

Category

Taxation



Geography/ Location

NS, ON

Municipality Size

Large



Tier

Enabling



Constraints

Equity, Political



Administrative Capacity Required

Low



Fiscal Tool Brief: Climate Action-Related Taxation

A municipal tax mechanism that generates dedicated revenue for climate mitigation, adaptation, and resilience projects.

Climate action-related taxation, or climate levy, refers to the municipal tax mechanisms designed to generate dedicated funding for climate mitigation and adaptation initiatives. Typically structured as a surcharge on existing property tax bills, this levy creates a revenue stream that can only be used for climate-related projects, such as energy efficiency retrofits, green infrastructure, flood resilience measures, and the development of low-carbon transportation systems.

In practice, municipalities can establish the levy through bylaws or budgetary decisions, often after public consultation or council approval. The surcharge is applied as a small percentage or fixed

amount added to annual property taxes, which is then collected alongside regular municipal taxes. This approach provides municipalities with a stable, long-term funding source that is independent of annual budget fluctuations and intergovernmental transfers, allowing for more strategic planning and implementation of climate action initiatives.

The funds raised are directed into a dedicated climate action reserve or fund, ensuring transparency and accountability in how the revenue is allocated. Municipalities may use these funds to directly implement projects, offer grants or incentives to property owners, or leverage them to attract additional funding or investment.

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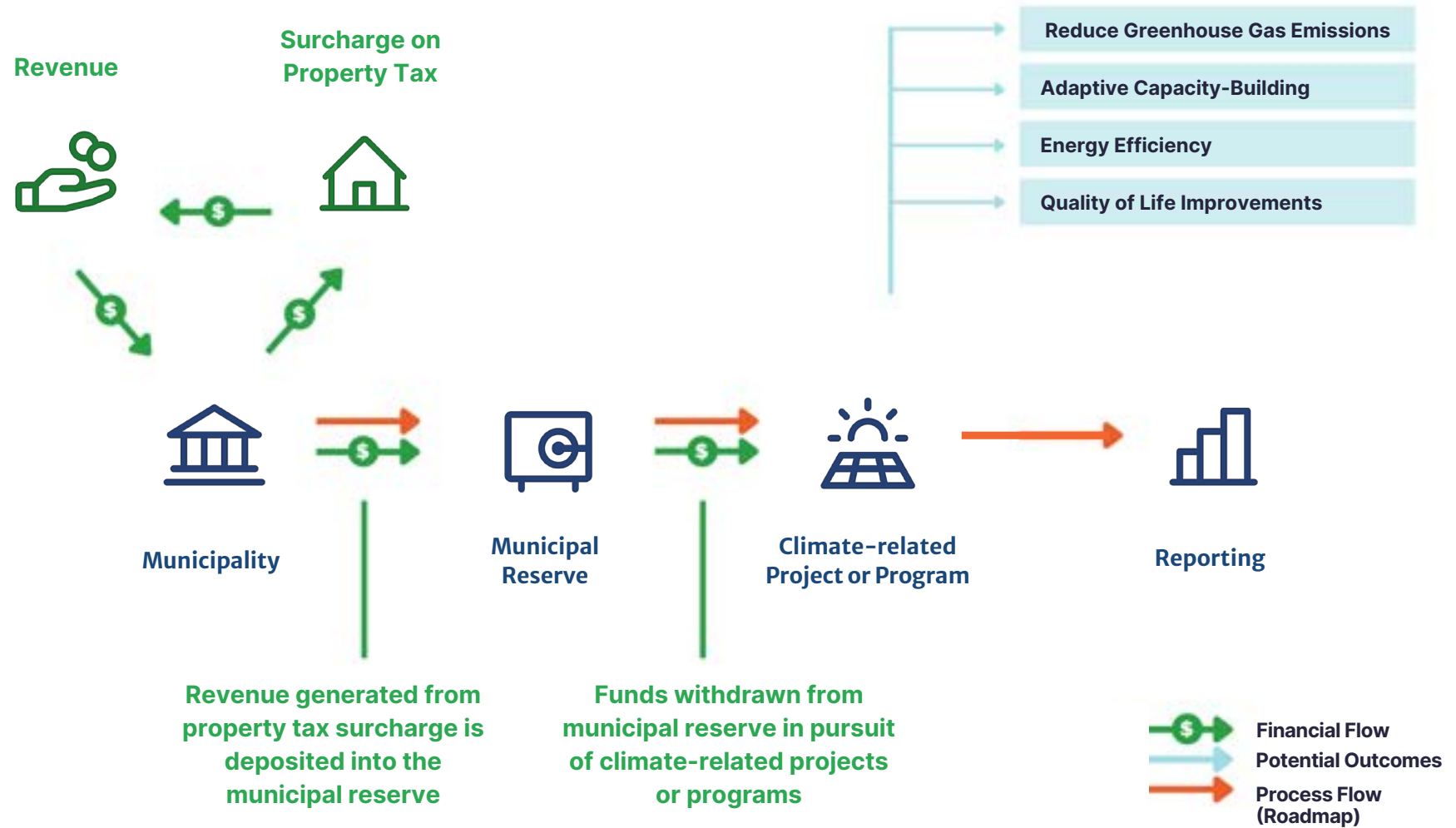


Figure 1. Visual representation of how Climate Action-Related Taxation works

Examples

Some Canadian municipalities have explored the use of climate action-related taxation and adopted this mechanism to finance climate-related projects. For example, [Halifax \(NS\)](#) introduced the Climate Action Tax, which applies a fee to residential and commercial property tax bills to support its climate-related projects in the HalifACT plan.¹ The Council approved a dedicated 3% property tax increase, committed for at least a decade. The tax generates about \$18 million annually, creating a reserve to cover upfront climate investments and future debt payments. The tax revenue directly funds initiatives such as bus electrification, energy efficiency retrofits, flood mitigation, emergency preparedness, and resilient infrastructure improvements. Halifax adjusts the tax rate annually,² provides transparent updates on expenditures, and ensures funds are used exclusively for climate-related goals. The success has been credited to strong backing from the finance department, which framed the measures as long-term investments, as well as to widespread community engagement and climate awareness that helped secure public support.³

Peterborough (ON) also introduced a climate action-related taxation in 2020 to fund its climate action. The City added a 0.25% increase on the all-inclusive property tax rate which generates about \$426,400 for the City's Climate Change Reserve annually.⁴ This reserve has already funded several important projects such as the installation of electric vehicle charging infrastructure and improving building energy efficiency. The projects funded through the Climate Change Reserve are reported to council and are featured in the municipality's annual budget book, ensuring that the residents are informed about the climate actions and contributing to the effective use of the taxation mechanism.⁵

Relevance to Advancing Adaptation

Climate action-related taxation plays a critical role in advancing local adaptation by providing a reliable funding stream that municipalities can rely on to protect communities from climate risks. Unlike grant-based or time-limited funding, a dedicated levy ensure that adaptation investments can be sustained across political cycles and budget years. This long-term reliability allows municipalities to plan and implement multi-year adaptation projects such as resilient stormwater systems, green infrastructure networks, and coastal or riverine flood protection measures.

For example, revenues can be directed to the construction and maintenance of flood-resilient culverts, enhanced drainage networks, or permeable pavements that reduce runoff and prevent urban flooding. In addition, climate levies can also finance natural infrastructure initiatives that provide both ecological and social benefits. Wetland restoration, riparian buffer enhancement, urban tree-planting, and soil regeneration projects not only reduce urban heat islands and improve water management but also strengthen biodiversity and carbon sequestration capacities.

By investing in these dual-purpose projects, municipalities can align adaptation with mitigation objectives, making the most efficient use of local revenues. Furthermore, these taxation mechanisms can be used to fund emergency preparedness and community resilience programs, such as early-warning systems, heat-relief shelters, and emergency response training. Targeted spending on these areas reduces vulnerability among high-risk populations—including seniors, low-income households, and renters—who often face the brunt of climate-related disruptions.

If equity considerations are deliberately built into project design, climate levy revenues can support adaptation measures that enhance physical resilience while improving social outcomes; without such safeguards, however, the levy may impose regressive burdens on lower-income households.

Accessibility

Municipalities are generally well-positioned to adopt a climate levy from a policy and administrative standpoint because property tax systems already exist in many jurisdictions, and implementation can often proceed through a bylaw or budget decision; in practice, however, uptake is more realistic in municipalities with the fiscal capacity and political support to sustain a new levy.⁶ This makes the instrument relatively straightforward to launch. Moreover, for taxpayers the cost is predictable and generally modest: it is expressed as a small percentage of property tax or a fixed add-on, so households and businesses can see how much the levy will add to their tax bill. Importantly, examples show that municipalities such as the Halifax Regional Municipality adopted the “Climate Action Tax” precisely to build a dedicated fund for adaptation and mitigation, signaling that the tool is accessible in the municipal context.

Although the mechanism is structurally accessible, since municipalities already administer property taxes, the political pathway to approval is far less straightforward. Municipalities are averse to raising taxes or adding levies. Therefore, securing support from the council and the public for any increase in taxation is challenging, particularly given public sensitivity to affordability issues and the perception that property taxes are already high.

Municipalities often face strong pressure to avoid introducing new levies, even modest ones, which makes the practical accessibility of this tool much more limited than the administrative steps might suggest. The very small number of municipalities that have adopted climate levies reflects how difficult it is for councils to justify new charges, even when the administrative apparatus is already in place.

Feasibility

From the implementation side, a climate levy is feasible for municipalities because it leverages existing tax-administration infrastructure. Unlike creating an entirely new tax collection mechanism, municipalities that collect property taxes already have billing systems, assessment data, and tax accounts. Thus, adding a surcharge or dedicated line within the existing property tax bill is much less resource intensive. Politically, its feasibility increases if the levy is accompanied by clear communication about how the revenues will be spent and what tangible benefits will accrue to the community. For example, in Halifax the climate action tax has been embedded in the annual operating budget and linked explicitly to the municipality’s climate strategy⁷, which helps build credibility and political viability. Therefore, successful implementation depends less on building new administrative systems than on maintaining transparent governance, modest staff capacity, and sustained public engagement to secure acceptance. In addition, the political feasibility of adopting a new levy remains one of the most significant barriers. Even when staff can demonstrate clear climate benefits, elected officials may be reluctant to endorse any initiative that raises taxes due to concerns about residential backlash, affordability pressures,

and political risk. Therefore, municipalities often put maintaining low tax increases as a priority, which limits their ability to introduce dedicated surcharges, even for urgent climate needs, demonstrating the fact that the uptake across Canada has been limited despite the tool being available across the country.

Risk

There are several risks associated with deploying a climate levy that need careful consideration. First, the levy may face public resistance if property owners perceive it as an added tax burden without visible results. For instance, in Halifax there was debate among councillors about whether to list the climate action tax as a separate line item on tax bills⁸, indicating sensitivities around transparency and public perception on such taxes. Second, there may be a risk of inequity because property tax can be considered as a regressive mechanism and lower-income households may pay disproportionately relative to income.⁹

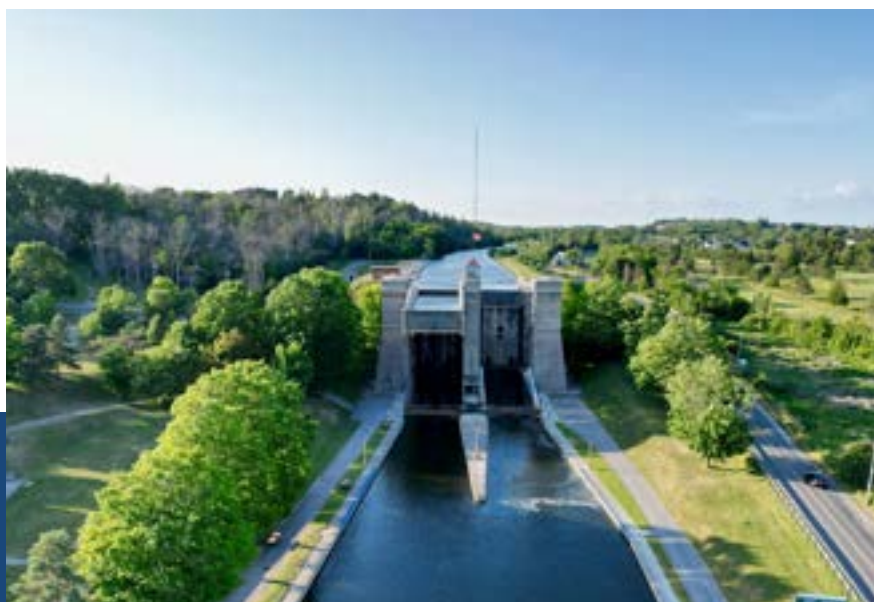
Therefore, a surcharge like the climate action-related taxation could place greater burden on vulnerable households unless mitigated through exemptions or rebates. Additionally, there is the risk that the revenues may be disproportionately spent in ways that favour particular neighbourhoods or property classes, making it difficult to ensure that community benefits are equitably distributed. Finally, the broader risk is that municipalities rely on this tax stream and fail to achieve the outcomes promised, thereby undermining public trust and political support.

To reduce these risks, municipalities can pair the levy with clear communication, transparency measures, and explicit equity safeguards such as rebates, exemptions, or phased implementation, although these measures are not inherent to the tool itself. Public resistance can be addressed by regularly reporting how funds are allocated and highlighting visible project outcomes. Concerns about regressivity can be mitigated through income-based rebates, phased-in rate increases, or targeted exemptions for low-income households and older adults. Transparent governance, such as communicating annual climate levy reports internally and externally, reporting on where investments are made, and involving community advisory groups, helps ensure benefits are distributed fairly across neighbourhoods. Finally, tying the levy to measurable adaptation and mitigation targets, with progress publicly tracked, helps maintain public trust and demonstrates that revenues are producing meaningful results.

Scalability

The climate levy mechanism is structurally scalable across municipalities because property tax systems are widely used in Canada, although practical scalability is strongest in larger municipalities that can absorb political risk and generate meaningful revenues. This means that once the policy design and implementation model are tested in one municipality such as Halifax or Peterborough, it can be adapted by others. For example, Peterborough instituted a 0.25% increase to its all-inclusive property tax rate to fund its climate change reserve, generating about \$426,400 annually.¹⁰

While the mechanism is structurally scalable, its real-world application has been limited because implementation depends on local political willingness to raise taxes, public tolerance for new charges, and sufficient fiscal capacity to make the levy worthwhile. Political resistance to increasing the tax burden on residents is a major constraint, particularly in contexts where affordability concerns are high and public tolerance for new taxes is low. The fact that only a few municipalities, such as Halifax and Peterborough, have implemented a dedicated climate levy suggests that this tool, despite being available for decades, faces significant barriers to widespread adoption. These constraints highlight that the levy's scalability depends not only on administrative feasibility, but also on local political dynamics, public willingness, and municipal capacity to ensure the successful implementation of this mechanism.



Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Generates dedicated, stable revenue stream for adaptation projects	Provides predictable long-term funding that can be directed to adaptation infrastructure and programs.
Economic Efficiency	High	+1	Uses existing property tax system and billing infrastructure	It is administratively efficient because it builds on existing municipal tax and billing systems.
Equity & Fairness	Low	-1	Broad-based property tax surcharge; affordability concerns noted	The levy can create regressive burdens and has a weak link between who pays and who benefits.
Political Acceptability	Low	-1	Strong resistance to new taxes; limited uptake across municipalities	Adoption is politically sensitive because new taxes are often unpopular with taxpayers and elected officials.
Feasibility (Admin/Legal)	High	+1	Municipal authority to adjust property taxes via bylaws	Municipalities generally have clear authority and a straightforward implementation pathway.
Coherence (Portfolio Fit)	High	+1	Integrates with municipal budgeting and reserve funds	It fits well with existing municipal finance structures and long-term capital planning.

Best Use Context

Most effective in municipalities with strong fiscal capacity, climate leadership, and sufficient public support for new revenue measures. It is best suited to jurisdictions seeking stable, long-term adaptation.

Context Factor	Relevance	Notes
Municipal Size	High	Larger municipalities better able to absorb political risk and generate meaningful revenue.
Administrative Capacity Required	Low	Minimal additional capacity needed due to existing tax infrastructure.
Development Pressure	Low	Not dependent on growth; functions regardless of developmental conditions.
Climate Risk Targeting	Medium	Revenue is flexible but not inherently risk-targeted.
Fiscal Flexibility Required	Medium	Requires political willingness to increase taxes.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Climate action-related taxation*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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This brief is part of a larger catalogue. The Catalogue of Fiscal Tools to Advance Adaptation examines how municipalities can use and optimize existing fiscal tools to support climate adaptation and climate-resilient infrastructure. Each brief included in this catalogue explores a specific tool, assesses its strengths and limitations through a common analytical framework, and highlights examples of how it has been applied in practice.



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Category

Partnerships



Geography/ Location

AB, BC, NS, SK

Municipality Size

All



Tier

Enabling



Constraints

None

Administrative Capacity Required

Medium



Fiscal Tool Brief: Co-operatives (Co-ops)

Renewable Energy Co-operatives let communities collectively invest in shared clean energy projects, lowering costs, expanding access, and sharing benefits through mechanisms like virtual net metering.

Co-operatives are member-owned and democratically governed organizations that operate across many sectors, including finance, renewable energy, agriculture, housing, retail, health, insurance and others.¹ They allow individuals and communities to pool resources, share risks, and collectively benefit from services or investments that might otherwise be inaccessible. For the purpose of this brief, we will focus on Renewable Energy Co-operatives.

Renewable Energy Co-operatives (RECs) are often referred to as community renewable energy projects often include wind or solar power. They offer municipalities a way to expand access to clean electricity without requiring individual installations.



Through these programs, a municipality, utility, co-operative, or Indigenous government develops a shared wind or solar array and enables residents, businesses, and institutions to subscribe or invest in a portion of the system. Participants then receive credits on their electricity bills for the power generated by their share, a mechanism often referred to as virtual net metering.² This aggregated demand and centralized energy generation in a single professionally managed location, reduces per-unit costs, simplifies maintenance, and spreads financial risk across many participants. This mechanism can help overcome some common barriers, such as lack of access for rental housing and high upfront capital investments, although participation still depends on regulatory frameworks and project design. Across Canada, provincial energy regulators and utilities are gradually enabling virtual net metering arrangements that support municipalities to launch REC projects. Early uptake and active projects can be seen in provinces such as British Columbia, Alberta, Saskatchewan, Ontario and Nova Scotia.³

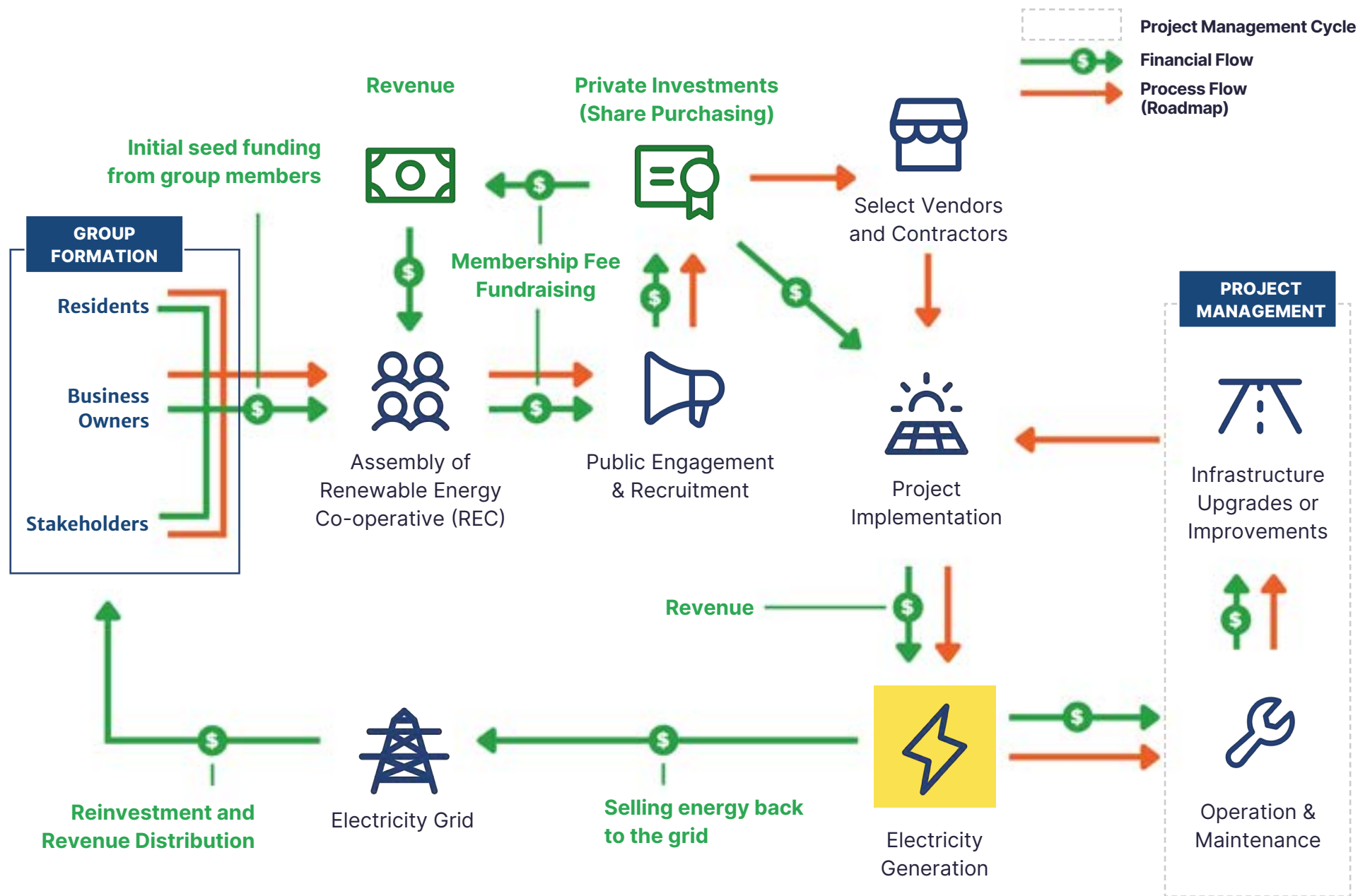


Figure 1. Visual representation of how Renewable Energy Co-operatives work

Examples

Numerous Canadian municipalities and communities have implemented REC projects to help lower greenhouse gas emissions and provide cleaner energy to the grid. For example, in June 2025 the [Ulkatcho First Nation \(BC\)](#) Anahim Lake Solar Project was launched as one of the largest off-grid community solar initiatives in Canada. Backed by a combined federal–provincial investment of \$15.8 million, the project is 100% owned by the Ulkatcho Energy Corporation (UEC) and designed to displace the community's exclusive reliance on diesel generation. Once complete, the hybrid system, integrating solar panels, battery storage, and a diesel back-up, will cut diesel use by about 64%, significantly lowering greenhouse gas emissions and energy costs.⁴ Under a Community Electricity Purchase Agreement with BC Hydro, the solar power will feed into the local microgrid, providing reliable clean electricity.

The Alberta Solar Co-op, based in Starland County (AB), is developing Alberta's first community-owned solar farm, a project that aims to become a model for other Prairie communities. Established in 2015, the co-op overcame early regulatory barriers and helped shape the province's Community Generation Program, which provides long-term price guarantees for locally generated renewable electricity and offers a 30% Community Economic Development Corporation (CEDC) tax credit for investors.⁵ The planned 12-acre solar farm is designed to generate 1–2 megawatts of power, enough to supply roughly 400 homes, with an estimated \$5 million in community investment raised through co-op share offerings and crowdfunding.⁶ Electricity from the array will be sold back to the grid under Alberta's Small Scale Generation Regulation, creating a revenue stream for local investors while supporting the province's goal of achieving 30% renewable electricity by 2030.⁷

In June 2024, [Shelburne \(NS\)](#) approved a 10 MW community solar park in Jordan Branch under [Nova Scotia's Community Solar Program](#). Developed by ABO Energy, the project will install 13.8 MWDC of panels with 10 MWAC inverters, generating about 18.4 GWh of power annually, enough for over 1,300 homes. Subscribers, including the municipality and local residents, will receive a \$0.02/kWh credit, with potential savings of \$369,000 per year.

Relevance to Advancing Adaptation

While primarily a clean energy and emissions reduction strategy, RECs can support municipal climate adaptation indirectly by increasing local energy security and resilience. Shared wind and solar arrays can diversify electricity supply and reduce reliance on centralized fossil fuel generation, helping communities better withstand grid disruptions caused by extreme weather events where systems are integrated with storage or microgrids. By pairing wind or solar generation with storage or integrating into microgrids, RECs can maintain critical services, such as emergency shelters or municipal water systems, during outages that are becoming more frequent. The model also lowers financial barriers for households and municipalities to access renewable power, reducing exposure to volatile energy prices. For municipalities, these projects provide a stable, locally controlled source of clean electricity that supports both mitigation and the capacity to adapt to increasingly frequent and severe climate impacts.

Accessibility

Access to RECs depends primarily on provincial regulations that determine who may generate and sell electricity, and whether mechanisms such as virtual net metering or community generation programs are permitted. Provinces like Nova Scotia, Alberta,

shared solar subscriptions, enabling municipalities to participate directly or partner with local co-ops.^{8,9,10} A key advantage of this fiscal tool is that municipalities of different sizes can participate, including smaller and rural communities, since the model allows for distributed financial contributions across many members, although implementation still depends on provincial enabling frameworks and utility participation. This approach helps address one of the most common barriers, access to private funding, by distributing investment across participants. Access also depends on grid interconnection capacity and utility participation. Utilities must support billing credit mechanisms, subscriber management, and interconnection studies. Regions with advanced interconnection procedures or community-generation tariffs tend to have significantly higher uptake, as demonstrated.^{11,12} Lastly, land availability affects accessibility, although projects can be developed on brownfields, municipal parcels, or underutilized land. Municipalities with spatial constraints can still participate through partnerships in co-ops located in neighbouring jurisdictions or through virtual crediting models if permitted by provincial regulation.

Feasibility

The primary constraint with RECs is the high upfront capital requirement for site preparation, equipment purchase, and interconnection upgrades, which often requires multi-party financing involving co-op member shares, lenders, and private developers. Evidence from Canadian community solar developers shows that interconnection studies and required grid upgrades can add significant cost and delays to projects. Furthermore, administrative feasibility is also shaped by a municipality's capacity to manage or partner on subscriber recruitment, billing coordination, and long-term operations. These tasks require dedicated

administrative systems, especially for projects using virtual net metering, where revenues depend on accurate and timely utility crediting.¹⁴ REC models can be attractive to municipalities because they offer flexible participation options, particularly where municipalities act as subscribers or partners rather than primary project sponsors. When municipalities participate as subscribers or land hosts rather than owners, projects may proceed without requiring municipal capital investment or affecting borrowing capacity, depending on local accounting treatment and governance arrangements.

Risk

One commonly identified risk for RECs is the uncertainty of long-term revenue streams, as changes to virtual net-metering rules or credit valuation can affect the project's cash flow. In jurisdictions where utilities can revise compensation rates or billing structures, REC revenues may fluctuate, increasing exposure for both municipalities and members of the co-operative. Moreover, REC projects also face challenges when trying to connect their solar systems to the electricity grid. Before a project can connect, the utility must study whether the local grid can handle the new power. Studies can take a long time, and projects often end up waiting in a queue behind others. If the grid in that area is already overloaded, the utility may require upgrades, such as new lines or equipment, before the project can connect. These steps add both time and cost, and in some cases can delay a project for months or even years, as highlighted in a recent independent review of Nova Scotia's interconnection process.¹⁵ Lastly, the shared ownership model also introduces operational risk, as billing errors, subscriber turnover and management, or inaccurate utility data transfers can disrupt revenue allocation. These risks noted above

vary significantly across provinces and regulatory frameworks, reinforcing that project viability and performance are highly context dependent.

Scalability

There is a growing demand for REC projects as solar power becomes cheaper, and communities look for cleaner local energy options. As more municipalities and co-ops gain experience developing these projects, and as provincial programs become better established, RECs can expand gradually over time. Since these projects can generate revenue through electricity sales and bill credits, early successes may help attract new investors and finance larger follow-on installations, although revenue stability depends on regulatory conditions and credit structures. This pattern has already emerged in several community solar initiatives, where initial projects have set the foundation for bigger, more ambitious projects.¹⁶ However, scalability is constrained by grid hosting capacity and interconnection availability. Distributed solar can only expand to the extent that local feeders and substations can accommodate additional electricity generation, and many municipal distribution systems have limited surplus capacity, requiring upgrades before new REC projects can proceed.¹⁷ Overall, RECs provide a flexible and community-driven model that can expand over time, but scalability is contingent on stable provincial rules, available grid capacity, and sustained organizational and financial capacity.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Indirect adaptation benefits (energy resilience)	Supports adaptation indirectly through energy resilience but does not directly finance targeted resilience infrastructure.
Economic Efficiency	Medium	0	Shared costs but high upfront and coordination complexity	Cost-sharing improves efficiency, but financing, interconnection, and governance requirements add complexity.
Equity & Fairness	High	+1	Expands access to renters and low-capital households	Inclusive ownership model distributes benefits broadly and reduces participation barriers.
Political Acceptability	High	+1	Community ownership and local benefits	Strong local alignment and participatory governance support high public acceptance.
Feasibility (Admin/Legal)	Medium	0	Dependent on provincial regulation and utility cooperation	Implementation is viable but contingent on regulatory frameworks and coordination with utilities.
Coherence (Portfolio Fit)	Medium	0	Aligns with energy program but not core fiscal tool	Fits within broader climate strategies but functions as a complementary, not primary, finance instrument.

Best Use Context

Best suited for municipalities aiming to enhance energy resilience and community participation, particularly as a complementary tool rather than a primary municipal revenue instrument. Most effective where enabling provincial policies (e.g., virtual net metering) support cooperative energy models and where adaptation is pursued indirectly through system resilience.

Context Factor	Relevance	Notes
Municipal Size	Medium	Applicable across sizes; smaller municipalities benefit from pooled investment.
Administrative Capacity Required	Medium	Requires coordination with utilities, developers, and co-op governance.
Development Pressure	Low	Not dependent on growth or land value dynamics.
Climate Risk Targeting	Low	Indirect adaptation benefits; not risk specific.
Fiscal Flexibility Required	Medium	Flexible participation reduces direct municipal fiscal burden.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Co-operatives*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada.<https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

User Fees and
Regulatory Charges



Geography/ Location

ON, BC, QC

Municipality Size

Large



Tier

Conditional



Constraints

Equity; Political;
Feasibility



Administrative Capacity Required

High



Fiscal Tool Brief: Congestion Charges

Congestion charges manage urban traffic by increasing travel costs in high-demand areas or peak periods, helping reduce congestion, improve travel times, and lower emissions.

Congestion charges, also known as congestion pricing programs, are systems that place surcharges on the use of public goods during periods or in areas of high demand. These systems are most commonly applied to road use in congested urban centers. It is similar to tolls on highways and bridges, but with a different objective. While tolls, which are designed primarily to fund road construction or maintenance, congestion charges specifically aim to regulate demand by increasing the cost of travel at peak times or in high-traffic zones.¹ Economically, they function as a form of value pricing or dynamic pricing, similar to “surge pricing” used by ride-sharing platforms, where prices increase when demand exceeds available capacity. These charges can take the form of road pricing, higher peak fares for transit,



or “pay-as-you-go” based on the distance travelled.² This mechanism regulates demand in order to manage congestion without increasing supply but by increasing the price of roads (Figure 1). By influencing travel behaviour, congestion charges help reduce traffic volumes, improve travel times, and decrease associated emissions.^{3,4}

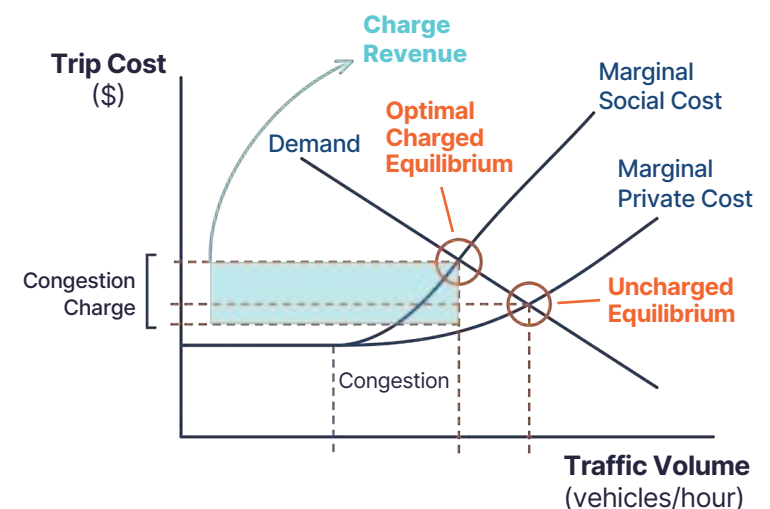


Figure 1. Principle of Marginal Social Cost Pricing⁵

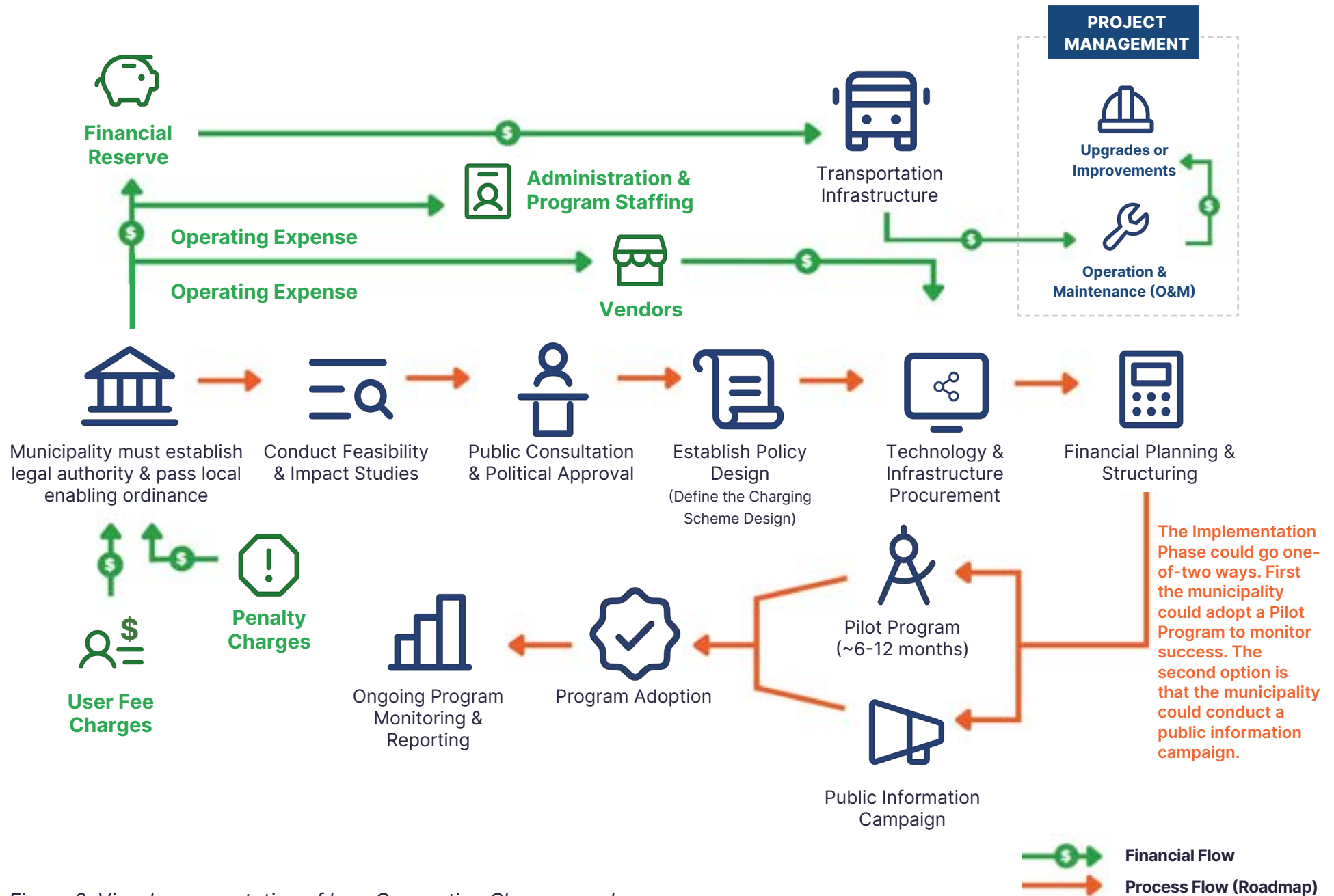


Figure 2. Visual representation of how Congestion Charges work

Examples

Previous attempts to introduce congestion charging in Canada especially in Vancouver and Toronto have not been successful, due to political resistance, public acceptability concerns, and unresolved governance questions.⁶ More recently in Toronto, this trajectory may be changing with the creation of a Chief Congestion Officer role, signalling renewed institutional focus on managing congestion and reconsidering pricing-based tools.⁷

In contrast to Canada's experience, congestion charging has been successfully implemented in several international cities. For example, [Singapore \(SG\)](#) has an Electronic Road Pricing (ERP) system in place to manage road congestion. In 1975, the government first launched their congestion pricing system called Area Licensing Scheme (ALS) that charged a flat rate for vehicles entering Singapore's central area.⁸ After the introduction of ALS, there was an immediate reduction of 45% in traffic and 25% in vehicle crashes. There were also benefits including more public transit commuters, smoother travel speeds, and cleaner air conditions. In 1998, the ALS system was replaced by the ERP system, and the ERP system further decreased the traffic levels by 15%. Under the ERP system, bigger vehicle types pay more, and the charges can fluctuate based on the traffic conditions⁹ at the time.¹⁰ While the system reduces traffic levels, it also generates revenues with approximately \$64 million Singapore Dollars in net profits per year, allowing the government to pursue ambitious public transportation programs more easily.^{11,12}

[New York City \(US\)](#) established a Congestion Relief Zone in its urban center aiming to reduce the excess traffic in the area and help improve quality of life.¹³ Vehicles entering this zone are charged a toll. The program helps reduce traffic and travel time,

improve safer streets and cleaner air, reduce greenhouse gas emissions, encourage public transit ridership, and promote the quality of life. In addition, the raised funds can also be used to fund public transit improvements, including the accessibility improvements at the subway stations and transit electrification.¹⁴

Moreover, [London \(UK\)](#) has also implemented a Congestion Charge of £18 per day when drivers travel within the Congestion Charge zone during specific hours and days. The Congestion Charging scheme was first introduced in February 2003 and it has been successful in managing traffic and congestion in central London.¹⁵ In a recent proposal, the City is planning to increase the charge and provide discounts for electric vehicles, continuing to reduce congestion in the area and encouraging the adoption of clean vehicles.¹⁶ Other cities that have implemented congestion charges include [Stockholm \(SE\)](#), [Gothenburg \(SE\)](#), and [Milan \(IT\)](#).

Relevance to Advancing Adaptation

Congestion charging is primarily a demand-management and emissions-reduction tool; it does not directly help to adapt to climate change. Evidence from London, Stockholm, and Singapore shows reductions in traffic and air pollutants following implementation.^{17,18} These outcomes support mitigation and public health objectives, but do not in themselves increase resilience to climate hazards. Its relevance to adaptation lies in how revenues are used. International programs demonstrate that congestion pricing can generate stable, locally controlled funding streams.¹⁹ When earmarked for resilience investments, such as flood-proofing transit stations, upgrading drainage, reinforcing critical corridors, or improving network redundancy, congestion charging can serve as a financing mechanism within a broader climate adaptation strategy. The pricing mechanism is therefore indirect: its

adaptation value depends on governance decisions, revenue dedication, and integration into long-term capital planning.

Accessibility

Congestion charging is currently a potential rather than readily available fiscal tool, as no standing federal or provincial program explicitly enables cities to levy road use charges without higher order government authorization. In most provinces, municipalities would require enabling legislation or provincial consent to introduce new user charges on public roads, particularly where charges extend beyond traditional toll bridges or municipally owned facilities, creating a jurisdictional constraint on access.^{20,21} Large municipalities such as Toronto, Vancouver or Montreal are better positioned to pursue congestion charging due to their scale, congestion severity, and administrative capacity, but even these municipalities have so far been limited to feasibility studies and pilot discussions rather than implementation.²² From a financial perspective, congestion charging does not operate as a grant or transfer program rather, it is a locally generated revenue mechanism, meaning access depends less on eligibility criteria and more on legal authority, political approval, and technical readiness. Advances in electronic tolling and vehicle tracking technologies have reduced implementation barriers and costs for some municipalities, making the tool more accessible in principle over time, particularly for municipalities with existing smart transportation infrastructure.²³

Feasibility

The feasibility of congestion charges is constrained primarily by political and social acceptance rather than technical or economic factors. Examples from municipalities globally show that congestion

reliably reduces peak traffic and generates stable local revenue, supported by mature and widely deployed technologies such as electronic tolling and license plate recognition.^{24,25} Early discussions in Vancouver and Toronto indicate that equity concerns, regional coordination challenges, and anticipated public opposition remain the main barriers to implementation.²⁶ While international experience shows public acceptance typically increases after implementation as benefits become visible, this dynamic creates high upfront political risk. As a result, congestion charging is most feasible in large, transit-rich metropolitan regions with acute congestion and strong regional governance.

Risk

While congestion charging can reduce congestion and generate dedicated revenue, it introduces several risks for municipalities, particularly related to public acceptance, equity, and governance. A primary risk is political and reputational. Strong opposition prior to implementation has led to cancelled or delayed proposals where charges were perceived as unfair, poorly timed, or insufficiently linked to visible benefits such as transit improvements.²⁷ Equity risks are also significant. Without exemptions, rebates, or complementary investments, congestion charges may disproportionately affect lower income or car dependent households, increasing the likelihood of legal challenges or sustained public resistance. Operational risks include higher than expected implementation or operating costs, privacy concerns associated with vehicle tracking technologies, and slower than anticipated congestion reduction, which can undermine public confidence if early results are not evident.²⁸ Finally, there is a risk that revenues are perceived as general taxation if not clearly earmarked and transparently reinvested, weakening public trust and long-term political viability.

Scalability

Congestion charging is scalable once implemented, as revenues can grow with traffic volumes, pricing adjustments, and geographic expansion of the charging zone. International municipal experience shows that charges can be increased incrementally, differentiated by time of day, vehicle type, or location, and expanded from pilot corridors or cordon areas to broader regions as governance capacity and public acceptance mature.²⁹ Revenues scale predictably when charges are indexed to inflation or congestion intensity, enabling municipalities to align funding with long term transportation and infrastructure investment needs. However, scalability in the Canadian context depends on strong regional coordination, as congestion patterns and commuter flow often cross municipal boundaries; without this, scaling beyond a single municipality may be limited. Where revenues are transparently reinvested in transit and mobility alternatives, congestion charging can evolve from a localized intervention into a durable, region-wide funding mechanism over time.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Primarily a mitigation tool; adaptation benefits depend on revenue use	Generates revenue, but its adaptation value is indirect and depends on earmarking funds for resilience investments.
Economic Efficiency	Medium	0	Requires advanced systems (e.g., tolling, tracking), but proven internationally	Demand pricing is efficient in principle, but technical and operational complexity reduces overall efficiency in municipal use.
Equity & Fairness	Low	-1	Disproportionate impacts on lower-income, car-dependent users	The tool can impose regressive burdens unless offset through rebates, exemptions, or transit reinvestment.
Political Acceptability	Low	-1	Failed attempts in Canadian cities due to opposition	Strong public resistance and political risk significantly constrain adoption.
Feasibility (Admin/Legal)	Low	-1	Requires provincial authorization; not currently enabled in most jurisdictions	Legal authority and governance barriers limit feasibility despite technical viability.
Coherence (Portfolio Fit)	Medium	0	Can fund transit and resilience investments if integrated into planning	The tool can support broader transport and resilience planning, but only with deliberate coordination and revenue alignment.

Best Use Context

Most effective in large, transit-rich metropolitan areas with severe congestion and strong regional governance. The tool is best suited where enabling legislation exists and municipalities can clearly reinvest revenues into transit and resilience infrastructure. Its adaptation relevance remains conditional rather than inherent.

Context Factor	Relevance	Notes
Municipal Size	High	Most viable in large metropolitan regions with significant congestion.
Administrative Capacity Required	High	Requires advanced technology, governance coordination, and enforcement systems.
Development Pressure	Low	Not dependent on growth; tied to traffic demand.
Climate Risk Targeting	Low	Does not inherently target adaptation; depends on revenue allocation.
Fiscal Flexibility Required	High	Requires strong political mandate and intergovernmental coordination.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Congestion Charges*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Land Value Capture



Geography/ Location

BC, ON

Municipality Size

Large



Tier

Enabling



Constraints

Equity



Administrative Capacity Required

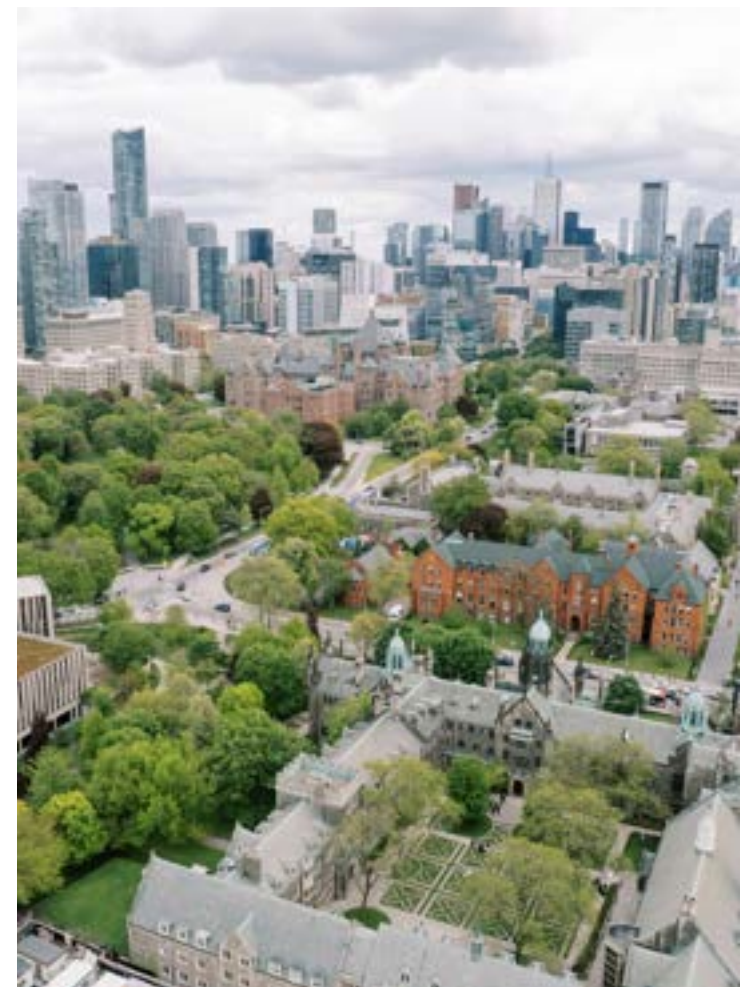
High



Fiscal Tool Brief: Density Bonus

Density Bonuses are incentives that require developers to provide community benefits such as creating open green spaces in order to go above standard allowable building density.

