municipality's administration and solicitor will help you to identify the best opportunities - and most relevant risks - for your community.

The following recommendations draw from Data Centres and the Climate Landscape: An Actionable Resource for US Mayors by Climate Mayors, with adaptations to the Canadian Context.



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.



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).



Economic Development & Community Investment

Require Community Benefits Agreements (CBAs)

Intense competition for computing power among technology companies strengthens the municipality's negotiating position. When expectations are clearly articulated, standardized across jurisdictions, and predictable, municipalities are well-positioned to ask for benefits, without deterring investment.

Negotiating CBAs can generate greater community buy-in for data centres as they secure enforceable benefits. CBAs can ensure benefits such as:

- local hiring and purchases,
- workforce training,
- public infrastructure investments,
- grid upgrades,
- renewable energy and storage projects,
- heat pumps initiatives,
- home retrofits initiatives,
- home weatherization initiatives,
- EV charging infrastructure
- community-resilience projects

Fulfillment of community benefits, including long-term job creation and local economic development, should be communicated with the public.

Municipalities can develop a standardized CBA menu of pre-approved community benefits, co-designed with residents and businesses, to give developers clear expectations and reduce one-off negotiations while increasing certainty and consistency across projects. This standardized menu can calibrate recommended benefits and expectations with project factors such as, facility scale, power and water intensity, proximity to sensitive users, local environmental conditions, and reliance on public infrastructure. Larger, hyperscale projects can reasonably be held to higher standards. Third-party developers can be more sensitive to cost structure, tenant requirements and standardized approval processes.

Setting up a Community Advisory Group to oversee the establishment and implementation of the CBA ensures continued community engagement and accountability.



Case Study: Prince George IREN Data Centre

Prince George has one AI data centre located on a 12-acre freehold site that was converted from a bitcoin mine in 2022, and is owned by IREN. According to Councillor Frizzell, the initial development played a big role in spurring universal broadband to the city. Prior to the facility, the community used to only have one high-fibre line, which caused connectivity issues, including incidents where the line was accidentally cut by a farmer, and a wildfire.

Despite not requiring any community benefit contributions, IREN provides community grants up to $250,000. They host an annual event to distribute the grants at a local winery and actively take part in career days and opportunities to hire new graduates.

Limit tax abatements, exemptions, or financial incentives

Any incentives a developer may receive should be tied to environmental criteria relating to energy-efficiency, on-site renewable energy generation or storage, water reuse, and waste heat capture. Ensure clawbacks or step-down mechanisms are in place that allows cities to recapture incentives if developers fail to meet agreed performance or reporting requirements.

Incentivize capturing heat waste for reuse

The densely packed chips within data centres generate a lot of heat. If managed correctly, that heat could be reused for space and water heating. A significant percentage of residential energy use goes towards space and water heating, so diverting waste heat from data centres could result in significant energy savings. Municipalities should encourage waste heat recovery, when possible, and could provide incentives such as increased density points or waived fees. If designed poorly without waste heat capture, data centres risk creating heat islands, raising nearby temperatures.

Case Study: Bell's Thompson River University Facility in Kamloops

Rather than venting server heat into the atmosphere, Bell Canada's AI Fabric centre, under development on the Thompson River University(TRU) Campus, includes a "heat recovery loop". The waste heat generated by the AI processors is fed directly into TRU's Low-Carbon District Energy System to keep the university's campus buildings warm.



Community Engagement & Advocacy

Engage residents early and transparently

Data centres are facing increasing public opposition. Engage residents early on in the process so the municipality can channel community concerns into enforceable protections and benefits. Public input should be an important informant of requirements and community benefits agreements to ensure residents receive tangible benefits. Ensure developers can demonstrate that they are meeting duty-to-consult requirements with Indigenous communities affected.

Additionally, public education is needed on the different types of data centres, and the varying levels of environmental impact, as not all data centres are created equally but risk getting lumped together.

Case Study: Mississauga Town Hall on Prologis data centre

Following growing public outcry, the City of Mississauga convened a Town Hall on June 25, 2026 drawing a room full of residents from Wards near where the data centre is set to be located. Prologis representatives also attended to share details of the proposal.



Refrain from entering into agreements that shield developers

Avoid non-disclosure agreements sought by corporations pursuing data centre projects, as they are a limitation to meaningful public engagement and transparent discussion of a project's risks and opportunities. Regular and accurate reporting from data centres on their environmental impacts is critical for both environmental management and community trust.

Local governments should refrain from entering into agreements that shield developers from disclosing estimated water and energy use or potential health impacts. Once data centres are operational, they should submit annual, publicly available impact reports that are audited by third parties.

Coordinate collaboration between Indigenous, Inter-Municipal, and Regional Governments

Data Center developers commonly pursue parallel sitting discussions across municipalities within the same region, comparing sites, approval times and requirements. Without coordination, this dynamic can trigger a race to the bottom to secure investment. When minimum expectations are standardized and predictable across a region, the benefits a community can negotiate for hosting a data centre are strengthened for all.

Another reason it is imperative to coordinate with neighbouring municipalities, Indigenous communities, and regional governments is that data centre impacts extend beyond municipal boundaries, particularly for electricity, water, and air quality.

Regional impacts can strengthen the case for shared standards and positions. Regional partners, such as a watershed association or an air quality district, can play a key role in monitoring regional impacts and uniting regional players behind shared standards and land use practices.