A Density Bonus, also known as Density for Benefit Agreement, is a type of zoning incentive that allows developers to exceed the standard allowable building density (e.g., build more floor area or additional housing units than normally allowed) in exchange for providing community benefits. These benefits may include affordable housing, open green spaces, community facilities, or infrastructure improvements. In provinces such as Ontario and British Columbia, density bonuses are permitted under municipal planning legislation, but the benefits or funds generated must be allocated to local, area-specific amenities rather than citywide projects. Municipalities typically set out the parameters for density bonuses through official plans or zoning bylaws, aiming to make trade-offs transparent and consistent with broader land-use objectives, although equity outcomes may vary depending on where development occurs.¹



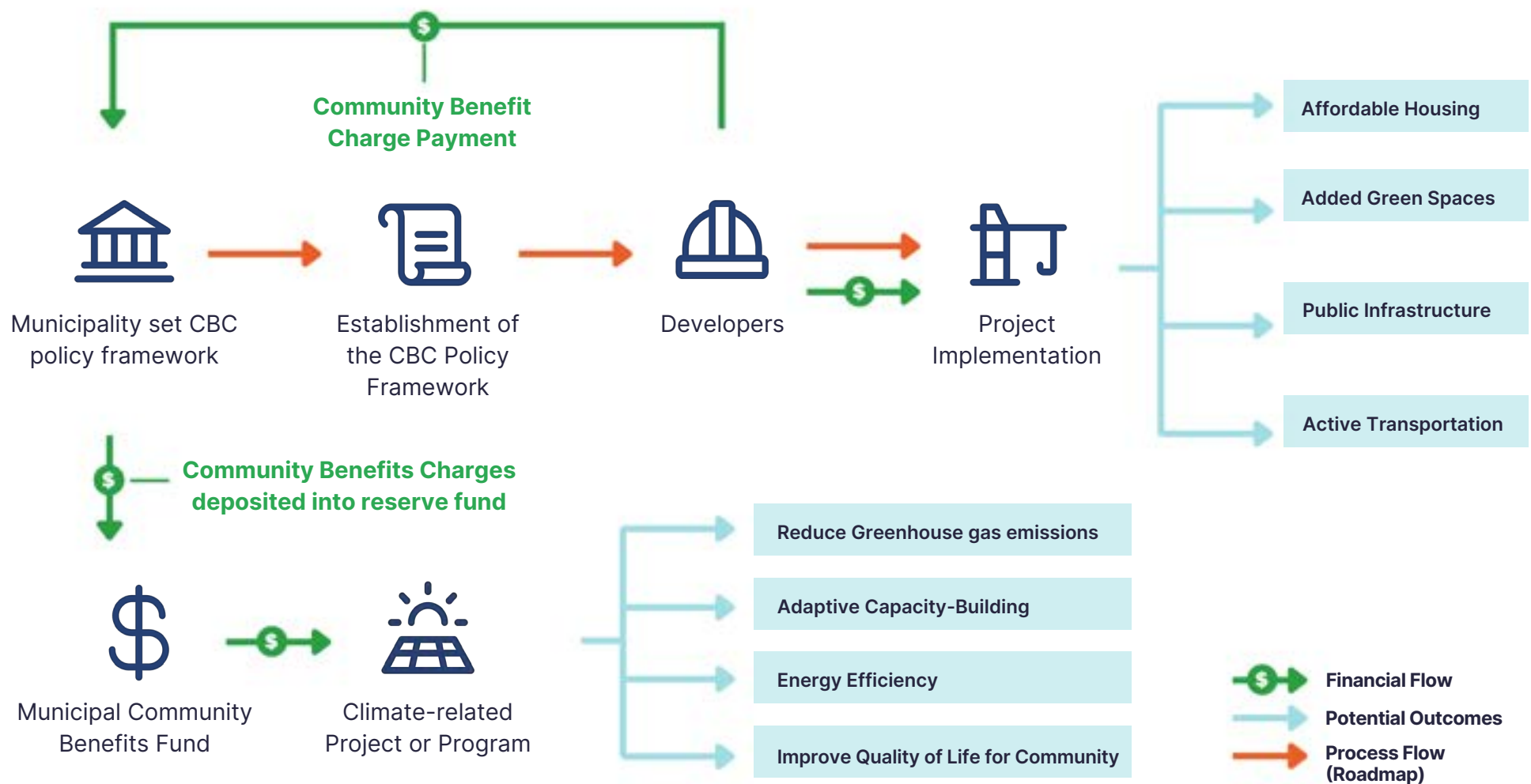


Figure 1. Visual representation of how Density Bonus works

Examples

Numerous Canadian municipalities have implemented density bonus programs to help advance their climate adaptation efforts. For instance, [Burnaby \(BC\)](#) uses a density bonus program known as the City's Community Benefit Bonus Policy that allows the City to approve additional density in exchange for contributing a 'community benefit', including community amenities such as parks, libraries, or community centres, affordable housing, or cash contribution-in-lieu to funds that are allocated exclusively for the future provision of a community amenity or affordable housing programs.² Through this density bonus program, the City has financed seven parks, three group childcare centres, and 19 units of affordable housing.³ In [Toronto \(ON\)](#), the Planning Act allows the City to adopt a Community Benefits Charge (CBC) bylaw, charge CBCs on developments and redevelopments that are at least five storeys in height and that add at least ten residential units, and use the funds to maintain the community facilities and services.⁴ [Calgary \(AB\)](#) introduced a Downtown Density Bonusing Offset Program that is slightly different from other density bonus programs. This program incentivizes faster and high-density residential growth in the downtown area, encouraging developers to contribute to community well-being, such as contributing to a community fund, providing parks or plazas, creating affordable housing, or adding public art.⁵ Other municipalities such as [Halifax \(NS\)](#), [Coquitlam \(BC\)](#), and [Winnipeg \(MB\)](#) have also used density bonuses to support climate adaptation.

Relevance to Advancing Adaptation

Density bonus programs can be leveraged to support climate adaptation by requiring developers to contribute to climate adaptation in exchange for increased building density. Through a density bonus, municipalities can direct these contributions towards projects such as resilient infrastructure, green roofs, stormwater management systems, or wildfire-resistant landscaping, where adaptation objectives are explicitly built into program requirements. In-kind contributions such as improved streetscapes, expanded tree canopies, or public plazas with shade structures can further enhance urban resilience by reducing heat stress and creating multifunctional public spaces that serve as refuge during climate-related emergencies. Therefore, when paired with clear guidelines and project standards, density bonus programs can support embedding adaptation measures into development projects, although their effectiveness depends on development activity and program design.

Accessibility

The accessibility of density bonus programs varies significantly by jurisdiction. Larger municipalities with dedicated planning departments and greater capacity are generally better placed to develop the zoning frameworks, negotiate developer contributions, monitor outcomes, and enforce the trade-offs. For example, the City of Burnaby in British Columbia has a well-documented "Community Benefit Bonus Policy" that enables developers to achieve additional residential density in exchange for affordable housing, parks, childcare facilities, or cash contributions.⁶ On the

contrary, smaller municipalities often face capacity constraints such as fewer staff, limited technical or legal expertise, weaker market needs, and fewer re-zoning opportunities, which can hinder their ability to design and implement effective density bonus systems.⁷ In addition, uptake depends heavily on the developer community engaging voluntarily with the scheme. Since most density bonus mechanisms are optional, their attractiveness and actual use depend on market conditions, cost-benefit for developers, and regulatory certainty.⁸

Feasibility

Density bonus programs have appeal for implementation, particularly in high-demand development contexts. Since they rely on leveraging developer contributions rather than requiring upfront municipal investment, these programs can be economically attractive, although political acceptability remains context-dependent due to density-related concerns. For example, municipalities can integrate these programs into their official plans and zoning bylaws and tailor them to local priorities, such as mandating green roofs in exchange for bonus height, requiring stormwater resilience features, or offering affordable housing contributions. Moreover, when demand for additional density is strong (e.g., in transit-oriented areas, downtown districts), developers are more likely to take up the bonus option, making the mechanism more viable; in lower-growth areas, uptake may be limited. However, the feasibility depends on solid market demand for the bonus density, clear and transparent guidelines, and a strong municipal planning system.⁹

In addition, the feasibility can also be politically challenging. Increasing density can trigger pushback from existing residents, particularly in

the neighbourhoods where concerns about congestion, parking pressure, neighbourhood character, or environmental impacts can contribute to the “not in my backyard” (NIMBY) opposition. Even if the bonus program itself is well designed, local political leaders may hesitate to support bonus density due to public resistance, creating uncertainty or limiting where the tool can realistically be applied. This adds a layer of political complexity that can hinder adoption, require extensive community engagement, or slow approvals. As a result, even though density bonuses are permitted under planning legislation, they may be difficult to implement consistently across a municipality unless there is both market interest and community and political willingness to accept additional growth.

Risk

There are several key risks associated with density bonus programs, particularly related to equity, transparency, and political acceptance. First, a critique is that the rationales for density bonuses appear weak and can lead to less than transparent deals. For instance, the C.D. Howe Institute argued that in Ontario, many density bonus programs lacked transparency and measurable justification. Second, political risks arise if the program is not designed and implemented with transparency, clear criteria, and public scrutiny – the discretionary nature of many bonus negotiation processes means there is potential for uneven treatment, developer capture, or conflicts over democratic accountability.^{10,11} Additionally, there may be resistance from the existing communities. For example, in locations where intensification occurs, greater concentrations of traffic tend to occur, and this worsens local environmental conditions¹² and residents may object to the increased density.

To address these risks, municipalities have introduced policies to make their density bonus programs more transparent and equitable. For example, Vancouver has introduced standardized valuation formulas, publicly accessible benefit schedules, or requirements that council reports disclose how bonus values were calculated, which are all important steps that reduce discretion and strengthen accountability.¹³ The Government of British Columbia has developed comprehensive guidance to help municipalities that implement density bonuses improve their transparency and accountability.¹⁴ Municipalities such as Burnaby have also established mechanisms to mitigate equity concerns and ensure benefits are delivered in the areas experiencing growth.¹⁵ These measures collectively show how municipalities can strengthen oversight, distribute benefits more fairly, and improve public trust in the density bonus process.

Scalability

Municipalities can adapt a successful framework of density bonus and apply it more broadly where enabling policies and sufficient developmental demand exist (e.g., zoning authority, official plan references, enabling bylaws). For example, smaller zones can adopt similar bonus thresholds or benefit categories (e.g., affordable housing, public space, resilience infrastructure) and integrate the mechanism into broader municipal planning policies. However, a major constraint is the market demand for high-density development. In areas with weak demand (low absorption of new units, weaker developer economics), the incentive may be insufficient to attract developers to build to the bonus level. In addition, it is also critical to ensure that the density bonus programs and the increased density are integrated with other municipal policies to deliver comprehensive and effective essential services, enhancing the city's resilience and ensuring a high quality of life for residents.¹⁶



Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Enables contributions via development	Can support adaptation infrastructure, but impact is indirect and contingent on development activity and policy design.
Economic Efficiency	Medium	0	Uses private capital but requires negotiation	Leverages developer contributions efficiently, though administrative and transaction costs are significant.
Equity & Fairness	Low	-1	Benefits concentrated in high-growth areas	Creates spatial inequities and uneven access to benefits across municipalities.
Political Acceptability	Medium	0	NIMBY opposition and transparency concerns	Moderately acceptable but politically sensitive due to density increases and negotiation processes.
Feasibility (Admin/Legal)	Medium	0	Enabled but capacity-intensive	Legally viable, but requires strong planning, legal, and monitoring capacity.
Coherence (Portfolio Fit)	High	+1	Aligns with zoning and planning systems	Integrates well with existing land-use planning and development frameworks.

Best Use Context

Best suited for fast-growing urban municipalities with strong developmental pressure and planning capacity, where sufficient market activity exists to generate meaningful community benefits. Most effective when adaptation objectives are explicitly embedded into zoning and community benefit frameworks, allowing municipalities to leverage development activity for resiliency outcomes.

Context Factor	Relevance	Notes
Municipal Size	High	Larger municipalities better equipped with planning and negotiation capacity.
Administrative Capacity Required	High	Requires strong planning, legal, and monitoring systems.
Development Pressure	High	Most effective in high-growth, high-demand real estate markets.
Climate Risk Targeting	Medium	Can target adaptation if embedded in program design.
Fiscal Flexibility Required	Low	Does not require upfront municipal expenditure.

Recommended Citation

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Category

User Fees and
Regulatory Charges



Geography/ Location

AB, BC, NS, ON,
QC, MB, SK

Municipality Size

Large



Tier

Enabling



Constraints

Equity



Administrative Capacity Required

Medium



Fiscal Tool Brief: Development Cost Charges

Development Cost Charges require new developments to help fund growth-related infrastructure, ensuring growth pays for growth while protecting existing taxpayers.

Development Cost Charges (DCCs), also known as development charges, development impact fees, growth fees, or off-site levies, are fees levied by municipalities on new residential, commercial, industrial, or institutional developments to cover the capital costs of growth-related infrastructure and projects that benefit a community. The mechanism works by requiring private developers to contribute financially to infrastructure such as water, wastewater, stormwater, roads, transit, parks, and community facilities. Municipalities set the rates and adopt bylaws informed by background studies that assess infrastructure needs associated with projected growth. A critical feature of DCC systems is that revenues

collected must be placed into dedicated reserve funds.¹ These Development Charges Reserve Funds (DC Reserve Funds) are established following bylaw adoption and are used to hold, manage, and allocate DCC revenues for eligible capital expenditures.

These reserve funds are typically service-specific and segregated, such as water, sewer, and roads. They generate investment income, helping offset inflation and are subject to strict regulatory requirements regarding use, tracking, and reporting. This structure ensures transparency and reinforces the principle that growth pays for growth, while protecting existing taxpayers from subsidizing new development. In practice, DCCs can be calculated using either the inductive or deductive method. The inductive method applies broad benchmarks, while the deductive method uses detailed engineering and planning studies to allocate costs more precisely.



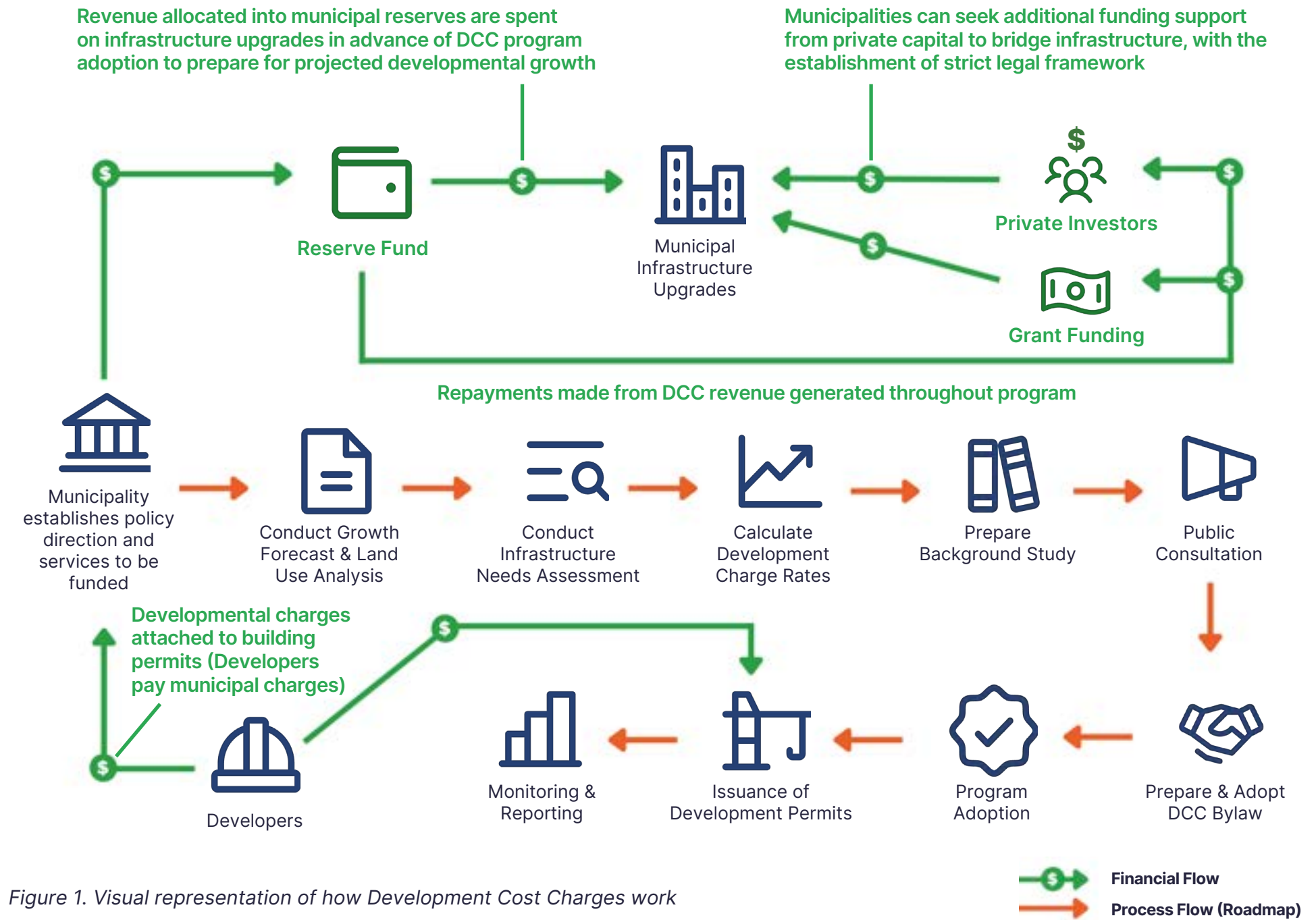


Figure 1. Visual representation of how Development Cost Charges work

Examples

Development Cost Charges (DCCs) are widely used across Canada. In [Regina \(SK\)](#), DCCs are applied to new subdivisions to help cover the cost of extending water, sewer, and road networks needed for expanding neighbourhoods, paying down debt for past growth works or for developing technical studies and plans. In [London \(ON\)](#), DCCs fund critical growth infrastructure (e.g., transportation, transit, water/sewer infrastructure, community centres, fire, police and libraries) with charges applied to both residential and non-residential developments, recent schedules show fees for a single-detached home at nearly \$49,000 reflecting the City's effort to recover the true cost of growth.² In [Woodstock \(ON\)](#), the City maintains a transparent fee schedule where charges vary by type of development, ensuring that residential, commercial, and industrial growth each contribute fairly to infrastructure costs. Larger urban centres are also adjusting fees in response to rapid growth pressures: [Toronto's \(ON\)](#) development charges have more than doubled in the past decade, with single-detached unit charges surpassing nearly \$138,000 by 2024, one of the highest in the country, while [Mississauga \(ON\)](#) introduced temporary 50% reductions and payment deferrals to balance housing affordability with municipal infrastructure funding needs.

[Halifax \(NS\)](#) applies a “growth pays for growth” model through Regional Development Charges (RDCs), ensuring that new developments cover the infrastructure costs they generate. These charges are carefully structured to break even, avoiding surpluses or deficits over time. [Calgary \(AB\)](#) maintains a comparatively moderate approach to development costs, with fees structured to support growth while avoiding the extreme affordability pressures seen in Toronto or Vancouver. Under the City's 2025 fee schedule,³

charges vary by project scale and type, keeping costs balanced across developments. These examples show how municipalities balance growth financing with affordability pressures through DCCs.

At the reserve fund level, municipalities such as the [Region of Peel \(ON\)](#) maintains DC Reserve Funds in accordance with Section 33⁴ of the Development Charges Act 1997, to ensure “growth pays for growth,” collecting developer fees into service-specific reserve funds for roads, water, wastewater and GO Transit. In 2023, collections dropped to about \$179 million while capital spending and debt repayments reached \$484 million, creating a net draw of roughly \$305 million.⁵ A Tribunal-ordered \$56 million refund added to the pressure, leaving a negative available balance of \$211 million and an over-commitment of about \$2.49 billion. Despite these challenges, Peel remains compliant with the Development Charges Act, maintaining separate reserves and publishing annual statements for transparency.⁶

Similarly, in British Columbia, under Section 188 of the Community Charter,⁷ municipalities such as the [District of Lake Country \(BC\)](#) can deposit DCC revenues into segregated reserve funds for infrastructure including water, sewer, and roads, ensuring funds are used exclusively for growth-related capital projects.

Relevance to Advancing Adaptation

DCCs can support climate adaptation by funding resilient infrastructure in growing communities. Revenues collected through DCCs and held in reserve funds create a dedicated and predictable funding stream for capital investments that enhance resilience. Through these reserve funds, municipalities can plan and finance multi-year adaptation projects, such as stormwater management

systems, flood protection infrastructure, green infrastructure, and water and wastewater system upgrades aligned with climate risks. Since funds are segregated and accumulate over time, they enable municipalities to phase large-scale adaptation investments without overburdening operating budgets. DCCs can also incentivize climate smart development by offering reduced fees for projects that incorporate resilience measures, such as permeable surfaces, energy efficient design, or increasing tree canopy coverage. For example, [Metro Vancouver \(BC\)](#) uses DCC revenues to expand water and wastewater infrastructure as well as to invest in regional parks and green spaces that deliver climate adaptation benefits, such as stormwater management, reduced urban heat islands, increased biodiversity, and carbon storage. Between 2024 and 2050, the Region is planning over \$803 million⁸ in DCC funded parkland acquisitions to increase its ecological resilience.

However, since DCC revenues depend on development activity, adaptation investments may be unevenly distributed, with slower-growing or historically underinvested areas receiving fewer benefits despite potentially higher climate risks.

Accessibility

DCCs are broadly available across Canada through provincially enabling legislation, making them a widely accessible tool for funding growth-related infrastructure.

In most jurisdictions, legislation requires that DCC revenues be placed into dedicated reserve funds, reinforcing accountability

and restricting their use to eligible capital costs. For example, Ontario requires municipalities to establish separate reserve funds for each service category under the Development Charges Act⁹; British Columbia mandates that DCC revenues be deposited into service-specific reserve funds under the Local Government Act¹⁰; and Quebec and Alberta have similar frameworks that restrict revenues to growth-related infrastructure.^{11,12} Despite broad availability, implementation requires technical studies, bylaw adoption, and administrative capacity, which may create barriers for smaller municipalities. No equivalent statutory reserve-fund regime for development charge revenues has been identified in Manitoba, Saskatchewan, the Atlantic provinces, or the territories. DC reserve funds therefore remain a tool primarily available in Ontario, British Columbia, and Quebec, with partial equivalents in Alberta.

Feasibility

Overall, DCCs are a politically and economically feasible tool because they are supported by provincial legislation and align with the cost recovery principle, which shifts the cost of new infrastructure from taxpayers to developers and new residents or businesses. The DC reserve fund system further supports feasibility by integrating with existing municipal financial management practices, requiring audited tracking and reporting, and enabling long-term capital planning. Many municipalities already manage significant reserve balances, demonstrating strong institutional capacity to administer DCC systems and associated reserve funds. However, feasibility varies. While fast-growing municipalities can accumulate substantial reserves, slower-growth municipalities may see limited revenue generation, reducing impact.

In addition, high DCC rates such as Toronto's increase from \$14,000 in 2011 to over \$138,000 in 2024 have raised concerns about their impact on housing affordability and development viability.¹³ *Budget 2025: Canada Strong* announced the Building Communities Strong Fund to help address housing affordability. However, provinces and territories will be required to cost match federal investments and ensure that supported municipalities reduce development charges and do not levy other taxes that hinder housing supply.¹⁴ Municipalities like [Mississauga \(ON\)](#) and [Vaughan \(ON\)](#) have responded to housing affordability concerns with temporary DCC reductions and payment deferrals to sustain development while maintaining infrastructure funding capacity. Overall, while DCCs are widely accepted and legislatively supported, their successful implementation depends on careful rate calibration, transparent governance, and sensitivity to housing-market pressures.

Risk

Several risks arise from both the DCC mechanism and its reliance on reserve funds. One of the most significant concerns is that DCCs may be partially or fully passed on to buyers and renters through higher housing prices, exacerbating affordability challenges in fast growing communities.¹⁵ This could create regressive impacts, where lower income households absorb a disproportionate burden despite not directly benefiting from new infrastructure. To be more precise, research suggests that markets where demand is high and supply is constrained may favor a higher burden on homebuyers and renters compared to developers and landowners.¹⁶ Additionally,

municipalities risk political backlash when rate increases are perceived as contributing to the housing crisis or discouraging development. Economic downturns or overestimated growth projections can further expose municipalities to financial gaps if expected DCC revenues do not materialize to cover planned infrastructure investments. Finally, inequitable application of waivers or exemptions such as preferential reductions for specific housing types can reduce municipal revenue stability and generate perceptions of unfairness among developers and residents.¹⁷

In terms of DC Reserve Funds, one of the risks is that revenues can decrease quickly when development slows. Because these funds depend on new construction, an economic downturn or delay in housing projects can leave municipalities without enough money to complete planned infrastructure or adaptation upgrades.¹⁸ Furthermore, municipalities can unintentionally commit to more projects than their reserve funds can support if they rely on growth forecasts that do not materialize. When development slows, they may need to delay projects, raise taxes, or take on additional debt to cover the gap. This situation occurred in Peel Region, where 2023 development charge collections were lower than expected and the Ontario Land Tribunal ordered a \$56 million refund under an amendment to Bylaw 77-2020.¹⁹ Large reserve balances can also be misunderstood as surplus funds, even though most of these funds are legally required for specific projects. If this is not communicated clearly, municipalities may face criticism or resistance to updating development charges, especially during periods of housing affordability concerns.

Scalability

DCCs scale with development activity, making them well suited for growing municipalities where infrastructure demand is increasing. As development increases, DCC revenues rise, reserve fund balances grow, and the capacity for capital investment also expands. This makes the fiscal tool well suited for municipalities with growing populations and increasing pressure on roads, water systems, parks, and stormwater networks. Ontario's Financial Information Return (FIR) data shows that reserve balances increase steadily in fast growing regions.²⁰ However, scalability varies across municipalities. For example, housing affordability pressures can limit rate increases; there are uneven development patterns across municipalities; and there may be political resistance to higher charges.

In response to mounting affordability pressures, several municipalities have introduced targeted reductions and deferrals rather than continued rate increases. The City of Mississauga approved a temporary 50% reduction in DCCs for residential projects beginning before November 13, 2026, saving an estimated \$28,000 per new single-family home.²⁰ The City also deferred DCC payments until first occupancy and waived charges for three-bedroom purpose-built rental units to encourage new housing supply, while urging the Region of Peel to introduce a 35% property tax discount for purpose-built rentals. Similarly, the City of Vaughan implemented a DCC Rate Reduction and Deferral Policy in November 2024, cutting fees by 88–92% depending on housing type up to \$44,273 in savings for detached homes and suspending interest

on DCCs to ease financing burdens.²² These examples show that while DCCs can scale with growth, further expansion through rate hikes is increasingly constrained by affordability limits and public pressure. Going forward, scalability will rely on innovative policy mechanisms such as flexible rate structures, which adjust DCCs based on factors like housing type, density or location, or phased payment options, which allow developers to pay charges over time rather than upfront.



Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Generates infrastructure funding tied to development activity	DCCs provide meaningful infrastructure revenue, but support adaptation indirectly and depend on ongoing development activity.
Economic Efficiency	Medium	0	Established system but requires forecasting, rate-setting, and administration	The tool supports growth-based cost recovery efficiently, but forecasting, rate calibration, appeals, and market sensitivity reduce overall efficiency.
Equity & Fairness	Medium	0	Costs passed to homebuyers/renters; affordability concerns	Costs are often passed to homebuyers and renters, creating affordability pressures despite partial alignment between payers and beneficiaries.
Political Acceptability	Medium	0	Widely used but increasing resistance due to housing affordability	DCCs are institutionalized and generally accepted, but growing concern about housing cost constrains political support.
Feasibility (Admin/ Legal)	High	+1	Legislatively supported and widely implemented across municipalities	Clear legal authority and established municipal practice make DCCs highly feasible despite moderate administrative complexity.
Coherence (Portfolio Fit)	High	+1	Integrated with reserve funds and capital planning systems	DCCs fit well within municipal growth-financing systems and complement reserve funds and broader infrastructure planning.

Best Use Context

DCCs are most effective in high-growth municipalities where development activity generates stable revenue for infrastructure expansion. They work best as a growth-linked financing tool within a broader municipal finance portfolio but are less suitable in low-growth settings and usually require complementary measures to address equity concerns and revenue volatility.

Context Factor	Relevance	Notes
Municipal Size	High	Most effective in large or fast-growing municipalities with sustained development activity.
Administrative Capacity Required	Medium	Requires technical capacity for forecasting, rate-setting, and fund management.
Development Pressure	High	Performance depends heavily on ongoing growth and construction activity.
Climate Risk Targeting	Low	Not inherently targeted; supports adaptation indirectly through infrastructure funding.
Fiscal Flexibility Required	Medium	Requires ability to manage revenue volatility and align spending with growth cycles.

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This brief is part of a larger catalogue. The Catalogue of Fiscal Tools to Advance Adaptation examines how municipalities can use and optimize existing fiscal tools to support climate adaptation and climate-resilient infrastructure. Each brief included in this catalogue explores a specific tool, assesses its strengths and limitations through a common analytical framework, and highlights examples of how it has been applied in practice.



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Category

Debt



Geography/ Location

AB, BC, ON, SK

Municipality Size

All



Tier

Enabling



Constraints

None

Administrative Capacity Required

Medium



Fiscal Tool Brief: Energy Efficiency Loans

Energy efficiency loans help property owners finance energy-saving upgrades with low upfront costs, often repaid over time through property tax bills, utility bills, or loan payments.

Energy efficiency loans are a type of financing program designed to help homeowners, businesses, and municipalities implement projects that improve energy performance or integrate renewable energy solutions. Many of these programs operate under or are structured similarly to Property Assessed Clean Energy (PACE) financing. PACE programs allow property owners to finance energy efficiency, renewable energy, and climate-resilience upgrades and repay the cost through an assessment added to their property tax bill. This structure reduces or eliminates upfront costs, which is one of the primary barriers to building retrofits, and enables longer repayment periods that better align with the lifespan of energy improvements. Because the repayment obligation is attached to the property rather than the individual borrower, the remaining balance can

transfer to a future owner if the property is sold, which helps facilitate longer-term investments in building performance.¹

In Canada, municipalities often play a central role in administering these programs because they manage property tax systems and can integrate financing tools like PACE into local retrofit initiatives, although implementation depends on enabling provincial legislation that varies across jurisdictions. These programs aim to reduce greenhouse gas emissions and lower energy costs. They are generally offered at low or zero interest rates with flexible repayment schedules, making them more accessible to a broad range of participants. Eligible upgrades often include improved insulation, high-efficiency heating and cooling systems (e.g., heat pumps), solar photovoltaic installations, and advanced energy management technologies.^{2,3} Programs are delivered by federal, provincial, and municipal governments, utilities, and financial institutions, and can be in combination with grants or rebates to further reduce upfront barriers.



The main purpose of energy efficiency loans is to make energy upgrades accessible by reducing the upfront costs, allowing borrowers to repay through mechanisms like property tax bills, utility bills, or traditional loan payments. Many programs are structured to ensure that energy savings offset the loan repayments, creating a cost-neutral or a cost-saving outcome for participants.⁴



Examples

Different Canadian municipalities have energy efficiency loan or financing programs to improve energy performance for buildings. [Saskatoon \(SK\)](#) implemented a Home Energy Loan Program (HELP) to provide homeowners with low-interest financing to support energy efficiency upgrades, renewable energy installations, and energy reduction measures. Loan amounts range from \$1,000 to \$60,000 and can be repaid through property taxes over flexible terms of 5, 10, or 20 years.⁵ [Guelph \(ON\)](#) launched its Greener Homes program, which is a residential home energy-efficiency retrofit program that helps residents reduce emissions and make their homes more affordable. With a funding of \$15 million from the Government of Canada and FCM,⁶ the program allows homeowners to upgrade energy systems, such as solar installations, and reduce both costs and emissions. The program offers two program streams, which are the “Loan program” and the “Grant program” for low-income households.⁷ Other examples include [Toronto \(ON\)](#), [Edmonton \(AB\)](#), and [Central Saanich \(BC\)](#).

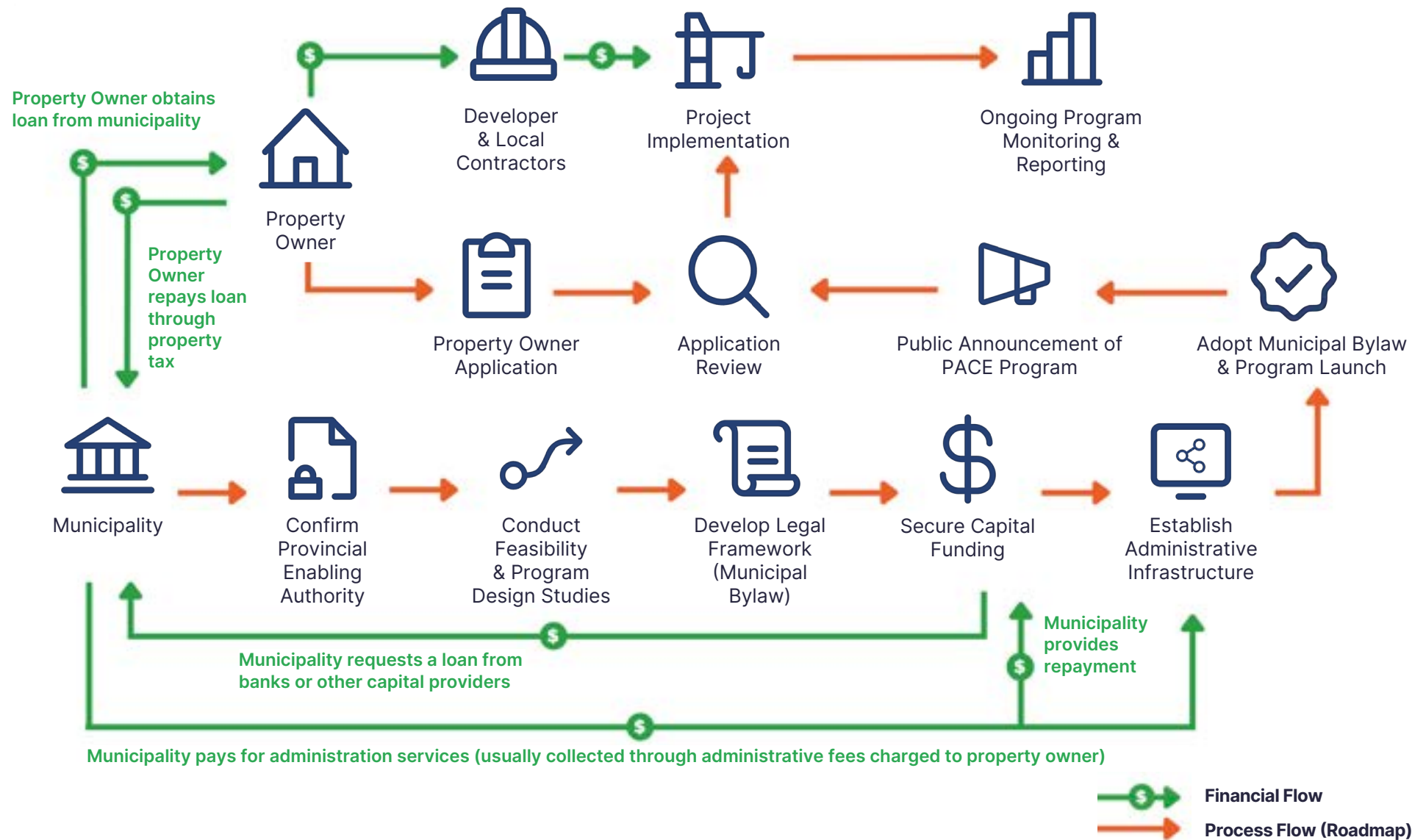


Figure 1. Visual representation of how Energy Efficiency Loans work

Relevance to Advancing Adaptation

While primarily a climate mitigation tool, energy efficiency loans can also support climate adaptation by enabling upgrades that strengthen building-level resilience to extreme weather events. For example, retrofitting buildings with high-performance insulation, energy-efficient windows, and heat pumps not only reduces energy demand but also helps maintain livable indoor conditions during heat waves or cold temperatures.⁸ Incorporating solar panels with battery storage can improve energy security during grid outages caused by storms.⁹ By implementing energy efficiency loans that can also support adaptation measures, municipalities and property owners can implement adaptation and mitigation-focused improvements efficiently, without requiring large upfront capital. This helps reduce the financial barriers for resource-constrained communities to invest in infrastructure that is more reliable under changing climate conditions.

Accessibility

Energy efficiency loan programs are generally designed to be accessible to homeowners and businesses by reducing financial barriers to energy upgrades, although access remains more limited for renters and some low-income households. Many programs offer low- or zero-interest financing with flexible repayment terms, which lowers the cost of participation compared to traditional private loans. For example, the federal [Canada Greener Homes Loan](#) provided interest-free loans of up to \$40,000 for eligible retrofits, significantly expanding access for households that might otherwise be unable to finance energy upgrades upfront.¹⁰ Municipal programs such as Saskatoon's HELP also enhance accessibility by allowing

repayments through property tax bills, leveraging existing municipal collection systems and reducing administrative burden for participants.¹¹ Accessibility can be improved when loans are bundled with grants or rebates, as seen in Guelph's Greener Homes program, which combines loan financing with grant support for low-income households to address affordability and equity concerns.¹²

However, accessibility can still be constrained by eligibility requirements such as property ownership, minimum credit requirement, and consumer proposal, which may limit participation among renters, low-income households, or communities with limited administrative capacity. These factors highlight the importance of complementary grant streams, outreach, and technical assistance to ensure equitable access across different population groups.

Moreover, accessibility also depends on the capacity of municipalities to design, administer, and sustain these programs. Developing and operating energy efficiency loan programs can require significant administrative resources, technical expertise, and coordination with financial partners, which can be challenging for smaller municipalities with limited staff or funding. Therefore, it is critical to provide funding, guidance, and technical support to help municipalities develop and scale community financing initiatives and strengthen the local capacity to deliver these programs.

Feasibility

Energy efficiency loan programs are generally feasible because proven program models already exist at multiple levels of government, although implementation depends on enabling legislation and municipal capacity. Many of the financing structures used in Canada are based on the Property Assessed Clean Energy (PACE) model, which was first developed and piloted in the United States, with early programs launched in Berkeley, California in 2007.¹³ These early demonstrations helped establish the operational and financial viability of property tax-based financing for energy retrofits and provided practical lessons that informed program development in other jurisdictions, including Canada. For example, the federal government's Canada Greener Homes Loan provided interest-free financing of up to \$40,000 with a 10-year term for energy-efficient home upgrades such as insulation, heat pumps, and windows, supporting broad participation and demonstrating practical delivery at scale.¹⁴ At the municipal level, Saskatoon's HELP offers low-interest loans repayable through property taxes over 5–20 years, leveraging existing tax collection systems to simplify repayment and reduce administrative complexity for participants.¹⁵ These kinds of loan programs can also be bundled with rebates and other incentives, which can improve uptake but add coordination requirements. For example, as seen in Saskatoon's case study where stackable rebates and additional tools such as pre-vetted contractors and energy coaching improved the uptake of such energy retrofits.¹⁶ Therefore, by building on existing structures, including federal financial products and municipal delivery mechanisms, energy efficiency loans offset the costs for energy upgrades and demonstrate both technical and administrative feasibility for widespread implementation.

Risk

Energy efficiency loan programs carry risks linked to administrative capacity, political continuity, and performance uncertainty. For example, the federal Canada Greener Homes Loan closed its intake ahead of schedule due to funding limits, exposing how shifts in political and fiscal support can abruptly alter the landscape of loan availability, undermining long-term planning and participant confidence.¹⁷ At the municipal level, high demand for energy audits and limited contractor availability in Saskatoon's Home Energy Loan Program created logistical bottlenecks, showing how administrative and technical constraints can delay project delivery and discourage participation.¹⁸ Saskatoon has improved this situation through training and relationship-building, such as offering contractors training on building envelopes and energy-efficient technologies and equipment.¹⁹ Performance risks also arise because loan repayment assumes a degree of energy savings. While energy efficiency measures often deliver cost savings, they can vary based on climate conditions and usage patterns, meaning outcomes are not uniform for all borrowers. Academic research on retrofit strategies notes that without careful design accounting for future climate and building performance variables, efficiency improvements may not deliver the expected balance of costs and savings.²⁰ These administrative, political, and technical risks suggest that comprehensive program design, clear continuity commitments, and robust feasibility assessments are important to ensure effective, equitable loan deployment.

Scalability

Energy efficiency loan programs have strong potential for scaling across jurisdictions and integrating with broader climate strategies, particularly where financing, partnerships, and administrative capacity can be sustained. For example, the federal government's Canada Greener Homes Loan program provided a nationwide model for interest-free financing of energy upgrades, demonstrating that high-impact loan products can be deployed at national scale and inspire analogous provincial, territorial, or municipal initiatives.²¹ At the municipal level, Saskatoon's work to expand from its Home Energy Loan Program to a Community Energy Loan Program (CELP) for commercial and multi-unit sectors illustrates how scalable frameworks can be extended to new building types and borrower segments.²² Scalability is further supported by the fact that energy efficiency retrofits deliver both mitigation and adaptation benefits, such as improved resilience to extreme temperatures and grid stress, enabling compelling multi-objective justification for broader program adoption and integration with climate plans.²³ By combining standardized delivery models, evolving policy support, and co-benefits across mitigation and adaptation, energy efficiency loan programs can be replicated and expanded across regions, sectors, and scales. When paired with partnerships between utilities, local governments, and financial institutions, they have the potential to achieve higher scalability and contribute to a wider impact on climate resilience.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Primarily mitigation-focused; indirect resilience benefits	Supports adaptation indirectly through building-level resilience upgrades, but is not a primary adaptation finance tool.
Economic Efficiency	Medium	0	Leverages existing systems but requires administration	Moderately efficient, though program design, partnerships, and delivery create a meaningful coordination burden.
Equity & Fairness	Medium	0	Improved access but barriers remain for renters and low-income groups	Equity outcomes are mixed because low-interest financing helps some households, but eligibility and affordability constraints persist.
Political Acceptability	High	+1	Popular due to savings, low upfront costs, and voluntary participation	Strong public acceptance is supported by clear financial benefits and a non-coercive design.
Feasibility (Admin/Legal)	Medium	0	Municipal authority to adjust property taxes via bylaws	Feasible where legal frameworks and delivery capacity exist, but implementation is uneven across jurisdictions.
Coherence (Portfolio Fit)	High	+1	Integrates with municipal budgeting and reserve funds	Aligns well with broader municipal and intergovernmental climate finance and retrofit programs.

Best Use Context

Most effective for municipalities seeking to retrofit existing buildings and improve resilience incrementally. Works best where administrative capacity exists and where utilities, senior governments, or other partners can help support program delivery and financing.

Context Factor	Relevance	Notes
Municipal Size	Medium	Applicable across sizes, but larger municipalities have greater delivery capacity.
Administrative Capacity Required	Medium	Requires program design, partnerships, and outreach capacity.
Development Pressure	Low	Not dependent on growth; applies to existing building stock.
Climate Risk Targeting	Medium	Supports building-level resilience, but not large-scale infrastructure.
Fiscal Flexibility Required	Medium	Requires upfront capital or partnerships to fund loan pools.

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This brief is part of a larger catalogue. The Catalogue of Fiscal Tools to Advance Adaptation examines how municipalities can use and optimize existing fiscal tools to support climate adaptation and climate-resilient infrastructure. Each brief included in this catalogue explores a specific tool, assesses its strengths and limitations through a common analytical framework, and highlights examples of how it has been applied in practice.



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Category

Debt



Geography/ Location

AB, BC, MB, NB,
NL, NS, ON, PE,
QC, SK

Municipality Size

Medium



Tier

Enabling



Constraints

None

Administrative Capacity Required

Medium



Fiscal Tool Brief: Energy Service Performance Contracts (ESPCs)

Energy Service Performance Contracts let municipalities upgrade facilities with little upfront cost by using guaranteed energy savings to repay project costs over time.

Energy Service Performance Contracts (ESPCs) or in short Energy Performance Contracts (EPCs) are agreements between a municipality (or other entities) and an Energy Service Company (ESCO) to upgrade buildings and infrastructure for energy efficiency. Instead of the municipality paying upfront, the ESCO covers some or all of the project's costs, such as upgrading HVAC systems, lighting, or windows, and is repaid over time from the savings on energy bills. The ESCO guarantees a certain level of savings, so the municipality's repayments come directly from reduced utility costs rather than other sources. EPCs typically last from two to 20 years, depending on the measures implemented. Once the contract ends, the municipality keeps all future savings. This



makes EPCs a useful fiscal tool because they let municipalities modernize facilities, cut emissions, and lower operating costs without large upfront spending, while also shifting technical and financial risks onto the ESCOs. While ESPCs are presented as a form of debt in this Catalogue, whether they count as municipal debt or not depends on how each jurisdiction defines debt under its laws.