Advocate for a National Strategy

A broader national strategy governing digital infrastructure would improve and refine policy options for decision-makers at the local level and provide consistency across the country through minimum development standards and performance measures. A national strategy would help to avoid local governments being pitted against each other in a 'race to the bottom' in order to secure investment and would support smaller municipalities who may have limited resources to assess proposals and navigate negotiations.

Additionally, a national strategy could fill in policy gaps relating to managing operations and decommissioning. There is a lack of standard end-of-lifecycle processes, including brownfield remediation, in the context of data centres.

Case Study: Kamloops Motion to FCM to advocate for the development of a Federal data centre framework

Kamloops councilors Dale Bass and Nancy Bepple put forward a motion for council to request the Federation of Canadian Municipalities (FCM) advocate to the federal government for the development of a coordinated policy framework respecting data centres. Councillor Bass emphasized that the task of defining regulations and oversight for data centres is excessively onerous for each individual municipality to undertake. The development of a national framework would provide a level playing field across the country. The motion passed, and the community is in discussion with FCM.



Guiding Questions for Councillors

The following questions are designed to encourage local elected officials to build an awareness of what data centres exist within their community, and what policies are in place to regulate a future data centre proposal. Many of these questions should be asked to a data centre developer when a project is proposed to ensure council and community members have a full understanding of the project.

The current state of data centres in your community:

1. How many data centres are in your community? How many are proposed?
2. When were they created, or at what stage is the project?
3. How large are the data centres in terms of land mass?
4. What is the data centre capacity in MW?
5. What types of data centres do you have (i.e. AI training, inference, co-location etc.)?
6. Who are the owners and/or users?

Noise:

1. Is the proponent required to make any commitments around noise mitigation or monitoring?
2. Is your community's noise bylaw sufficient to address data centre noise concerns?
3. Are there meaningful penalties in place if the proponent goes beyond set noise standards?

Land Use:

1. How are data centres in your community zoned (i.e. light industrial, heavy industrial, commercial, mixed-use etc.)?
2. Are data centres defined within the zoning bylaw?
3. Are overlay districts in place to designate appropriate areas for data centres?
4. Can proposed projects be located on ecologically-significant or farming lands?
5. Are there any best-practice design codes or guidelines for data centres recommended by the municipality?
6. Are there buffer zones or minimum setbacks from other land use that apply to data centres?
7. Has your community discussed end of life-cycle processes or responsibilities, including brownfield remediation, in the context of data centres?

Infrastructure Needs:

1. If a proponent identifies new infrastructure needs (i.e. watermains, natural gas pipelines, energy transmission, or roads) to support the facility, would these be paid for by the proponent? The municipality/utility? Or a combination?
    a. Will the new infrastructure be owned by the municipality?

Water Usage:

1. What actions will the local government take to assess or limit water use risks from data centers?
2. Are proponents required to make commitments around disclosure of water use and wastewater discharge?
    a. Will this information be publicly available?
3. Are proponents required to identify water use needs?
    a. If so, do they identify average annual usage, peak demand hours, or both?
4. Has the proponent identified the cooling technology the data centre will use (i.e. evaporative or closed-loop)?
5. Has the proponent identified the source of water (i.e. municipal, aquifer etc.)?
6. Is there a maximum water use in place for data centres, and is there meaningful recourse if the proponent goes beyond the limit?

Air Quality and Energy Use

1. What actions will the local government take to assess or limit energy use risks from data centers?
2. Are proponents required to make commitments around disclosure of energy use?
3. Will this information be publicly available?
4. What 'Behind-the-meter' power sources, if any, does the project include (i.e. natural gas plant, diesel generator, renewable energy and battery storage, etc.)?

Taxation:

1. What kinds of tax abatements and incentives are in place, and how might these impact the property taxes paid by a data centre?
2. Are there any abatements, incentives, or credits granted by regional economic development agencies outside of the local government that should be accounted for?

Community Benefits

1. Would a data centre receive any tax abatements, exemptions or financial incentives from the municipality?
2. What is the added municipal tax revenue of a proposed data centre?
3. What is the anticipated number of employment opportunities a proposed data centre would create?
4. Is there a heat waste capture and reuse element to a proposed project?
5. Does a proposed data centre have any on-site renewable energy generation or storage?
6. Is there potential for the community to participate in a community-owned and operated data centre?
7. Would the community receive any other community amenity contributions from a data centre?

Community Engagement

1. Would the proponent conduct any voluntary community engagement?
2. Is a public hearing required as part of the zoning or permitting process?
3. Is there a forum for the public to express their concerns and opinions on a proposed data centre?
4. Would regional governments, planning groups or associations be consulted, especially in regards to regional water, air quality and energy risks?
5. Can the proponent demonstrate that they are meeting their duty-to-consult requirements with Indigenous communities?

Conclusion

Data centres can present significant challenges for communities, including high water and energy demand, pressure on municipal climate goals, constant noise and impacts on local air quality. However, when thoughtfully planned, they can also create opportunities by supplying waste heat to district energy systems, supporting clean energy development, and delivering additional community investments.

This toolkit provides local governments with the knowledge they need to ask the right questions when evaluating data centre proposals and to negotiate outcomes that align with community priorities. Furthermore, they do not have to navigate this rapidly-evolving landscape alone. Through continued collaboration, Climate Caucus and Urban Climate Leadership will amplify emerging practices to ensure data centre growth aligns with local climate, energy and community goals.

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