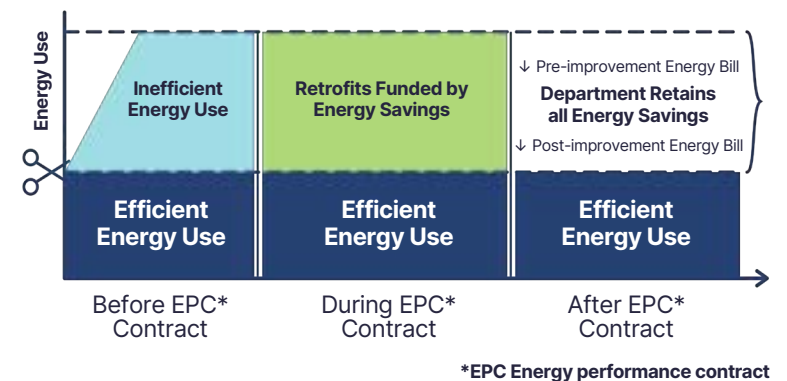


Figure 1. Energy Performance Funding Model¹

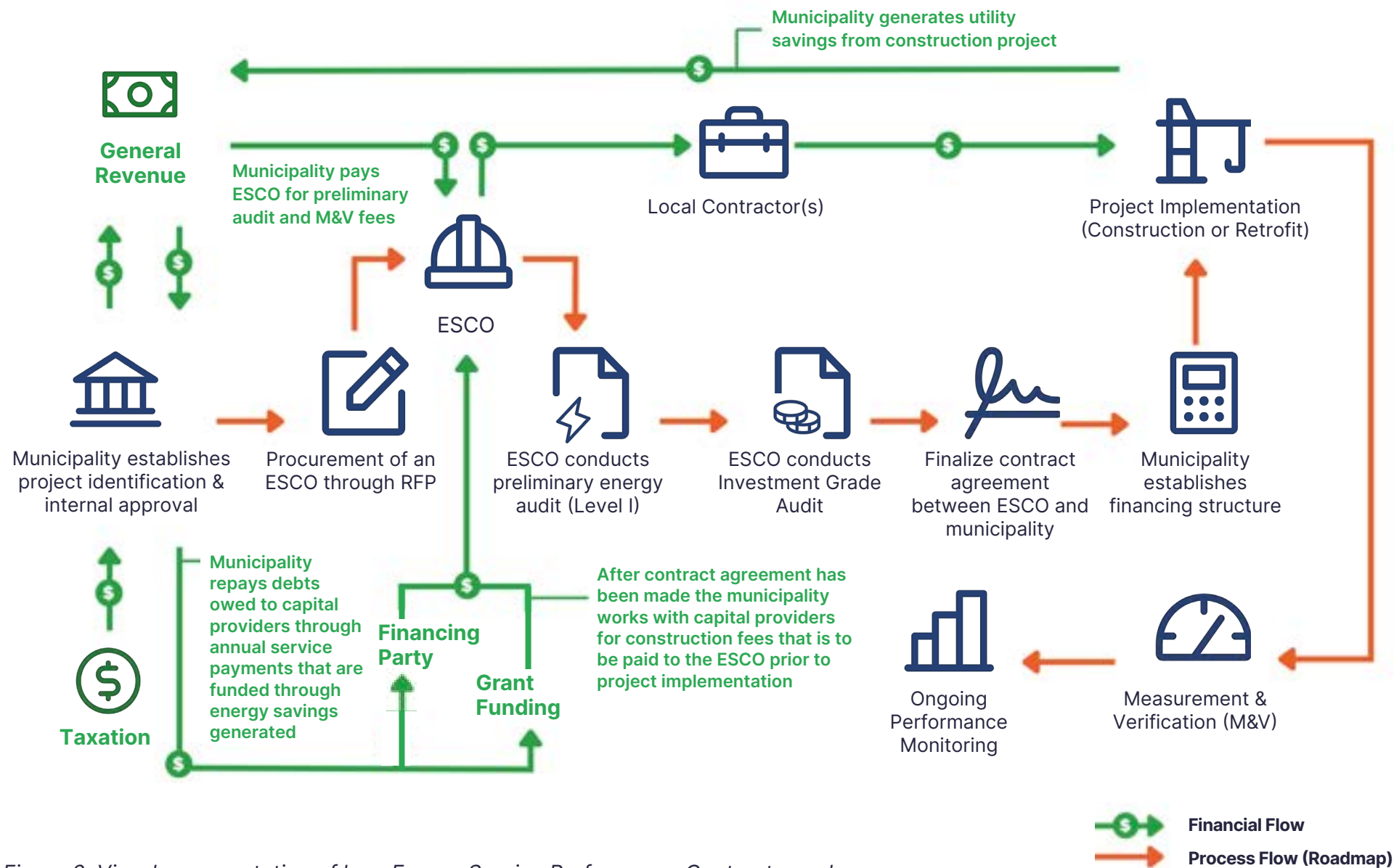


Figure 2. Visual representation of how Energy Service Performance Contracts work

Examples

EPCs have been implemented in all provinces and in various municipalities across the country, with over 280 projects completed in 2017.² These projects ranged in size from \$1 – 50 million and it was estimated that annual revenues for projects that had a performance guarantee was about \$300 million.³ [Windsor \(ON\)](#) implemented deep energy retrofits across 148 municipal buildings, including City Hall, libraries, pools, fire stations, wastewater treatment facilities and others. Through the EPC, the municipality achieved \$982,000 in annual energy cost savings. In Atlantic Canada, there are successful EPC case studies documented in Gander (NL), Halifax (NS) as well as Gagetown (NB) among others. In [Saskatoon \(SK\)](#), 35 buildings have gone through renovations to improve energy performance and operational efficiencies in civic facilities since 2017. The main improvements included: LED lighting retrofits, HVAC upgrades, building automation controls, and building recommissioning. [Vancouver \(BC\)](#) implemented an EPC through BC Housing's Housing Renovation Partnership, upgrading 171 residential buildings covering over 2 million square feet. The \$52 million project improved living conditions for 2,453 apartment units, achieved \$1.2 million in annual energy cost savings, and significantly reduced greenhouse gas emissions. [Quebec](#) was one of the first provinces to use EPCs over 35 years ago through Econoler, then a Hydro-Quebec subsidiary, and has since become Canada's most active jurisdiction in promoting them. Over the past two decades, provincial ministries have directed schools, universities, and hospitals with the highest energy costs to adopt

EPCs. Quebec is now launching a municipal Super ESCO program, [ÉcoÉnergie360](#), designed to accelerate decarbonization by bundling small municipal projects into larger, more attractive packages. The mechanism provides turnkey EPC services with no upfront costs, financed through SOFIAC's CAD \$300 million fund, structured so repayments come from verified energy savings without impacting municipal debt capacity. Projects will target buildings, water and wastewater plants, and streetlighting, with investments deployed over six years and repaid within fifteen. The initiative entered its final structuring phase in 2025, with implementation scheduled to begin in 2026 and roughly 200 municipalities already engaged.⁴ Lastly, in the recently announced [Budget 2025](#) the uptake of Energy Performance Contracts is highlighted by the Department of National Defence, recognizing the model has a high potential to modernize critical infrastructure, lower recurring utility costs, and advance Canada's climate commitments through third-party financed retrofits. The federal government's endorsement shows that EPCs are now viewed as a scalable and low-risk solution for improving energy efficiency across large, complex facility portfolios while maintaining fiscal discipline, meaning that modernization occurs without adding to public debt or increasing operational budgets.⁵ These examples demonstrate the flexibility of EPCs across different jurisdictions and sectors.

Relevance to Advancing Adaptation

EPCs can support climate adaptation by enabling municipalities to retrofit public buildings without needing upfront capital. These upgrades such as improved cooling, ventilation, or energy systems help facilities remain safe and functional during extreme weather events. For instance, [Windsor \(ON\)](#) upgraded 148 facilities, saving nearly \$1 million annually in energy costs, while improving resilience in wastewater systems, libraries, and emergency services. In [Kingston \(ON\)](#), EPCs helped conserve 11,000 cubic metres of water annually by modernizing arena systems, a key adaptation in areas facing future water stress. A mid-sized municipality facing more frequent heatwaves could use EPCs to install passive cooling systems, efficient lighting, and smart controls in schools and care homes, thereby reducing vulnerability while cutting emissions. These measures can also improve air quality and indoor comfort especially in schools and community centres contributing to important health and social equity benefits during extreme heat events. Looking ahead, EPCs could be expanded to integrate solar and battery storage systems in civic buildings, which may enhance energy autonomy and help maintain services during grid failures linked to climate impacts.

Accessibility

EPCs are broadly accessible across Canada, with enabling programs and model frameworks available at federal, provincial, and utility levels. The mechanism is open to all orders of government, as well as to schools, hospitals, and housing authorities, and does not require access to specific grant programs. Federal initiatives such as Natural Resources Canada's Federal Buildings Initiative

(FBI) and the Department of National Defence's expansion of EPCs⁷ under Budget 2025 demonstrate strong public sector confidence in the model and provide templates that municipalities can adapt easily. At the provincial level, Hydro-Québec, BC Hydro, and SaskPower offer technical assistance and prequalified ESCO lists to simplify procurement. Many municipalities also rely on turnkey models or shared-service arrangements, such as Quebec's ÉcoÉnergie360 Super ESCO, which aggregates smaller municipal projects into larger, fundable portfolios. Smaller or rural municipalities, however, may face barriers due to limited staff capacity or legal expertise in performance contracting. These can be mitigated through provincial support programs, regional collaborations, and standardized contract templates developed by NRCan.⁸ Overall, the accessibility of EPCs depends on institutional readiness and technical capacity.

Feasibility

At the economic level, feasibility is increased by the guaranteed savings model, in which third-party ESCOs finance and implement upgrades, recovering costs through verified reductions in utility bills. This structure reduces risk for municipalities and preserves borrowing capacity, making it especially attractive in periods of fiscal constraint. For medium-sized communities, specialized financing programs such as the Super ESCO, can lower transaction costs and expand the uptake. From a social perspective, EPCs are generally well accepted, particularly due to their cost-neutral structure and visible operational improvements. Feasibility could be strengthened through bundling projects across departments or municipalities to achieve economies of scale. For example, Quebec's municipal Super ESCO model shows how bundling can attract more competitive ESCO bids.

Risk

There is a risk that projected energy savings under an Energy Performance Contract may not fully materialize, particularly if the initial energy use baseline is inaccurate or if operating conditions change after retrofits. Since the repayment of the ESCO is tied to verified cost savings, discrepancies between projected and realized performance can lead to financial shortfalls or contract disputes. To mitigate this, municipalities are encouraged to adopt standardized Measurement and Verification (M&V) frameworks, such as the International Performance Measurement and Verification Protocol (IPMVP) used under Natural Resources Canada's Federal Buildings Initiative, which establishes transparent and verifiable savings methodologies. Moreover, there could be contractual and legal risks associated with the complexity of multi-year EPCs. Misaligned expectations, unclear performance obligations, or insufficient documentation during procurement can expose municipalities to disputes over responsibilities or maintenance standards. Finally, reputational and political risks may emerge if projects underperform or if promised savings are not clearly demonstrated to the public or council. Because EPCs are often promoted as self-financing and low-risk, failure to achieve expected outcomes could undermine confidence in both the mechanism and municipal climate commitments.

Scalability

EPCs are scalable across jurisdictions and project types, particularly where sufficient administrative capacity and project bundling opportunities exist. They have been successfully implemented from coast to coast to coast, with hundreds of projects completed nationwide. One of the model's key strengths is its ability to bundle and aggregate projects across multiple facilities jurisdictions, enabling municipalities of different sizes to access competitive financing and shared technical expertise. Looking ahead, EPCs could scale even further by integrating renewable energy, electrification, and climate resilience upgrades for example, by adding solar panels, battery storage, or passive cooling systems into existing contracts. This re-imagined approach could position EPCs as a long-term, self-financing mechanism that support both mitigation and adaptation goals, while strengthening energy security and operational resilience in municipalities.



Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Savings-backed financing; indirect adaptation benefits	Enables efficiency upgrades with indirect resilience benefits, but does not directly target adaptation outcomes.
Economic Efficiency	Medium	0	ESCO-led delivery; contract complexity	High capital efficiency through private delivery, offset by complex measurement, verification, and contract management.
Equity & Fairness	Medium	0	Public asset upgrades; no direct user charges	Benefits are broadly shared, though not specifically targeted to vulnerable populations.
Political Acceptability	High	+1	No upfront cost; guaranteed savings model	Strong political support due to cost neutrality and visible operational savings.
Feasibility (Admin/Legal)	Medium	0	Requires ESCO procurement and legal expertise	Widely implementable but constrained by procurement complexity and capacity requirements.
Coherence (Portfolio Fit)	High	+1	Aligns with asset management and climate programs	Integrates well with infrastructure renewal and broader energy and climate frameworks.

Best Use Context

Most effective for municipalities seeking low-capital upgrades to existing infrastructure assets. Works best where sufficient administrative or external capacity exists to manage contract complexity, and where efficiency improvements can be integrated into broader resilience and asset management strategies.

Context Factor	Relevance	Notes
Municipal Size	Medium	Larger municipalities benefit more from scale and internal capacity.
Administrative Capacity Required	Medium	Requires procurement, legal, and technical expertise.
Development Pressure	Low	Not dependent on growth; applicable to existing assets.
Climate Risk Targeting	Low	Primarily targets energy efficiency, not specific climate risks.
Fiscal Flexibility Required	Low	Minimal upfront capital required due to third-party financing.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Energy Service Performance Contracts*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Intergovernmental
Transfers and Grants



Geography/ Location

AB, BC, MB, NB, NL,
NS, NT, NU, ON, PE,
QC, SK, YT

Municipality Size

All



Tier

Foundation



Constraints

None

Administrative Capacity Required

High



Fiscal Tool Brief: Federal Transfers and Grants

Federal grants provide municipalities with targeted funding to support essential services, climate adaptation, infrastructure, and community resilience projects.

Federal grants are a form of intergovernmental transfer and a primary public funding mechanism used by the Government of Canada to support a wide range of initiatives at the local level. While Canadian municipalities are expanding and gaining more responsibilities to provide public services, they rely heavily on property taxes for their revenues and have limited revenue sources.^{1,2} As a result, municipalities are highly reliant on intergovernmental transfers. These transfers help sustain essential services like policing, libraries, public transit, and water infrastructure, and play a foundational role in

maintaining the health, safety, and livability of communities. Given the increasing risks posed by climate change, some of these grants are aimed at addressing the impacts of climate change, enabling the local governments, community organizations, Indigenous communities, and other stakeholders to implement adaptation measures tailored to different local and regional contexts. Federal grants are delivered through dozens of departmental and agency programs, including Housing, Infrastructure and Communities Canada, Natural Resources Canada, and Environment and Climate Change Canada. These grants are targeted investments in critical sectors such as infrastructure, environmental stewardship, and community resilience. By providing targeted financial resources, federal grants directly enable implementation of adaptation projects and strengthen municipal capacity.



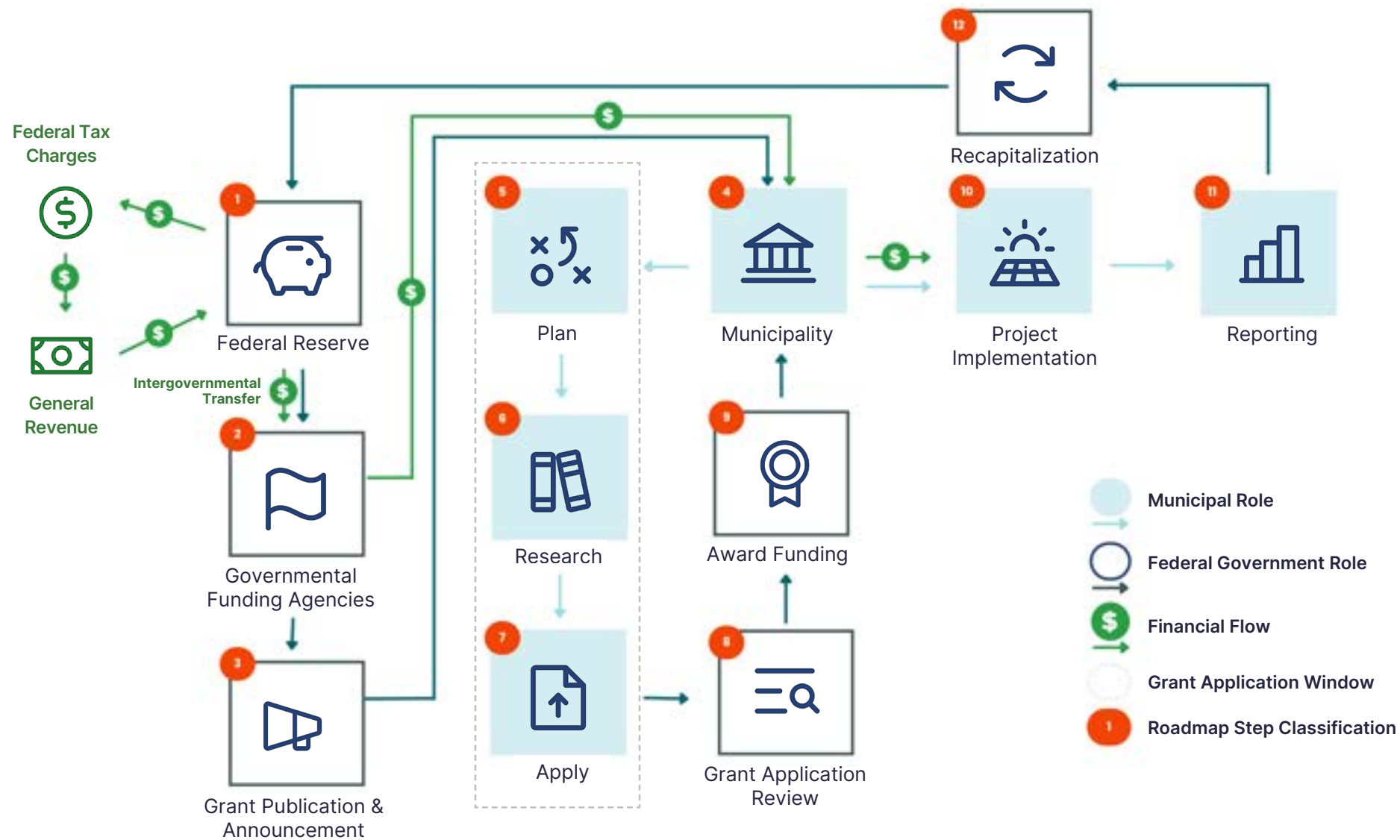


Figure 1. Visual representation of how Federal Transfers and Grants work

Examples

There are numerous federal grants that fund projects and initiatives to build climate-resilient communities, such as flood mitigation projects, fuel management projects to mitigate wildfire risks, and the restoration of natural ecosystems that buffer communities from climate hazards. One example is the [Disaster Mitigation and Adaptation Fund \(DMAF\)](#) from Housing, Infrastructure and Communities Canada. Through DMAF, the federal government is investing \$2 billion over 10 years in structural and natural infrastructure projects to increase the resilience of communities that are impacted by natural disasters triggered by climate change. From April 1, 2018, to March 31, 2024, DMAF allocated over \$2.8 billion to 115 projects, including over \$242 million for Indigenous communities and organizations, to help communities remain resilient in the face of extreme events, such as flooding, wildfires and droughts. In addition, a further \$489 million in new funding for DMAF, secured through the Government of Canada Adaptation Action Plan, allowed the program to provide more financial support to various climate adaptation initiatives.³ These funded projects aim to protect communities from extreme weather events such as flooding, wildfires, and storms that are increasing in both frequency and severity due to climate change. Investments range from engineered solutions like stormwater drainage upgrades to nature-based solutions such as wetland restoration, all with the shared goal of reducing disaster risks and enhancing long-term resilience. Another example is the [Green Municipal Fund \(GMF\)](#) from the Federation of Canadian Municipalities (FCM). For over 25 years, this funding has been

supporting Canadian municipalities, regardless of their size, to implement both climate mitigation and adaptation projects, reach net-zero, and build a resilient future.⁴ Over 2,700 projects have received the support from GMF since this program started, contributing to a reduction of 2.98 million tonnes of GHG emissions, contribution of about \$1.5 billion to national GDP, and various social benefits including equity, cohesion, and community well-being.⁵

Relevance to Advancing Adaptation

Federal grants are critical to advancing climate adaptation and resilience in Canada. By providing financial resources to local municipalities and organizations, federal grants enable municipalities and communities to undertake projects that would otherwise be fiscally challenging or infeasible, such as coastal resilience, wildfire mitigation infrastructure, and flood mitigation projects. For example, small municipalities facing increasing flood risks due to climate change might access DMAF funds to build flood control channels, elevate roads, or restore natural wetlands to reduce the risks, reducing the long-term adaptation costs and increasing climate resilience for the municipalities. The financial support provided by federal grants not only helps reduce the immediate risks posed by climate events but also strengthens the long-term adaptation capacity of local communities. Moreover, by lowering financial barriers, federal grants also promote social equity in adaptation, ensuring that vulnerable regions are not left behind in national climate resilience efforts, and can be complemented by private-finance initiatives such as ICLEI Canada's [Getting Ready to Finance Toolkit](#).

Accessibility

Federal grants are available nationwide, but access varies widely based on a range of factors, such as administrative capacity, regional priorities, and matching fund requirements.^{6,7} However, the access may be uneven across regions and population groups. For example, grant application windows are often short and may require a certain level of project background information. While urban or larger municipalities typically have dedicated staff, knowledge, and experience to navigate application processes, smaller or rural communities may lack capacity to apply or manage compliance. In addition, sometimes municipalities may not be aware of all federal grant programs, unless they are contacted to apply or obtain the information from other sources. Moreover, some grant programs require recipients to provide matching funds or to demonstrate a certain level of project readiness, which can limit the accessibility for smaller municipalities where the capacity is constrained. As a result, despite nationwide availability, equitable access to federal grants remains a challenge that must be addressed through targeted capacity-building and streamlined processes.⁸

Feasibility

Federal grants are politically well-supported and embedded in federal frameworks, but implementation feasibility varies due to intergovernmental coordination requirements and local capacity constraints. They are embedded in federal budget frameworks, align with national priorities (e.g., Canada's National Adaptation Strategy), and provide implementation flexibility that allows local and regional governments to tailor projects to their specific climate adaptation needs. However, municipalities are constitutionally

under provincial jurisdiction, and as a result, they also rely on provincial frameworks and support to fully access and implement federal funding. This inter-jurisdictional structure means that while federal transfers are critical to funding these climate adaptation projects, provincial support is also essential to ensuring these grants translate into effective implementation of these local adaptation initiatives. Federal grants, when paired with enabling provincial legislation and support, can enhance municipal capacity to invest in infrastructure, reduce climate risks, and address climate vulnerabilities.

Risk

While federal grants reduce fiscal risk to recipients, they can bring administrative and political risks.⁹ For example, complex application processes, long approval timelines, and stringent compliance requirements can lead to delays or cancellations, especially for communities with limited administrative resources. Many grant programs also require matching contributions, which can be difficult for some applicants to secure. There are also uncertainties about program continuity, especially under changing governments, and these uncertainties can complicate long-term planning and investment, particularly for large-scale infrastructure projects that span multiple years. This challenge reflects a broader issue identified by the Canadian Infrastructure Council, an expert advisory body, tasked to deliver Canada's first National Infrastructure Assessment (NIA). Their recent report¹⁰ notes that overlapping responsibilities across, federal, provincial, territorial and municipal governments, misaligned funding cycles, and fragmented decision-making processes create significant barriers to timely and coordinated infrastructure investments.

Scalability

Federal grants have high potential for scalability, particularly when they are embedded in long-term, multi-year national frameworks (e.g., Government of Canada Adaptation Action Plan). Programs such as the Disaster Mitigation and Adaptation Fund and the Local Leadership for Climate Adaptation (LLCA) from the Federation of Canadian Municipalities' Green Municipal Fund have funded dozens of projects across all provinces and territories, demonstrating its scalability by supporting a wide variety of projects across all provinces and territories, ranging from major infrastructure upgrades to ecosystem-based adaptation initiatives. However, while these programs demonstrate scalability in terms of geographic reach and project scope, existing federal transfers are insufficient to meet the costs of the projects that help mitigate the climate impacts and build resilience. For example, the LLCA program provides a maximum funding of \$1 million dollars.¹¹ But this may be insufficient for a larger size to make an impact on large infrastructure projects. In addition, a report from the Federation of Canadian Municipalities and Insurance Bureau of Canada showed that the cost of climate adaptation is estimated to cost Canadian municipalities \$5.3 billion annually.¹² Therefore,

to effectively scale adaptation across sectors and regions, government funding must be complemented by substantial private sector investment and innovative financing mechanisms. Private capital can play a vital role in financing large-scale and innovative projects, particularly where there are clear returns in terms of risk reduction, asset protection, and long-term resilience.¹³ A recent example of this approach is ICLEI Canada's [Financing Resilient Infrastructure Project \(FRIP\)](#) developed in partnership with Co-operators and Addenda Capital, which connected ten municipalities with private investors to design finance-ready climate-resilient projects. The project's [Getting Ready to Finance Toolkit](#) offers practical guidance for municipalities seeking to leverage private capital alongside federal grants to accelerate adaptation. Encouraging mechanisms such as blended finance, green bonds, public-private partnerships, and climate risk disclosure frameworks can help de-risk adaptation investments and attract institutional investors. Unlocking private capital will be essential to bridging the funding gap and accelerating the speed and scale of adaptation.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Direct funding for adaptation infrastructure	Directly enables implementation of resilience projects with strong targeting of climate risks.
Economic Efficiency	Medium	0	High impact but complex application and compliance	Highly efficient for recipients, though application and reporting requirements are resource intensive.
Equity & Fairness	Medium	0	Supports vulnerable regions but uneven access	Improves equity through funding distribution, but access barriers limit consistent outcomes.
Political Acceptability	High	+1	Strong federal alignment with climate priorities	High legitimacy due to alignment with national climate strategies and public funding.
Feasibility (Admin/Legal)	Medium	0	Requires intergovernmental coordination	Feasible within existing systems, but coordination and capacity constraints remain.
Coherence (Portfolio Fit)	High	+1	Core component of municipal finance system	Strongly integrated with municipal infrastructure funding and complements other tools.

Best Use Context

Most effective for municipalities with sufficient administrative capacity to navigate complex application processes. Particularly valuable for funding large-scale, capital-intensive adaptation projects that would otherwise be unaffordable, and best used alongside other tools to ensure continuity and scale.

Context Factor	Relevance	Notes
Municipal Size	Medium	Larger municipalities better positioned to access, though programs are broadly available.
Administrative Capacity Required	High	Significant capacity needed for applications, compliance, and reporting.
Development Pressure	Low	Not dependent on growth; applicable across contexts.
Climate Risk Targeting	High	Strong alignment with specific climate risks such as flooding and wildfires.
Fiscal Flexibility Required	Low	Reduces need for municipal capital through external funding.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Federal Transfers and Grants*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

User Fees and
Regulatory Charges



Geography/ Location

AB, BC, MB, NB,
NL, NS, ON, PE,
QC, SK

Municipality Size

All



Tier

Foundation



Constraints

None

Administrative Capacity Required

Medium



Fiscal Tool Brief: Fees for Solid Waste Collection and Disposal

Solid waste fees charge users directly for waste collection, recycling, composting, and disposal, helping municipalities recover service costs while encouraging waste reduction.

Fees for solid waste collection and disposal are user-pay municipal utility charges that directly recover the costs of waste services from those who generate waste rather than from the general tax base. In these systems, households, businesses, and other waste generators pay for the collection, recycling, composting, and disposal of solid waste based on service use, aligning with the user-pay principle that encourages waste reduction and recycling. Municipalities set these fees through bylaws or utility

rate frameworks, and they can include flat rates, volume-based pricing such as bin size or bag tag charges, or weight-based fees. In many Canadian cities, these fees fund ongoing operations, upgrades to processing facilities, landfill management, recycling services, and environmental programs. For multi-residential buildings and businesses, municipalities sometimes contract waste collection to private haulers, with property managers or business owners then passing charges through to tenants or incorporating them into utility bills.¹ Fees are typically structured to cover operating and long-term capital costs, improving financial sustainability while providing transparent cost signals to users. This user-pay approach contrasts with funding waste services through property taxes, which spreads costs more broadly irrespective of individual waste contributions.



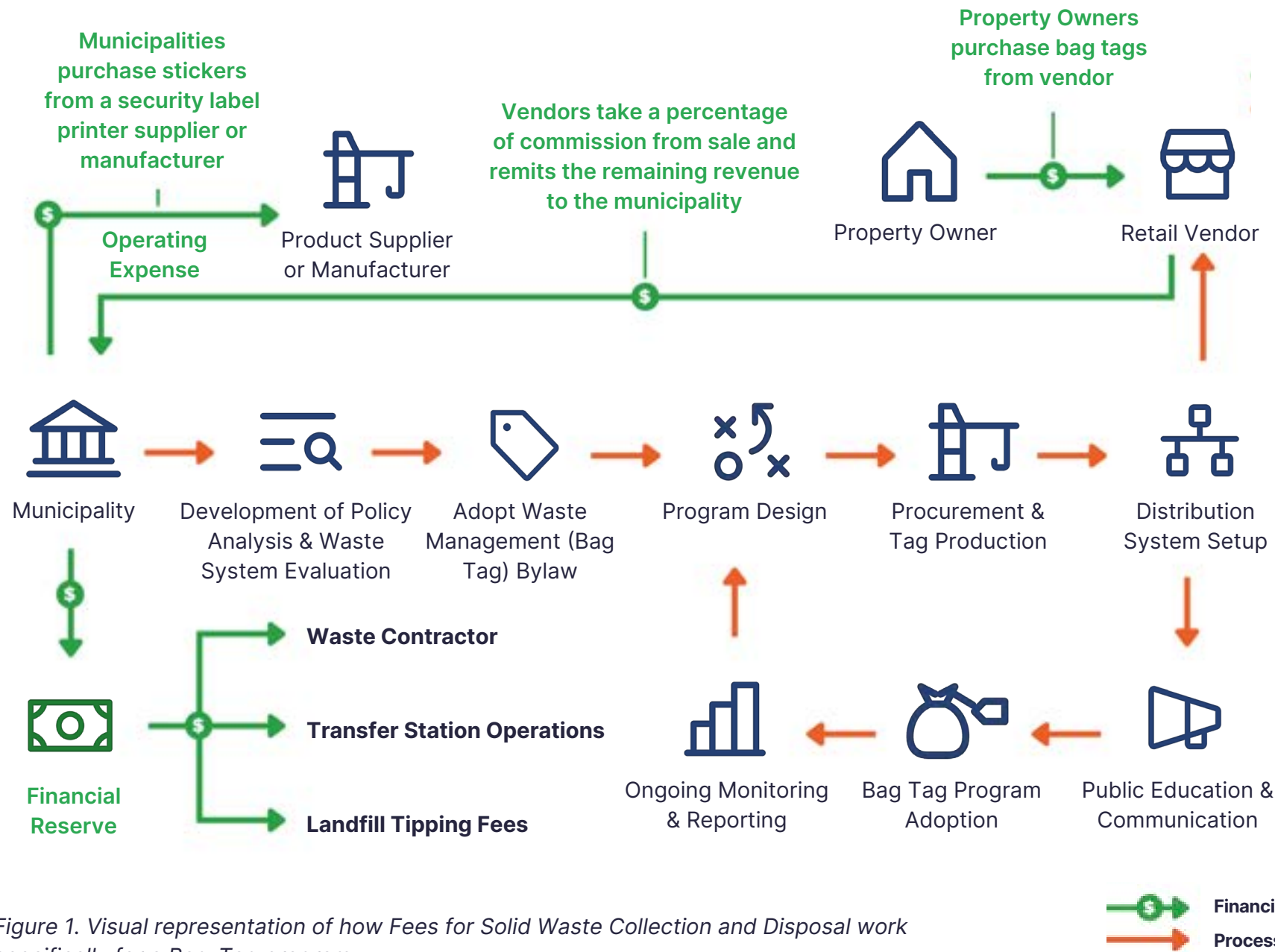


Figure 1. Visual representation of how Fees for Solid Waste Collection and Disposal work specifically for a Bag-Tag program

Examples

Solid waste collection and disposal fees are widely adopted by local governments in Canada, and there are various pricing structures for collecting these type of fees. For example, [Calgary \(AB\)](#) funds their residential cart programs through the program fees paid by residents and does not use property taxes for the programs. Calgary charges a flat fee to each household that receives City waste services. In 2026, the rate is \$20.51 per month.² Residents such as condo owners who do not receive City waste services are exempt from paying this fee. Each household is limited to one garbage cart of waste for each collection and residents need to purchase garbage tags for the excess waste.³ In [Durham Region \(ON\)](#), residents can dispose up to four garbage bags for their curbside waste collection each time, and they are required to purchase additional garbage bag tags for the waste generated over the limit.⁴ Municipalities such as [Victoria \(BC\)](#) provides the option for residents to determine their garbage bin size. Victoria has three bin sizes and sets different rates for different bin sizes.⁵ When residents have more garbage than what their bin can fit, they can purchase extra garbage tags, upgrade the size of their bin for an additional annual fee, or drop them off at the designated locations for an additional user fee.⁶ In [Beaconsfield \(QC\)](#) rate structure is comprised of a fixed portion: three bin sizes at different rates, which include 12 collections per year. All additional collections are charged at a variable rate,⁷ effectively discouraging waste disposal.⁸

Relevance to Advancing Adaptation

Fees for solid waste collection and disposal have significant potential to support climate adaptation due to its user-pay characteristic. The fees link cost recovery with waste reduction incentives, encouraging the community to divert more waste and reduce the associated environmental impacts.⁹ By charging users according to the amount of waste they generate, municipalities create incentives to divert organics and recyclables, which reduces methane emissions from landfills, decreases strain on waste infrastructure¹⁰ and mitigates risks to soil and water resources during extreme rainfall or flooding events. Volume-based pricing can also stimulate investment in resilient waste infrastructure and adaptive service planning, positioning municipalities to cope with demographic and consumption shifts without over-reliance on tax subsidization. Fee structures that encourage recycling and composting help communities manage organic waste, which in turn reduces the carbon intensity of municipal operations and enhances local circular economy opportunities. When waste fees are structured transparently and with affordability measures, they can help municipalities align waste management with broader climate adaptation and resiliency goals while ensuring long-term financial sustainability.

Accessibility

User fees for solid waste collection and disposal are broadly accessible across Canada, as municipalities in all provinces with modern enabling legislation hold authority to impose service charges for waste management. In Ontario, s. 11(2) of the *Municipal Act* designates “waste management” as a municipal sphere of jurisdiction, and s. 391(1) authorizes municipalities to impose fees or charges for services or activities provided by the municipality, together providing a clear basis for user-pay solid waste fees.¹¹ Ontario Regulation 584/06, made under s. 391, governs fee-setting parameters; a cost-ceiling principle (fees not to exceed the cost of service) is reflected in regulatory guidance and policy norms rather than as an explicit cap in the statute itself.¹² In British Columbia, municipalities draw on general revenue authority under the *Community Charter*,¹³ and the *Local Government Act*¹⁴ to establish utility-style rates for solid waste collection and disposal. In Alberta, waste collection fees are supported by the general user-fee and service-delivery powers of the *Municipal Government Act*.¹⁵ In Quebec, waste management can operate on two distinct levels. Municipal-level waste fees are governed by the general municipal tariffication and regulatory charge powers under the *Loi sur les cités et villes* and the *Code municipal*. At the provincial level, the Regulation respecting the charges payable for the disposal of residual materials, made under the *Environment Quality Act*, imposes a provincial charge (\$34 per metric ton) on operators of landfills, construction and demolition waste sites, incineration facilities, and transfer stations.¹⁶ This provincial charge functions as a Pigouvian tipping fee designed to discourage landfilling and internalize environmental externalities, rather than as a municipal cost-recovery mechanism. The

combination of municipal-level cost recovery and provincial-level environmental pricing gives Quebec a two-tiered structure distinct from provinces that rely primarily on municipal user fees. Across all provinces, implementation accessibility depends more on existing billing and administrative infrastructure than on statutory barriers: the legal authority to impose solid waste fees is well-established everywhere, but effective user-pay systems require measurement or differentiated billing capacities that smaller or less-resourced municipalities may lack.

Feasibility

Fees for solid waste collection and disposal are a feasible fiscal mechanism to implement because they build on municipalities’ existing service delivery frameworks and revenue collection systems. In many jurisdictions, solid waste services are already tracked through utility billing systems (e.g., water or other utility invoices), allowing waste fees to be incorporated without creating an entirely new administrative process. For example, Toronto’s solid waste management system charges households based on bin size and frequency and is implemented through existing municipal billing structures.¹⁷ In addition, user fees are a feasible tool for aligning incentives with environmental outcomes when they reflect true costs and create incentives for waste reduction and diversion. Pay-as-you-throw (PAYT) schemes, which vary fees based on the quantity of waste generated, have been shown in academic studies to encourage households to reduce waste and recycle more, supporting both financial and environmental feasibility.¹⁸ The feasibility for implementation also depends on public acceptance of the new fees structure; communicating environmental and accountability benefits increases acceptance

of shifting from fixed fees to PAYT schemes, helping smooth implementation.¹⁹ However, feasibility can be constrained by operational realities such as the need to integrate fee collection with utility billing systems, manage exception cases (e.g., private hauler services), and ensure that rates are set at levels that balance cost recovery with affordability and diversion incentives.

Risk

While fees for solid waste collection and disposal align users with service costs, they carry several implementation and equity risks. One documented risk is that for PAYT systems, the fees need to be set at levels that reflect true disposal costs, creating incentives for waste generators to divert waste illegally or engage in improper disposal to avoid charges, such as illegal dumping.²⁰ This highlights the importance of pairing fees with strong diversion infrastructure and enforcement to minimize leakage into illegal dumping or other inappropriate waste disposal methods. Fee structures that vary by service level (e.g., bin size) may also lead to perceptions of inequity, especially in the situations where users with lower waste production still pay base service fees or low-income households find the costs burdensome relative to income. From a tax-equity perspective, fees are more regressive than the property tax. Variable waste fees can be tagged as a 'family-based charge', in that they target households with a larger number of occupants. Therefore, equity and affordability are key considerations in the policy and program design, and progressive fee design and exemptions may be necessary to avoid disproportionate burden. Another risk is the revenue instability, particularly if fees are set too low to cover long-term capital and operating costs. A report on solid waste systems in Canada

indicates that municipal solid waste services are not always fully funded by fees alone and often rely on general revenues or grants in some jurisdictions, raising sustainability concerns.²¹ Finally, public opposition or low acceptance of fee increases, especially if not linked transparently to service improvements or environmental outcomes, can undermine implementation, requiring strong communication and stakeholder engagement to manage public perceptions and maintain community support.

Scalability

Fees for solid waste collection and disposal can scale effectively if there are legal frameworks and administrative systems to support the expansion and if the program designs are adaptable to different municipal contexts. Across Canadian municipalities, a variety of user-pay approaches demonstrates that multiple models can be scaled depending on community size, waste profiles, and service objectives. Research also indicates that charging residents and businesses in proportion to the waste they generate is a scalable approach that can improve system efficiency and provide reliable revenue streams across jurisdictions.²² Scalability is further supported when municipalities integrate fee structures within broader waste diversion and climate goals, aligning incentives for recycling and composting with fee design, which increases acceptance and reinforces environmental outcomes. Moreover, scalability can depend on administrative systems that can handle evolving fee structures, including billing, metering (for weight-or volume-based models), and customer service functions, as well as the ability to monitor outcomes and adjust fee levels accordingly.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Indirect adaptation benefits via waste reduction	The tool supports environmental resilience indirectly, but does not directly finance or target adaptation infrastructure.
Economic Efficiency	High	+1	Cost-recovery model; uses existing billing systems	Solid waste fees are an efficient user-pay mechanism with strong cost recovery and relatively low administrative burden.
Equity & Fairness	Medium	0	Polluter-pays principle but affordability concerns	The fee structure is fair in principle, but affordability concerns remain unless exemptions or tiered pricing are built in.
Political Acceptability	Medium	0	Acceptance depends on transparency and pricing design	Public acceptance is manageable but can weaken when fees rise or pay-as-you-throw models are introduced.
Feasibility (Admin/Legal)	High	+1	Established authority and widespread use	Municipal authority is clear and implementation is highly feasible because the model is already widely used in Canada.
Coherence (Portfolio Fit)	High	+1	Core municipal service with strong policy alignment	The tool fits well with utility systems, environmental objectives, and broader circular economy strategies.

Best Use Context

This tool is most effective as a foundational municipal revenue source for routine service delivery and environmental management. It works well across municipalities of different sizes where billing infrastructure already exists, but its adaptation value is mainly indirect rather than targeted.

Context Factor	Relevance	Notes
Municipal Size	High	Applicable across all sizes; scalable with different pricing models.
Administrative Capacity Required	Medium	Requires billing systems and program management, but often already in place.
Development Pressure	Low	Not linked to growth; applies to existing service delivery.
Climate Risk Targeting	Low	Indirectly linked to adaptation via environmental co-benefits.
Fiscal Flexibility Required	Low	Generates stable own-source revenue with cost recovery.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Fees for Solid Waste Collection and Disposal*. In *Catalogue of Fiscal Tools to Advance Adaptation*. In collaboration with the Centre de recherche sur la gouvernance of the École nationale d'administration publique. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Debt



Geography/ Location

AB, BC, MB,
NB, NS, ON

Municipality Size

Large



Tier

Conditional



Constraints

None

Administrative Capacity Required

Medium



Fiscal Tool Brief: General Obligation Bonds

General Obligation bonds let municipalities finance major infrastructure projects by borrowing against their full tax base, providing stable, low-cost capital for long-term community benefits.

Municipal bonds are a common tool used by Canadian municipalities to raise money for major infrastructure projects such as water systems, transit lines, roads, bridges and stormwater management. These bonds allow municipalities to borrow funds from investors and pay them back over time, usually at a low interest rate because municipalities tend to be low-risk borrowers. Municipalities are not allowed to borrow money to cover operating deficits, but they can borrow to fund capital projects that improve public services and infrastructure. Larger cities like Toronto, Ottawa, and Vancouver often issue their own bonds directly in the capital markets. Smaller municipalities usually access loans through pooled arrangements managed by provincial entities like the Municipal Finance Authority in British Columbia (MFABC), the Nova Scotia Municipal Finance Corp (NSMFC), the New Brunswick Municipal Finance Corp (NBMFC), or

Infrastructure Ontario (IO) among others. The funding requirements can vary from approximately C\$50 million a year for smaller municipalities to C\$2 billion in an active year for the larger borrowers.¹ Green bonds have also emerged as a complementary instrument for financing environmentally focused capital projects.

General Obligation (GO) bonds are long-term municipal debentures backed by the full faith and credit and ultimately the property-taxing power of the issuing municipality.² These provinces require municipalities to balance operating budgets and limit long-term borrowing to capital projects, making GO bonds a preferred mechanism for financing infrastructure with broad community benefits such as roads, transit, schools, and emergency services. Since repayment is supported by the municipality's total tax base, these bonds typically achieve strong credit ratings and comparatively low interest rates, providing cost-effective access to capital. Their flexibility and stability make them a cornerstone of Canadian municipal finance, particularly for projects that span generations and where costs should be shared between current and future taxpayers.³



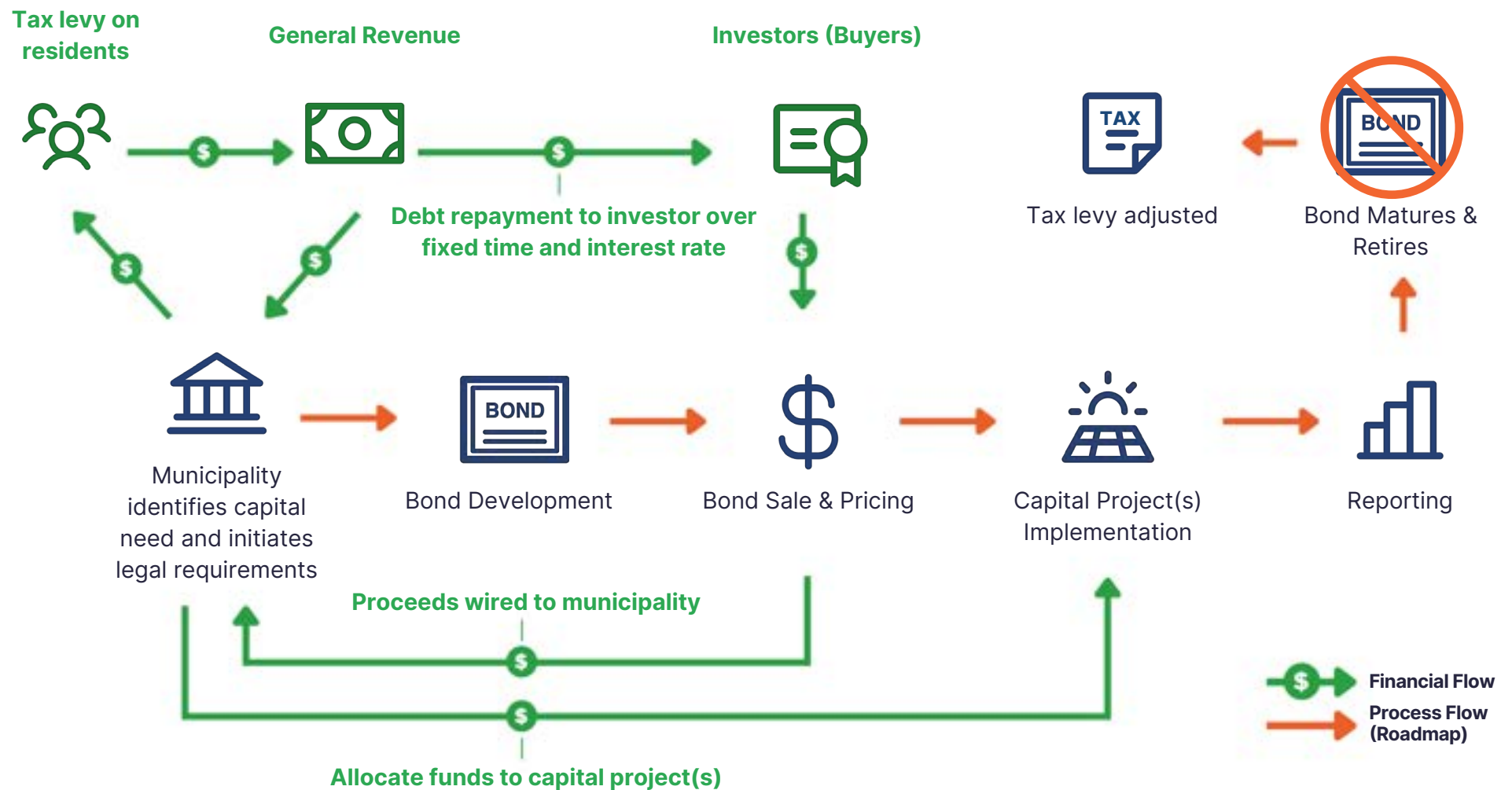


Figure 1. Visual representation of how General Obligation Bonds work

Examples

General obligation bonds are used across different municipalities in almost all provinces (Figure 2). For example, [Winnipeg \(MB\)](#) issued a \$200 million, 40-year general obligation bond in January 2024 at a 4.65% coupon^{4,5} to fund key capital projects, including upgrades to the South End Water Pollution Control Centre, construction of the North District Police Station, improvements at the St. James Civic Centre and the construction of the Bill and Helen Norrie Library. [Calgary \(AB\)](#) completed its first municipal bond issue in March 2024, raising \$180 million at roughly 4.2% interest, lower than comparable provincial borrowing rates, generating an estimated \$1.6 million in annual savings over ten years. In British Columbia, the [Municipal Finance Authority \(MFA BC\)](#) regularly issues large-pooled debentures, including a \$1.06 billion 10-year bullet bond at roughly 2.5%, enabling municipalities of all sizes to access capital markets efficiently and fund long-term infrastructure across the province.



Figure 2. Most Active Canadian Municipal Bond Issuers in 2018⁶

Relevance to Advancing Adaptation

General obligation bonds can enable municipalities to fund large-scale, long lasting adaptation infrastructure that benefits entire communities, such as flood protection, stormwater management systems, resilient roadways, and energy efficient public buildings. For example, a municipality could issue a \$100 million GO bond to finance a multi-decade flood mitigation program, building berms, elevating key roads, and upgrading pumping stations, repaid through property taxes over 20–30 years. This spreads the cost across generations of taxpayers who benefit from the infrastructure. Their flexibility and stability make GO bonds foundational sources of long term and reliable capital for adaptation projects, upon which other financing instruments can be built.

Accessibility

Access to GO bonds depends on provincial legislation, municipal credit capacity, and administrative expertise. For example, under Ontario's Municipal Act, 2001, municipalities may issue long-term debt only for capital projects and must balance operating budgets annually, ensuring that borrowing supports durable infrastructure such as transportation, water systems, or flood protection assets.⁷ Moreover, large municipalities with strong credit ratings, such as Toronto or Vancouver can issue bonds directly on the capital markets, benefiting from investor confidence and low borrowing costs.⁸ On the other hand, smaller or rural municipalities often access debt through provincial financing agencies, including the [Municipal Finance Authority of British Columbia \(MFABC\)](#), the

[Ontario Infrastructure Bank](#), or the Alberta Capital Finance Authority, which pool borrowing to secure better rates and shared credit support.⁹ As with other fiscal tools in this catalogue, managing bond issuance, regulatory disclosure, and investor relations requires specialized skills more commonly found in larger municipalities with dedicated finance teams, whereas smaller communities often depend on pooled debenture systems or provincial financing intermediaries to access capital.

Feasibility

GO bonds are generally politically and economically feasible because they are viewed as safe investments with low default risk and steady repayment from tax revenues. They are attractive to investors such as pension funds and insurance companies due to predictable returns. In emergency contexts from a climate event, such as restoring infrastructure after flooding, borrowing through GO bonds can be faster than assembling grant funding. For example, following Hurricane Harvey, [Harris County \(Texas\)](#) used voter approved general obligation flood control bonds to mobilize US\$2.5 billion for drainage and flood reduction projects, while federal disaster recovery grants and matching funds were still being assembled. However, feasibility can be constrained by market conditions such as rising interest rates which increase borrowing costs, inflation raises construction prices and borrowing needs and weakened credit ratings can restrict the municipalities' ability to issue new bonds or secure favorable terms.¹⁰ These challenges are particularly significant for smaller municipalities with limited debt capacity.

Risk

A key risk associated with GO bonds is the long-term fiscal obligation they create for municipalities. Furthermore, rising interest rates can substantially increase debt servicing costs, diverting funds from essential services or future capital projects.¹¹ Smaller municipalities with limited tax bases may face higher borrowing costs or difficulty refinancing during periods of economic stress, increasing vulnerability to fiscal imbalance. Lastly, credit rating downgrades, whether triggered by broader market conditions or local exposure to climate-related damages, can further elevate borrowing costs and restrict access to investors.¹² As Canadian rating agencies increasingly incorporate climate resilience into municipal assessments, overreliance on debt without integrating adaptation planning may expose municipalities to higher long-term financing costs.¹³



Scalability

A debt service limit, often referred to as an Annual Repayment Limit or ARL in Ontario is a rule governing the maximum amount of long-term debt a municipality may carry relative to its revenue base. In Ontario, provincial regulation caps the maximum annual payments for principal and interest on long-term debt and other obligations at 25 % of a municipality's "own source" revenues that is, revenues such as property taxes, user fees, and investment income, excluding grants and transfers from other governments, less existing debt servicing costs. This threshold is set by Ontario Regulation 403/02 under the Municipal Act, 2001 and is updated yearly by the Ministry of Municipal Affairs and Housing as the ARL for each municipality.¹⁴ Municipalities in Canada hold long-term borrowing potential, which can support the scalability of GO bond issuance over extended periods. For example, one analysis found that municipalities in Ontario used only 6% to 8% of their own source revenue debt servicing limit between 2009 and 2022, well below the conventional 25% threshold.¹⁵ This might indicate available capacity for scaled long-term borrowing. Once a municipality establishes a policy and governance structure for issuance, it can issue subsequent bonds as older debt amortises or is retired. However, the pace and volume of issuance are still subject to institutional capacity, investor appetite, and external economic conditions. A recent municipal debt management review noted that many Ontario municipalities still lack formal debt policies or internal limits, which could slow scaling efforts.¹⁶ Overall, GO bonds remain a foundational and scalable tool in municipal finance systems, offering predictable, long-term capital for climate resilient infrastructure.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Strong capital financing for infrastructure	Provides large-scale, long-term capital for adaptation infrastructure backed by reliable tax-supported repayment.
Economic Efficiency	High	+1	Low interest rates, standardized instrument	Offers efficient access to relatively low-cost capital through mature markets and standardized issuance processes.
Equity & Fairness	Medium	0	Broad tax-based repayment	Costs are spread broadly through property taxes, supporting intergenerational equity but limiting beneficiary targeting.
Political Acceptability	Medium	0	Requires tax-backed repayment	Generally accepted for infrastructure financing, but tax implications and debt aversion can create political sensitivity.
Feasibility (Admin/Legal)	Medium	0	Requires expertise and provincial authorization	Widely available but constrained by debt limits and technical capacity requirements, especially for smaller municipalities.
Coherence (Portfolio Fit)	High	+1	Core municipal finance tool	Fits well within municipal capital planning and complements grants, reserves, and user-fee tools.

Best Use Context

General obligation bonds are most effective for large municipalities or those with access to pooled financing arrangements. They are best suited to financing major, long-life adaptation infrastructure where costs can be spread over time.

Context Factor	Relevance	Notes
Municipal Size	High	Large municipalities benefit most; small ones rely on pooled financing.
Administrative Capacity Required	Medium	Financial expertise is needed, though intermediaries can reduce the burden.
Development Pressure	Low	The tool does not depend on growth and is supported by a stable tax base.
Climate Risk Targeting	Medium	Supports major infrastructure investment but is not highly targeted to specific risks or beneficiaries.
Fiscal Flexibility Required	High	Requires adequate debt capacity and stable municipal revenues.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *General Obligation Bonds*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Debt



Geography/ Location

BC, NB, NS,
ON, QC

Municipality Size

Large



Tier

Enabling



Constraints

Feasibility;
Complexity



Administrative Capacity Required

High



Fiscal Tool Brief: Green or Climate Bonds

Green or climate bonds help municipalities raise capital specifically for environmentally beneficial projects, such as clean energy, low-carbon transportation, and climate-resilient infrastructure.

Municipal bonds are a common tool used by Canadian municipalities to raise money for major infrastructure projects such as water systems, transit lines, roads, bridges and stormwater management among others. These bonds allow municipalities to borrow funds from investors and pay them back over time, usually at a lower interest rate because municipalities tend to be low-risk borrowers. Municipalities are not allowed to borrow money to cover operating deficits, but they can borrow to fund capital projects that improve public services and infrastructure. Larger cities like Toronto, Ottawa, and Vancouver often issue their own bonds directly in the capital markets. Smaller municipalities usually access loans through pooled arrangements managed by provincial entities



like the Municipal Finance Authority in British Columbia (MFABC), the Nova Scotia Municipal Finance Corp (NSMFC), the New Brunswick Municipal Finance Corp (NBMFC), or Infrastructure Ontario (IO) to mention a few. The funding requirements can vary from approximately C\$50 million a year for smaller municipalities to C\$2 billion in an active year for larger borrowers.^{1,2} As municipalities look to address not only infrastructure renewal but also climate and environmental priorities, green bonds have emerged as a targeted financing option within the broader municipal debt landscape.

Green Bonds are a type of debt instrument issued by governments, municipalities, or corporations to raise funds specifically for projects that deliver environmental benefits. These bonds are part of the broader sustainable finance landscape and are designed to support initiatives such as renewable energy development (solar, wind), energy efficiency upgrades, clean transportation, wastewater and stormwater upgrades, flood protection, climate

resilience, amongst others. Unlike traditional bonds, the proceeds from green bonds are designated exclusively for “green” or “sustainable” projects, and issuers are expected to provide transparency on how the funds are used and the environmental impacts achieved. Climate bonds are essentially the same and are often used interchangeably but emphasize climate-specific outcomes like GHG reduction or climate change adaptation.

Examples

Green and Climate Bonds are increasingly being used by Canadian municipalities to fund climate and infrastructure projects. [Ottawa \(ON\)](#) became the first Canadian municipality to issue a Green Bond in 2017 and has since issued five Green Bonds totaling C\$1.027 billion.³ A major focus of Ottawa’s green bond proceeds has been the expansion of its Light Rail Transit (LRT) system, a key project for reducing transportation-related emissions and improving transit accessibility. Other funded projects include areas such as energy-efficient municipal buildings and stormwater upgrades. [Toronto \(ON\)](#) issued its first green bond in 2018 to help finance transformative climate action projects, and since then raised \$1.38 billion with a total of seven bonds issued to date.⁴ Initiatives funded through green bonds in 2023, included renewable thermal energy systems, cycling infrastructure, and capacity improvements at the Yonge-Bloor transit hub.⁵ [Vancouver \(BC\)](#) introduced its Green Bond Program in 2018, issuing \$85 million in bonds maturing in 2028 to support climate resilience and sustainability initiatives. Proceeds have been allocated to projects focusing on green redevelopment of Roddan Lodge, affordable housing and upgrades to sewer and water mains to improve flood resilience.

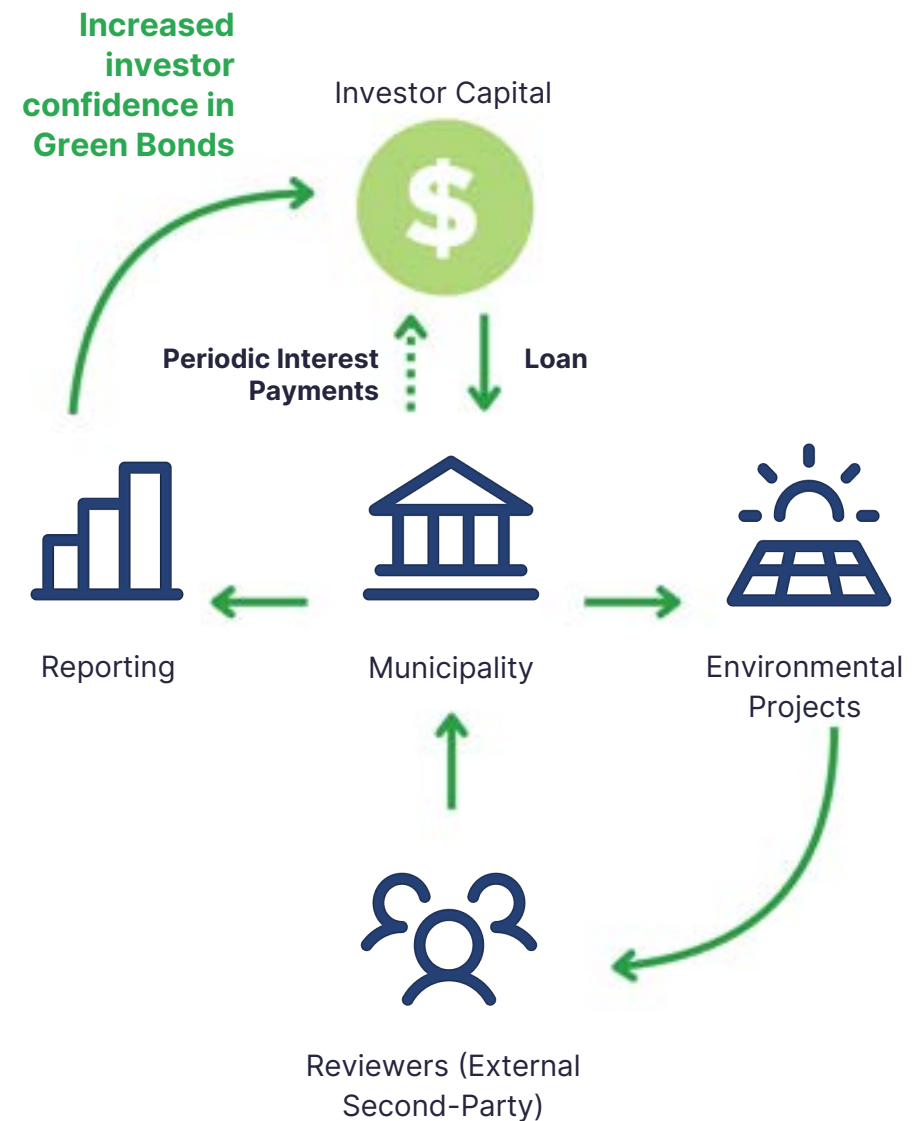


Figure 1. Visual representation of how Green and Climate Bonds work

Relevance to Advancing Adaptation

Green bonds enable municipalities to raise upfront capital specifically for projects with environmental benefits, making them a valuable tool for financing large-scale adaptation initiatives without immediately impacting general revenue or raising taxes. Since proceeds must be allocated to eligible green projects, municipalities can use green bonds to target adaptation investments such as flood protection infrastructure, cooling systems for heat-prone areas, or resilient transit upgrades. For example, a coastal municipality facing increased storm surge and sea level rise might issue a \$100 million green bond to fund a multi-phase shoreline adaptation project. This could include elevating critical roads, installing modular sea walls, and retrofitting stormwater outflows to prevent backflow flooding. These investments reduce the risk of infrastructure failure during extreme weather events while also supporting long-term economic stability in vulnerable districts. Since projects funded by green bonds often improve public health and reduce climate risk, they can also attract strong investor interest. Furthermore, by issuing green bonds under a recognized framework with clear reporting and third-party validation, municipalities can demonstrate climate leadership and build confidence in their long-term resilience strategies.

Accessibility

Green bonds are available to municipal governments in Canada mainly through two pathways: direct issuance (for large cities) or pooled borrowing (for smaller communities). At the municipal level, only a small number of large cities such as Toronto, Ottawa, and Vancouver have issued green bonds to date. Access is generally

limited to jurisdictions with strong credit ratings, established capital markets experience, and sufficient administrative capacity to develop a green bond framework, manage proceeds, and report on outcomes.⁶ For smaller municipalities, green bonds remain less commonly used due to the complexity of issuance and ongoing reporting requirements. They typically do not have the capacity, market presence, or legal authority to issue independently. Instead, they rely on pooled programs such as those offered by the Municipal Finance Authority of BC (MFABC). Similar pooled borrowing structures exist in Nova Scotia (NSMFC), New Brunswick (NBMFC), and through Infrastructure Ontario (IO). Sometimes, other concerns such as operational and compliance demands may lead a municipality to reconsider issuing green bonds. For example, Montreal explored the idea of issuing green bonds, but after a thorough internal analysis, the City ultimately decided not to pursue this path for several reasons, including the interest rates being equivalent to those of regular bonds, the monitoring and reporting requirements, and the legal and reputational risks. Therefore, Montreal finances its adaptation-related activities through standard bond issuance for its capital investment projects and made a policy to allocate approximately 10–15% of its capital investment budget to adaptation initiatives to maintain its commitment to climate adaptation.

Feasibility

Green bonds are increasingly recognized as a viable financial mechanism for funding “green” projects in municipalities. However, their feasibility varies across provinces and municipalities, influenced by factors such as political commitment, economic capacity, and administrative infrastructure. In Ontario, the feasibility of green

bonds is notably high. The City of Toronto, has successfully issued multiple green bonds since 2018, raising substantial funds to finance climate action projects.⁷ This is an existing strong political support for environmental initiatives, a robust economy, and well-established administrative systems capable of managing complex financial instruments. In British Columbia all local governments and regional districts, except the City of Vancouver, borrow through the MFABC, a legislated bond-issuing body that aggregates loans into sustainable bond issuances on their behalf.⁸ The City of Vancouver launched its Green Bond Program⁹ in 2018 to support projects aligned with its climate mitigation and adaptation plans at the time, the Renewable City Strategy and the Climate Change Adaptation Strategy respectively.¹⁰ The province's commitment to sustainability, combined with Vancouver's strong credit rating and financial management, enhances the feasibility of green bond issuance. In contrast, provinces like Nova Scotia and Quebec have shown slightly less municipal-level activity in green bond issuance, mainly due to the lack of independent access to capital markets for bond issuance. Interest in green bonds are growing, but their use remains concentrated in larger, well-resourced municipalities with the scale to justify the transaction costs such as preparing a green bond framework, hiring external reviewers, legal and financial advisory services, and ongoing reporting.¹¹

Risk

There is a risk that projects financed by green bonds may not fully deliver on their promised environmental outcomes or may not be as “green” as publicly portrayed. If investors or the public perceive that funds are used for projects lacking genuine environmental benefit, or if reporting is unclear or inconsistent, municipalities may face reputational damage. This challenge is even greater for climate adaptation projects, since it is harder to measure avoided damages, such as reduced flood risk or fewer heat-related illnesses, compared to tracking greenhouse gas reductions. This can create uncertainty about how to define and report adaptation outcomes. However, new tools such as resilience taxonomies, including the [Climate Bonds Initiative's 2025 framework](#), are helping set clearer standards and improve transparency, which supports investor confidence in adaptation-focused green bonds. The [Green Bond Framework](#) acknowledges this by requiring independent second-party reviewers such as Sustainalytics in Toronto and Ottawa, or the Centre for International Climate Research (CICERO) in Québec.¹² Moreover, green bonds require specialized expertise to evaluate, report, and verify eligible projects annually. Municipalities with limited administrative capacity may struggle to meet these demands, risking non-compliance with transparency and impact reporting commitments. The Framework requires both allocation and environmental impact reporting until all proceeds are spent, which may strain smaller municipalities without dedicated sustainability finance teams.¹³ Additionally, if projects do not meet expectations or if reporting is poor, investors may lose confidence, which could lead to a lower credit rating. This downgrade would make future borrowing more expensive and could reduce the municipality's ability to raise funds.

Scalability

Green bonds offer a flexible and potentially scalable financial mechanism for large municipalities to support long-term climate action and adaptation investments. Municipalities like Toronto, Ottawa, and Vancouver have successfully issued multiple green bonds over time, raising hundreds of millions to fund clean transportation, energy-efficient buildings, and climate-resilient infrastructure under a consistent framework. However, the ability to scale green bonds is constrained by municipal debt limits set under provincial legislation, which cap how much a municipality can borrow relative to its revenue base.¹⁴ These debt ceilings are designed to protect taxpayers but can restrict additional green bond issuances, particularly if a municipality already carries significant capital debt. For smaller or rural municipalities, scalability is even more challenging due to tighter borrowing capacity, less access to capital markets, and more limited administrative resources.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Earmarked funding for environmental projects	Directly finances adaptation with strong targeting through eligibility and reporting frameworks.
Economic Efficiency	Medium	0	Additional reporting and verification costs	Accesses capital efficiently but introduces added compliance and transaction costs.
Equity & Fairness	Medium	0	Broad tax-backed repayment	Benefits are diffuse with limited direct alignment between payers and beneficiaries.
Political Acceptability	High	+1	Strong climate alignment and transparency	High public and political support due to environmental branding and accountability.
Feasibility (Admin/Legal)	Medium	0	Requires specialized expertise and strong credit	High public and political support due to environmental branding and accountability.
Coherence (Portfolio Fit)	High	+1	Builds on existing debt frameworks	Integrates well with municipal finance systems and complements climate finance strategies.

Best Use Context

Green or climate bonds are most effective in large, well-resourced municipalities with established capital programs and climate strategies. They perform best where there is a clear pipeline of eligible projects and sufficient institutional capacity to meet reporting and verification requirements.

Context Factor	Relevance	Notes
Municipal Size	High	Primarily suited to large municipalities with capital market access.
Administrative Capacity Required	High	Requires technical, financial, and reporting expertise.
Development Pressure	Low	Not dependent on growth; linked to capital planning and climate priorities.
Climate Risk Targeting	High	Strong ability to target specific adaptation and mitigation investments.
Fiscal Flexibility Required	High	Requires debt capacity and stable revenues.

Recommended Citation

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Category

Partnerships



Geography/ Location

AB, BC, MB, NB,
NL, NS, ON, PE,
QC, SK

Municipality Size

Small



Tier

Enabling



Constraints

Effectiveness



Administrative Capacity Required

Low



Fiscal Tool Brief: Group Purchasing Organizations (GPOs)

Group Purchasing Organizations help municipalities and partners lower costs and improve procurement access by combining their purchasing power for shared goods, services, and climate-resilient solutions.

A Group Purchasing Organization (GPO) is an entity that is created to leverage the purchasing power of a group of businesses and organizations to obtain discounts from vendors based on the collective buying power of the GPO members. With a group purchasing organization, organizations including municipalities, public sector agencies, Indigenous communities, and non-profits can leverage their collective purchasing power to obtain goods and services at reduced costs. GPOs are widely used by

municipalities to improve procurement efficiency, reduce costs, and increase access to goods and services that may otherwise be unaffordable or difficult to source individually, such as acquiring books for libraries or starting a building project.^{1,2} In the context of advancing climate adaptation, GPOs are increasingly used to support these initiatives at the local level by making it easier and more affordable to access climate-resilient infrastructure, technologies, and professional services. There are various models, ranging from local and regional purchasing co-operatives to sector-specific group purchasing organizations.³ By aggregating demand, GPOs help smaller entities overcome cost and capacity barriers in climate adaptation procurement, from green infrastructure (e.g., rain gardens) to wildfire-resilient materials (e.g., firefighting equipment).



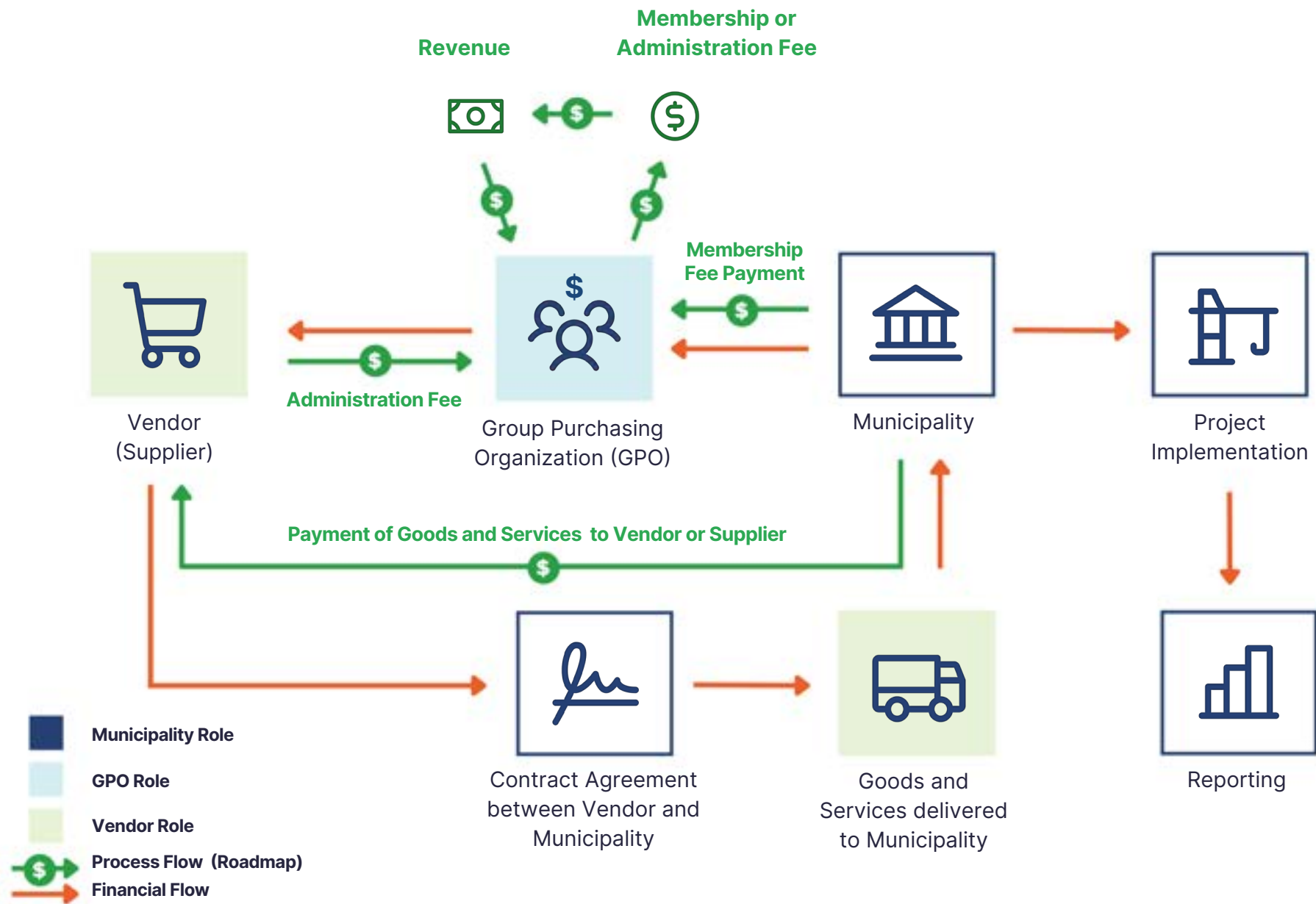


Figure 1. Visual representation of how Group Purchasing Organizations work

Examples

Various public sector group purchasing initiatives are proliferating in Canada. These initiatives are in the forms of different arrangement models, such as regional purchasing co-operatives. Government of Canada's [Buyers for Climate Action \(BCA\)](#) is a coalition of governments who purchase a significant volume of goods and services in the categories such as real property, information and communications technology (ICT), vehicles and low-carbon fuels, and goods and services that improve climate resilience. The objective of the BCA was to help drive the transition to a green, net-zero carbon economy by collaborating on green procurement. The members in the BCA share knowledge and best practices to accelerate and improve green procurement and increase capacity of buyers to work with suppliers to provide greener goods and services.⁴ The [Canoe Procurement Group](#) is one of the largest co-operative purchasing organizations for public sector organizations, serving over 6,000 municipalities, public sector entities, and not-for-profit organizations. It pools purchasing from hundreds of municipalities and offers access to vendors specializing in areas such as emergency preparedness, road infrastructure, and waste management. Another example is the [Niagara Public Purchasing Committee \(NPPC\)](#). The NPPC is a group of regional and local governments and organizations, such as the Regional Municipality of Niagara, the City of St. Catharines, and the St. Catharines Public Utilities Commission, working together to promote efficiency, economy, and effectiveness in the purchasing management field. Through group purchasing, the NPPC can provide optimum value and resources to its member agencies and client groups through

innovative and progressive procurement methods, practices, and techniques while following federal and provincial legislation, municipal bylaws, and agency policy. Lastly, the [Municipal Group Buying Program](#) operated by the Association of Municipalities of Ontario allows Ontario municipalities to access competitively priced and sustainable co-operative business services, helping to realize lower costs, higher revenues, and enhanced staff capacity.

Relevance to Advancing Adaptation

GPOs can significantly contribute to the advancement of climate adaptation at the local and regional levels. By simplifying and reducing the cost of procurement, they enable local governments and community organizations to acquire critical infrastructure, materials, and technologies needed for climate resilience—particularly in the face of budgetary and capacity constraints. For instance, the EMS Vehicles and Supply Program from the Canoe Procurement Group can help a small municipality that may lack the expertise or volume purchasing leverage to negotiate a competitive price for the emergency medical services, which can allow them to increase their emergency preparedness and respond to the medical emergencies effectively. In addition to cost savings, GPOs can reduce financial and operational barriers by bundling multiple municipalities' needs, allowing for economies-of-scale and the ability to access goods and services, such as improving community emergency response services, that may be unaffordable or difficult to source individually. This bundling not only creates administrative efficiencies but also unlocks greater funding opportunities by

making projects more attractive to funders. Importantly, GPOs help de-risk adaptation investments by providing due diligence, vendor vetting, and even financial mechanisms like backstopping debt or aggregating demand to meet lender thresholds.⁶ This reduces perceived risks for both municipalities and external funders, thereby facilitating safer and more scalable financing structures for adaptation projects⁷ and advancing the climate adaptation efforts for participating municipalities.

Accessibility

GPOs are accessible to a wide variety of local governments, but the accessibility may depend on factors such as membership eligibility, procurement regulation constraints, and limited knowledge. Regional presence may also be a factor that limits access. While Canadian provinces generally have access to and utilize GPOs, some only exist in a specific geographical area (e.g., the NPPC). In addition, while some large municipalities already participate in GPOs and benefit from established procurement networks, smaller communities or Indigenous governments may face hurdles in participation due to lack of awareness, procurement expertise, language barriers, jurisdictional barriers, or membership costs.⁸ In addition, some GPOs are provincially administered or geographically limited, which may affect their reach and accessibility.

Feasibility

GPOs are highly feasible since they usually align with existing financial and procurement frameworks, are relatively low-cost to administer, and can offer members greater access to efficiency and sustainable initiatives. Since they operate within existing financial systems and do not require new legislation or funding commitments from higher levels of government, they represent a pathway for attracting adaptation-related investments and implementing initiatives to advance adaptation. In addition, group procurement offers a viable alternative to traditional methods, providing several key benefits, including reducing administrative burdens for local governments and enabling faster implementation of climate resilience projects.

Risk

While GPOs mitigate cost-related risks by providing better pricing and contracts, they may introduce risks related to factors such as vendor performance.⁹ Poor vendor performance may include the failure of delivery of high-quality goods or services on time and within budget, as well as poor communication and responsiveness,¹⁰ which may bring risks such as reputational risk, financial risk, and political risk to the municipality. Additionally, communities with limited capacity may face challenges navigating the terms and conditions of large procurement frameworks without sufficient legal or technical support. However, through the bundling procurement across multiple municipalities, GPOs make adaptation initiatives more attractive to funders and reduce perceived risks for the municipalities and the funders through de-risking the investment.

Scalability

GPOs are scalable, both in terms of geographic reach and procurement scope. There are existing GPOs across Canada, and they are in various models such as purchasing co-operatives, meaning that the procurement scope can be adapted to different sectors. In addition, one of the strengths of GPOs is their ability to bundle demand across multiple municipalities, increasing the scale of procurement, and thus, unlocking more favorable pricing, financing terms, and eligibility for funding programs, opening more funding opportunities for municipalities. For the advancement of climate adaptation, GPOs can scale by incorporating sustainable and resilient products, developing joint procurement programs for climate adaptation projects (e.g., flood mitigation infrastructure), and facilitating GPOs that focus on local or regional needs. Their ability to centralize procurement while supporting decentralized implementation makes them an effective and scalable tool for accelerating local adaptation efforts across Canada. Moreover, GPOs can help de-risk climate adaptation projects—for both municipalities and funders, and in some cases, providing backstopping mechanisms that can make climate adaptation financing safer and more predictable, helping to accelerate implementation of resilient infrastructure and technologies at the local level.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Enables procurement of adaptation goods/services	Supports adaptation indirectly by improving access to goods and services but does not generate capital.
Economic Efficiency	High	+1	Aggregated purchasing reduces costs	Achieves strong cost savings and efficiency through economies of scale and shared procurement.
Equity & Fairness	Medium	0	Improves access but uneven participation	Enhances affordability but participation barriers may limit benefits for some communities.
Political Acceptability	High	+1	Collaborative, cost-saving model	Broadly supported due to low risk and alignment with value-for-money objectives.
Feasibility (Admin/Legal)	High	+1	Operates within existing systems	Highly feasible with minimal legal barriers and low implementation complexity.
Coherence (Portfolio Fit)	High	+1	Complements procurement and financing tools	Integrates well with municipal operations and supports other fiscal instruments.

Best Use Context

GPOs are most effective for smaller or resource-constrained municipalities seeking cost savings and procurement efficiency. They are particularly useful where internal capacity is limited and can improve access to adaptation solutions when paired with financing tools.

Context Factor	Relevance	Notes
Municipal Size	High	Particularly beneficial for small and mid-sized municipalities.
Administrative Capacity Required	Low	Reduces internal procurement burden through shared services.
Development Pressure	Low	Not dependent on growth; applicable across contexts.
Climate Risk Targeting	Medium	Enables access to solutions but does not directly target risks.
Fiscal Flexibility Required	Low	Does not require borrowing or new revenue sources.

Recommended Citation

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Category

Land Value Capture



Geography/ Location

AB, BC, MB, NB,
NS, ON, QC

Municipality Size

All



Tier

Enabling



Constraints

None

Administrative Capacity Required

Medium



Fiscal Tool Brief: Local Improvement Charge (LIC)

Local Improvement Charges help municipalities fund local infrastructure or sustainability upgrades upfront by recovering costs over time from the properties that directly benefit.

Local Improvement Charges (LICs), also encompassing what is often referred to as Special District Financing (SDF), are municipal financing mechanisms used to fund infrastructure or services that provide direct benefits to a defined group of properties. Unlike general property taxes that spread costs across evaluation units, LICs assign the cost of improvements to the property owners within a designated area who receive the primary benefit. Under the LIC financing mechanism, municipalities typically define a geographic benefit area and recover costs through charges or levies imposed on benefiting properties. These charges may fund one-time capital improvements (e.g., sewer upgrades, sidewalks) or, in SDF-like applications, ongoing services (e.g., transit, fire protection, or drainage services). In both cases, the



repayment obligation is tied to the property rather than the individual, enabling long-term, transferable financing. Therefore, it makes LIC financing a flexible and accessible tool for long-term infrastructure and sustainability investments. LICs ensure that the financial burden of the improvement is shared equitably among those who receive the direct benefits, while enabling municipalities to complete critical infrastructure projects immediately and spread the repayment costs over many years.

Traditionally, LICs have been applied to physical infrastructure such as sidewalks, streetlights, or sewer upgrades. However, recently, more municipalities have adapted the LIC model to support sustainability and clean-energy investments (e.g., energy efficiency upgrades, renewable energy, water conservation, resiliency). Since LICs allow flexible, long-term financing tied to property, it is well suited to support a broader range of local priorities, such as promoting water conservation, reducing pressure on energy infrastructure, and providing support for marginalized communities. By linking costs directly to beneficiaries, LICs/SDF ensure equitable cost allocation while enabling municipalities to proceed with infrastructure investments upfront and recover costs over time.

Examples

LIC-type financing mechanisms have been commonly used among municipalities across Canada. In Ontario, this mechanism is enabled by the Ontario Ministry of Municipal Affairs and Housing and has been applied in Ontario for years.³ [Ottawa \(ON\)](#) has implemented its local improvement regulations allowing communities and residents to initiate new municipal infrastructure or infrastructure upgrades. A Local Improvement project can include upgrading of the sanitary sewers, watermains, stormwater systems, sidewalks, and noise barriers. Property owners can use a petition-based procedure to

request for a Local Improvement project, and the costs are split between the municipality and all property owners who are benefiting from a local improvement once it is approved. The municipality pays the upfront costs of the Local Improvement project and recovers the required funding from the benefiting property owners based on the selected payment option, and this repayment can be over multiple years.⁴ [Antigonish \(NS\)](#) has implemented a “user pay” approach in their municipal service areas such as fire protection, road improvements, and water and sewer systems, making the local improvement projects possible in rural communities where service levels vary. A Local Improvement project can be the construction or upgrades of a municipal infrastructure, including water and storm water systems, and street improvements.⁵ A Local Improvement project would require two-thirds of the property owners affected by this project to express support before it will be considered by the municipality. The charge can be calculated in different ways, including a uniform amount for each property, property use, property area, property frontage, assessed value, or a combination of two or more methods.⁶ [Wetaskiwin \(AB\)](#) also uses local improvement charges to allow for construction projects that Council considers to be of greater benefit to a particular area of the municipality than to the whole municipality. The municipality assesses how a property owner will be charged for a local improvement from various factors, such as property type and property location.⁷ SDF-type applications are also observed. For example, [Winnipeg \(MB\)](#) passed a bylaw and imposed frontage levies, which are charged separately and apart from other taxes on the property. The City has created two types of frontage levy rates, and the frontage levy is based on a property fronting on a street that contains a sewer main or water main.⁸ The revenue collected is used for the upgrade, repair, replacement and maintenance of City streets and sidewalks.⁹ Other examples of LIC adoption in Canada include [Saanich \(BC\)](#), [Mahone Bay \(NS\)](#), and [Yarmouth \(NS\)](#).

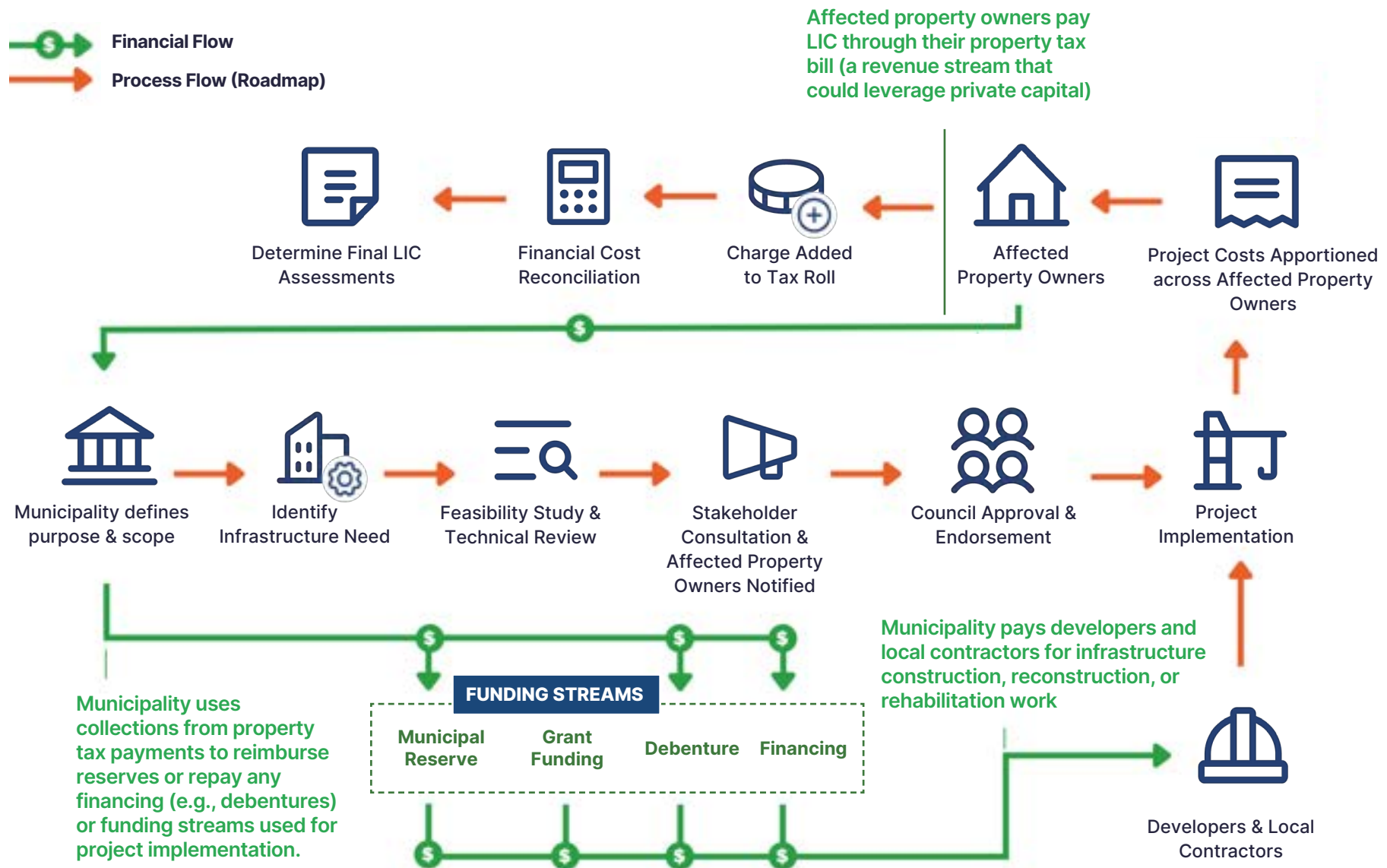


Figure 1. Visual representation of how Local Improvement Charges work

Relevance to Advancing Adaptation

LIC financing can play a significant role in advancing climate adaptation by enabling municipalities to fund and recover the costs of localized resilience projects, such as flood protection systems, stormwater management upgrades, green infrastructure installations, and urban heat mitigation measures. The Canadian Climate Institute has even explicitly identified local improvement charges as one of several tools that could fund place-based resilience infrastructure through “Resilience Districts”, modelled on California’s Climate Resilience Districts authorized in 2022.¹⁰ The funds come directly from the property owners who benefit most from the interventions rather than relying solely on general tax revenues. This targeted funding mechanism allows local governments to prioritize and implement critical adaptation projects in high-risk or vulnerable areas without overburdening the broader tax base, thereby accelerating the pace of climate resilience efforts. By linking the cost of infrastructure improvements to the properties that experience increased protection, enhanced property values, or improved environmental services, LICs can create a more equitable and transparent approach to financing adaptation. Moreover, they can strengthen public support for climate initiatives by clearly demonstrating the connection between individual contributions and tangible local benefits. Over time, this approach can also improve municipal financial sustainability, as it diversifies revenue sources and reduces dependence on external funding or limited municipal budgets, allowing municipalities to plan and invest more strategically in long-term climate resilience.

Accessibility

LIC financing is broadly accessible across Canada wherever provincial legislation authorizes municipalities to designate specific capital projects as local improvements and to recover all or part of their cost through special charges imposed on directly benefiting properties. In Ontario, the Municipal Act provides the statutory foundation, and Ontario Regulation 586/06 supplies the detailed procedural framework: the municipality prepares an engineer’s report, provides public notice, allows a petition and objection period, establishes a committee of revision to hear disputes, and imposes the charge as a special fee that ranks as a priority lien on the benefiting property recoverable on the same basis as property taxes.^{11,12} In British Columbia, municipalities can recover the costs of specific capital improvements through the local area service framework under Division 5 of Part 7 of the Community Charter (ss. 210–216), which authorizes councils to impose local service taxes (including parcel taxes) on properties within a defined service area.¹³ Equivalent authority exists for regional districts through Part 10 of the Local Government Act, governing service structure and establishing bylaws, together with s. 397 on fees and charges. In Alberta, the Municipal Government Act, Part 10, authorizes local improvement taxes on properties benefiting from specific improvements, following a bylaw and public notice process.¹⁴ In Manitoba, the Municipal Act, Division 4, Part 10, provides for local improvement charges as a cost-recovery mechanism for improvements that directly benefit specific properties.¹⁵ Nova Scotia’s Municipal Government Act, and New Brunswick’s Local Governance Act, contain analogous authority. In Québec, municipalities can apply a “special tax” or a local improvement tax under the *Loi sur les cités et villes*, art. 487.

For SDF, the most explicit statutory framework is in Alberta, where the Municipal Government Act authorizes a menu of named special taxes imposed on properties within defined benefit areas.¹⁶ Section 382(1) lists eleven eligible categories of special tax, including waterworks, sewer, fire protection area, recreational services, paving, drainage ditch, dust treatment, and roads/sewer/water maintenance taxes. Section 383(1) authorizes imposition only on property in the area of the municipality that will benefit from the specific service or purpose, and s. 384 requires the bylaw to state the specific service, describe the benefiting area, state the estimated cost, and set the tax rate basis (assessment, parcel, frontage, or area). Section 386 restricts use of revenue to the stated service or purpose and requires public advertisement of any use of excess revenue. A distinct petition right under s. 392(4) applies to local improvement taxes rather than special taxes, reflecting a structural separation in the Alberta MGA between ongoing benefit-based service taxes (ss. 382–387) and one-time capital improvement taxes (ss. 391–409). Alberta’s special tax framework most directly approximates the SDF model. In Ontario, the Municipal Act does not establish a single unified SDF regime; municipalities construct functional equivalents by combining the general fee and charge authority under s. 391(1) with service-area scoping under other provisions.¹⁷ Section 391(1) authorizes municipalities to impose fees or charges on persons for services or activities provided by the municipality, for costs payable for services provided by or on behalf of any other municipality or local board, and for use of municipal property; when combined with designation of a defined service area, it produces an outcome functionally similar to an SDF levy.

While enabling authority for LICs or SDFs exists broadly across Canada, practical accessibility is uneven: the notification, petition, dispute-resolution, and charge-registration steps required before levy impose administrative demands that smaller municipalities may find burdensome relative to the capital amounts involved, particularly where in-house planning and legal capacity is limited.

Feasibility

LICs and SDFs are generally feasible across Canada where municipalities have clear statutory authority to impose special levies. From an economic perspective, they allow the cost of infrastructure improvements (or resilience and/or energy upgrades) to be spread over long repayment periods, reducing the upfront burden on individual property-owners, and therefore, improving affordability. For example, the Ontario regulations allow amortization via bylaws so that annual payments may extend over the lifetime of the work.¹⁸ In addition, they align with the so-called “benefit principle”, which is the idea that those who directly receive the benefit of an improvement bear the cost.¹⁹ This alignment can make these mechanisms more politically palatable than across-the-board tax increases. Moreover, there is existing policy and regulatory frameworks in provinces such as Ontario and Nova Scotia that permit them to be used for climate-related improvements,²⁰ meaning that when the enabling policies are in place, they can be a feasible financing tool for municipalities to increase resilience.

Risk

One key risk for LIC programs is that it concentrates costs on a defined group of beneficiaries, where disputes can emerge over district boundaries, benefit attribution, or proportionality of charges, particularly where infrastructure serves both local and broader system-wide functions. Municipal finance literature notes that these boundary and attribution challenges can expose municipalities to appeals, legal challenges, or delays if property owners contest inclusion or levy calculations. Another risk is administrative capacity. For example, designing, implementing, and managing a LIC program requires municipal staff time, legal review, bylaw drafting, notice to property-owners, petition or consent processes, collection and enforcement procedures. Municipalities with limited capacity or resources may struggle to handle this complexity. There is also a risk of limited uptake from the communities, since property-owners may hesitate to sign up if they worry about increases in their property tax or local improvement charges, or they may simply be unaware of how they benefit. In addition, there may be opposition due to the high cost of infrastructures, perceived inequity, or uneven benefit allocations, especially when benefits are indirect (e.g., flood-protection, heat-mitigation) and may accrue over time rather than immediately. Research highlights that while beneficiary pay models can improve fairness in theory, they can erode trust if residents do not clearly see the promised benefits.^{23,24} Therefore, it is critical to apply effective communications planning to these efforts and to identify precisely which properties benefit and how much they should contribute.²⁵

Scalability

LIC-type financing mechanisms have significant potential for scalability, both because they generate a dedicated revenue stream enable attracting private leverage and because they can pair with PACE-style frameworks (Property Assessed Clean Energy) to allow broad replication across the municipality (or both, as in the case of the City of Ottawa using private leverage to scale its [Better Homes Ottawa Loan Program](#)). Since LICs can be structured to apply to both large-scale municipal infrastructure (e.g., stormwater system upgrades, flood-protection, or green infrastructure) and to individual property-level projects (e.g., home energy retrofits or solar installations), they can be scaled in various contexts. For example, in Ontario, regulatory amendments have explicitly expanded the permissible scope of LICs to include energy efficiency works or renewable energy works.²⁶ With sufficient legislative support and administrative standardisation, municipalities across different sizes could adopt LIC models and aggregate many small investments to achieve meaningful climate-adaptation or resilience goals. In addition, they can scale more effectively in larger or fast-growing municipalities, where development and reinvestment generate a steady pipeline of eligible projects. In some cases, special districts may cross municipal boundaries, allowing municipalities to address shared regional infrastructure or adaptation needs that extend beyond a single jurisdiction.²⁷ Lastly, scalability is constrained where benefits are diffuse or system-wide, as these mechanisms rely on clearly attributable benefits and targeted funding. However, the scalability still depends on various factors including local capacity, program design, infrastructure costs, transparency, and the uptake of the communities.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Direct funding of localized infrastructure via property charges	LICs strongly target site-specific adaptation projects with a clear beneficiary-pay model.
Economic Efficiency	Medium	0	Established administrative model but requires project-specific setup	LICs involve moderate setup requirements, but provide efficient cost recovery once implemented.
Equity & Fairness	Medium	0	Costs borne by benefiting property owners	Costs align with benefits, but affordability concerns may arise for low-income property owners.
Political Acceptability	High	+1	Petition-based approval and clear benefit linkage	Participatory approval and visible benefit linkage support strong public legitimacy.
Feasibility (Admin/Legal)	High	+1	Enabled in multiple provinces; widely used in Canada	LICs have clear legislative authority and established municipal use across several provinces.
Coherence (Portfolio Fit)	High	+1	Fits within property tax and land value capture systems	LICs integrate well with existing property tax systems and complement infrastructure financing tools.

Best Use Context

LICs are most effective for targeted, place-based adaptation projects in built-up areas where benefits can be clearly allocated. They are particularly suitable for municipalities seeking to retrofit infrastructure without relying on general taxation.

Context Factor	Relevance	Notes
Municipal Size	Medium	Applicable broadly, but larger municipalities have stronger administrative capacity.
Administrative Capacity Required	Medium	Requires bylaw design, billing systems, and project coordination.
Development Pressure	Low	Not dependent on growth; applicable to existing built areas.
Climate Risk Targeting	High	Highly effective for localized risks such as flooding and stormwater.
Fiscal Flexibility Required	Medium	Requires upfront municipal financing with cost recovery over time.

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This brief is part of a larger catalogue. The Catalogue of Fiscal Tools to Advance Adaptation examines how municipalities can use and optimize existing fiscal tools to support climate adaptation and climate-resilient infrastructure. Each brief included in this catalogue explores a specific tool, assesses its strengths and limitations through a common analytical framework, and highlights examples of how it has been applied in practice.



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Category

Land Value Capture



Geography/ Location

BC, NS, ON,
PE, QC

Municipality size

All



Tier

Enabling



Constraints

Equity



Administrative Capacity Required

Low

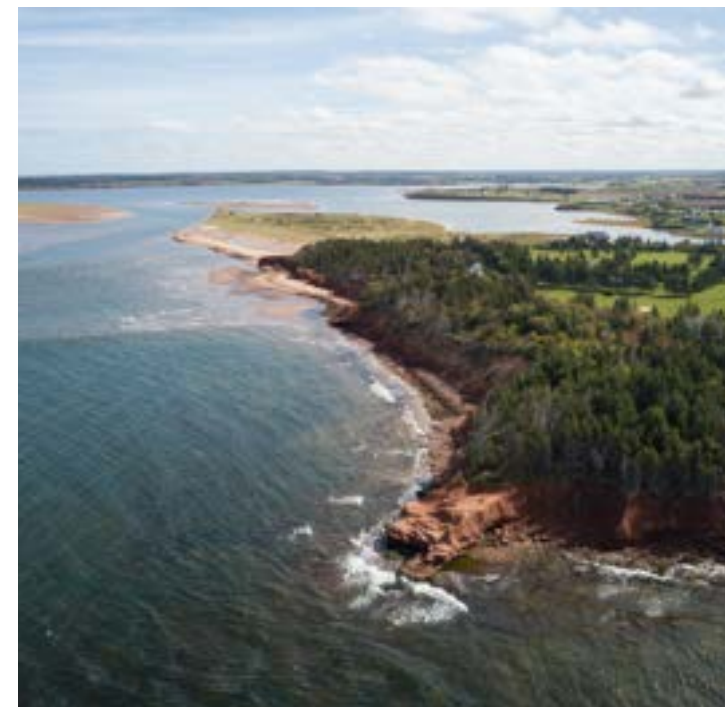


Fiscal Tool Brief: Property Tax Incentives for Conservation

Property tax incentives for conservation reduce landowners' tax costs to encourage voluntary protection and stewardship of ecologically important lands.

Property tax incentives for conservation are programs that reduce or exempt property taxes for landowners who agree to protect ecologically significant areas on their property. The mechanism is simple: by lowering the tax burden, municipalities make it more affordable for landowners to conserve forests, wetlands, riparian zones, or other sensitive habitats, rather than converting them to other uses. In exchange, landowners commit to maintaining the ecological value of the land, often through conservation agreements, easements, or official designations. While the legislative framework is set at the provincial level, municipalities administer property assessments and apply the exemptions or credits locally. The approach is different across provinces, some offer full tax exemptions, others provide

partial rebates or credits, but the aim is similar: to use the property tax system as a fiscal tool to encourage voluntary land stewardship.



Beyond the conservation outcomes, these programs also function as a mechanism for mobilizing private capital toward ecosystem protection. By lowering the ongoing cost of land ownership, municipalities create financial conditions that encourage private landowners to retain and actively manage natural areas rather than selling or developing them. In practice, this shifts part of the financial responsibility for ecosystem protection from the public sector to private landowners, who continue to pay for land acquisition, management planning, and stewardship activities on conserved lands. For example, many programs require participating landowners to undertake specific management actions or develop long-term stewardship plans. These activities often involve direct private expenditures, such as hiring forestry professionals to prepare management plans, conducting ecological monitoring, or undertaking habitat restoration and invasive species management. In this way, municipal tax incentives act as a catalyst that unlocks private spending on conservation that would otherwise be unlikely to occur.

Examples

Under [Ontario's Conservation Land Tax Incentive Program \(CLTIP\)](#), municipalities may apply 100% property tax exemptions to properties that protect provincially significant natural areas such as wetlands, woodlands, or endangered species habitat. While the program is provincially legislated, municipalities like [Hamilton Township \(ON\)](#), [Tay Valley Township \(ON\)](#) and others, administer it through local tax rolls, reducing carrying costs for landowners who conserve ecologically valuable land. Another Ontario-based program, the [Managed Forest Tax Incentive Program \(MFTIP\)](#), reduces property tax assessments to 25% of the residential rate for landowners with at least four hectares of forest and an approved 10-year

management plan. The plan builds landowners' understanding of their forests and engages them more directly in management, encouraging stronger stewardship of Ontario's private woodlands. Participation in MFTIP requires landowners to hire certified Managed Forest Plan Approvers to develop management plans and periodically report on forest management activities. These plans involve forest inventories, mapping, and long-term management strategies, representing direct private investment in sustainable land management. Between 2004 and 2024, the number of properties enrolled in the CLTIP and MFTIP programs grew by 93% to more than 46,000, while the land conserved increased by 32% to nearly 1.2 million hectares, protecting forests, wetlands, and other natural habitats.¹ Because these lands remain privately owned, the majority of stewardship costs, including management planning, monitoring, and maintenance, are borne by participating landowners rather than municipalities, representing substantial private investment in conservation.

In British Columbia, West Vancouver (BC), Abbotsford (BC) and other municipalities use Permissive Tax Exemptions to provide property tax relief to lands and organizations that contribute to community well-being, including conservation purposes. Council grants these exemptions a bylaw, often for terms of up to 10 years, directly lowering municipal property tax bills for eligible properties. Within the Islands Trust (BC) a federation of independent local governments, municipalities participate in the Natural Area Protection Tax Exemption Program (NAPTEP), which grants a 65% property tax exemption to landowners who register permanent conservation covenants. This municipal-provincial partnership has conserved sensitive ecosystems across participating islands, with exemptions applied annually to local tax bills.

Nova Scotia's [Conservation Property Tax Exemption](#) allows private landowners to eliminate property taxes on lands legally protected for ecological values, helping to support conservation efforts of the province where 70% is privately owned and 95% of the coastline falls into that category. Since the land remains privately owned and managed, conservation outcomes depend heavily on private landowner investment in maintaining ecological values, effectively leveraging private capital to protect landscapes that would otherwise require public acquisition. In Prince Edward Island (PEI), municipal properties designated under the province's [Natural Areas Protection Act](#) are exempt from municipal property taxes, unless the land is developed or subdivided. Municipalities apply these exemptions through their assessment rolls, ensuring that private conservation efforts on ecologically important lands are recognized and financially supported. This mechanism is highlighted in Charlottetown's Official Plan,² which identifies Natural Areas as sites of ecological or geological importance to be protected through provincial designation and municipal planning policy.³ In Québec, designated natural reserves on private land are exempt from municipal and school property taxes under the *Loi sur la fiscalité municipale*, art. 204.⁴ The exemption takes effect automatically once a notarial agreement is registered with the Ministry of Environment, with an estimated fiscal impact of \$500,000 in 2019. Two approaches contrast: automatic exemption by provincial law in some jurisdictions, municipal autonomy in others.

Relevance to Advancing Adaptation

Property tax incentives for conservation help municipalities protect ecosystems such as wetlands, forests, and coastal habitats that act as cost-effective natural infrastructure for climate resilience. For example, a study conducted by [Ming and colleagues \(2007\)](#) found that restoring one hectare of wetland in British Columbia cost about CAD \$73,000 in 2016, yet it could prevent an estimated CAD \$7,600 in flood damages each year, meaning it pays for itself within a decade and generates significant long-term savings.⁵ A municipality that exempts 1,000 hectares of riparian forest or wetlands could help absorb millions of litres of stormwater annually, significantly reducing infrastructure costs and flood risk. By using property tax exemptions to protect such ecosystems, municipalities invest in durable, nature-based solutions that stabilize local climates and safeguard communities.



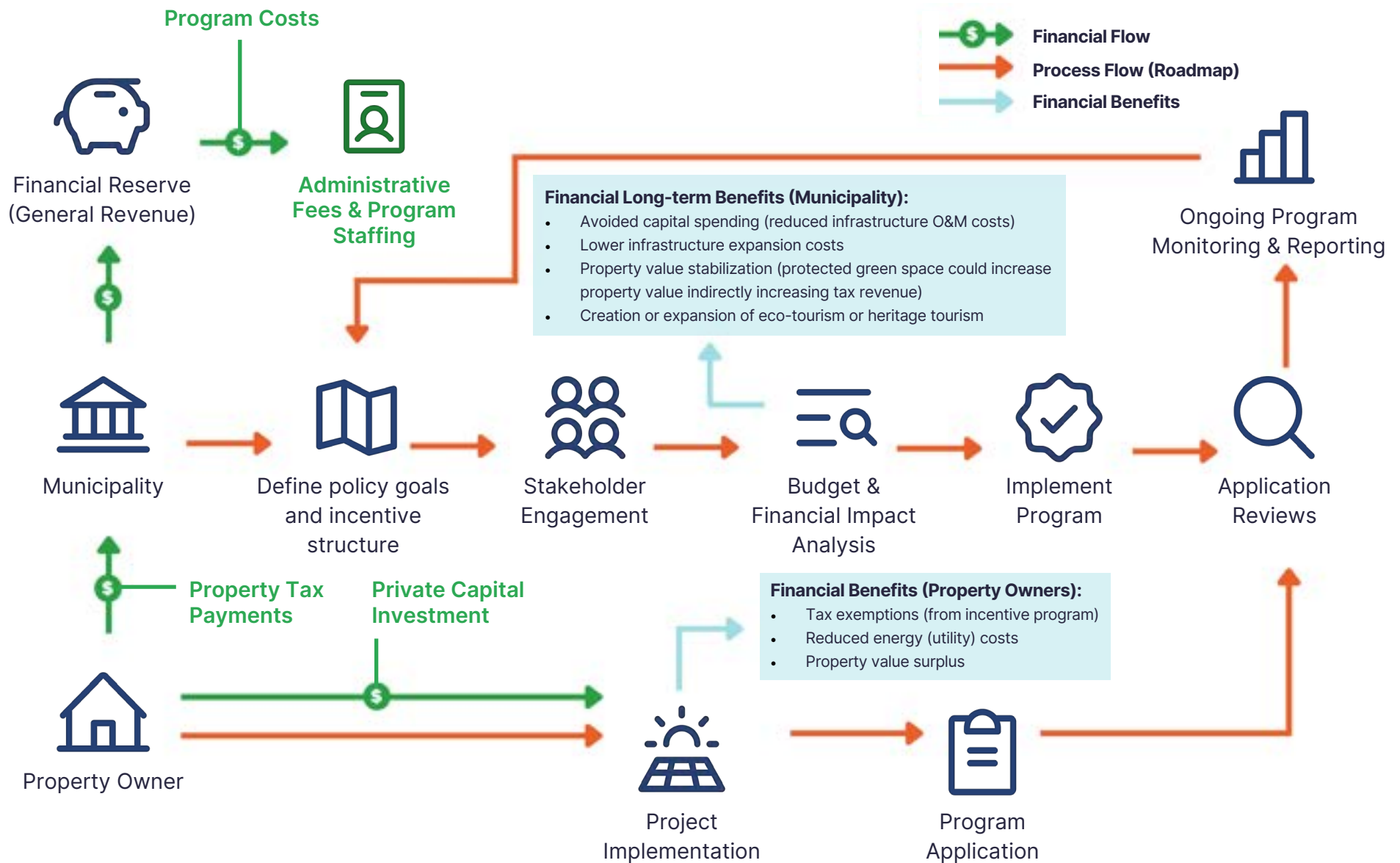


Figure 1. Visual representation of how Property Tax Incentives for Conservation work

Accessibility

Property tax incentives for conservation are accessible through dedicated enabling legislation in five Canadian provinces, though the scope, eligible land categories, exemption rates, and administrative arrangements differ substantially. In Ontario, two programs operate through the interaction of the Assessment Act and Ontario Regulation 282/98, made thereunder.^{6,7} The Conservation Land Tax Incentive Program (CLTIP) operates through paragraph 25 of s. 3(1) of the Assessment Act, which exempts “conservation land” from property taxation; O. Reg. 282/98 (ss. 24–27) defines eligible conservation land to include provincially significant wetlands, areas of natural and scientific interest, endangered species habitat, Niagara Escarpment Natural Areas, and lands owned by registered charities or conservation authorities meeting specified ecological criteria. The exemption is administered by the Ministry of Natural Resources and Forestry, which approves eligibility, and applied by municipalities through their assessment rolls. The Managed Forest Tax Incentive Program (MFTIP) operates through a separate mechanism: O. Reg. 282/98 creates a Managed Forests property class (ss. 8.2–9.7) conditional on a 10-year managed forest plan approved under the Ontario Managed Forest Tax Incentive Program Guide, with the class taxed at a provincially-set ratio of 25% of the residential rate under the tax-ratio provisions of the Municipal Act.

In Nova Scotia, s. 45B of the Assessment Act,⁸ as added by the Conservation Property Tax Exemption Act,⁹ exempts qualifying “conservation property” from all taxation authorized under any public or private Act of the Legislature, encompassing both municipal and school property taxes. Eligible categories include land subject

to a conservation easement held by an eligible body under the Conservation Easements Act (primarily dedicated to native biodiversity protection and prohibiting industrial, commercial, forestry, agricultural, or quarrying uses), land designated as an ecological site under the Special Places Protection Act, and land designated permanently as a Wilderness Area under the Wilderness Areas Protection Act; the Minister of Environment and Climate Change Canada determines conservation property status annually on September 30 for the following municipal taxation year.¹⁰

In Quebec, the Natural Heritage Conservation Act (ss. 56–70) enables the responsible Minister to recognize private lands as “nature reserves” through a formal agreement with the owner that specifies conservation objectives, management arrangements, and use restrictions; the agreement is registered in the land register under ss. 58–59 and is binding on subsequent acquirers.¹¹ The tax exemption flows through a separate statute: paragraph 19 of s. 204 of the Act respecting municipal taxation exempts from municipal and school taxation any immovable recognized as a nature reserve under C-61.01.¹² The combined effect is that qualifying lands are removed from the municipal tax base for the duration of the recognition.

In British Columbia, the geographic scope is limited to the Islands Trust area on Vancouver Island and the Gulf Islands. Part 7.1 of the Islands Trust Act (ss. 49.1–49.8), establishes a framework for tax exemption certificates for “eligible natural area property”: land subject to a conservation covenant under s. 219 of the Land Title Act in favour of the Islands Trust Conservancy, a local trust committee, or the trust council, and meeting prescribed natural

area values.¹³ The Islands Trust Natural Area Protection Tax Exemption Regulation, B.C. Reg. 41/2002, s. 3, sets the tax exemption at 65% of the assessed value of the covenanted land, exempting that portion from taxation under the Local Government Act, Community Charter, Taxation (Rural Area) Act, School Act, and other listed property taxation statutes.¹⁴ The program is administered as the Natural Area Protection Tax Exemption Program (NAPTEP) by the Islands Trust Conservancy.

In Prince Edward Island, the exemption operates through the interaction of two statutes: s. 3 of the Real Property Tax Act exempts from provincial and municipal real property taxation any real property designated as a natural area under the Natural Areas Protection Act as well as any real property designated as a wildlife management area under the Wildlife Conservation Act.^{15,16}

Alberta, Saskatchewan, Manitoba, New Brunswick, and Newfoundland and Labrador currently lack enacted province-wide statutory conservation property tax exemption programs; landowners in those provinces may access federal tax benefits through the Ecological Gifts Program but realistically cannot rely on provincial property tax relief.¹⁷

Feasibility

The feasibility of these programs is fundamentally dependent on provincial legislative frameworks, as municipalities cannot independently authorize property tax exemptions without enabling provincial legislation. For example, Ontario's CLTIP and MFTIP are provincially legislated, with municipalities administering exemptions through property tax rolls. Therefore, these programs

indicate a clear and tested division of responsibilities that allows municipalities to implement the incentives using existing assessment and taxation systems. From an administrative perspective, the feasibility is relatively high because these incentives rely on existing property tax infrastructure, and thus, the need is low for new staffing or implementing technical systems. However, feasibility is constrained by municipal fiscal capacity, since tax exemptions reduce local revenue and may be difficult to absorb in communities with narrow tax bases or high service demands. This fiscal trade-off means that while conservation outcomes may be attractive, some municipalities may hesitate to fully promote or expand participation without provincial backstopping or compensation mechanisms.

Risk

A key risk of Property Tax Incentives for Conservation is that participation is entirely voluntary, meaning conservation outcomes depend on landowner willingness to enroll eligible lands.¹⁸ Therefore, if the landowners are uninterested, unaware, or concerned about long-term restrictions, municipalities may see limited ecological gains despite having the program in place. In addition, there is also an equity risk, because benefits tend to accrue to landowners with large or ecologically significant properties, while other residents continue contributing through regular property taxes without access to comparable incentives. Moreover, in programs that rely on time-limited agreements, such as permissive tax exemptions granted for fixed terms that are often up to 10 years in British Columbia,¹⁹ there is a risk that conserved lands may later be developed if agreements are not renewed.

Scalability

The scalability of these programs is limited by the fact that these programs are legislated at the provincial level (e.g., Ontario's CLTIP, Nova Scotia's Conservation Property Tax Exemption). Therefore, the expansion in scope or eligibility requires provincial amendments, which can limit municipal flexibility. Despite this constraint, scalability is strong over time because property tax exemptions are ongoing rather than time-limited expenditures, allowing conservation benefits to accumulate as long as lands remain designated. In a report from the Ontario Biodiversity Council, between 2004 and 2024, enrollment in CLTIP and MFTIP increased substantially.²⁰ The combined number of properties participating in CLTIP and MFTIP increased by 93% (from approximately 24,000 to 46,500 properties) and the area of the properties enrolled in both programs increased by approximately 32% (906,000 to 1,198,000 hectares).²¹ The protection of nearly 1.2 million hectares of private land demonstrates the capacity for gradual, durable expansion. In addition, scalability can be further enhanced when municipalities layer tax incentives with complementary tools, such as green infrastructure programs or land acquisition trusts, creating mutually reinforcing protection mechanisms. By embedding conservation incentives within routine taxation systems, municipalities can scale climate-resilient land protection without relying on finite grant budgets, allowing this tool to be a useful strategy for advancing climate adaptation in the long term.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Supports ecosystem protection via tax incentives	The tool advances adaptation indirectly through nature-based conservation, but does not generate direct revenue or capital financing.
Economic Efficiency	High	+1	Uses existing tax systems with low administrative burden	It is efficient to administer and leverage private stewardship with limited municipal cost beyond foregone revenue.
Equity & Fairness	Low	-1	Benefits concentrated among eligible landowners	Benefits accrue disproportionately to eligible landowners, creating regressive distributional effects across the wider tax base.
Political Acceptability	Medium	0	Voluntary participation with visible environmental benefits	The tool is generally acceptable, but fairness concerns and foregone municipal revenue can limit support.
Feasibility (Admin/Legal)	Medium	0	Requires provincial enabling legislation	Administration is straightforward, but implementation depends on provincial authority and limited municipal autonomy.
Coherence (Portfolio Fit)	High	+1	Integrates with property tax and land-use planning systems	The tool aligns strongly with land-use planning, conservation policy, and nature-based adaptation strategies.

Best Use Context

This tool is most effective in municipalities with significant ecological assets under developmental pressure, where conserving natural infrastructure can produce long-term resilience benefits. It is particularly suitable where municipalities can absorb modest reductions in property tax revenue.

Context Factor	Relevance	Notes
Municipal Size	Medium	Applicable across sizes, but fiscal impact more manageable in larger tax bases.
Administrative Capacity Required	Low	Implemented through existing tax systems with minimal added complexity.
Development Pressure	High	Most effective where land conversion pressure threatens ecological assets.
Climate Risk Targeting	Medium	Supports adaptation indirectly through ecosystem protection.
Fiscal Flexibility Required	Medium	Requires tolerance for reduced property tax revenue.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Property Tax Incentives for Conservation*. In *Catalogue of Fiscal Tools to Advance Adaptation*. In collaboration with the *Centre de recherche sur la gouvernance of the École nationale d'administration publique*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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This brief is part of a larger catalogue. The Catalogue of Fiscal Tools to Advance Adaptation examines how municipalities can use and optimize existing fiscal tools to support climate adaptation and climate-resilient infrastructure. Each brief included in this catalogue explores a specific tool, assesses its strengths and limitations through a common analytical framework, and highlights examples of how it has been applied in practice.



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Category

Intergovernmental
Transfers and Grants



Geography/ Location

AB, BC, MB, NB, NL,
NS, NT, NU, ON, PE,
QC, SK, YT

Municipality Size

All



Tier

Foundation



Constraints

Equity; Feasibility



Administrative Capacity Required

High



Fiscal Tool Brief: Provincial and Territorial Transfers and Grants”

Provincial and territorial transfers and grants provide targeted funding to help municipalities and communities deliver essential services, fill local funding gaps, and advance resilience or infrastructure projects.

Provincial and territorial transfers and grants are a form of intergovernmental transfer and a direct funding mechanism where provincial and territorial governments allocate a set sum of money to municipalities, First Nations, or other eligible recipients for specific projects. Canadian municipalities are taking on expanding responsibilities in delivering public services, yet they depend heavily on property taxes as their primary revenue source.^{1,2} Consequently, they rely significantly on intergovernmental transfers, which are critical for sustaining essential services

such as policing, libraries, public transit, and water infrastructure. These transfers form the backbone of efforts to protect community health and safety. As climate change continues to impact our communities, provincial and territorial governments develop grant programs to help local municipalities implement projects that advance environmental protection, disaster risk reduction, and community resilience. These grants are typically awarded through applications with clear eligibility criteria, deliverables, and timelines. Funding may be provided as a lump sum or in installments tied to project milestones, and can cover a wide range of initiatives, from planning studies to large-scale infrastructure projects. By leveraging provincial and territorial resources, these grants can bridge funding gaps for projects that might otherwise be delayed or scaled down due to local budget constraints.



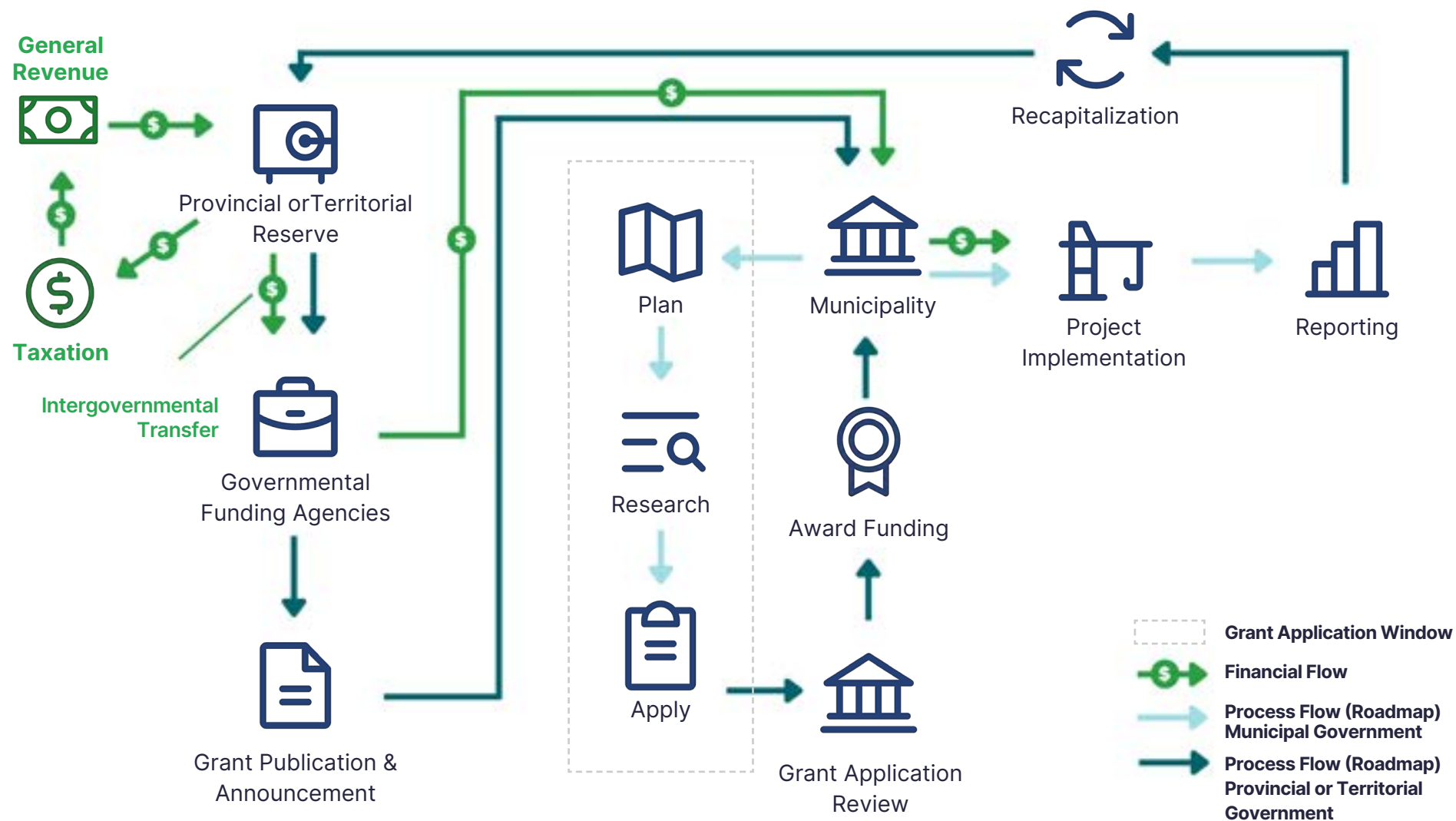


Figure 1. Visual representation of how Provincial and Territorial Transfers and Grants work

Examples

Various provincial and territorial grants support projects aimed at building climate-resilient communities, including reducing flood risks, improving emergency response initiatives, and restoring ecosystems. For example, the [Ontario Community Environment Fund \(OCEF\)](#) collects revenues from environmental penalties, such as industrial sites that don't follow Ontario's environmental rules, and reinvest back into local environmental initiatives. These funds are available for projects such as habitat restoration, shoreline stabilization, and community tree planting campaigns. In 2025, this program has over \$2.9 million available for local projects to restore the environment, supporting healthy communities and protecting and preserving the environment.³ In British Columbia, the [Disaster Resilience & Innovation Funding program \(DRIF\)](#) provides financial support to First Nations and local governments for projects that improve preparedness for natural hazards and climate-related risks, such as upgrading dikes, improving emergency communication systems, and developing community risk maps. These provincial grant programs reduce the financial constraints that local governments may have and enable them to act proactively in the face of climate impacts, building long-term resilience through investments in natural systems, community capacity, and hazard preparedness.

Relevance to Advancing Adaptation

Provincial and territorial grants play a critical role in enabling municipalities and communities to implement climate adaptation measures that may be too costly to fund solely through local revenues. By providing upfront, non-repayable capital, these grants allow for timely investment in infrastructure upgrades, nature-based solutions, and community capacity-building that address both immediate and long-term climate risks. For instance,

a coastal municipality at risk from sea-level rise could use grant funding to restore protective wetlands, reinforce shoreline defences, and redesign public spaces to manage periodic flooding. Similarly, a grant could fund the installation of permeable pavement and bioswales in urban centres to reduce stormwater runoff and urban heat islands. Beyond physical infrastructure, grants can also support adaptation planning, risk assessments, and public engagement programs that improve community awareness and preparedness for climate impacts. Since provincial and territorial grants often prioritize projects that demonstrate measurable resilience benefits, they help align local action with broader provincial and territorial climate adaptation strategies and encourage the replication of successful approaches across multiple jurisdictions.

Accessibility

There are numerous intergovernmental grants available across Canada's provinces and territories. However, these grants vary in accessibility due to provincial and territorial priorities, eligibility criteria, and administrative capacity at the local level. For example, in Ontario, the OCEF allocated over \$2.9 million in 2025 for local environmental projects, with eligibility extending to municipalities, Indigenous communities, and not-for-profits, but only in regions where environmental penalties have been collected, which led to some areas without access.⁴ Access also hinges on municipal capacity. Larger municipalities tend to have more experience and advantage in securing funding. For example, the OCEF uses Transfer Payment Ontario application system. This system can be resource intensive for some municipalities with limited capacity.⁵ In addition, language, technical support, and outreach efforts by provincial and territorial agencies influence which communities perceive, apply for, and successfully receive funding. These factors can collectively produce inequities in access,

underscoring the need for intentional outreach and support mechanisms to ensure more equitable distribution of adaptation resources.

Feasibility

Provincial and territorial grants have a high feasibility for municipal climate adaptation, since they can be designed to closely align with broader provincial and territorial climate goals, strategies, and budgeting cycles. Since municipalities are under either provincial or territorial jurisdiction, they operate within a governance and fiscal relationship in which provincial and territorial transfers are a natural and established funding mechanism. This makes provincial and territorial grant programs a practical channel through which provinces and territories can advance adaptation priorities at the local level. In addition, many are embedded within multi-year fiscal frameworks, giving applicants and recipients some predictability. This is evident in programs like the DRIF and Community Emergency Preparedness Fund (CEPF) in British Columbia, which offer ongoing calls and clear categories for foundational planning and structural resilience projects that match provincial/territorial disaster risk priorities.⁶ However, feasibility is influenced by the capacity of both provincial and territorial administrations and local applicants. At the provincial/ territorial level, political priorities and fiscal constraints can shape program continuity and funding levels year-to-year. If a province/territory shifts its budgetary emphasis away from climate adaptation, grant availability and program design could change, challenging municipalities relying on these funds. At the local level, municipalities with established grant management capacity and technical expertise can more feasibly prepare competitive applications and manage reporting requirements.

Risk

While provincial and territorial grants can catalyze climate adaptation efforts, they carry several risks that affect municipalities and broader adaptation goals. One central risk is administrative complexity since many programs require detailed proposals, extensive documentation, and ongoing reporting, which can delay project initiation and disproportionately burden smaller municipalities or those with limited staffing capacity.⁷ This can discourage participation or divert local resources from other priorities. There are also risks associated with the political and fiscal environment. Provincial and territorial budgets and priorities can shift with changes in government or economic conditions, meaning funding streams for adaptation can be reduced, paused, or redesigned from one fiscal cycle to the next. This volatility creates uncertainty for multi-year projects, such as large infrastructure upgrades or nature-based solutions that require sustained funding commitments.⁸ Additionally, the reliance on competitive allocation can also create inequities, where well-resourced municipalities repeatedly secure funding while high-risk but under-resourced communities are left out. This indicates that equity-focused design for such funding programs are needed because communities with fewer resources face greater barriers to accessing funds and participating in decision-making.⁹ Therefore, mitigating these risks requires transparent program design, multi-year policy commitments, and technical support to enhance municipal capacity to navigate funding processes effectively.

Scalability

Provincial and territorial grant programs have strong scalability potential when structured to support both replication and adaptation of successful models across jurisdictions. Within a province or territory, grants can be targeted toward common climate risks, such as flood hazards, wildfire vulnerability, or drought impacts, enabling municipalities facing similar conditions to adopt proven solutions. For instance, British Columbia's CEPF funds a range of projects from risk assessments to small structural interventions across many local governments and First Nations, demonstrating how standardized categories can support broad uptake.¹⁰ Grants also provide a mechanism for piloting innovative adaptation approaches at smaller scales before scaling up. Provinces and territories can evaluate pilot outcomes, refine guidelines, and then expand funding to support wider deployment of effective practices. Integrating pilot learnings into program criteria can support the wider adoption of innovative adaptation strategies.

However, scalable impact depends on sustained and predictable funding commitments. One-time or short-term funding limits the ability to build momentum or embed solutions into municipal planning processes. Coordination with federal programs and private investment is also critical for larger infrastructure or multi-community initiatives, reducing reliance on provincial and territorial grants alone. Furthermore, cross-sector collaboration, including municipalities, Indigenous governments, non-profits, and private partners, can also enhance scalability by pooling expertise and resources. With these partnerships and long-term fiscal planning, provincial and territorial grants can be a useful tool to scale up adaptation initiatives across regions.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Direct, non-repayable funding	Directly funds adaptation projects and enables investments otherwise unaffordable locally.
Economic Efficiency	Medium	0	Application and reporting burden	Efficient funding but requires moderate administrative effort and staff capacity.
Equity & Fairness	Medium	0	Competitive access disparities	Access varies across municipalities; outcomes depend on program design and capacity.
Political Acceptability	Medium	+1	Widely accepted transfer mechanism	Strong legitimacy as grants fund visible public goods without local taxation.
Feasibility (Admin/Legal)	High	+1	Established intergovernmental system	Highly feasible within existing provincial-municipal fiscal relationships.
Coherence (Portfolio Fit)	Medium	0	Project-based and fragmented	Aligns with provincial and territorial priorities but may lack long-term coordination with local planning.

Best Use Context

Provincial and territorial grants are most effective for municipalities with sufficient administrative capacity to secure and manage funding. They are particularly valuable for high-cost adaptation projects where local revenues are insufficient but are best used alongside other tools due to their competitive and episodic nature.

Context Factor	Relevance	Notes
Municipal Size	Medium	Larger municipalities have advantage, but smaller ones can benefit with support.
Administrative Capacity Required	High	Strong capacity needed for applications, compliance, and reporting.
Development Pressure	Low	Not dependent on growth; applicable across contexts.
Climate Risk Targeting	High	Can be designed for specific hazards (e.g., floods, wildfire, heat).
Fiscal Flexibility Required	Low	Provides external funding, reducing need for local fiscal capacity.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Provincial and Territorial Transfers and Grants*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category
Partnerships



**Geography/
Location**
MB, ON

Municipality Size
Large



Tier
Conditional



Constraints
Efficiency; Complexity;
Political



**Administrative
Capacity Required**
High



Fiscal Tool Brief: Public-Private Partnerships

Public-private partnerships help governments deliver major infrastructure projects by leveraging private-sector financing, expertise, and risk-sharing while maintaining public oversight.

Public private partnerships (known also as PPPs, 3Ps, or P3s) are long-term agreements between governments and the private sector to construct, expand, or upgrade public infrastructure, provide services, and/or maintain them.¹ In Canada, P3s were introduced in the early 1990s, and have since been widely used for projects including roads, bridges, hospitals, water and wastewater treatment plants, transit systems, schools, and justice facilities. The Canadian Council for Public Private Partnerships (CCPPP) defines the Made in Canada Model as “a cooperative venture between public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards”.² In practice, P3s aim to harness private-

sector innovation, efficiency, and financing capacity to deliver public assets more effectively. When structured well, they can reduce lifecycle costs, accelerate project delivery, and transfer key risks away from governments while maintaining public oversight and accountability.

There are some concerns that P3s are more expensive than the traditional bid-build contracts and that the private sector’s borrowing costs are higher than those for the public sector. However, because the private sector is motivated to perform, a well-structured public private partnership can provide value for money, though outcomes depend on financing costs, contract design, and oversight capacity.³ In addition, since public private partnership models consider the life cycle costs of the assets, it can lead to better value in design, construction, maintenance and operation.

Leveraging private capital, P3s can help address funding gaps for large infrastructure projects, particularly where long-term revenue or funding commitments are available.



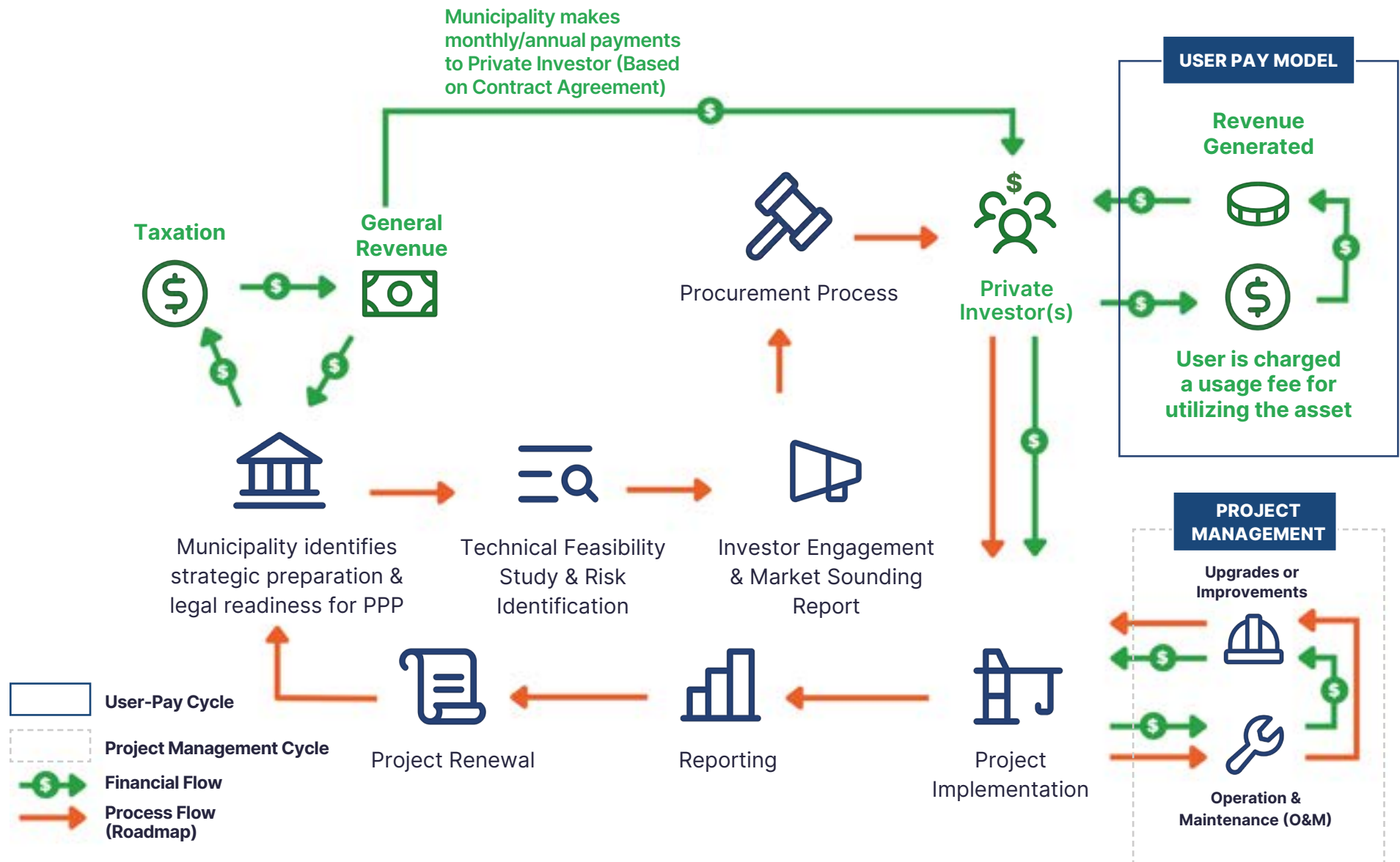


Figure 1. Visual representation of how Public Private Partnerships work

Examples

P3s have a proven track record in successfully delivering large-scale infrastructure projects across Canada. For example, the Infrastructure Ontario's P3 model, also called as Alternative Financing and Procurement (AFP), provides a financing model for large-scale public sector infrastructure projects in Ontario. It is typically used for projects with a capital cost exceeding \$100 million or those involving significant risk and complexity. Under this model, the private sector assumes responsibility for designing, building, financing, and in some cases, maintaining and operating infrastructure, while the public sector ensures accountability and oversight. A key feature of the model is its emphasis on transparency, with Infrastructure Ontario making project information available to the public while balancing commercial confidentiality to protect sensitive business details.⁴ There are multiple successful projects across Ontario that have used Infrastructure Ontario's P3 model. For example, the Bluewater Health project that expanded services with a larger emergency department, new surgical centre, improving community access to health care and enhancing the access to emergency services.⁵

Canada Infrastructure Bank (CIB) also employs a public-private partnership model to support large-scale infrastructure investments that strengthen resilience to climate change. The public-private partnership model played a crucial role in the formation of CIB, and CIB now uses this model further by using revenue and user charges to fund the asset, in whole or in part, and transfer more revenue, usage and ownership risks to the private sector.⁶ For example, in the Thompson Regional Airport project, the investment enabled the replacement and upgrade of the airport terminal, providing a long-term solution resilient to the impacts of climate change.

From this project, the air access for 37 remote and Indigenous communities, that rely exclusively on air or ice roads, is preserved, helping ensure the long-term continuity of essential services.⁷

Moreover, Build Canada Homes is a new initiative from the federal government to accelerate building homes through public-private cooperation. This initiative will help all levels of government build affordable homes by attracting private capital, streamlining project processes, and providing support of financing and sustainable building expertise.⁸

Examples

Although not designed specifically for adaptation, P3s can support large-scale, climate-resilient infrastructure where resilience requirements are explicitly incorporated into project design. Because P3 contracts typically cover the full asset lifecycle, they can embed resilience requirements at the design stage, including consideration of future flood risk, extreme heat, and long-term asset performance. This approach can also deliver co-benefits, such as integrating energy efficiency and emergency readiness into hospitals or improving accessibility and resilience in schools, where resilience and performance requirements are contractually embedded.

However, P3s are most appropriate for large, capital-intensive projects where financial returns can be clearly defined. For private partners to see a return on investment, projects must generate predictable revenues or be supported through availability payments or long-term public funding commitments. While this model aligns well with many climate mitigation projects that produce direct savings or revenues, it is more challenging to apply to climate adaptation projects, which often deliver public benefits and

avoided losses rather than direct financial returns. As a result, adaptation-focused P3s typically require stronger public sector support, risk-sharing, or policy alignment to be viable. Therefore, when appropriately structured, P3s can still support scalable adaptation by bringing innovation, cost control, and long-term maintenance discipline, particularly in contexts where public budgets are constrained and projects require sustained performance over time.

Accessibility

P3s in Canada tend to be accessible primarily to large-scale infrastructure projects, which means that smaller, more localized adaptation efforts may struggle to leverage this model. Because P3s bundle together several project phases, including design, construction, maintenance, and sometimes operations, they require sophisticated contractual structures and technical capacity on the public side to negotiate and manage. CCPPP notes that true P3s must involve the transfer of risk and the entire lifecycle of the asset.⁹ Moreover, while information on P3 projects is often made publicly available for accountability and transparency, balancing that disclosure with commercial confidentiality can be challenging. Infrastructure Ontario, for instance, emphasizes transparency in its P3s model but notes that some details must remain confidential so as not to compromise competitive procurement.¹⁰ Therefore, while P3s can provide strong public oversight, they demand considerable in-house expertise and capacity, which may limit accessibility for smaller municipalities or less technically resourced governments.

Feasibility

The feasibility of P3s are well demonstrated as many Canadian jurisdictions have successfully used them to deliver large, complex public infrastructure projects on time and to specification. Infrastructure Ontario, for example, explicitly uses its P3s model for large projects, typically those over CA\$100 million, or where risk or complexity is substantial.¹¹ The long-term, performance-based structure of P3s can align with adaptation objectives, as resilience features such as flood protection, energy efficiency, and heatwave readiness can be embedded from the design stage and maintained over the asset's lifecycle. From a financial and accounting perspective, the public sector retains ownership of the asset, while spreading out financial obligations over time, and benefits from private sector expertise and capital. However, most P3 project obligations are recorded on the public sector balance sheet under Public Sector Accounting Standards (PSAS), unless the arrangement is structured so that substantial risks and rewards are transferred to the private partner, with limited exceptions. Overall, P3s can improve feasibility by addressing large upfront capital constraints, leveraging private sector expertise and financing for design and construction, and embedding long-term performance and maintenance requirements, making complex, resilience-oriented infrastructure more achievable despite fiscal constraints.

Risk

While P3s shift many of the risks associated with infrastructure development to the private sector, they do not eliminate risk entirely, and they introduce their own set of challenges. Financing risk is a significant factor. Private partners often borrow at higher rates than governments, which can make the cost of capital more expensive in absolute terms than traditional public borrowing. Over the life of the contract, these higher financing costs need to be weighed against gains in performance, maintenance efficiency, and risk mitigation. Moreover, even though P3 contracts are intended to transfer risks like cost overrun, construction delays, or operational failures, poorly structured agreements can leave public liabilities at risk. Therefore, the deals must be carefully negotiated so that the private partner is incentivized to deliver and maintain high standards. In addition, there is an accountability risk. Since without strong regulation and transparency mechanisms, private entities may underperform or cut corners, especially when profit motives conflict with public goals. As the CCPPP process guide explains, performance-based contracts in P3s are designed to penalize underperformance, but they require robust oversight.¹⁴ Therefore, without clear governance, value-for-money assessments, long-term monitoring, and transparency, these risk transfers may not yield the expected public benefit.

Scalability

P3s offer significant scalability for adaptation projects when they are applied to infrastructure with regional or provincial importance. For instance, hospitals, transit lines, water treatment plants, and large public buildings can be built and operated under this model. In addition, since P3 contracts can span decades, they are well suited to integrating long-term resilience measures: flood-resistant designs, climate-adaptive materials, energy-efficient systems, and routine maintenance built into contract requirements. This makes them powerful tools for embedding climate adaptation into critical public infrastructure. Moreover, the ability to pool risk, expertise, and capital across public and private actors means that even financially constrained municipalities can undertake large-scale adaptation investments. However, the scalability of P3s are more limited when it comes to small, distributed adaptation interventions, such as neighbourhood-level green infrastructure or community gardens, because the transaction costs, complexity, and scale may not justify a full P3 structure. Furthermore, while P3s are highly scalable for high-investment, high-risk projects, applying them to local adaptation priorities requires intentional contract design, and adaptation criteria must be embedded explicitly so resilience can be a central component and integrated into the project, helping the project align with both local priorities and long-term climate goals.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Supports large infrastructure; indirect adaptation	Effective for major projects but weak targeting for adaptation due to limited revenue-linked benefits.
Economic Efficiency	Low	-1	High transaction and financing costs	Resource-intensive with complex contracts and higher private capital costs.
Equity & Fairness	Medium	0	Risk of uneven access	Mixed outcomes depending on design; potential misalignment between profit and public benefit.
Political Acceptability	Medium	0	Concerns about cost and accountability	Politically sensitive due to transparency and privatization concerns.
Feasibility (Admin/Legal)	Medium	0	Requires high institutional capacity	Feasible in Canada but limited to jurisdictions with strong expertise.
Coherence (Portfolio Fit)	Medium	0	Fits infrastructure systems, not adaptation-specific	Integrates with capital planning but requires deliberate adaptation alignment.

Best Use Context

Public-private partnerships are most effective for large, complex infrastructure projects where private capital and expertise can be leveraged. They are less suitable for smaller-scale or non-revenue-generating adaptation projects and require strong institutional capacity to implement effectively.

Context Factor	Relevance	Notes
Municipal Size	High	Best suited to large municipalities or regional/provincial projects.
Administrative Capacity Required	High	Requires advanced legal, financial, and procurement expertise.
Development Pressure	Medium	More viable where infrastructure demand and revenue streams exist.
Climate Risk Targeting	Medium	Can incorporate resilience if explicitly embedded in contracts.
Fiscal Flexibility Required	High	Requires long-term financial commitments and risk-sharing capacity.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Public Private Partnerships*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

User Fees and
Regulatory Charges



Geography/ Location

QC, ON

Municipality Size

Medium



Tier

Conditional



Constraints

Feasibility; Complexity



Administrative Capacity Required

High



Fiscal Tool Brief: Regulatory Charges

Regulatory fees or charges allow municipalities to fund services or infrastructure by charging those who benefit from or create demand for them, while also supporting policy goals such as climate adaptation.

A regulatory fee is a charge associated with a regulatory regime and collected by a public authority. Unlike the general power to levy taxes, whose primary purpose is to generate revenue, the general power to impose regulatory fees may serve two purposes – to finance infrastructure, a service, or a program by charging those who benefit from it or create the need for it; and to promote, through its influence on the behaviour of individuals (natural or legal persons), the achievement of the regulatory regime's objectives.¹

A regulatory fee also differs from a tax in that it must be associated with a comprehensive and detailed regulatory regime falling within municipal jurisdiction. The bylaw establishing the regulatory fee must, in particular, identify the regime's objectives, specify how the fee amount will be determined, and set forth the permissible uses of the funds collected.

Since this is a general power, the scope for collecting the regulatory fee is limited only by the exclusions established by provincial governments or case law. Furthermore, its status as a regulatory fee—distinct from a tax—allows it to function similarly to an indirect tax, which offers greater scope for collection. A fee can thus apply to a wider range of items or activities, such as the sale of goods or services, commuting to and from work, the presence of a tourist within the jurisdiction, or the use of a public road.

In Canada, only municipalities in Quebec currently have general authority to impose regulatory fees. However, most Canadian cities have specific regulatory fee authorities, such as development fees, transportation fees, or revitalization fees. Thus, municipalities can generally impose a fee to fund infrastructure, a service, or a program on those who benefit from it or generate the need for it.

Nevertheless, thanks to their general authority, only Quebec municipalities can use it to modify behaviour. And while other tax tools may influence behavior, that is not their primary objective. The general power to impose regulatory fees can therefore prove to be a particularly effective tool for achieving climate objectives, particularly in the area of adaptation.



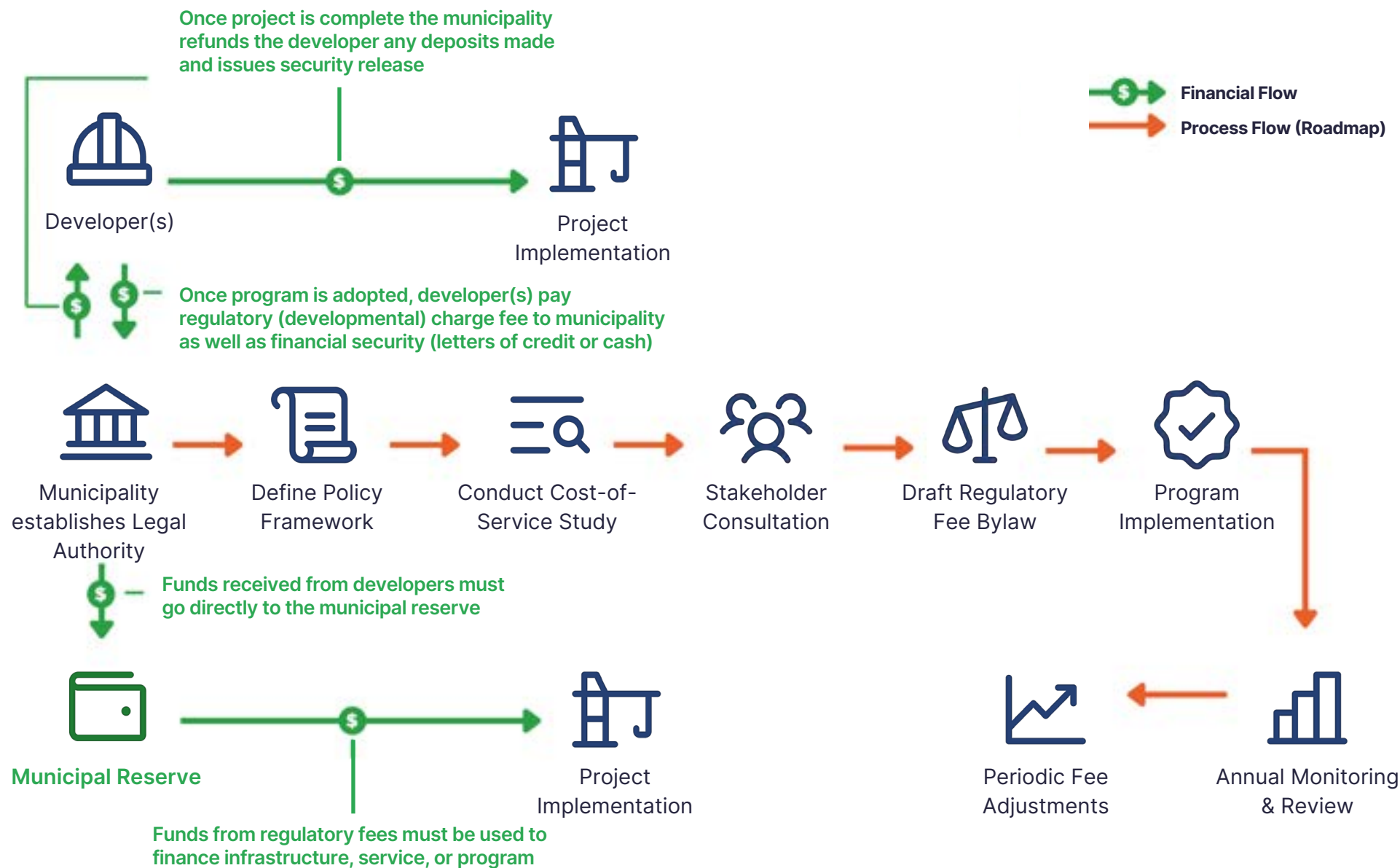


Figure 1. Visual representation of how Regulatory Charges work

Examples

In 2022, the City of [Prévost](#) adopted a bylaw imposing a fee on single-use or single-serving containers and products distributed by retailers. Each quarter, retailers must complete a reporting form detailing the quantity of items sold or distributed and pay the fee to the municipality. The revenue generated an average of \$45,000 per year to help fund local initiatives, such as expanding bulk goods offerings (which are mandatory for certain products), distributing eco-friendly items, and supporting waste reduction projects. To support this measure, two web pages have been created: one for businesses and the other for residents.^{2,3} In addition to the funds collected and the programs funded, the regulatory fee system allows for the collection of information and the tracking of the quantity of single-use items sold or used.

In 2025, the City of Victoriaville adopted a fee to promote tree canopy protection, applied to the issuance of building permits based on the area of trees cut down during construction work (\$25 per square meter of trees cut down).⁴ In 2026, the same municipality adopted a bylaw imposing a regulatory fee for the protection and restoration of the tree canopy, as well as for the development of sustainable infrastructure.⁵ This fee applies to owners of assessment units whose canopy index falls below the 30% threshold.

Another example of such a measure is the Fee for the Recultivation of Unused Agricultural Land, adopted in 2024 by the City of [Laval](#).⁶ This fee, imposed on owners who are not certified or registered as agricultural entrepreneurs, aims to encourage the recultivation of land in permanent agricultural zones.

Other potential uses of the general authority to impose regulatory fees are already in place or under consideration,⁷ such as a tourism fee, a fee targeting major sources of traffic, a fee on package delivery, a fee on construction, renovation, and demolition waste, or a bandwidth fee. The application of this general authority must be carefully considered in light of the municipality's objectives, as well as its administrative capacity.

Relevance to Advancing Adaptation

Regulatory fees are tools that can be used to achieve various environmental and sustainable development goals.⁸ A municipality seeking to fund climate change adaptation measures or encourage certain adaptation-related behaviours among residents and businesses within its jurisdiction could utilize its general authority to impose regulatory fees in various ways.

In terms of objectives, a municipality might want to reduce heat islands and ensure better rainwater retention during heavy rainfall. These objectives can be achieved by funding certain stormwater management infrastructure or by encouraging greening and the implementation of nature-based solutions.

In terms of targeted activities or individuals, the municipality could choose, as the basis for assessment, the area of felled trees or the “missing” canopy area falling below a certain threshold or, conversely, impervious surfaces or parking spaces.

It could therefore choose to encourage greening by imposing a fee on impervious surfaces or finance stormwater retention measures through a fee based on the area of felled trees, or any other combination of these objectives or tax bases, depending on the sectors, the targeted units, or its specific circumstances.

Accessibility

In Canada, although there are general regulatory fee regimes in other provinces, the general authority to impose regulatory fees is fully available only in Quebec, pursuant to section 500.6 of the Cities and Towns Act and section 1000.6 of the Municipal Code of Quebec. Across the country, the test for establishing a regulatory fee is set forth in *620 Connaught Ltd. v. Canada*, paras. 24–24 and 30–34. To implement a regulatory fee, the municipality must adopt a bylaw establishing a comprehensive, detailed, and complex regulatory regime that defines, in particular, the purpose of the regulation seeking to influence a specific behavior, the existence of actual or estimated costs associated with the regulation, and a relationship between the regulation and the person subject to it who benefits from it or who caused the need for it. Thus, the implementation of a regulatory fee system depends on the objectives pursued by city councils, based on political, administrative, and social acceptability, as well as the territorial or socioeconomic context. Furthermore, the use of this authority remains limited. While larger cities have greater administrative capacity, the number and diversity of assessment units, for example, can complicate the design of a regulatory system. Conversely, the use of this authority may be more accessible for a medium-sized city, which is more agile in its ability to act and has a smaller number of people affected within its jurisdiction.

Feasibility

Since this is a general authority, regulatory fees may be imposed by all Quebec municipalities, depending on the objectives pursued by municipal councils. However, designing regulatory regimes can be a complex undertaking in cases where, for example, an assessment roll must be created using geomatics data. In such cases, the cost, data availability, and expertise required to determine the areas subject to the fee, for example, may prove prohibitive, even though the administrative costs associated with the regulatory regime can be included in the fee amount. As with many other eco-tax measures, considerations regarding administrative capacity apply, whether for the design of the regulatory regime, its enforcement, its collection, or the management of the funds to be spent.

Risk

The main risk associated with the use of regulatory fee authority, aside from issues of social acceptability, is the risk of legal challenges. Indeed, this authority is constrained by a number of administrative and legal considerations that may leave it open to challenge, including the compliance with exclusions and tax bases occupied by the province, such as wealth or tobacco, to avoid duplication; the compliance with certain prohibitions regarding the criteria under which the fee may vary, such as property value; and the obligation to reach an agreement with an agent if the fee cannot be collected directly from the person concerned (which also limits its application).

Scalability

Where permitted by law, regulatory fees offer significant potential for scaling up, both within municipal boundaries and across them. For example, Quebec law allows municipalities to adopt a regulatory fee to fund a variety of programs, services, or infrastructure and to address a variety of behaviors. Municipalities can therefore design and adapt regulatory regimes based on the challenges they face or their specific needs. The criteria under which the amount of the fee or liability for it may vary are also numerous, for example based on sectors, assessment units, users, legal entities, or individuals, etc. This flexibility encourages the replicability of regulations among municipalities with the same objectives. However, the scalability of measures adopted under the general authority to impose a regulatory fee may be limited to Quebec municipalities.

Nevertheless, these measures can be adapted to the legislative context: for example, a fee on impervious surfaces could be implemented in a municipality in another province under its pricing authority. Another example is a parking fee, which could be implemented as a tax in a municipality with general taxing authority, such as Toronto.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Can fund adaptation infrastructure and influence behaviour	Regulatory charges can support targeted adaptation outcomes and behaviour change, but revenue scale and consistency are uncertain and highly design dependent.
Economic Efficiency	Medium	0	Requires complex regulatory regime design and data systems	The tool has high administrative and technical costs relative to likely revenue because it depends on design, monitoring, and enforcement capacity.
Equity & Fairness	Medium	0	Charges linked to activities or impacts	Equity can be improved through impact-based design, but outcomes vary by fee structure and the brief does not show consistent safeguards.
Political Acceptability	Medium	0	Dependent on local context and acceptability of behavioural charges	Charges may be defensible on environmental grounds, but can still be contentious where they are seen as indirect taxation.
Feasibility (Admin/Legal)	Low	-1	Limited authority outside Quebec; risk of legal challenges	Feasibility is weak across most Canadian municipalities because authority is limited and valid regulatory regimes are legally and operationally demanding.
Coherence (Portfolio Fit)	Medium	0	Can complement other fiscal tools and be adapted to local objectives	The tool is flexible and can complement other instruments, but it is not embedded in standard municipal finance systems.

Best Use Context

Regulatory fees are most effective where municipalities have enabling legal authority, especially in Quebec, and enough administrative capacity to design and enforce complex regimes. They are best suited to targeted behaviour change and place-specific adaptation goals, rather than broad-based or easily scalable municipal revenue generation.

Context Factor	Relevance	Notes
Municipal Size	Medium	Medium-sized municipalities may be more agile; large cities face complexity.
Administrative Capacity Required	High	Requires legal, technical, and data capacity for design and enforcement.
Development Pressure	Low	Not dependent on growth; based on regulated activities or behaviours.
Climate Risk Targeting	High	Can be explicitly designed to target specific adaptation risks (e.g., heat islands, stormwater).
Fiscal Flexibility Required	Medium	Requires capacity to design, implement, and adapt regulatory regimes.

Recommended Citation

Tremblay-Racicot, F., Duguay, V., Couture, J., Tóth, A., Ma, K., Meaney, M., Jackson, E., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *General Authority for Regulatory Charges*. In *Catalogue of Fiscal Tools to Advance Adaptation*. In collaboration with the Centre de recherche sur la gouvernance of the École nationale d'administration publique. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Land Value Capture



Geography/ Location

AB, BC, MB, ON

Municipality Size

Medium



Tier

Enabling



Constraints

Equity



Administrative Capacity Required

Medium



Fiscal Tool Brief: Revitalization Tax Exemptions (RTEs)

Revitalization Tax Exemptions reduce municipal property taxes temporarily to encourage private investment in redevelopment, sustainability upgrades, and other community revitalization goals.

Revitalization Tax Exemptions (RTEs) are municipal fiscal tools that allow local governments to temporarily reduce or eliminate the municipal portion of property taxes on eligible properties to encourage redevelopment or investment that aligns with community objectives. Municipalities typically provide exemptions for a fixed period on the incremental increase in property tax resulting from improvements or redevelopment. Their primary purpose is to stimulate private investment in projects that align with local revitalization goals, which may include economic development, environmental sustainability, and social benefits such as affordable housing.



To establish an RTE program, a municipality must pass a bylaw specifying the program's objectives, eligibility criteria, application process, and exemption terms. Once a property owner applies and is approved, they enter into an agreement with the municipality and receive a tax exemption certificate. The exemption applies only to the municipal portion of property taxes and typically applies to the increase in assessed value resulting from redevelopment or improvements, rather than the entire property value. This structure is intended to incentivize targeted redevelopment or improvements in specific areas, such as downtown cores, underutilized industrial zones, or areas affected by environmental degradation.

In Canada, RTEs are most formally established in British Columbia, where Section 226 of the Community Charter grants municipalities explicit authority to create revitalization tax exemption programs. Ontario offers a functionally similar mechanism through Community Improvement

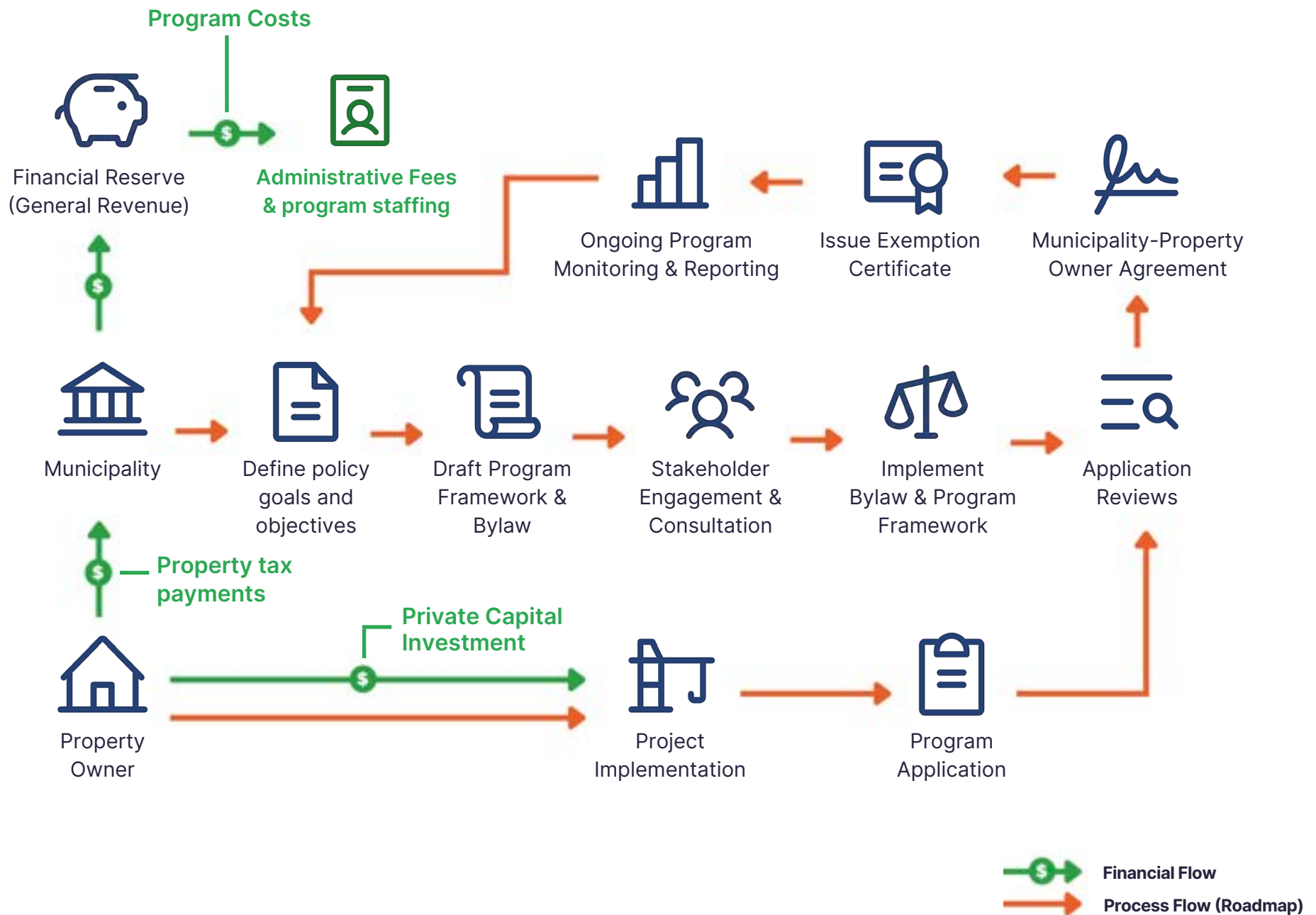


Figure 1. Visual representation of how Revitalization Tax Exemptions work

Plans (CIPs) under Section 28 of the Planning Act, which allow municipalities to provide tax increment-equivalent grants or exemptions within designated improvement areas. While the legislative terminology and administrative processes differ across provinces, the core mechanism of using temporary property tax relief to incentivize targeted private investment is available in multiple jurisdictions. Because they reduce tax liabilities on the incremental value created by development, RTEs are designed to mobilize private-sector capital investment that might otherwise not occur or would occur more slowly. By improving the financial viability of redevelopment projects, particularly those involving higher upfront costs such as brownfield remediation, building retrofits, or resilience features, RTEs can leverage substantial private investment while requiring relatively limited direct municipal spending. RTE programs are inherently flexible since municipalities can tailor eligibility to prioritize certain types of investment, such as building retrofits, brownfield redevelopment, or the integration of green infrastructure. This makes RTEs an adaptable instrument for encouraging private-sector participation in achieving broader community objectives without requiring significant upfront public expenditure.

Examples

[Kelowna \(BC\)](#) implemented an RTE program to provide tax exemptions for purpose-built rental housing, non-profit rental housing, and cooperative housing within specific areas in the City. The City passed a Revitalization Tax Exemption Program Bylaw in 2023, and eligible projects can receive a tax exemption on the municipal portion of property tax attributable to the increase in property value resulting from development of a property for 10 years.¹ In [Sooke \(BC\)](#), the District has adopted a tax exemption

program that provides property tax incentives to projects contributing to the well-being of the community.² Sooke has historically provided between \$500,000 and \$620,000 in exemptions each year, with the resulting costs redistributed among other property owners.³ In Alberta, Calgary's Brownfield Tax Incentive Program provides a five-year exemption of 50% of the municipal property tax increase resulting from new facility construction on contaminated sites, with eligible developments explicitly including solar and wind farms; this positions brownfield remediation as both an environmental cleanup and a renewable energy development tool.⁴

Relevance to Advancing Adaptation

RTEs can be strategically leveraged to advance climate adaptation goals by integrating tax exemptions with the incorporation of resilience-enhancing measures in development or redevelopment projects.⁵ For example, in a novel application of the RTE mechanism for climate adaptation, the District of Saanich (BC) launched its Climate Action Tax Exemption (CATE) program, offering municipal property tax exemptions of up to 100% of project costs for electrification retrofits in multi-unit residential buildings and 50–80% for commercial buildings. The program targets the conversion of fossil fuel-powered space heating and hot water systems to electric systems, directly reducing building-level GHG emissions while improving resilience to energy price volatility.⁶ Victoria (BC) has adopted a parallel program targeting market rental apartment buildings.⁷ The Saanich case demonstrates that by tying eligibility criteria to adaptation measures, municipalities can use RTEs to redirect private development capital toward projects that incorporate resilience features. In this way, relatively modest tax incentives can leverage substantially larger private investments in climate-resilient infrastructure and buildings.

Since RTEs can link financial incentives with climate-resilient initiatives, municipalities can shift private investment towards developments that reduce local vulnerability to climate hazards while delivering co-benefits such as improved biodiversity and enhanced community well-being. In addition, when RTEs are embedded within a broader adaptation strategy, they can complement other funding mechanisms, regulatory measures, and community planning efforts, enabling municipalities to further advance their climate adaptation efforts.

Accessibility

Revitalization tax exemptions in their most direct, standalone form are explicitly authorized only in British Columbia. Section 226 of the Community Charter grants municipal councils express authority to exempt land, improvements, or both from municipal property taxation “for the purpose of encouraging revitalization in the municipality.”⁸ The mechanism operates in three steps: council must adopt a revitalization program bylaw specifying the program’s objectives, the kinds of eligible property, the extent and amounts of exemptions, and a maximum term not exceeding 10 years (s. 226(4)); enter into an exemption agreement with the eligible property owner (s. 226(7)); and issue an exemption certificate (s. 226(8)).

In Ontario, a functionally similar outcome is achieved through a two-statute architecture. Section 28 of the Planning Act authorizes municipalities with an official plan containing community improvement provisions to designate community improvement project areas and adopt Community Improvement Plans (CIPs).⁹ Once a CIP is in effect, s. 28(7) authorizes grants and loans to owners and tenants

of lands and buildings within the project area for eligible costs, which s. 28(7.1) defines broadly to include environmental site assessment and remediation, development, redevelopment, construction, reconstruction, rehabilitation, and energy efficiency improvements. The tax-cancellation component sits in the Municipal Act: section 365.1 authorizes bylaws cancelling municipal and school property taxes on eligible properties that have undergone a phase-two environmental site assessment within a CIP area, for an “assistance period” running until the cancelled taxes equal the cost of remediation.¹⁰ A parallel provision at section 365.2 authorizes tax reductions for eligible heritage properties. Ontario’s framework is therefore narrower in scope than BC’s (restricted to environmental remediation and heritage contexts) but does include genuine tax-cancellation authority.

In Alberta, the Municipal Government Act (ss. 381.1–381.5) establishes the Community Revitalization Levy (CRL), authorizing councils to pass a CRL bylaw imposing a levy on the incremental assessed value of property in a designated CRL area, to fund infrastructure and other costs associated with redevelopment.¹¹ The mechanism is a tax-increment capture instrument rather than a tax exemption: property owners in the designated area continue to pay property taxes, but the increment is segregated to fund redevelopment rather than flowing to general municipal revenue.¹² A CRL bylaw has no effect unless approved by the Minister (s. 381.2(3)). A 3% cap on the taxable assessment that may be included in a proposed CRL area is imposed through the provincial Community Revitalization Levy Program Guidelines.¹³

In Manitoba, The Community Revitalization Tax Increment Financing Act operates through a similar increment-capture logic rather than

a direct exemption.¹⁴ Real property is designated by regulation as a “community revitalization property” (s. 1 definitions), and a community revitalization levy is imposed under s. 11(1) based on the property’s incremental assessed value as determined under ss. 8–9. As with the Alberta CRL, the mechanism captures value uplift rather than forgoing taxation.

No general RTE framework equivalent to BC’s s. 226 has been identified in Quebec, the Atlantic provinces, or Saskatchewan. In summary, explicit bylaw-level authority to offer property-specific revitalization tax exemptions exists only in British Columbia; Ontario achieves comparable outcomes within narrower substantive limits (environmental remediation and heritage) through the combined Planning Act CIP and Municipal Act tax cancellation architecture; and Alberta and Manitoba offer value-capture rather than exemption, which achieves similar economic incentive effects through a structurally different fiscal mechanism.

Feasibility

RTEs are administratively feasible in municipalities that already have property tax and bylaw management systems because they can simply leverage existing statutory authorities and financial planning processes.¹⁵ However, feasibility can be influenced by local market conditions. For example, in the areas with weak developmental activity, the incentive offered by RTEs may not be sufficient to stimulate investment, reducing the impact of the mechanism. Municipalities with strong developmental sectors and clear revitalization objectives, such as historic downtown renewal or industrial expansion, are more likely to see RTEs result in meaningful investment. Municipalities can also tailor RTE bylaws to support climate adaptation priorities, such as implementing

green roofs as conditions for receiving the exemption. There are also considerations around municipal capacity and staffing to manage applications, compliance monitoring, and revenue forecasting, which can be more challenging for smaller jurisdictions with limited planning resources. Since RTEs do not require direct annual expenditures (unlike grants), they avoid significant upfront costs, but assessing long-term fiscal impacts on municipal budgets remain important for feasibility planning. Jurisdictions in which RTEs are more grant-like (i.e. Québec) might experience different fiscal considerations around this tool.

Risk

One of the main financial risks associated with RTEs is the opportunity cost of deferred municipal revenue, since councils exempt the municipal portion of property taxes for up to 15 years, potentially reducing funds available for local services.¹⁶ Since exemptions must be adopted through a bylaw and coordinated with financial planning statements, municipalities need to forecast and absorb the fiscal impact of multiple long-term exemptions, which can be difficult under uncertain economic conditions. There is also a risk that RTEs may be structured in ways that benefit private developers disproportionately if eligibility criteria and public benefit conditions are not clearly defined or enforced. In some cases, poorly targeted programs could lead to exemptions for developments that provide limited additional public benefit or fall short of revitalization and climate adaptation goals. In addition, political and reputational risks arise if residents perceive that tax incentives subsidize development without adequate community return, especially when tax relief contributes to shifting tax burdens or service pressures elsewhere in municipal budgets. Additional administrative risk includes the potential for compliance challenges,

where property owners may fail to meet conditions stipulated in exemption agreements, requiring monitoring that can strain municipal resources. Therefore, thoughtful program design, transparent criteria, and robust performance monitoring are useful to help mitigate these risks and ensure the tool supports broad community and adaptation objectives.

Scalability

RTEs have significant potential for scaling within and across municipalities in provinces and territories where enabling legislations exist. For example, British Columbia's Community Charter allows councils to expand programs to support a range of economic, social, and environmental objectives. With the enabling legislations, municipalities can tailor RTE bylaws to target different property classes or sectors, such as industrial expansion in North Cowichan or purpose-built rental housing and mixed-use development in Kelowna, enabling diverse applications of the same basic tool.¹⁷ This flexibility encourages replication of successful models across jurisdictions with similar revitalization goals. However, scaling is limited to provinces that have the necessary legislative authority. In addition, local market conditions can also influence scalability. In weaker markets, RTEs alone may be insufficient to attract new investment without complementary tools such as infrastructure investment or development cost charge waivers. Therefore, to scale RTE impacts across broader climate adaptation goals, municipalities can integrate exemption criteria with resilience priorities and other funding programs to encourage larger investment in resilient infrastructure and climate adaptation.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Incentivizes private investment; adaptation benefits depend on program design	RTEs can support adaptation indirectly by shaping redevelopment, but resilience outcomes depend on explicit eligibility criteria.
Economic Efficiency	High	+1	Leverages private capital with minimal direct municipal expenditure	The tool is relatively cost-efficient because it encourages private investment with limited direct municipal spending.
Equity & Fairness	Low	-1	Tax burden redistribution and potential developer windfalls	RTEs can create inequitable outcomes by shifting fiscal burdens and subsidizing private development without clear proportional public benefit.
Political Acceptability	Medium	0	Potential public concern over tax exemptions for developers	Acceptance is possible, but transparency and visible public benefits are important to address sensitivity around developer exemptions.
Feasibility (Admin/Legal)	Medium	0	Requires enabling legislation and municipal bylaw design	The tool is feasible where authority exists, but it's use depends on provincial legislation and municipal program management capacity.
Coherence (Portfolio Fit)	Medium	0	Aligns with land-use planning and redevelopment strategies	RTEs fit with planning and redevelopment tools, but need coordination with broader adaptation strategies to add value.

Best Use Context

RTEs are most effective in municipalities with strong developmental pressure, where incentives can influence private investment toward more resilient redevelopment. Their usefulness depends heavily on program design and local market conditions, so they work best as a targeted complementary tool rather than a standalone adaptation finance mechanism.

Context Factor	Relevance	Notes
Municipal Size	Medium	More effective in municipalities with active development markets.
Administrative Capacity Required	Medium	Requires bylaw design, monitoring, and financial planning.
Development Pressure	High	Works best where redevelopment and investment demand already exist.
Climate Risk Targeting	Medium	Requires explicit criteria to link incentives to adaptation outcomes.
Fiscal Flexibility Required	Medium	Requires tolerance for short-term foregone revenue.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Revitalization Tax Exemptions*. In *Catalogue of Fiscal Tools to Advance Adaptation*. In collaboration with the Centre de recherche sur la gouvernance of the École nationale d'administration publique. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Other

Geography/ Location

ON, SK

Municipality Size

All



Tier

Enabling



Constraints

Complexity



Administrative Capacity Required

Medium



Fiscal Tool Brief: Revolving Loan Funds (RLFs)

Revolving Loan Funds provide reusable, low-interest financing for projects with upfront costs, using repayments to replenish the fund and support future investments.

A Revolving Loan Fund (RLF) is a self-replenishing pool of capital from which loans are made to eligible borrowers, with the repayments of principal flowing back into the fund to finance new loans. Unlike one-time grants or fixed appropriations, the revolving nature of the fund means that a single initial investment can generate multiple cycles of lending over time, without requiring repeated injections of public money. Seed capital for an RLF can come from a variety of sources, including public budgets, ratepayer funds, bond issuances, federal or provincial grants, and private capital.¹

RLFs can be structured in two main ways. An internal (or “green revolving”) fund operates within a municipality’s own organization, lending capital to

specific municipal projects such as building energy retrofits, then replenishing the fund using the resulting energy cost savings. An external RLF operates as a loan program for outside borrowers, residents, businesses, or community organizations, offering below-market interest rates and flexible repayment terms that are typically unavailable through commercial lenders. In both models, interest and fee payments are used to cover the administrative costs of managing the fund, making it largely self-sustaining over time.²

RLFs are an effective financing tool for projects that require significant upfront capital but generate savings or returns over time, such as energy efficiency upgrades, stormwater management improvements, and other resilient infrastructure investments. By providing long-term, low-interest financing, RLFs can unlock projects that would otherwise be inaccessible due to high initial costs, particularly for households, small businesses, and smaller municipalities that do not qualify for conventional lending.³



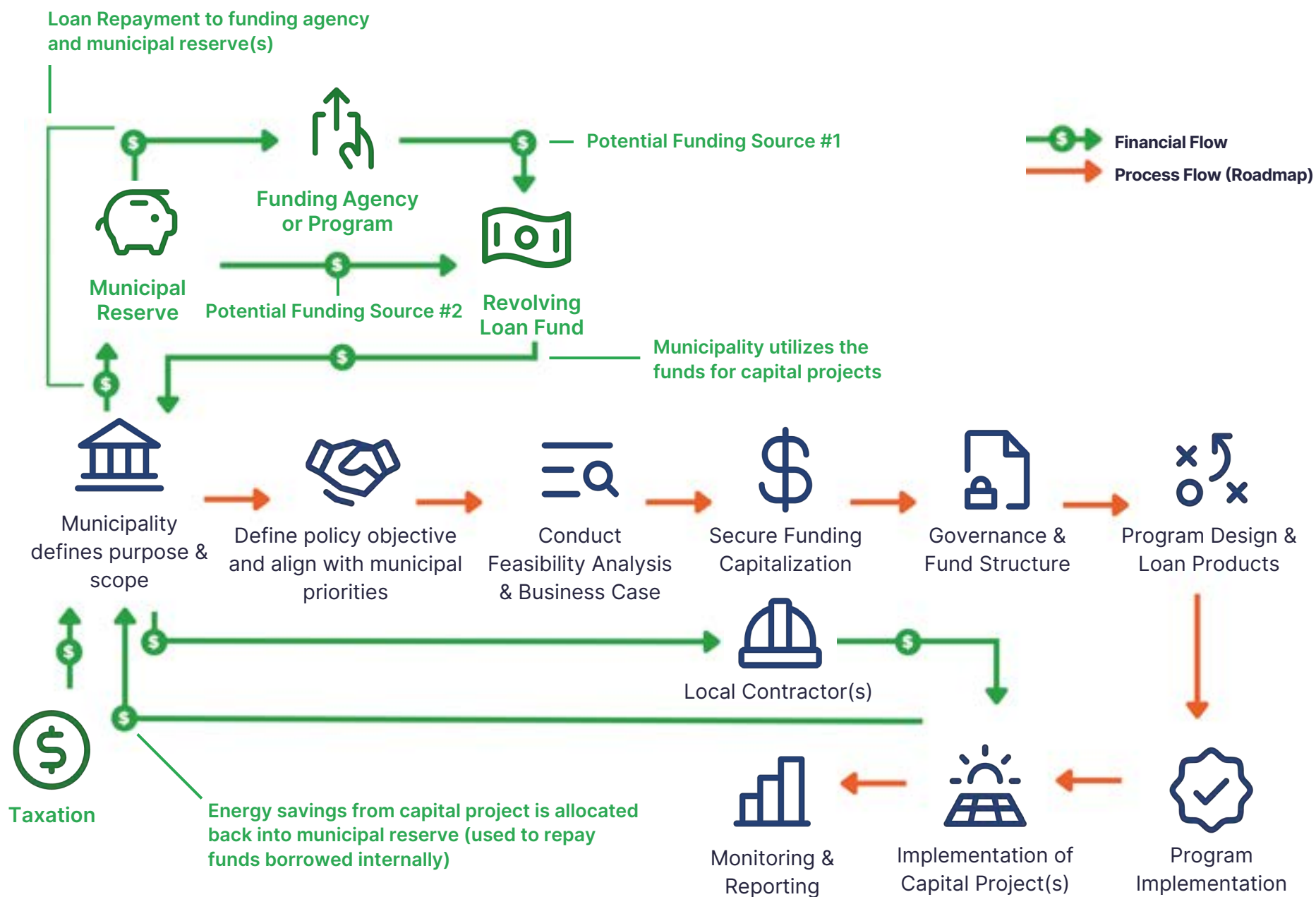


Figure 1. Visual representation of how Revolving Loan Funds work

Examples

Canadian municipalities have used RLFs in a variety of forms to advance energy efficiency and climate goals. [Caledon \(ON\)](#) established a Corporate Energy Revolving (CER) Fund in 2015 using an initial seed investment of \$147,000 derived from solar installation revenue and unused funds from a prior energy project. The fund is entirely self-sustaining; it draws revenue from three town-owned solar sites, energy incentives, and a portion of the utility cost savings generated by CER-funded projects. Since its inception, the fund has financed LED retrofits across municipal buildings, pool drain water heat recovery, upgraded arena controls, and cold-water ice-resurfacing technology, all without relying on taxpayer funds or the municipal budget cycle. A recent round of projects funded by the CER is projected to save 700,478 equivalent kilowatt-hours of energy annually, remove 120 tonnes of CO₂e, and reduce operating costs by approximately \$37,000 per year.^{4,5}

[Toronto \(ON\)](#) operates the Home Energy Loan Program (HELP), one of Canada's most established external municipal RLFs for residential energy retrofits. Through HELP, homeowners can access zero-interest loans of up to \$125,000 to finance a broad range of improvements including electric heat pumps, insulation, rooftop solar PV, geothermal systems, EV charging stations, and air sealing. Loans are repaid over terms of up to 20 years through instalments on the property tax bill, and the financing is attached to the property rather than the individual owner, meaning the balance transfers to new owners upon sale. The program was significantly enhanced with funding from the Federal Government through the Green Municipal Fund, including a \$9.7 million loan and \$4.9 million grant, and has achieved documented energy savings of approximately 25% across participating households.^{6,7}

[Saskatoon \(SK\)](#) launched its Home Energy Loan Program (HELP) in September 2021, becoming the first municipality in Saskatchewan to implement a Property Assessed Clean Energy (PACE)-style financing program for residential retrofits. Developed with initial internal city funding and subsequently expanded with financial support from the GMF's Community Efficiency Financing initiative, HELP offers homeowners low-interest loans between \$1,000 and \$60,000 to finance a range of improvements, including high-efficiency furnaces, heat pumps, insulation, windows, rooftop solar, EV charging stations, and water conservation measures. Loans are repaid through the property tax bill over 5, 10, or 20-year terms and are attached to the property rather than the individual owner. The program was immediately oversubscribed upon launch, requiring a waitlist shortly after applications opened. To advance equity, Saskatoon waives the program's administrative fee for income-qualified households and provides additional rebates and supports through a partnership with SaskPower's Energy Assistance Program.^{8,9}

Relevance to Advancing Adaptation

RLF's can play a meaningful role in advancing climate adaptation by providing municipalities with a sustainable, long-term financing mechanism that removes the upfront cost barrier to resilience investments. Since they do not rely on annual budget approvals or one-time grants, well-capitalized RLFs can offer continuous access to affordable capital for climate-related projects over many years.¹⁰ At the municipal operations level, internal RLFs can be structured to fund retrofits to municipal buildings and infrastructure that reduce energy consumption, lower greenhouse gas emissions, and decrease vulnerability to climate impacts such as extreme heat. At the community level, external RLFs can help residents and

businesses finance improvements that reduce overall climate risk, including energy-efficient upgrades that lower demand on the electricity grid during heat events, stormwater management systems that reduce flood risk on private properties, and structural improvements that increase building resilience to extreme weather. In both cases, the revolving structure ensures that investments made today continue to generate financing capacity for future adaptation projects.¹¹

Accessibility

The accessibility of RLFs in Canadian municipalities depends primarily on the availability of enabling legislation, seed capital, and administrative capacity. In Ontario, amendments to the Municipal Act, 2001 and related regulations have enabled municipalities to use Local Improvement Charges (LICs) as a repayment mechanism for energy efficiency loans, providing a legal foundation for external RLFs structured similarly to the Toronto HELP model. Other provinces have varying enabling frameworks, and municipalities should confirm local legislative authority before establishing an external RLF.¹² A key enabler for Canadian municipalities is the Green Municipal Fund's (GMF) Community Efficiency Financing initiative, administered by the Federation of Canadian Municipalities (FCM). This program provides loans and grants to municipalities to establish and scale home energy loan programs, effectively serving as seed capital for external RLFs. Through this initiative, municipalities of various sizes, from Toronto to Saskatoon, have been able to launch programs without requiring large upfront budget commitments.¹³ Internal RLFs, such as Caledon's Corporate Energy Revolving Fund, face fewer legislative barriers since they operate within the municipality's own capital management

framework. However, they still require an initial source of seed capital, which in Caledon's case was generated by existing municipal renewable energy assets. Municipalities without this existing revenue base may find it more challenging to establish a self-sustaining internal fund, particularly smaller or rural communities with limited energy infrastructure.¹⁴

Feasibility

RLFs are generally feasible to implement in municipalities that have identified a source of seed capital and a clear target borrower group, but several practical considerations can affect their viability. The most significant upfront requirement is capital, both to fund initial loans and to cover administration costs until sufficient loan repayments begin to flow back into the fund. In the early stages of a program, before substantial repayments accumulate, there can be a gap period during which the fund's lending capacity is constrained.¹⁵ Municipalities acting as the administrator of an RLF must also invest staff time in program design, eligibility screening, loan adjudication, and ongoing monitoring of repayments. If the fund draws on multiple capital sources (e.g., a combination of GMF loans, municipal reserves, and provincial grants), this can add reporting requirements and lending constraints that increase administrative complexity. For municipalities with limited staffing capacity, these demands may be a barrier to launching or sustaining the program, and third-party administration arrangements may be worth considering.¹⁶

Risk

The primary financial risk in any RLF is loan default. If a significant number of borrowers fail to repay their loans, the fund's capital base can erode, reducing its capacity to lend to future borrowers. For municipal programs using the property tax bill repayment mechanism (as in Toronto's HELP), the risk of default is partially mitigated by the strong incentive for property owners to maintain their tax payments and the municipality's ability to enforce collections. However, for programs lending to businesses or community organizations, default risk can be more significant and requires careful underwriting and eligibility criteria.¹⁷ A second risk is funding stagnation. If an RLF is not actively managed and its loan terms or eligible projects are not updated to reflect evolving market conditions and municipal priorities, uptake can decline and the fund can become underutilized. The U.S. Economic Development Administration (USEDA) Revolving Loan Fund Best Practices Handbook notes that stagnant funds often benefit from a structured program review that reassesses eligibility criteria, loan terms, and outreach strategies to revitalize demand.¹⁸ There is also an equity risk if RLF programs are not designed with inclusivity in mind. Loan programs that require good credit history, home-ownership, or a mortgage lender's consent may systematically exclude lower-income households, renters, and other groups who face the greatest climate vulnerabilities but have

the least access to capital. Municipalities should consider incorporating targeted affordability measures, such as income-based interest rate reductions, grants for low-income households, or expanded eligibility criteria, to ensure that RLFs reach those who need them most.¹⁹

Scalability

Since an RLF replenishes itself through loan repayments, a well-managed fund can continue operating indefinitely without repeated public subsidy. Additional capital injections, from grants, bond proceeds, or private co-lending, can further expand lending capacity over time. At the national level, the GMF's Community Efficiency Financing initiative provides loans and grants to help municipalities establish and grow home energy loan programs, enabling municipalities of varying sizes to launch RLFs without large upfront budgetary commitments. Scalability is constrained in smaller municipalities where limited staff and a smaller borrower pool may make it difficult to generate sufficient loan volume. Regional cooperation, such as a shared program administered by a regional government or conservation authority on behalf of multiple smaller municipalities, can be an effective way to achieve the scale needed to make an RLF viable.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Provides continuous, repayable financing for adaptation-related investments	RLFs strongly support adaptation by creating an ongoing financing mechanism for resilience projects.
Economic Efficiency	Medium	0	Self-replenishing but requires upfront capital and program administration	The model is efficient over time, but setup and administration create moderate resource demands.
Equity & Fairness	Medium	0	Risk of exclusion for low-income or credit-constrained participants	Equity outcomes depend on program design, with potential access barriers unless supports are built in.
Political Acceptability	High	+1	Offers low-interest financing without direct taxation increases	RLFs are generally acceptable because they provide supportive financing rather than imposing new taxes or fees.
Feasibility (Admin/Legal)	Medium	0	Requires enabling legislation, seed capital, and administrative systems	The tool is feasible where capacity exists, but implementation is more demanding for smaller municipalities.
Coherence (Portfolio Fit)	High	+1	Integrates with municipal finance tools and external funding programs	RLFs fit well within broader adaptation finance portfolios and complement grants, LICs, and energy programs.

Best Use Context

RLFs are most effective where municipalities can secure seed funding and sustain administrative capacity. They are particularly valuable for financing distributed, smaller-scale adaptation measures across communities.

Context Factor	Relevance	Notes
Municipal Size	Medium	Scalable, but smaller municipalities may require regional collaboration.
Administrative Capacity Required	Medium	Requires program design, loan management, and monitoring.
Development Pressure	Low	Not dependent on growth; applicable across market conditions.
Climate Risk Targeting	High	Can directly finance targeted resilience and retrofit measures.
Fiscal Flexibility Required	Medium	Requires initial capital but becomes self-sustaining over time.

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Category

User Fees and
Regulatory Charges



Geography/ Location

AB, BC, MB, NB,
NS, ON, QC

Municipality Size

Large



Tier

Foundation



Constraints

Complexity



Administrative Capacity Required

Medium



Fiscal Tool Brief: Stormwater Fees

Stormwater fees charge property owners based on runoff impacts, creating dedicated funding for stormwater infrastructure while encouraging practices that reduce runoff.

Stormwater fees, more commonly referred to as stormwater charges, are mechanisms used by municipalities to generate dedicated funding for the management of stormwater runoff, from residential, multi-residential and non-residential properties. These charges are typically based on the amount of impervious surface, such as rooftops, driveways, and parking lots on a property, as these surfaces prevent water from soaking into the ground and contribute to runoff.¹ Rather than relying solely on property taxes, which may not reflect a property's actual impact on

the stormwater system, stormwater charges ensure a fairer system where property owners contribute in proportion to their runoff generation. The funds collected are used exclusively for the construction, maintenance, and upgrading of stormwater infrastructure, including sewers, ponds, and green infrastructure. This mechanism can align the fees with the extent of a property's contribution to runoff, and thus, municipalities can apply a "user-pay" principle that encourages property owners to adopt stormwater management practices on their own lots, while ensuring sustainable funding for system-wide resilience improvements.² By tying charges to impervious areas, municipalities not only secure a sustainable revenue stream but also incentivize property owners to adopt best practices that reduce water runoff and improve water quality.



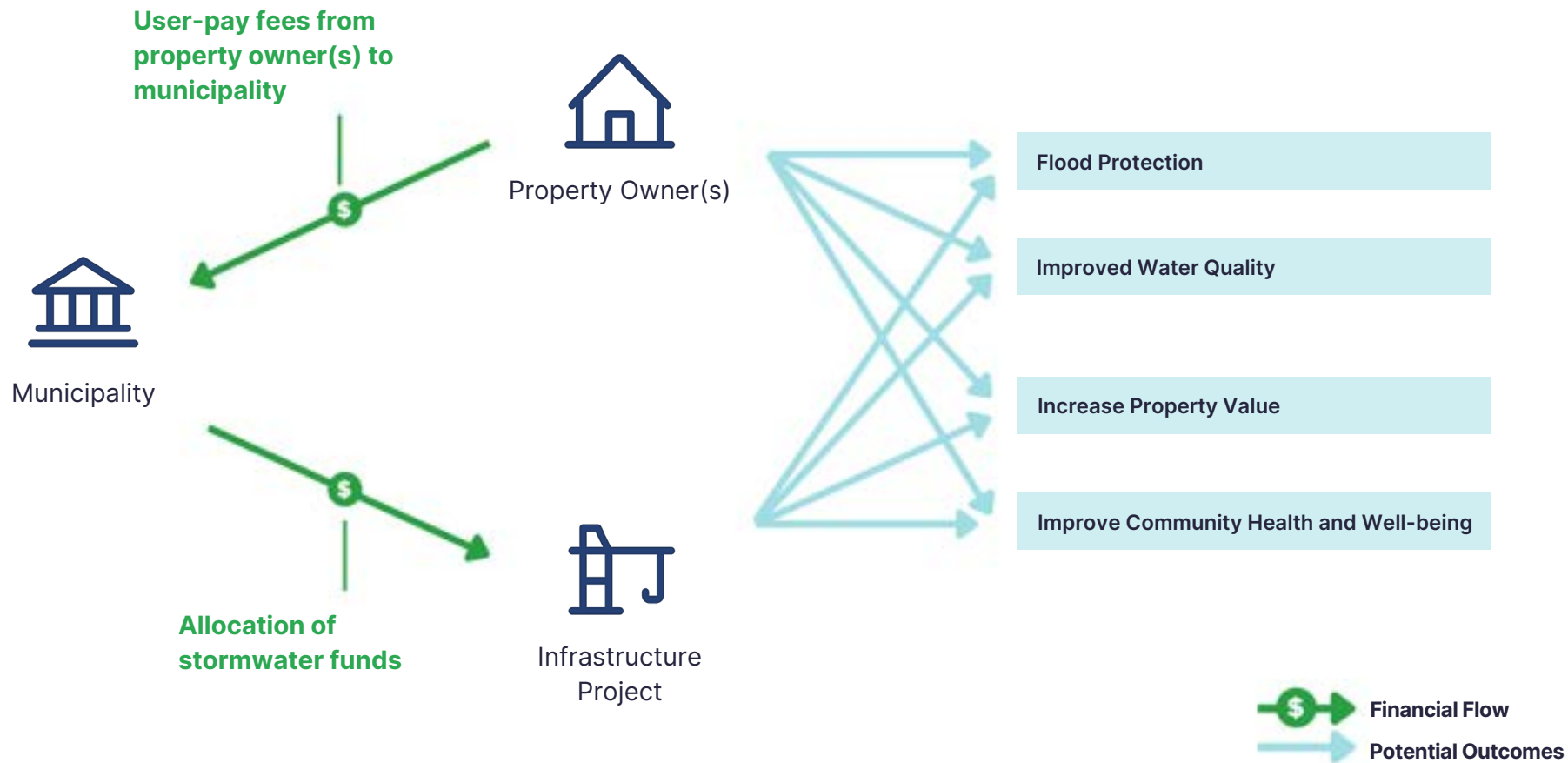


Figure 1. Visual representation of how Stormwater Fees work

Examples

Several Canadian municipalities have implemented stormwater charges to secure sustainable funding for stormwater infrastructure and promote equitable cost-sharing among property owners.

[Kitchener \(ON\)](#) was one of the first in Canada to adopt an impervious area-based stormwater utility in 2011, linking charges to the amount of runoff a property generates. [Victoria \(BC\)](#) transitioned to a stormwater utility model in 2016, incorporating both fixed and variable rate components, and offers a Rainwater Rewards program to encourage green infrastructure adoption, such as rain gardens and permeable driveways, with rebates ranging from \$35 to \$1,500 to assist with the upfront costs.³ [Halifax \(NS\)](#) charges residential properties based on the impervious area on the property using a tiered approach where properties with more impervious area (i.e., roofs, asphalt, concrete, and packed gravel) would pay more than those with less impervious area, while non-residential properties are assessed based on their size, characteristics, and property use. [Edmonton \(AB\)](#) also uses impervious area assessments under its Stormwater Intensity Adjustment Program (SIAP), offering credits for properties that reduce runoff through stormwater best practices. These examples illustrate how municipalities are tailoring their stormwater fees to local needs, infrastructure demands, and community engagement goals.

Relevance to Advancing Adaptation

Stormwater charges are becoming more relevant as municipalities face increasing pressures from climate change, particularly more frequent and intense rainfall events, urban flooding, and aging infrastructure. Mississauga (ON) introduced its stormwater charge in 2016 as the response to two major storm and flooding events in 2009 and 2013.^{4,5} The stormwater charge is calculated based on

the amount of hard surface on the property and the funds collected from this charge contributes directly to the City's stormwater budget, which is used exclusively to deliver stormwater services and programs in the City, and to meet the increasing demand and investment necessary for stormwater management (planning, operations, infrastructure construction, repairs, and improvements). These types of investments on stormwater management, enabled by the stormwater charge, help the municipality avoid more costly emergency responses, reduce property damage, and build long-term resilience to climate impacts. Similar to [Kitchener's](#), Victoria's Rainwater Rewards program illustrates the incentive dimension: property owners who install green infrastructure (rain gardens, permeable driveways, or rainwater harvesting systems) receive rebates of \$35 to \$1,500, creating a direct financial signal for private adaptation investment.⁶ These credit and incentive systems, by reducing both municipal infrastructure burden and private runoff contribution, collectively build resilience against increasingly intense storm events.

Accessibility

Stormwater fees are universally accessible: every Canadian province's general municipal fee and utility powers provide adequate statutory authority, and no legislative amendment is required to implement them. This places stormwater fees among the most administratively accessible tools in this catalogue.

The authority flows from general fee or utility provisions rather than stormwater-specific legislation. In Ontario, s. 391(1) of the Municipal Act authorizes fees for services provided by the municipality, and the "public utilities" sphere of jurisdiction at s. 11(3) supports stormwater utility design. Notably, Ontario's drainage sphere explicitly excludes storm sewers, so stormwater is reached

through the utility pathway rather than the drainage one.⁷ Ontario municipalities (like Mississauga) use this authority to support stormwater utility charges based on impervious surface area. In British Columbia, s. 194 of the Community Charter authorizes fees for municipal services, and s. 397 of the Local Government Act provides equivalent authority for regional districts; the latter enabling cross-boundary stormwater service areas where watershed management requires them.^{8,9} In Alberta, s. 382(1)(b) of the Municipal Government Act includes a “sewer tax” among enumerated special tax categories, and general user-fee authority offers a more flexible alternative.¹⁰ Manitoba’s Part 10, Division 4 (Local Improvements and Special Services) of The Municipal Act.¹¹ Nova Scotia’s Municipal Government Act,¹² and New Brunswick’s Local Governance Act¹³ each provide analogous general utility fee authority. As for Quebec municipalities, they can apply stormwater charges using their general power to levy regulatory charges.¹⁴

Since the statutory basis is uncontested, implementation barriers are practical rather than legal: designing an equitable rate structure based on impervious surface area requires parcel-level impervious-area data (typically derived from aerial imagery or GIS-based land-cover modelling), billing system capacity to handle non-assessment-based charges, and governance capacity for appeals and boundary decisions. Ottawa’s 2025 rate structure review adopted impervious surface area as its preferred metric because it directly correlates with runoff volume and infrastructure demand, a framing increasingly standard across Canadian stormwater utility designs.¹⁵ Smaller and rural municipalities face higher per-unit setup costs relative to revenue generated, creating an economies-of-scale constraint independent of the legal framework.

Feasibility

Stormwater charges are generally considered a highly feasible fiscal tool for municipalities in Canada, especially in urban or rapidly developing areas with growing stormwater infrastructure needs. Politically, they tend to gain traction where there is strong support for environmental cost recovery and infrastructure sustainability. For example, cities like Kitchener and Mississauga successfully implemented stormwater fees following extensive public engagement and council approval, using messaging that emphasized fairness (polluter-pays principle) and dedicated reinvestment in local flood protection infrastructure.^{16,17,18}

Economically, stormwater fees are relatively low per household, typically between \$100–\$160 annually. However, feasibility is often lower in smaller or rural municipalities due to limited administrative capacity, data availability (e.g., impervious surface mapping, GIS data), and public resistance to new fees. Socially, the success of a stormwater fee depends on public understanding of stormwater as a utility-like service rather than a general tax, which requires targeted outreach and clear communication. Overall, while initial implementation may require political will and technical groundwork, stormwater fees are viewed as a politically and economically viable tool for municipalities seeking to build climate resilience and maintain aging infrastructure.

Risk

One common concern with stormwater charges is its administrative complexity. For example, accurately assessing impervious surface areas require GIS data, technical staff, and billing system integration, resources that may be limited in smaller municipalities. Errors or

inconsistencies in assessments can lead to public complaints or legal challenges. There is also the risk of inequity if credit programs are not accessible, allowing major runoff contributors such as commercial or institutional properties to pay disproportionately less than smaller residential users.¹⁹ Flat-rate fee structures, in particular, can raise equity concerns by placing a relatively higher burden on lower-income homeowners compared to larger commercial or industrial properties. For instance, a modest single-family home on a small lot may pay the same flat stormwater fee as a large commercial plaza with extensive paved parking, despite contributing far less runoff.²⁰ Another sensitive risk is the perception of unfairness when properties that are already chronically affected by flooding are charged based on runoff generation. This approach may be met with strong resistance from owners who are already incurring substantial losses from frequent flood events (e.g., 100-year storms that now occur more regularly). In such cases, the fee may be seen as an added penalty rather than an incentive. This risk could be addressed at least partially through design by reinvesting a designated part of the revenue into these high-risk neighbourhoods and by exempting properties with documented flood damage until remediation is complete. Another risk lies in underutilized revenue: if funds are not visibly reinvested in infrastructure improvements or adaptation efforts, public trust may decline. Additionally, transitioning stormwater funding from property taxes to user fees can generate political friction. In Ontario, for example, some municipalities exploring stormwater charges have encountered

resistance from council and the public, particularly where the shift was viewed as a hidden tax or not explained clearly.^{21,22,23}

Scalability

Stormwater charges offer municipalities a scalable funding model that can grow in line with infrastructure demands, development, and climate risks. Since the fee is based on measurable property characteristics such as impervious surface area, it can expand automatically as urban areas grow or densify. Stormwater user fees can be adjusted over time to reflect inflation, service levels, or new regulatory requirements, providing flexibility without relying on annual property tax reallocations.²⁴ Fee structures such as tiered rates enable municipalities to scale revenues predictably while maintaining fairness.²⁵ Additionally, by linking charges to dedicated capital and operating budgets, municipalities can plan multi-year upgrades and adapt programs as needs evolve, ensuring the fiscal tool remains effective under future climate conditions. These same distinct revenues also are supportive to the conditions of potential private capital involvement; they can be utilized to service leverage provided by upfront capital financing when annual budgets or municipal reserves are insufficient to fund large projects. Addressing the equity concerns mentioned above requires careful communication, transparent reinvestment of revenues in flood-prone areas, and recognition of historical planning decisions that have contributed to current vulnerabilities.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Dedicated revenue for stormwater infrastructure	Provides a reliable, targeted funding stream for flood mitigation and runoff management.
Economic Efficiency	Medium	0	GIS mapping and billing system requirements	Efficient cost recovery, but requires moderate technical and administrative setup.
Equity & Fairness	Medium	0	Impervious-area pricing with design limitations	Aligns costs with runoff contribution, though affordability concerns remain if poorly designed.
Political Acceptability	Medium	0	Perceived as new tax; requires communication	Generally acceptable but politically sensitive without strong public engagement.
Feasibility (Admin/Legal)	High	+1	Broad municipal authority; utility billing integration	Widely implementable using existing municipal powers and systems.
Coherence (Portfolio Fit)	High	+1	Utility-like model aligned with service delivery	Integrates well with municipal finance systems and long-term asset management.

Best Use Context

Stormwater fees are most effective in municipalities with significant flood risk and extensive impervious surfaces, where dedicated funding for drainage infrastructure is needed. They work best where technical capacity exists to administer the system and where municipalities can support implementation with clear public communication.

Context Factor	Relevance	Notes
Municipal Size	High	Most effective in urban municipalities with significant infrastructure needs
Administrative Capacity Required	Medium	Requires GIS, billing systems, and technical expertise
Development Pressure	Medium	Revenue scales with impervious surface growth
Climate Risk Targeting	High	Highly effective for flood and stormwater risks
Fiscal Flexibility Required	Low	Generates stable, dedicated revenue outside property tax base

Recommended Citation

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Category

Land Value Capture



Geography/ Location

AB, BC, MB, NB,
NL, NS, ON, PE,
QC, SK

Municipality Size

Large



Tier

Conditional



Constraints

Equity; Feasibility;
Complexity



Administrative Capacity Required

High



Fiscal Tool Brief: Tax Increment Financing (TIF)

Tax Increment Financing uses future increases in property tax revenue from a designated area to fund local infrastructure, redevelopment, and public improvement projects.

Tax Increment Financing (TIF) is a municipal financing tool used to support local economic development and public improvement projects. When a municipality designates a specific area also known as a Tax Increment District (TID),¹ it continues to collect the existing level of property tax revenue from that area. However, any future increases in property tax revenue, generated by rising property values

resulting from new development or improvements, are set aside in a special fund (Figure 1). These “tax increments” are then used to pay for projects within the district, such as upgrading public infrastructure (better sidewalks, improved lighting), cleaning up brownfields, or enhancing parks, transit, and public spaces. In many cases, municipalities borrow upfront based on the expected future tax revenue, allowing them to finance projects now and repay over time as property values rise. The time period for TIFs are flexible, and depending on the project, it can range from 10 to even 50 years. After the time period, the value after termination may be used to pay for items such as any remaining debt obligations, contractually obligated expenses, and/or administrative expenses.²



Tax Increment Financing (TIF) Agreement Mechanics

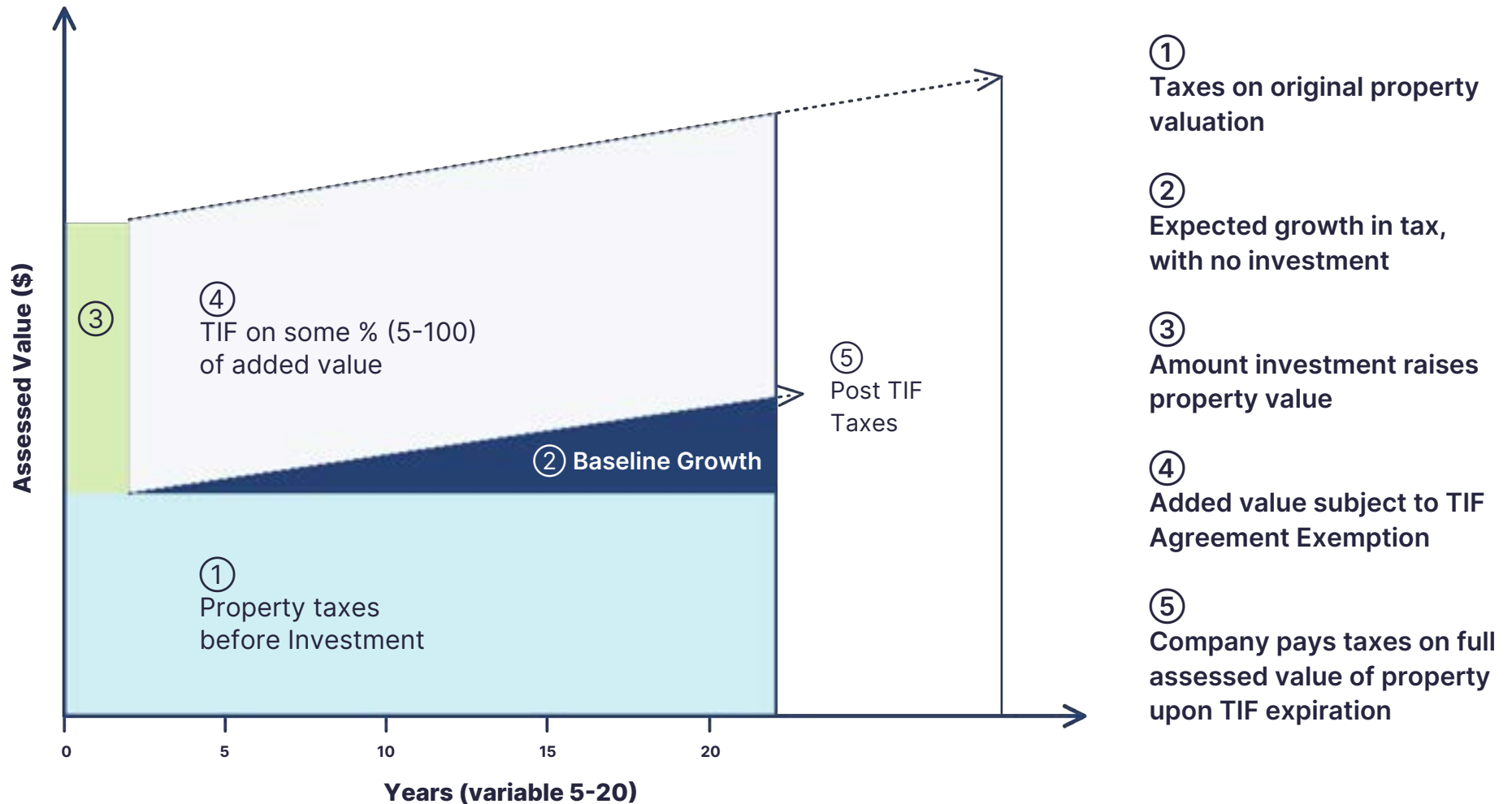


Figure 1. Tax Increment Financing Phases³

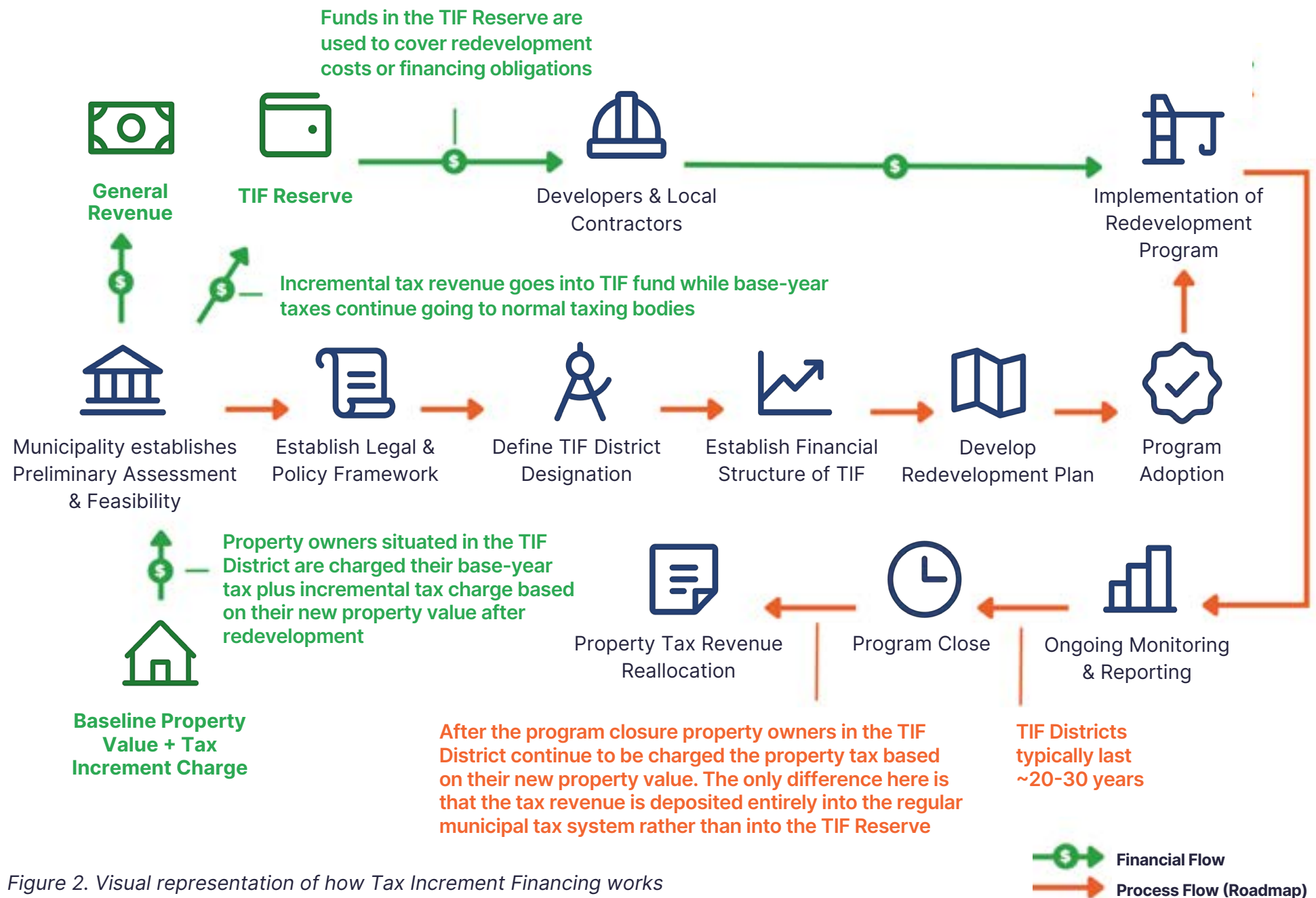


Figure 2. Visual representation of how Tax Increment Financing works

Examples

TIF has been implemented to fund urban renewal projects and revitalize underdeveloped neighbourhoods. [Calgary \(AB\)](#) adopted a tool called Community Revitalization Levy (CRL) to underwrite some of the costs of The Rivers revitalization. Since the developers and landowners will benefit from public improvements in The Rivers district, the City recovered some of the infrastructure costs through fees as development occurred. This tool allows the City to use a portion of the property tax revenue from this area and directly invest it into the local infrastructure improvements, for up to 20 years. [St. Catharines \(ON\)](#) developed a TIF program to help offset the cost of a redevelopment project. The incentive is given as an annual rebate of 45% of the increase in the City portion of property taxes generated by project completion for up to 10 years. In addition, if a project includes a minimum of 30% affordable rental dwelling units, the percentage of the rebate is increased to 65%. In [Winnipeg \(MB\)](#), the City established TIF programs in designated areas of the City in order to encourage investment or development. Winnipeg's incentives are in the form of grants/other payments and development projects, including affordable housing and rehabilitation of eligible heritage buildings.

Relevance to Advancing Adaptation

While the basic premise of TIF allows municipalities to borrow against future increases in property tax revenue within the designated area, this approach allows municipalities to unlock upfront capital without raising current taxes, which can be particularly useful in addressing urgent climate resilience needs such as enhanced stormwater management, new green infrastructure, and other flood mitigation measures.

Using the example of flood prevention, a municipality could designate a flood-prone area as a TIF district, especially if the area has development potential but is currently undervalued due to flood risk. The municipality could use TIF proceeds to invest in flood-resilient infrastructure that would make the area more attractive for private investment. For example, a municipality could identify a low-lying commercial district that frequently floods during heavy rain events, reducing business continuity and deterring new investment. The municipality could establish a TIF district covering this commercial zone and borrow to fund a \$20 million climate-ready infrastructure package. This could include constructing green roofs on public buildings, installing underground water storage tanks, and redesigning roads with improved grading and permeable surfaces. As flood risk declines and the area becomes more attractive for redevelopment, new buildings are constructed, existing properties are renovated, and property values rise. Over future decades, the increase in property tax revenue (the “tax increment”) is captured and used to repay the TIF bonds.

However, some caution should be used with the premise, as with all land value capture instruments. TIF assumes the financed infrastructure itself drives the property value increase that repays the bonds, but the empirical literature on land value capture finds that this link is highly variable and uncertain, particularly for the kind of hidden adaptation infrastructure that lacks visible amenity value. Kim's (2022) study of land value capture at urban expansion frontiers found that estimating land value uplift is fundamentally a subjective exercise whose results depend heavily on who is doing the calculation and for what purpose, and that even sophisticated developers looking at the same public investment in her case study radically disagreed on whether profitable opportunities

existed. Significant land value capture typically materializes only sporadically and over long time horizons, which complicates the design of TIF tools that depend on predictable near-term incremental flows.⁴

Accessibility

Tax increment financing is legally accessible only in Manitoba and Alberta, with a narrow and dormant Ontario framework that is materially different in structure. No TIF-enabling legislation could be found for other provinces.

Manitoba provides the most fully operationalized framework. The Community Revitalization Tax Increment Financing Act (CRTIF) enables real property to be designated by regulation as a “community revitalization property” (s. 4) for a term that, including any renewals, cannot exceed 25 years (s. 5(2)).⁵ Designation triggers a mandatory re-allocation of the assessment roll under s. 7 into pre-designation and incremental assessed value portions (determined under ss. 8 and 9 respectively). A community revitalization levy is then imposed on the portioned value of the incremental assessed value under s. 11(1). Importantly, s. 11(2) reveals the mechanism’s specific fiscal logic: the levy is imposed and is payable in lieu of school taxes that would otherwise be payable on the designated property. Manitoba’s CRTIF is therefore not a general increment-capture tool: it is specifically a redirect of the school tax portion of the increment toward revitalization purposes, with the incremental value also exempted from school taxation under s. 10. Grants to municipalities, property owners, occupiers, and qualifying local organizations for improvement projects are authorized at s. 15(6), with purposes specified at s. 15(6.1) (community revitalization, economic development, social and cultural development, heritage preservation).

In Alberta, the Municipal Government Act (ss. 381.1–381.5) establishes the Community Revitalization Levy (CRL).⁶ A municipality passes a CRL bylaw (s. 381.2(1)) imposing a levy on the incremental assessed value of property within a designated CRL area (s. 381.2(2)), with the revenue used toward infrastructure and other redevelopment costs. A CRL bylaw has no effect unless approved by the Minister (s. 381.2(3)), and the Minister may approve a bylaw in whole, in part, with variations, or subject to conditions (s. 381.2(4)). The incremental assessed value is excluded from both equalized assessment calculations and provincial requisitions (s. 381.4), meaning the growth in assessed value is genuinely segregated to the revitalization purpose. A 3% cap on the combined taxable assessment that may be included in a proposed CRL area across a municipality was introduced with the program revamp, imposed through the provincial Community Revitalization Levy Program Guidelines rather than through the statute itself.⁷

In Ontario, the Tax Increment Financing Act provides a statutory framework that has remained dormant since enactment.⁸ The regulations contemplated by s. 6 (governing tax increment calculation, feasibility study requirements, payment administration, and funding agreement terms) have never been prescribed, leaving the Act inoperative for practical purposes. Beyond the dormancy, the Ontario framework is structurally distinct from Alberta’s CRL and Manitoba’s CRTIF: it enables a municipality to apply for provincial funding for designated projects based on projected education tax increments (s. 2(1)), with the Minister of Finance authorized to enter into funding agreements paying out of the Consolidated Revenue Fund (ss. 3(1)(c), 4, 4(6)). The aggregate ceiling on Ministerial payments is capped at the estimated education tax increments (s. 4(5)), and an additional municipal-side limit restricts designated-project funding to 1% of total municipal-purpose taxes in a given year (s. 2(3)). Eligible projects are confined to infrastructure or

amenities supporting the redevelopment or intensification of previously developed areas, the development of urban growth centres under the Places to Grow Act, 2005, environmental remediation in previously developed areas, and municipal public transit facilities (s. 1 definitions of “eligible project”). In substance, the Ontario framework would function as a project-specific provincial grant program funded by foregone provincial education tax revenue, rather than as a general municipal TIF authority.

No TIF-enabling legislation has been identified in British Columbia, Quebec, Saskatchewan, Nova Scotia, New Brunswick, Prince Edward Island, or Newfoundland and Labrador. Municipalities in these provinces realistically cannot access TIF-equivalent increment capture without new enabling legislation.

Feasibility

TIF programs show varying levels of feasibility across provinces and territories based on legislation, political will, and municipal capacity. In Alberta, TIF is highly feasible through the Community Revitalization Levy (CRL), which has supported major projects with strong provincial and municipal alignment and public backing. The framework is well-established and supported by legislation.⁹ In Manitoba, feasibility is moderate to high - Winnipeg has used TIF effectively,^{10,11} while TIF is legally permitted under Section 28 of the Planning Act, provincial approval is required for each project and political hesitancy leads to limited use to large-scale infrastructure in major cities.

Risk

TIF has been adopted by some Canadian municipalities, but not without concerns. One key issue is the lack of transparency in how TIF funds are allocated, which can lead to concerns over mismanagement or misuse of public funds. While this has been more widely documented in U.S. cases, the concern is equally relevant in Canada where public oversight of financial tools remains critical to maintaining.¹² Another growing concern is the risk of gentrification, illustrated by Calgary’s Rivers District CRL. Since inception, CMLC has committed approximately \$400 million to East Village infrastructure, attracting nearly \$4 billion in planned development and substantially increasing both residential and non-residential property assessments within the district.¹³ While these increases generate the incremental revenue that finances the levy, they also raise the cost of housing within the district boundary, with unmitigated consequences for lower-income residents. The Alberta enabling regulation requires that CRL plans address “the impact, if any, that the redevelopment of the Rivers District will have on the residents of that area” and identify mitigation measures,¹⁴ but critics have noted that these requirements are loosely specified and that Alberta’s CRL framework lacks the displacement-prevention guardrails common in mature TIF jurisdictions.¹⁵ Additionally, TIF relies on the assumption that redevelopment will increase property values to generate the tax revenue needed to repay the infrastructure debt, but this isn’t guaranteed. One example of this is the Sheppard East subway line in Toronto, built in the early 2000s at a cost of

approximately \$1 billion. Even though it wasn't financed via a TIF, a retrospective study by the Institute on Municipal Finance and Governance modelled what TIF revenues would have generated over a 30-year period along that corridor. Even under favorable assumptions, the net present value of projected TIF revenues would have covered less than 10% of the capital cost.¹⁶ These challenges highlight the need for cautious implementation, and it's important to note that there may be additional risks beyond those discussed here—particularly as municipalities continue to explore TIF in diverse economic, political, and social contexts.

Scalability

TIF shows moderate scalability, with successful examples like Calgary's Rivers District CRL and Winnipeg's Sports, Hospitality and Entertainment District (SHED) generating significant tax increments for long-term redevelopment over 20-40 years. These projects demonstrate that TIF can be scaled for targeted, high-profile redevelopment, especially in municipalities with strong real estate markets and supportive provincial legislation. However, in other cases scalability is limited by some provincial regulations, such as Alberta's 3% cap on the municipality's total property tax assessment base¹⁷ (e.g., If a municipality's total property assessment base is \$10 billion, the combined assessed value of properties in all CRL zones cannot exceed \$300 million (3% of \$10 billion) and Ontario's Municipal Act, that prohibits a municipality from providing bonuses to business enterprises, including grants, loans or other forms of financial assistance—which limits how TIF funds can be used to attract or accelerate development.¹⁸ This regulatory landscape creates uneven opportunities across provinces, meaning that while some municipalities can use TIF to unlock major redevelopment, others are left with a tool that looks

powerful on paper but is functionally restrained in practice. To overcome these barriers, municipalities could pursue regulatory reforms and flexible policy design that streamline provincial approvals, improve transparency, and allow for hybrid funding models. Pairing TIF with complementary tools like development charges, grants, or resilience bonds can also reduce financial risk and make the mechanism more viable for climate adaptation. TIFs can enable the conditions to attract private capital financing to fund proactive climate adaptation because they generate a distinct revenue stream that can be leveraged.



Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Generates upfront capital tied to future property value increases	TIF can support adaptation infrastructure, but its value depends on development-led property growth rather than direct adaptation funding.
Economic Efficiency	Low	-1	Requires complex forecasting, long timelines, and administrative oversight	TIF is resource-intensive and comparatively inefficient because it depends on uncertain projections and sustained oversight.
Equity & Fairness	Low	-1	Risk of gentrification and displacement from rising property values	Benefits may be distributed unevenly, with redevelopment gains potentially creating burdens for vulnerable residents.
Political Acceptability	Medium	0	Transparency concerns and mixed public acceptance	TIF can be politically viable in some settings, but fairness and accountability concerns may limit support.
Feasibility (Admin/Legal)	Low	-1	Limited provincial enabling legislation and complex approval processes	Legal constraints and institutional complexity significantly limit widespread municipal use.
Coherence (Portfolio Fit)	Medium	0	Can be combined with other tools but constrained by regulations	TIF can fit within broader capital financing strategies, but uneven provincial rules reduce consistency and ease of integration.

Best Use Context

TIF is most effective in large, growing municipalities with strong redevelopment potential and the institutional capacity to manage complex financing arrangements. It is best suited to district-scale urban revitalization where adaptation measures can be incorporated into broader redevelopment projects.

Context Factor	Relevance	Notes
Municipal Size	High	Most effective in urban municipalities with significant infrastructure needs
Administrative Capacity Required	High	Requires GIS, billing systems, and technical expertise
Development Pressure	High	Revenue scales with impervious surface growth
Climate Risk Targeting	Medium	Highly effective for flood and stormwater risks
Fiscal Flexibility Required	High	Generates stable, dedicated revenue outside property tax base

Recommended Citation

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Category

Reserve Funds



Geography/ Location

AB, BC, ON

Municipality Size

All



Tier

Foundation



Constraints

None

Administrative Capacity Required

Low



Fiscal Tool Brief: Tax Rate Stabilization Reserve Funds

Tax rate stabilization reserve funds help municipalities smooth revenue fluctuations, absorb financial shocks, and maintain stable tax or utility rates over time.

Tax rate stabilization reserve funds are municipal financial management tools designed to help local governments manage revenue volatility and maintain predictable tax and utility rates over time.¹ Municipalities allocate surplus revenues or one-time windfalls from strong fiscal years into these reserves, which can then be drawn upon during years of fiscal stress, such as times when revenues decline due to economic downturns, when unexpected expenditures arise, or when unanticipated emergencies strain the budget. This approach enables municipalities to

absorb financial shocks without imposing sudden tax increases or cutting essential services. Some municipalities use stabilization funds as part of a broader long-term fiscal strategy, integrating them into multi-year financial plans to ensure sustainable service delivery and smooth year-over-year budgeting. It is important to note that this reserve fund represents a non-sustainable source of annual funding and usually aims to support normal municipal operations when the revenues decline. Therefore, it is designed for use to reduce annual tax rates on a routine basis. Serving as a buffer, the tax rate stabilization reserve fund support the provision of services and programs to the community and ensure the long-term municipal financial stability and sustainability.



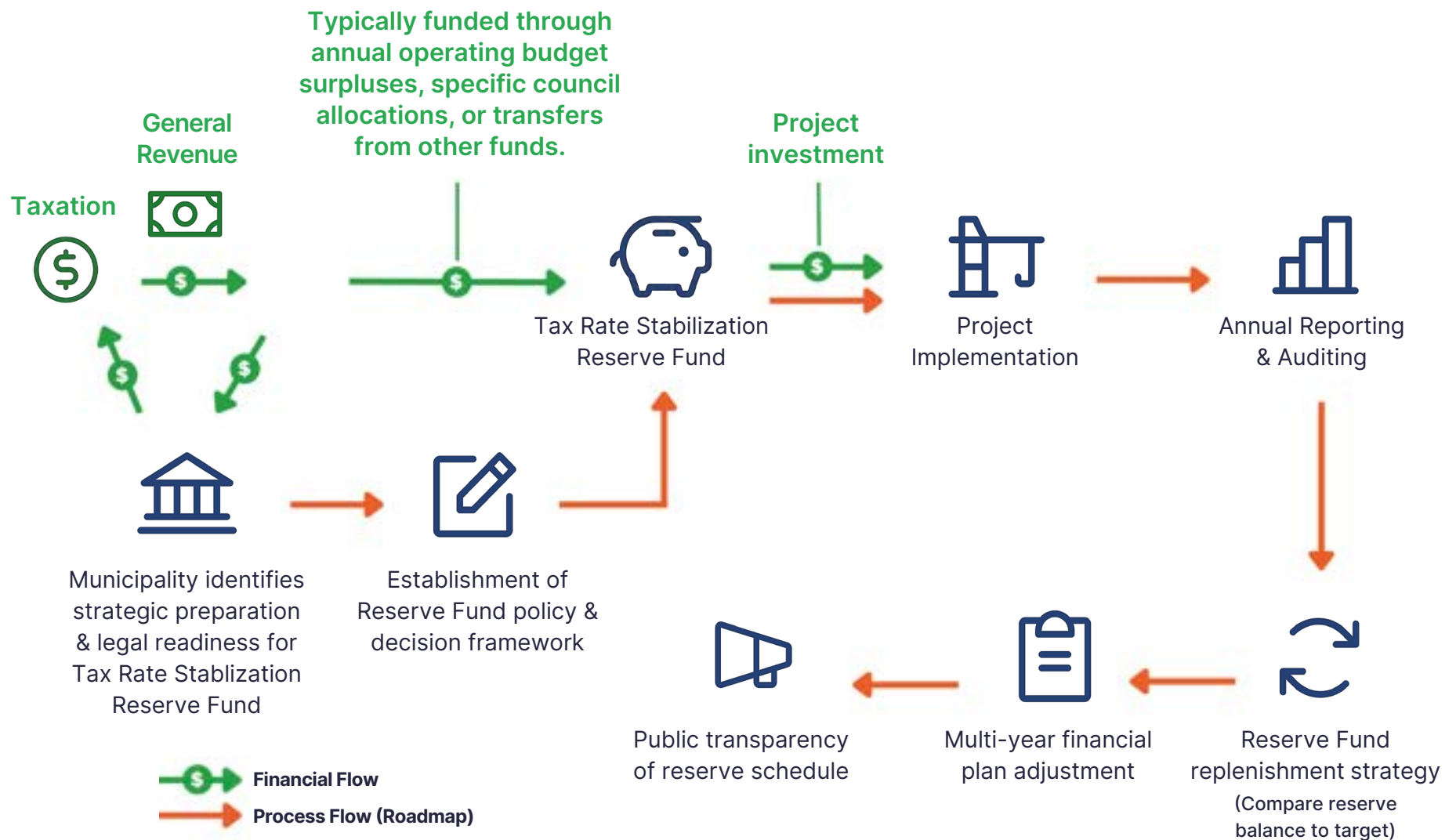


Figure 1. Visual representation of how Tax Rate Stabilization Reserve Funds work

Examples

Various municipalities in Canada have established tax rate stabilization reserve funds to manage their municipal revenue. For example, [Toronto \(ON\)](#) maintains a Tax Rate Stabilization Reserve as a contingency fund to address unanticipated and emergency events, ensuring prudent financial management and fiscal stability.² Given the uncertainty of future federal and provincial funding, this reserve is embedded in its broader reserve and reserve-fund framework and aims to support fiscal stability rather than simply service one-off expenditures, allowing the City to manage unforeseen costs while maintaining a balanced budget.³ To uphold financial resilience, Toronto has committed to retaining a Tax Rate Stabilization Reserve balance of no less than 2% of its annual property tax revenues.

[Clearwater County \(AB\)](#) maintains restricted surpluses, formerly known as financial reserves, that act as a savings mechanism for major infrastructure projects and unforeseen expenditures to ensure stable financial management and long-term sustainability. These reserves allow the County to save portions of annual revenues for specific purposes, and one component of Clearwater County's reserve strategy is their Tax Rate Stabilization Reserve, which helps maintain fiscal stability by offsetting revenue fluctuations and unexpected expenditures. This reserve allows the County to draw funds during economic downturns, infrastructure failures, or emergency events such as severe weather or environmental hazards without imposing abrupt tax increases on residents or businesses. It also provides a funding buffer for one-time or intermittent projects that would otherwise cause temporary spikes in property taxes. By maintaining this reserve, Clearwater County minimizes financial volatility, safeguards against short-term budget shortfalls, and upholds steady tax rates while continuing to meet community and infrastructure needs.⁴

In addition, [Middlesex Centre \(ON\)](#) established their tax rate stabilization reserve fund by the council through a municipal bylaw. Setting up reserve funds is part of the municipality's annual operating budget and a critical tool to ensure the normal operations of municipal projects and the long-term financial sustainability of the municipality.⁵ As one of the reserve funds Middlesex Centre has established, the tax rate stabilization reserve fund aims to aside funds to support municipal operations during tax revenue shortfalls, for one-time expenditures, as well as other unexpected events.⁶ This reserve fund is funded through annual operating budget contribution, allocation of year end surpluses, and the interest earned. The municipality maintains a target reserve balance of 10% of the municipal tax levy of the previous year. Other municipalities that have established a tax rate stabilization reserve fund include [Innisfil \(ON\)](#), [Abbotsford \(BC\)](#), and [Banff \(AB\)](#).

Relevance to Advancing Adaptation

Tax rate stabilization reserve funds can be a critical tool to advance climate adaptation because they provide municipalities with fiscal flexibility to respond to and recover from climate-related shocks while sustaining investment in long-term resilience. As extreme weather events such as floods, heatwaves, and wildfires become more frequent and costly, stabilization funds can act as a financial safety net, enabling municipalities to cover emergency repair costs or initiate urgent adaptation measures without disrupting planned budgets. For example, following a severe flood event, a municipality could use its stabilization reserve to finance immediate infrastructure repairs or ensure the consistent operation of municipal services such as emergency responses. By ensuring continuity of funding and avoiding abrupt tax increases after climate disasters, stabilization reserves help municipalities maintain public trust and fiscal stability while integrating adaptation into regular financial planning cycles.

Accessibility

Tax rate stabilization reserve funds offer a highly accessible mechanism for municipalities to manage fiscal volatility because they are embedded in existing budgetary frameworks and funded through surpluses from normal operations. Since municipalities already collect property taxes and utility revenues and already generate year-end surpluses or deficits, using those surpluses to feed into a stabilization reserve does not require creating a new revenue stream. In addition, the mechanism is integrated into municipal budgeting processes and deposits surpluses into reserve funds through municipal bylaws or policies. Therefore, this means the tool is available to any municipality that has governance and budgeting capacity. While it needs legal requirements (e.g., establishment of a municipal policy), the fact that many municipalities already report and manage reserve funds makes accessibility relatively strong. It does not depend on external grants, special funding rounds, or new tax-tools, making it accessible across a wide spectrum of municipalities regardless of their size.

Feasibility

Establishing and operating tax rate stabilization reserve funds are generally feasible for municipalities because the administrative and governance frameworks are already in place and the reserve fund can be embedded into existing budgeting systems. Practical steps to establish and operate such reserve funds typically involve a council bylaw or policy defining the reserve, target funding levels, contribution sources (e.g., year-end surplus, an allocation from the

tax levy), and conditions under which the reserve may be drawn. In addition, since the implementation is primarily financial policy and administrative monitoring, this approach is technically and operationally feasible. Moreover, many municipalities already track and report on their surpluses and manage various reserve funds, which means the incremental workload is lower than launching a new financial mechanism. Thus, it is feasible for municipalities with sound financial management practices to implement and operate this reserve mechanism.

Risk

While tax rate stabilization reserve funds provide meaningful benefits, there are several risks municipalities must manage to ensure the tool remains effective and doesn't introduce new vulnerabilities. One key risk is the use of the reserve as a source of ongoing operational financing rather than a buffer for one-time or extraordinary events. To address this risk, many municipalities have explicitly stated in their policies that the reserve fund is intended for one-time, unexpected events and should not use it for recurring, ongoing operational costs. Another risk is insufficient target levels or failure to replenish the reserve after drawdowns. If the reserve balance is under its targeted levels, the municipality becomes more vulnerable to future shocks. Therefore, municipalities have established rules on regular monitoring and reporting to maintain its resilience to future unexpected events. Overall, while the reserve tool mitigates risks of financial volatility, it can be vulnerable to misuse, and thus, sound and transparent policies on its usage, monitoring, and replenishment are needed.

Scalability

Tax rate stabilization reserve funds have strong scalability potential because the mechanism can be embedded in a municipality's fiscal capacity and its long-term financial planning strategies. Since municipalities usually need bylaws to establish and operate these reserve funds, the reserve structure can be adjusted with relative ease (e.g., modifying contribution policies and withdrawal conditions), especially when municipalities experience community growth or have changes in their revenue composition. This flexibility allows tax rate stabilization reserve funds to evolve, and therefore, they can be adapted to address climate-related pressures, enabling larger or more frequent allocations to buffer revenue volatility from extreme weather events, infrastructure disruptions, or unexpected economic shocks. Therefore, when supported by clear policies and transparent governance, tax rate stabilization reserve funds help form a comprehensive financial resilience framework for municipalities, mitigate the impacts of inconsistent service delivery during unexpected events, and support the long-term resilience for municipalities.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Supports fiscal stability, not direct funding	Enables continuity and response capacity but does not directly finance adaptation infrastructure.
Economic Efficiency	High	+1	Embedded in existing budgetary systems	Low-cost and administratively efficient use of surplus revenues.
Equity & Fairness	High	+1	Avoids sudden tax increases	Smooths fiscal shocks over time, reducing regressive impacts on households.
Political Acceptability	High	+1	Maintains stable tax rates	Widely accepted as prudent financial management with low public resistance.
Feasibility (Admin/Legal)	High	+1	Standard municipal practice	Easily implemented through existing bylaws and financial systems.
Coherence (Portfolio Fit)	High	+1	Integrated into reserve frameworks	Strongly aligned with municipal finance systems and complements other tools.

Best Use Context

Tax rate stabilization reserve funds are most effective as a foundational fiscal management tool across municipalities. They are particularly valuable where climate-related fiscal shocks are increasing, helping maintain service continuity and financial stability while supporting broader adaptation-based financial strategies

Context Factor	Relevance	Notes
Municipal Size	High	Applicable across municipalities of all sizes.
Administrative Capacity Required	Low	Minimal additional capacity beyond standard financial management.
Development Pressure	Low	Not dependent on growth or development activity.
Climate Risk Targeting	Medium	Supports fiscal response rather than targeted risk reduction.
Fiscal Flexibility Required	Medium	Requires ability to generate and allocate surpluses.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Tax Rate Stabilization Reserve Funds*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Other

Geography/ Location

AB, BC, ON, PE

Municipality Size

Large



Tier

Conditional



Constraints

Effectiveness;
Feasibility; Complexity



Administrative Capacity Required

High



Fiscal Tool Brief: Transfer of Development Rights (TDR)

Transfer of Development Rights helps protect sensitive or valuable lands by allowing development potential to be sold and redirected to areas better suited for growth.

Transfer of Development Rights (TDR), also known as Transfer of Development Credits (TDC), is a voluntary and incentive-based land-use tool that allows landowners to sell the development potential of their property to another party. Sending areas are often locations that have been identified by local governments as in need of preservation and can include environmentally sensitive lands or historic sites.¹ The buyer, often a developer, can

then use these rights or credits to increase density or floor space at another designated site, typically in areas prioritized for growth.^{2,3} Therefore, this mechanism can be used to preserve agricultural lands, forests, open space, wildlife habitat, and heritage sites, while channeling development toward urban centers or other suitable areas. TDR programs have been widely used in the United States since their introduction in the 1960s. In Canada, comparable programs are being developed, but due to differences in land rights, such as the constitutional protection of property rights in the U.S., the approach is referred to as Transfer of Development Credits (TDC).⁴ By providing compensation to landowners, TDR and TDC programs create a market-driven approach that balances conservation goals with development pressures.



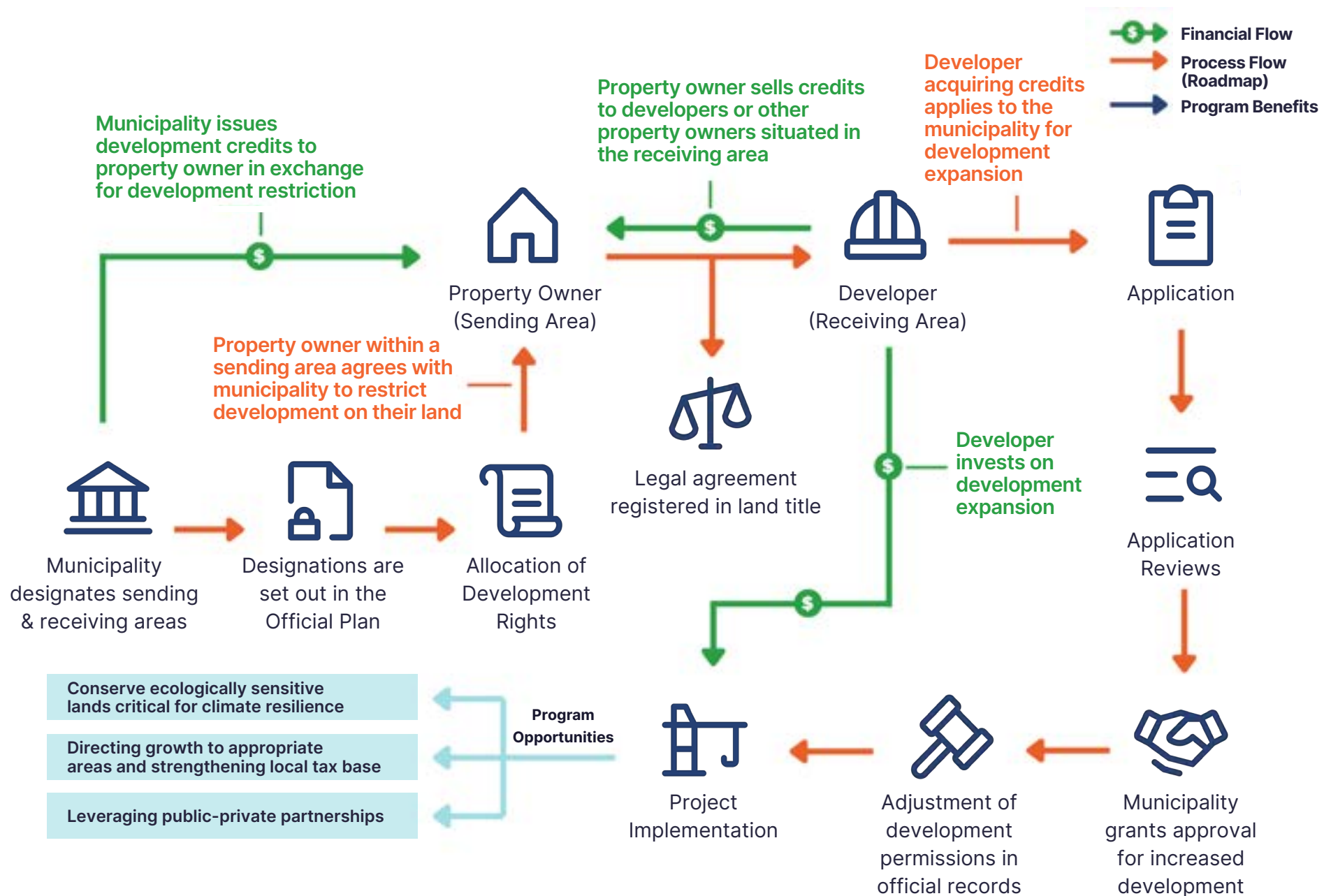


Figure 1. Visual representation of how Transfer of Development Rights work

Examples

The adoption of TDR and TDC programs have been slow for Canada.⁵ However, there are some examples that can be highlighted. For example, [Vancouver \(BC\)](#) has the Heritage Density Transfer System, which is the most firmly established and comprehensive program in Canada. First developed in 1983, this program has an urban focus and is primarily intended to protect historic buildings within their designated districts.⁶ The program can also support the development of parks, open spaces, or broader urban design initiatives. Its key objective is to ensure that restoring historic properties is as financially appealing as redeveloping the land. There are also some Canadian jurisdictions that have applied some parts of a TDC program in order to conserve rural or environmentally important lands. One example is the L.M. Montgomery Land Trust (PE). Established in 1994, the Trust's mission is to safeguard the agricultural and coastal landscapes of the Island's north shore. This initiative is a Purchase of Development Rights (PDR) program rather than a TDC program.⁷ Under a PDR program, development rights are permanently retired rather than transferred to another site for future development. Both PDR and TDC programs have similar approaches, where the number or value of "development rights" must be established, along with a system to limit land use in the designated sending area once the density has been allocated. One noticeable element of this example is that while most TDC and PDR programs are administered by a municipality, this example is administered by a third-party private land trust. Other examples of attempts of implementing TDC programs in Canada include Toronto (ON), Calgary (AB), Wheatland County (AB), and Bighorn (AB).⁸ Moreover, TDR programs are commonly used in the United States, and some of the successful examples include the [New Jersey Pinelands](#), [Montgomery County in Maryland](#), and [Boulder County in Colorado](#).

Relevance to Advancing Adaptation

TDR and TDC programs can advance climate adaptation by redirecting growth away from hazard-prone or ecologically sensitive areas, such as floodplains, wildfire zones, and coastal regions and protecting landscapes that provide livelihoods and valuable ecosystem services. Preserving farmland and natural areas not only safeguards local food systems but also enhances carbon sequestration, biodiversity, and watershed protection. At the same time, by concentrating development in designated growth areas, these programs promote compact urban forms that are easier to service with resilient infrastructure, public transit, and energy-efficient buildings. In this way, TDR and TDC programs can reduce exposure to climate risks and support adaptive capacity, primarily through land-use planning rather than direct financing.

Accessibility

TDR and TDC programs are not grant-based tools and do not provide direct access to senior-governmental funding. They are locally enabled land-use mechanisms, implemented through municipal official plans, zoning bylaws, and development approval processes.⁹ There is no federal or provincial TDC program that municipalities can apply into. Alberta provides relatively clear enabling conditions, as the Alberta Land Stewardship Act explicitly identifies TDCs as a permissible policy instrument.¹⁰ Effective accessibility is largely limited to municipalities with sustained developmental pressure, where demand for additional density can support a viable credit market. TDC programs have been applied at different geographic scales, but sustained implementation is typically limited to jurisdictions with strong development demand and planning capacity. They are most effective when clearly integrated into existing planning instruments such as Municipal

Development Plans (MDP), Area Structure Plans (ASP), and Land Use Bylaws.¹¹ Administrative capacity is a major constraint, as TDC programs require specialized planning, legal, and valuation expertise and ongoing program management. Vancouver remains one of the only Canadian municipalities with a sustained, comprehensive transfer-of-density system, applied narrowly to heritage preservation.¹²

Feasibility

From a political and social perspective, the feasibility of TDR and TDC programs depends on community buy-in from landowners, developers, and residents, as participation is voluntary rather than compulsory. Evidence from established programs shows that feasibility improves when TDCs are clearly linked to community values through visioning exercises, transparent objectives, and ongoing communication, while misinformation or perceptions of TDCs as a “silver bullet” can undermine community support. From a legal perspective, Canadian municipalities generally have sufficient authority under existing planning legislation to implement TDC programs, even in the absence of explicit provincial enabling statutes. However, the lack of TDC specific legislation might introduce uncertainty, requiring ongoing legal oversight and increasing political caution, particularly where landowners perceive impacts on property interests. Lastly, feasibility is further limited by municipal capacity. Effective TDC programs require detailed land-use data, planning and legal expertise, and long-term resources to manage conservation instruments. Many rural and under resourced municipalities may lack this capacity, reducing the likelihood of successful implementation despite theoretical suitability of the fiscal tool.¹³

Risk

One risk associated with these programs is market failure. TDRs and TDCs depend on a functioning real estate market to generate demand for credits in receiving areas. Where development slows or market conditions weaken, credit demand may collapse, limiting conservation outcomes and leaving designated sending areas unprotected despite a good program design. Moreover, administrative and coordination risks can increase substantially, particularly in multi-jurisdictional programs. Research shows that coordinating multiple municipalities, councils, and land-use priorities can significantly increase complexity, transaction costs, and implementation timelines, reducing program effectiveness even where regional conservation goals are well aligned. Lastly, long-term stewardship and enforcement risks remain significant. TDC programs rely on conservation easements or restrictive covenants to permanently extinguish development potential, yet many jurisdictions lack sufficient institutional or land-trust capacity to monitor and enforce these agreements over time.¹⁴

Scalability

The ability to expand TDRs and TDCs depends on development demand and program design rather than municipal budget capacity. Analysis of successful programs show that scalability improves when TDCs are embedded in broader growth management frameworks and supported by enabling structures such as background studies, TDC banks,¹⁵ and complementary Purchase of Development Rights (PDR) programs, which help stabilize credit supply and demand over time. Programs scale gradually, with activity often limited or uneven in early years, requiring long-term horizons to achieve meaningful outcomes. Clear definition of

objectives, compatible conservation goals, and appropriate performance metrics help with scaling by allowing programs to adapt as conditions change. In practice, TDC programs scale most effectively in larger or fast-growing jurisdictions with sustained developmental pressure and sufficient administrative capacity, while remaining difficult to expand in low-growth or under-resourced municipal contexts.¹⁶



Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Redirects development away from hazard-prone areas	Supports land-use adaptation and risk avoidance, but does not directly generate adaptation funding.
Economic Efficiency	Low	-1	Complex planning, valuation, and market coordination	High administrative and technical demands make performance uncertain relative to effort.
Equity & Fairness	Medium	0	Compensation to landowners but uneven benefits	Can improve fairness for some landowners, but outcomes depend heavily on market access and program design.
Political Acceptability	Medium	0	Voluntary participation but needs stakeholder buy-in	Acceptability is mixed and depends on communication, local priorities, and community support.
Feasibility (Admin/Legal)	Low	-1	Limited enabling frameworks and high capacity requirements	Legal ambiguity and administrative complexity significantly constrain implementation.
Coherence (Portfolio Fit)	Medium	0	Integrates with land-use planning but needs coordination	Fits within planning systems, but requires coordination and is not strongly embedded in municipal fiscal frameworks.

Best Use Context

TDRs are most effective in high-growth municipalities with strong development demand, planning capacity, and institutional ability to manage complex programs. It is particularly suited to protecting environmentally sensitive or hazard-prone lands while steering development toward safer, more compact urban areas.

Context Factor	Relevance	Notes
Municipal Size	High	More viable in large or fast-growing municipalities.
Administrative Capacity Required	High	Requires advanced planning, legal, and valuation expertise.
Development Pressure	High	Dependent on strong demand for additional density.
Climate Risk Targeting	High	Effective for protecting hazard-prone or sensitive lands.
Fiscal Flexibility Required	Low	Does not rely on municipal revenue generation.

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Transfer of Development Rights*. In *Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

Taxation



Geography/ Location

AB, BC, MB,
NB, NL, NS,
ON, QC, SK

Municipality Size

Large



Tier

Enabling



Constraints

Equity



Administrative Capacity Required

High



Fiscal Tool Brief: Vacant and Underused Property Taxes

Vacant and underused property taxes discourage leaving properties empty by increasing costs for owners, supporting housing availability and more efficient use of existing municipal infrastructure.

Vacant and underused property taxes are supplementary levies imposed by municipalities on residential or, sometimes, commercial properties that are left unoccupied for extended periods. Unlike general property taxes, which apply uniformly to all properties within a class, vacant property taxes specifically target the behaviour of leaving habitable housing or commercial space unoccupied. The mechanism is designed to increase the effective cost of keeping a property empty, thereby incentivizing owners to either occupy the property, rent it out, or sell it to someone who will. Revenue generated from

these taxes can be earmarked for affordable housing initiatives or other municipal housing programs but in most jurisdictions, the revenue generated can also be used as general funds.

Vacant property taxes operate through two types of declaration-based systems. Under the first one, all property owners are required to annually declare the occupancy status of their property, and those who fail to declare or who declare their property as vacant are subject to the supplementary tax. As for the second type, only the owners of vacant properties are required to declare the vacancy. The tax is generally calculated as a percentage of the property's assessed value, applied in addition to regular property taxes. Enforcement relies on a combination of self-declaration, utility usage data, audit processes, and complaint-based investigation.



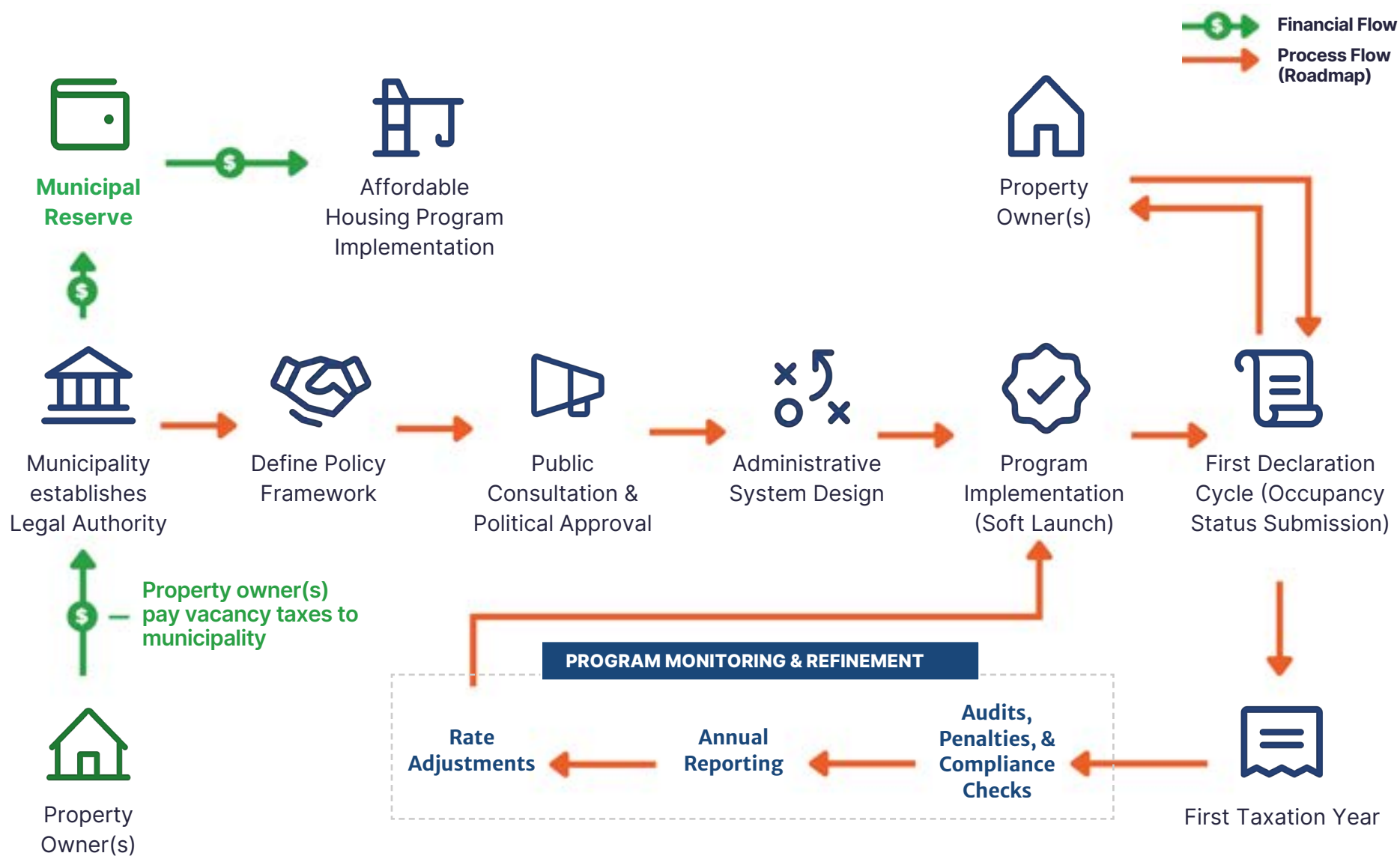


Figure 1. Visual representation of how Vacant and Underused Property Taxes work

While primarily introduced in Canada as a tool for housing supply and affordability, vacant property taxes are directly relevant to climate adaptation. Vacant properties represent an inefficient use of serviced land: the municipality has already invested in water, sewer, stormwater, road, and emergency service infrastructure to serve these properties, but receives no corresponding population benefit. By encouraging the use of existing housing stock, these taxes can also reduce pressure to develop new greenfield areas.

Examples

Vacant property taxes have been adopted in various forms by several major Canadian municipalities, by the Province of British Columbia, and by the federal government. Vancouver (BC) was the first Canadian municipality to introduce a vacant property tax, launching its Empty Homes Tax (EHT) in 2017. The rate has been set to 3% of assessed taxable value for the 2025 reference year. Properties deemed or declared empty for six months or more are subject to the tax, with revenue directed to affordable housing initiatives.¹ Since the program's inception, the number of vacant properties in Vancouver has declined by 58%, with the vacancy rate falling to a record low of 0.49% in 2024, compared to 0.9% in 2017.² The program has generated \$194.3 million in cumulative revenue for affordable housing since its imposition.

Toronto (ON) introduced its Vacant Home Tax (VHT) in 2022 at an initial rate of 1%, subsequently increased to 3% for the 2024 taxation year.³ The revenue supports the City's Housing TO 2020–2030 Action Plan, including the Multi-Unit Residential Acquisition program and capital repairs to Toronto Community Housing Corporation units. Early data indicates that the number of vacant properties in Toronto declined from 6,944 in 2022 to 5,989 in 2024.⁴ False declarations carry penalties of up to \$10,000, and overdue amounts are charged interest at 1.25% per month.⁵

At the provincial level, British Columbia introduced the Speculation and Vacancy Tax (SVT) in 2018, applying to residential properties in designated urban areas across the province. The SVT applies at rates ranging from 0.5% to 2% depending on the owner's residency and citizenship status. Similarly, at the federal level, the Underused Housing Tax (UHT) was introduced in 2022 as a 1% annual tax on the value of vacant or underused residential property owned by non-resident, non-Canadian owners.⁶

In Quebec, the cities of Saint-Colomban⁷ and Rimouski⁸ have adopted a bylaw on vacant commercial properties. Since these bylaws are adopted under their general taxation powers, the tax rate is applied not to the land value, but to the surface area of the building.

Relevance to Advancing Adaptation

Vacant property taxes advance climate adaptation by aligning property taxes with the efficient use of infrastructure that has already been built. When a municipality invests in upgrading stormwater systems, flood-proofing roads, or enhancing emergency services in an urban area, these investments benefit all properties in the area. A vacant property consumes infrastructure capacity by occupying serviced land, contributing impervious surface area to stormwater runoff, and requiring fire and police protection without contributing the population density that justifies the infrastructure investment. By discouraging vacancy, these taxes also help ensure that adaptation-upgraded infrastructure serves its intended purpose. Additionally, vacant properties can themselves become sources of climate vulnerability. Unmaintained buildings are more susceptible to water damage, pest infestation, and structural deterioration, which can exacerbate risk for neighbouring properties.

Revenue from vacant property taxes can be directed toward adaptation priorities. Toronto's program already earmarks revenue

or affordable housing, but the mechanism could equally support climate-resilient housing retrofits, community resilience hubs, or neighbourhood-level flood protection. Directing some of those funds towards adaptation may be particularly relevant since vacant properties may face more acute climate vulnerability.

Accessibility

Municipal vacancy tax authority in Canada is expressly conferred by statute in three distinct frameworks. Ontario offers the broadest municipal access: the Municipal Act (ss. 338.1–338.2), designates all single- and upper-tier municipalities as entitled to impose a tax on vacant residential units through a bylaw, following a March 2024 province-wide extension of that authority.⁹ In British Columbia, the framework is bifurcated: the *Vancouver Charter*, s. 616(1) grants Vancouver City Council alone the express power to impose an annual municipal vacancy tax through a bylaw, a charter-level competence unavailable to any other BC municipality;¹⁰ beyond Vancouver, the provincial Speculation and Vacancy Tax Act operates as a provincially-administered instrument applying across designated urban areas at rates of 0.5% to 2%.¹¹ It acts as a substitute for, not an enabler of, local municipal vacancy taxes. Quebec stands apart: vacancy taxation is expressly authorized by art. 500.5.1 of the *Loi sur les cités et les villes*, which specifically enables municipalities to levy a tax on the assessed value of vacant or underused residential units at rates capped at 1%, 2%, and 3% over successive years of application.¹² However it is yet to be applied by municipalities. In Alberta, broad taxation powers might allow vacancy taxes, but this possibility is still untested. Everywhere else (Manitoba, Saskatchewan, Atlantic provinces) no express statutory authorization for municipal vacancy taxes currently exists, and implementation would require new provincial enabling legislation.

Feasibility

Vacant property taxes are administratively feasible in municipalities with robust property assessment and tax collection systems, though they require significantly new administrative capacity for declaration processing, auditing, and enforcement. Toronto's experience illustrates both the feasibility and the challenges: in 2024, the City received 55,000 complaints about the tax, mostly coming from homeowners who forgot to fill out their declaration or experienced issues with the administration.¹³ Following best practices, Hamilton consulted with Toronto and other cities who had implemented the tax before launching its program, learning from their implementation challenges.¹⁴

The declaration-based model that applies to all property owners requires clear communication, a user-friendly online portal, and adequate staff to manage exceptions (which often include deaths, renovations, sales in progress, medical absences). Politically, vacant property taxes are generally popular with the public because they target a behavior widely perceived as socially undesirable during a housing crisis. However, administrative costs must be weighed against revenue generated, especially for smaller municipalities. The tax is most effective in high-value urban markets where a 1-4% levy creates a meaningful financial incentive; in lower-value markets, the revenue and behavioral impact may be too modest to justify the administrative apparatus.

Risk

The most significant risk is definitional and enforcement complexity. Determining whether a property is truly vacant requires clear criteria and reliable verification methods, which may prove hard to implement.

Owners may claim exemptions that are difficult to verify without intrusive investigation (e.g. medical absence). Toronto imposes penalties of up to \$10,000 for false declarations, but enforcement requires audit capacity that smaller municipalities may lack. Vancouver's auditing program generated \$18.8 million in revenue from non-compliant owners between November 2023 and November 2024, demonstrating both the scale of non-compliance to be expected and the revenue potential of robust enforcement.¹⁵

There is also an equity risk: the tax applies uniformly regardless of the reason for vacancy. A homeowner temporarily relocated for work, undergoing a difficult separation, or managing a deceased relative's estate faces the same tax as a speculator holding an empty investment property. While exemption categories exist to address some of these situations, they add administrative complexity and may not capture all legitimate cases. The ease of verification and the validity of the reasons for vacancy are not superposed: it is, thus, very probable that the tax could impose undue hardship.

One further risk is market displacement: vacancy taxes may push owners to convert properties to short-term rentals rather than long-term housing, potentially creating new policy challenges. Finally, there is a risk that vacancy taxes become a substitute for, rather than a complement to, more fundamental reforms to housing supply and land use policy. Hamilton's landlord association voiced concern that the tax would collect too little revenue to make a meaningful difference while discouraging investment,¹⁶ which indicates that such taxes could induce some strain on the relationship between developers and the City (which is expected with levies targeting speculation).

Scalability

Vacant property taxes are moderately scalable. Ontario's 2024 extension of vacancy tax authority to all single- and upper-tier municipalities demonstrates that the tool can be replicated across jurisdictions once enabling legislation exists.¹⁷ Tax rates can be adjusted over time: Toronto's increase from 1% to 3% illustrates this flexibility. Vancouver's experience shows that the vacancy rate can be driven down significantly (from 0.90% to 0.49%) over time, generating cumulative revenue of nearly \$200 million. Nevertheless, this should be put in perspective with the \$3.2 billion total revenue of the City: the vacancy tax represented slightly less than 1% of the 2024 municipal budget.

Scalability is limited by the size of the vacant housing stock: in most Canadian cities, declared vacancy rates are low, meaning the tax generates very modest revenue relative to total municipal budgets. Thus, the vacancy tax should be seen more as a behavioral tool than a significant source of revenue. The tax is most impactful in high-cost, high-vacancy markets (e.g. Vancouver, Toronto) and less significant in smaller or slower-growth municipalities. Scalability can be enhanced by expanding the scope of the tax to include underused commercial and industrial properties, as some members of the Toronto City Council have explored in 2026.¹⁸ Cross-jurisdictional scalability is further supported by the multi-level framework created by the federal UHT and provincial SVT, which helps normalize vacancy taxation as a policy tool across Canada.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	0	Encourages occupancy of serviced land; can fund adaptation priorities	The tool supports adaptation indirectly by improving use of serviced land and generating some revenue, but it is not a dedicated adaptation finance mechanism.
Economic Efficiency	Medium	0	Uses existing tax systems but requires declarations, audits, and enforcement	It is administratively workable in larger municipalities, though ongoing compliance and enforcement create moderate costs.
Equity & Fairness	Low	-1	Uniform tax may penalize legitimate vacancies; hardship risk noted	The tax can create unfair burdens for owners facing legitimate circumstances, and exemptions are difficult to administer perfectly.
Political Acceptability	High	+1	Generally popular because it targets vacancy during a housing crisis	Public support is often strong because the tax addresses visibly underused housing in high-cost markets.
Feasibility (Admin/Legal)	Medium	0	Express authority exists only in some provinces; robust systems needed for implementation	It is feasible where municipal authority and administrative systems exist, but provincial variation and implementation requirements limit broader use.
Coherence (Portfolio Fit)	Medium	0	Aligns with housing, land use efficiency, and adaptation goals but modest fiscal role	The tool fits well as a complementary housing and resilience instrument, though its fiscal contribution is too modest to serve as a core adaptation funding source.

Best Use Context

Vacant and underused property taxes are most effective in large, high-cost urban housing markets where vacancy is politically salient, and the levy is large enough to influence owner behaviour. They are best used as a complementary housing-efficiency and urban land-use tool rather than as a major standalone source of adaptation finance.

Context Factor	Relevance	Notes
Municipal Size	High	Most suitable in large urban municipalities with high-value property markets and sufficient administrative systems
Administrative Capacity Required	High	Requires declaration systems, audit capacity, enforcement, communications, and exemption management
Development Pressure	High	Works best in high-cost, high-demand housing markets where vacancy is a meaningful policy issue
Climate Risk Targeting	Low	Supports adaptation indirectly through efficient land and infrastructure use rather than direct risk targeting
Fiscal Flexibility Required	Low	Does not require major upfront municipal financing, but revenues are modest relative to total budgets.

Recommended Citation

Duguay, V., Tremblay-Racicot, F., Couture, J., Tóth, A., Ma, K., Meaney, M., Jackson, E., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Vacant and Underused Property Taxes*. In *Catalogue of Fiscal Tools to Advance Adaptation*. In collaboration with the Centre de recherche sur la gouvernance of the École nationale d'administration publique. ICLEI Canada. <https://icleicanada.org/project/fiscal-tools-catalogue/>

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Category

User Fees and
Regulatory Charges



Geography/ Location

AB, BC, MB, NB,
NS, ON, QC

Municipality Size

All



Tier

Foundation



Constraints

None

Administrative Capacity Required

Low



Fiscal Tool Brief: Water and Wastewater Fees

Water and wastewater fees charge users based on service use to fund safe drinking water, wastewater treatment, and shared utility infrastructure.

Water and wastewater fees are a user-pay system that municipalities use to fund the costs of providing safe drinking water and treating wastewater. Municipalities recover the cost of sourcing, treating, distributing and eventually collecting and treating water through a combination of fixed and variable charges. Typically, properties are metered so that the variable portion of the bill reflects actual water use, while the fixed portion covers shared infrastructure such as treatment plants, pumping stations and fire protection systems. Rate structures vary among municipalities, reflecting both policy choices and the fiscal powers available. Some charge a constant unit rate per cubic meter (volumetric rate), others apply tiered or “increasing block” rates to encourage conservation by targeting high users, and a smaller share still use flat fees.^{1,2} Wastewater charges are commonly linked to the water bill, either as a percentage of water charges or as a parallel volumetric rate.



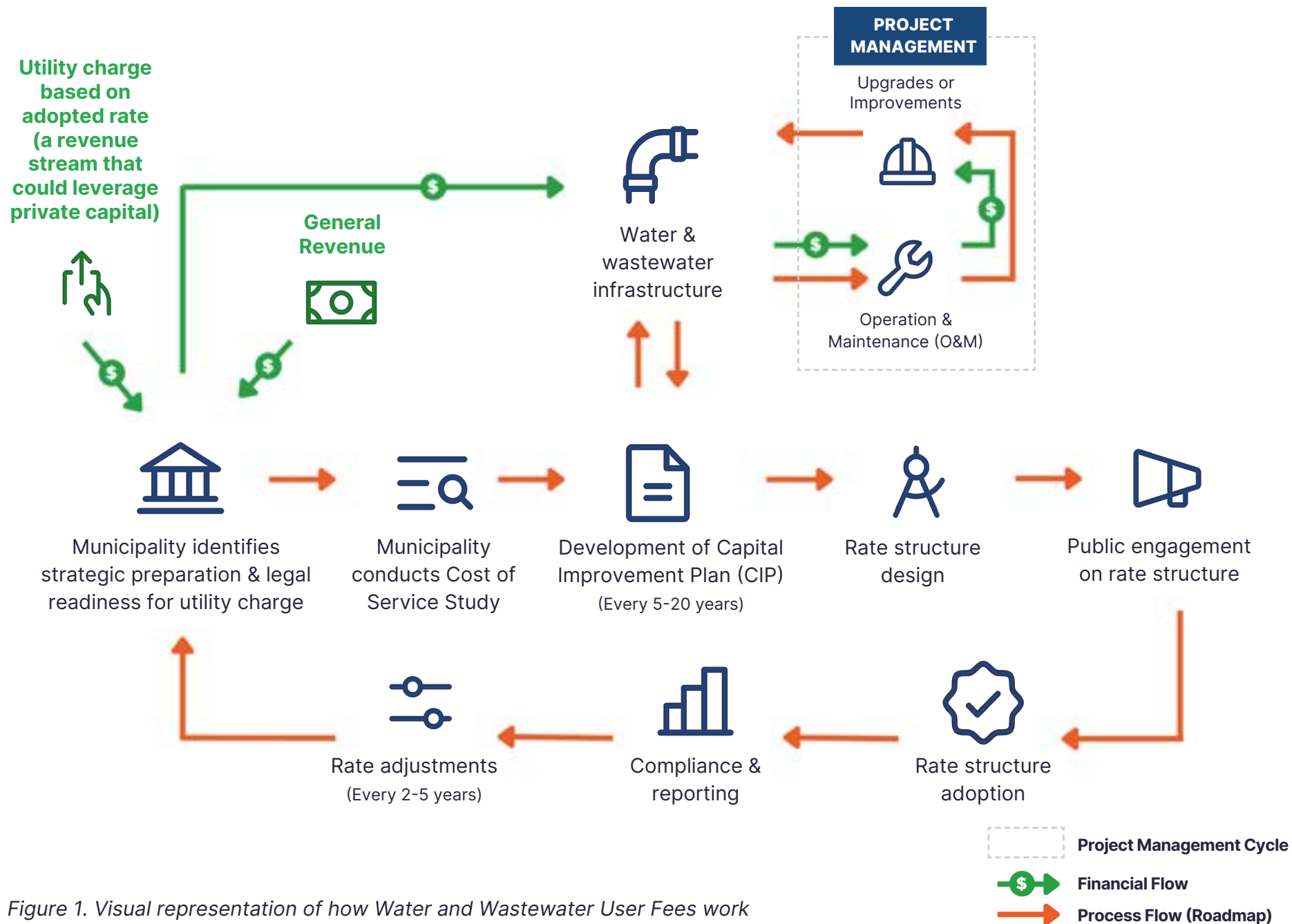


Figure 1. Visual representation of how Water and Wastewater User Fees work

Examples

The majority of municipalities in most provinces have adopted full-cost water and wastewater rate structures to fund the treatment, delivery, and safe return of water while encouraging conservation. [Winnipeg \(MB\)](#) sets municipal water and wastewater rates that residential users pay per cubic metre of water consumed and sewer treated. These fees cover city water supply, collection, and treatment services, and are approved annually as part of the City's utility rates structure.³ [Vaughan \(ON\)](#) sets combined water/wastewater rates per cubic metre and levies a separate annual stormwater charge, with revenues dedicated to water quality monitoring, leak detection, and maintenance of stormwater ponds and erosion controls. [Vancouver \(BC\)](#) applies seasonal metered rates, charging more per cubic metre during the high-demand summer months, together with a meter service charge that scales by pipe size to promote efficient use. These examples show that water and wastewater fee systems vary across provinces and municipalities, with each jurisdiction tailoring rate structures, to its own needs, infrastructure costs, and water conservation goals.

Relevance to Advancing Adaptation

Water and wastewater fees provide a dedicated source of funding for municipalities to maintain and upgrade essential water infrastructure as climate impacts become more frequent. Full-cost pricing and metered, conservation-oriented rate structures help municipalities cope with both heavier rainfall and more frequent droughts by financing infrastructure upgrades.⁴ For example, [Ottawa \(ON\)](#) has designed its four-tier water rate system to generate predictable revenue for long-term infrastructure renewal

while rewarding water conservation. The tiers reset every 30 days: Tier 1 covers the first 6 cubic metres at the lowest rate (\$1.345/m³), with rates increasing through Tier 2, Tier 3, and Tier 4, which applies to consumption above 180 cubic metres per month at \$3.313/m³ (nearly 2.5 times the base rate).⁵ Revenue from these rates are allocated to projects such as upsizing storm sewers and upgrading wastewater treatment capacity to handle the more intense rainstorms and river flooding projected to increase in the region.⁶ By linking higher water use to higher charges and dedicating the proceeds to climate-resilient upgrades, Ottawa and other municipalities can steadily invest in stronger pipelines, expanded treatment plants, and improved stormwater management without relying solely on property taxes. This approach shows how a well-structured fee mechanism can both reduce demand pressures and finance the capital projects needed to adapt to more extreme and unpredictable climate conditions.

Accessibility

User fees for water and wastewater services are universally accessible: every Canadian province's general municipal and utility legislation authorizes fee-setting for water supply and sewage treatment, and virtually all Canadian municipalities operating these services already exercise this authority. This places water and wastewater fees among the most administratively accessible fiscal tools in this catalogue.

The statutory basis is straightforward across jurisdictions. In Ontario, s. 391(1) of the Municipal Act, 2001 provides general fee and charge authority for municipal services,⁷ and the Ontario Water Resources Act supplies the environmental permitting framework

within which wastewater systems operate.⁸ Ontario is distinguished, however, by a financial-planning discipline that functions as a de facto rate-setting standard: s. 30 of the Safe Drinking Water Act, 2002 requires municipal drinking water system owners to prepare “financial plans” as a condition of holding or renewing a municipal drinking water licence,⁹ and Ontario Regulation 453/07 (made under s. 30) specifies the plan requirements.¹⁰ Under s. 2(2)(ii) of the regulation, the financial plans must apply for a period of at least six years; under s. 2(1), they must be approved by council resolution that indicates the drinking water system is financially viable; and under s. 2(4), they must itemize projected revenues (water rates, user charges, other), expenses (amortization, interest, other), and the resulting annual and accumulated surplus or deficit. While the regulation does not itself mandate full cost recovery, the viability requirement combined with the mandatory itemization produces a de facto full-cost-recovery discipline: rates must be set high enough that the plan can honestly represent the system as financially viable over the six-year horizon.

In British Columbia, s. 194 of the Community Charter authorizes fees for services including water and sewer,¹¹ with parallel authority available for regional districts under s. 397 of the Local Government Act.¹² In Alberta, general municipal fee and service-rate authority under the Municipal Government Act supports water and wastewater utility rate-setting.¹³ In Manitoba, The Municipal Act provides equivalent general fee authority. Atlantic provincial legislation (Nova Scotia’s Municipal Government Act¹⁵; New Brunswick’s Local Governance Act,¹⁶ notably s. 10(6)(d)&(e) on bylaw fee and user charge authority) supplies equivalent authority.

The availability of incitative rate structures is not uniform: in Quebec, for example, the tariff must reflect the benefit received, which prevents the adoption of increasing block rates (Loi sur la fiscalité municipale arts. 244.1-244.10).¹⁷ Municipalities in provinces with broader rate-setting authority have more latitude to deploy steeply tiered conservation pricing.¹⁸

Because the authority is universal and well-exercised, the climate-adaptation opportunity lies not in enabling new legal authority but in rate-structure design. Implementation choices (tiered volumetric rates that signal conservation, impervious-surface-based stormwater charges, dedicated climate-adaptation reserve contributions within the rate base, and cross-subsidy protections through low-income rebate programs) determine whether water and wastewater utilities can sustain the capital investments required for climate-resilient systems while maintaining affordability. Ontario’s Regulation 453/07 financial-planning model is particularly valuable as a replicable discipline: its six-year planning horizon, mandatory disclosure of projected revenues and expenses, and council-resolution viability attestation together create a governance structure well-suited to long-term capital planning for climate adaptation, and it is amenable to broader adoption or adaptation by other provinces.

Feasibility

The feasibility of implementing or adjusting water and wastewater fees is generally high because most municipalities in most provinces already have metered billing systems and administrative processes

in place. Shifting to different pricing mechanisms typically requires a council bylaw and a public consultation process rather than major technical upgrades, meaning the transition can be relatively straightforward and easy to implement. In addition, as provincial legislation across Canada generally allows municipalities to recover operating and capital costs for water systems through user fees this provides the necessary legislative foundation. Moreover, since the rate structures can be adjusted incrementally on a periodic basis, municipalities can phase in changes to improve public acceptability. Overall, the combination of existing infrastructure, legal clarity, administrative readiness, and incremental adjustability makes fee-based funding one of the most feasible approaches for financing climate-resilient water infrastructure.

Risk

Water and wastewater fees can carry several important risks that municipalities must manage carefully. Affordability is a primary concern, as higher rates can disproportionately affect low-income households, seniors, or larger families with limited ability to reduce consumption. These equity challenges can be addressed through rate modifications, utility assistance programs, or targeted rebates.^{19,20} For example, Toronto operates a low-income water rebate program providing a 30% reduction on charges for eligible low-income seniors and persons with disabilities whose annual consumption is below 400 cubic meters.²¹ Municipalities considering rate increases to fund climate adaptation should pair them with targeted affordability mechanisms to avoid shifting adaptation costs onto those least able to pay. In addition, political resistance to rate increases can also delay necessary investments, leading to deferred maintenance and increasing

long-term vulnerability to climate impacts such as extreme rainfall or wastewater overflows. There is also administrative risk in small municipalities where limited staff capacity may create challenges with financial modelling or rate-setting updates. Therefore, these risks highlight the need for equitable rate structures, affordability programs, transparent communication about infrastructure needs, and robust long-term financial planning to ensure that user-fees remain equitable and sustainable.

Scalability

The implementation of water and wastewater fees are scalable because municipalities can modify their rate structures (e.g., fixed charges, volumetric rates, or tiered pricing) to ensure full cost recovery and fund or finance long-term resilience projects. The funding mechanism is also scalable across infrastructure types, supporting drinking-water treatment, wastewater treatment, stormwater upgrades, groundwater monitoring, and climate-resilient infrastructure. The predictable revenue stream of regulated utility fees supports borrowing capacity, and many municipalities have unlocked private capital to finance water and wastewater operations at scale. Water utilities can be structured as ring-fenced entities, which can help attract infrastructure investors. Climate adaptation surcharges within the rate base could fund further resilience upgrades, potentially financed by a third-party private capital provider. Over time, municipalities can expand rate structures to incorporate stormwater charges or climate-adaptation surcharges, allowing the system to evolve as needs become more complex. This flexibility makes this mechanism a robust, scalable solution for financing resilient water and wastewater infrastructure.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Dedicated, continuous revenue stream funding infrastructure upgrades and conservation	The tool directly supports adaptation-related infrastructure while also encouraging conservation through pricing signals.
Economic Efficiency	High	+1	Existing metering systems and billing structures often already in place	It is highly efficient because revenue collection is built on established systems with low marginal administrative cost.
Equity & Fairness	Medium	0	Affordability concerns for low-income households identified	The beneficiary-pay model is strong, but affordability concerns remain unless mitigation measures are included.
Political Acceptability	Medium	0	Political resistance to rate increases noted in brief	Water and wastewater fees are generally accepted, though periodic rate increases can trigger resistance and delays.
Feasibility (Admin/Legal)	High	+1	Clear municipal authority and widespread existing systems	The tool is highly feasible because municipalities already have the legal authority, infrastructure, and administrative familiarity to implement it.
Coherence (Portfolio Fit)	High	+1	Integrated with asset management, rate-setting, and utility finance systems	It aligns strongly with long-term asset management, full cost recovery, and broader municipal finance frameworks.

Best Use Context

Water and wastewater fees are most effective as a foundational funding mechanism embedded in normal utility operations. They are especially well suited to municipalities seeking stable, long-term funding for incremental adaptation and infrastructure renewal, even where growth pressures are limited.

Context Factor	Relevance	Notes
Municipal Size	High	Applicable across all sizes; stronger revenue base in larger systems
Administrative Capacity Required	Low	Built on existing billing and utility management systems
Development Pressure	Low	Not dependent on growth; based on ongoing service demand
Climate Risk Targeting	Medium	Supports broad infrastructure adaptation but not highly targeted interventions
Fiscal Flexibility Required	Medium	Requires political willingness to adjust rates over time

Recommended Citation

Tóth, A., Ma, K., Meaney, M., Jackson, E., Tremblay-Racicot, F., Couture, J., Duguay, V., Henstra, D., Thistlethwaite, J., Ewart, T., & Stein, N. (2026). *Water and Wastewater Fees. In Catalogue of Fiscal Tools to Advance Adaptation*. ICLEI Canada.

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Category

Reserve Funds



Geography/ Location

AB, BC, NS, ON

Municipality Size

All



Tier

Foundation



Constraints

None

Administrative Capacity Required

Low



Fiscal Tool Brief: Water, Wastewater & Stormwater Reserve Funds

Water, wastewater, and stormwater reserve funds help municipalities maintain, repair, and upgrade essential utility infrastructure while avoiding sudden rate increases.

Water, wastewater, and stormwater reserve funds are dedicated accounts that municipalities use to manage the financial needs of their utility systems. These reserves are typically supported by user-fees, utility rates, and development-related charges rather than property taxes. Their main role is to ensure that essential water infrastructure, treatment plants, distribution networks, sewer systems, and stormwater assets can be maintained and upgraded without creating sudden rate increases for residents and businesses. Municipalities contribute to these reserves through planned annual allocations, operating surpluses, or one-time revenues such as provincial¹ and federal^{2,3} grants.



The funds are then drawn on to cover unexpected repairs, address cost spikes during severe weather, or support capital projects identified through asset management plans. Since water and wastewater services must follow full cost recovery principles in many provinces,⁴ these reserves help maintain financial stability and regulatory compliance.





Figure 1. Visual representation of how Water, Wastewater, and Stormwater Reserve Funds work

Examples

Several municipalities have implemented this fiscal tool to support long-term infrastructure planning. For example, [Middlesex Centre \(ON\)](#) maintains separate water, wastewater, and stormwater reserve funds through its reserve and reserve fund policy. In the policy, deficits are funded through reserve drawdowns with repayment requirements if balances are insufficient. The municipality incorporates dedicated charges directly into monthly water, wastewater, and stormwater rates, for example, in 2025 a 5/8" residential meter includes monthly contributions of \$18.54 (water), \$19.88 (wastewater), and \$17.05 (stormwater) to support long-term asset renewal.⁵ These reserves are directly tied to the municipality's asset management plan and are reviewed annually to ensure adequate funding levels for future capital needs. [East Hants \(NS\)](#) operates a dedicated water utility reserve under its 2024 Special Reserves Policy.⁶ The municipality funds the reserve through annual contributions equal to the water utility's depreciation expense, aligning reserve growth with the actual lifecycle cost of water system assets. Funds support capital renewal, regulatory compliance upgrades, and rate stabilization. Since depreciation is embedded in the approved utility rate model, reserve contributions increase automatically as the asset base grows or as capital upgrades occur, creating a consistent and predictable method for building reserve capacity. [Courtenay \(BC\)](#) maintains multiple utility reserves, including a water utility reserve, sewer utility reserve, and storm drainage reserve, guided by its five-year financial plan.⁷ Each reserve is funded through utility user fees, and contributions tied to asset management targets. Courtenay's storm drainage reserve is used to support both traditional capital renewal and green stormwater infrastructure, reflecting recent shifts in provincial asset management guidance.⁸ Annual reserve transfers are

determined through the City's 20-year utility financial model, allowing the municipality to track whether reserves keep pace with projected infrastructure renewal needs. Other municipalities have established water, wastewater or stormwater reserve funds include [Oakville \(ON\)](#), [Thunder Bay \(ON\)](#), [Camrose \(AB\)](#), and [St. Albert \(AB\)](#).

Relevance to Advancing Adaptation

These funds help municipalities prepare for climate impacts that place increasing strain on underground infrastructure, treatment systems, and stormwater networks. Since these reserves accumulate over time through utility rates or one-time funding, they give municipalities the ability to act before systems fail, rather than relying on emergency allocations after damage occurs. Consider a small municipality facing more frequent rainfall events, where updated historical Intensity-Duration-Frequency (IDF)⁹ curves show 25% higher peak flows by 2050. With a stormwater reserve holding \$4 million, the municipality can accelerate a package of adaptation upgrades such as replacing an undersized trunk sewer in a flood prone neighbourhood, rehabilitating 3 km of clay sewer pipe vulnerable to inflow and infiltration, and constructing two new bioswales to reduce surface runoff near a school and hospital. Without a dedicated reserve, these works would likely be deferred or financed through more expensive short-term borrowing. Similarly, water reserves help utilities manage climate-related supply and revenue volatility. During drought years, a community may impose outdoor watering restrictions that reduce consumption by 10–20%, creating shortfalls in rate supported revenue.¹⁰

A well-planned water reserve allows the municipality to maintain operations and continue funding adaptation measures, such as adding backup wells, rehabilitating aging reservoirs, or installing

monitoring systems to track source water stress, without abrupt rate increases. Lastly, these reserves align with evolving provincial asset-management requirements that emphasize climate risk, lifecycle costing, and renewal planning.^{11,12} By connecting reserve funds to asset management plans and multi-year utility models, municipalities ensure that adaptation is built directly into the financial structure of essential water and stormwater services.

Accessibility

Water, wastewater, and stormwater reserve funds are widely accessible since municipalities can create them through a local bylaw and fund them through existing utility rates. No provincial or federal approvals are required, and the approach aligns with full cost recovery principles used in most Canadian water systems.^{13,14} This makes reserve funds one of the easiest fiscal tools for municipalities to adopt, regardless of size. Accessibility depends mainly on the strength of the local rate base. Larger municipalities can build reserves quickly, while small or rural communities with limited growth may only generate modest annual contributions. To address this, many municipalities phase in contributions gradually or adjust rate structures to balance household affordability with long-term infrastructure needs.

Feasibility

One of the main feasibility challenges is the municipality's ability to generate steady and predictable utility revenues. Communities with a small rate base, aging pipeline, or limited growth often struggle to accumulate enough reserve funding to support major climate-related upgrades. Feasibility improves when municipalities link reserve contributions to multi-year financial plans, asset-management requirements, and external grants. Provinces

increasingly require utilities to plan for lifecycle costs and climate risks, for example, Ontario's O. Reg. 588/17 mandates long-term asset-management planning for core infrastructure.¹⁵ One-time transfers from programs such as the [Canada Housing Infrastructure Fund](#) can also be directed into dedicated reserves, giving municipalities additional capacity to fund adaptation focused upgrades.

Risk

A key risk with water, wastewater, and stormwater reserve funds is that contributions may not keep pace with increasing infrastructure pressures driven by climate change. Increased rainfall intensity, drought-related supply stress, and heat impacting pipeline degradation can accelerate deterioration, leaving utilities with renewal costs that exceed planned reserve levels. Secondly, financial and revenue stability risks also emerge when rate-supported utilities experience consumption volatility. During drought conditions, water use can decline by 10–20%, reducing operating revenues and limiting the ability to maintain scheduled reserve contributions.¹⁶ Furthermore, governance and policy risks arise if reserve fund bylaws lack clarity or allow borrowing for non-utility purposes. Without strict restrictions and repayment rules, reserves may be drawn down to address budgetary pressures, reducing funds available for critical adaptation investments. Lastly, reputational and political risks may also occur if reserve balances appear insufficient to support climate readiness commitments. When major failures occur, such as repeated sewer backups or water main breaks during extreme events, the public may question whether the municipality managed its reserves effectively. Transparent policies, annual reporting, and alignment with asset management plans are key to maintaining confidence within this fiscal tool.

Scalability

In general, these reserve funds can scale effectively because municipalities can adjust contributions as their rate base grows or as new capital needs emerge. Scalability improves when reserve strategies are linked to long-term asset plans and supported by outside funding, such as provincial programs that encourage lifecycle planning and climate readiness. For example, British Columbia's [Asset Management for Sustainable Service Delivery](#) framework, which promotes steady funding for infrastructure renewal. Scalability is also strengthened when utilities improve forecasting and cost tracking, allowing reserve contributions to adjust as climate pressures increase. A few case studies show that utilities with detailed renewal forecasting, such as those participating in the [National Water and Wastewater Benchmarking Initiative](#), are better able to scale reserve funding to match future capital needs.

Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	Medium	+1	Direct funding through dedicated reserves	Provides stable, predictable funding for adaptation-related infrastructure through asset management planning.
Economic Efficiency	High	+1	Low complexity through existing utility systems	Uses an efficient cost-recovery model with low incremental administrative burden and stable revenues.
Equity & Fairness	High	0	User-pay model with affordability concerns	Aligns costs with service users, but affordability concerns can arise without mitigation measures.
Political Acceptability	High	+1	Clear linkage between fees and services	Strong benefit-principle alignment supports transparency and public acceptability.
Feasibility (Admin/Legal)	High	+1	Municipal by-law authority; standard practice	Widely implementable through existing municipal authority and utility finance systems.
Coherence (Portfolio Fit)	High	+1	Integrated with asset management plans	Fits strongly with lifecycle planning, regulatory requirements, and broader municipal finance systems.

Best Use Context

Most effective in municipalities with established utility systems and asset management planning. It is particularly well suited to embedding adaptation into routine capital planning rather than financing large, one-time projects.

Context Factor	Relevance	Notes
Municipal Size	Medium	Larger municipalities build reserves faster; smaller ones face slower accumulation.
Administrative Capacity Required	Low	Can be managed within existing utility finance systems.
Development Pressure	Low	Not dependent on growth; funded through ongoing user fees.
Climate Risk Targeting	Medium	Supports adaptation broadly but not highly targeted to specific risks.
Fiscal Flexibility Required	Medium	Requires stable rate-setting capacity and long-term planning discipline.

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