



**RESORT MUNICIPALITY OF WHISTLER**

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## STAFF REPORT TO COUNCIL

**PRESENTED:** November 5, 2024 **REPORT:** 24-100  
**FROM:** Climate and Environment; and  
Facility Construction Management **FILE:** 1855-20-0551  
**SUBJECT:** GRANT APPLICATIONS – MEADOW PARK SPORTS CENTRE ENERGY AND  
BUILDING UPGRADES

### RECOMMENDATION FROM THE CHIEF ADMINISTRATIVE OFFICER

**That** the recommendation of the General Managers of Climate Action, Planning and Development Services and Infrastructure Services be endorsed.

### RECOMMENDATIONS

**That** Council endorse and authorize staff to apply to the following two grant programs on behalf of the Resort Municipality of Whistler (RMOW) to conduct energy and envelope upgrades to Meadow Park Sports Centre:

1. The Federation of Canadian Municipalities' Green Municipal Fund (GMF) Community Buildings Retrofit initiative, as described in the GMF Community Buildings Retrofit Application Guide attached as Appendix A to Administrative Report 24-100; and
2. The Government of Canada's Green and Inclusive Community Buildings (GICB) Program, as described in the GICB Application Guide attached as Appendix B to Administrative Report 24-100; and

**That** Council direct staff to fund the RMOW cost share of eligible costs for both grants (if the applications are successful) from the General Capital Reserve as outlined in the Budget Considerations section of Administrative Report 24-100; and further

**That** Council direct staff to provide overall grant management in accordance with the GMF and GICB grants' guidance, if the applications are successful.

### PURPOSE OF REPORT

The purpose of this report is to have Council endorse two grant applications to conduct energy and building envelope upgrades to Meadow Park Sports Centre (MPSC); the Green Municipal Fund (GMF) Community Buildings Retrofit initiative (CBR) from the Federation of Canadian Municipalities (FCM) and the Green and Inclusive Community Buildings (GICB) Program from the Government of Canada (attached as Appendices A and B). The purpose is also to receive Council support in committing the necessary reserves for the RMOW share of costs if the grant applications are successful.

Information Report Administrative Report (Decision or Direction)

## DISCUSSION

### Background

The MPSC offers a variety of fitness, leisure and recreation opportunities to Whistler residents and visitors. The building was originally constructed in two phases beginning with the arena opening to the public in 1993 followed by the fitness centre and aquatic facility in 1994. The fitness centre was expanded into the second floor in 1996 to address the growing demand and increased variety of fitness services offered in the facility. The facility receives close to 500,000 visitors annually and is regarded as a core community asset.

At the same time, the MPSC is consistently the second largest source of RMOW's corporate greenhouse gas (GHG) emissions. In 2023, GHG emissions from MPSC totalled 399 tCO<sub>2e</sub>, making up 18 per cent of RMOW's annual corporate GHG emissions.

### GHG Emissions at MPSC

On January 23, 2024 [Information Report 24-005](#), including the [RMOW Corporate GHG Reduction Plan](#) (GHG Reduction Plan) was presented to Council. The GHG Reduction Plan outlined four pathways to reduce RMOW's corporate GHG emissions by 50 per cent from 2007 levels by 2030. Pathway three of this plan is to reduce GHG emissions at MPSC from its current annual emissions of 399 tCO<sub>2e</sub> to 21 tCO<sub>2e</sub>. This can be achieved by implementing energy efficiency measures and fuel switching from fossil gas to low carbon fuel sources.

In 2022 a feasibility study was conducted as part of the RMOW's application to the Clean BC Communities Fund (Clean Fund) to identify energy efficiency and fuel switching measures that could be implemented at MPSC to reduce GHG emissions (Feasibility Study, Appendix C). The study explored a series of options to upgrade MPSC's mechanical systems and building envelope including installing heat recovery equipment on the arena-side ventilation systems from the refrigeration plant's desuperheater, installing cross-connections between the arena-side heat recovery system and pool's heating systems, upgrading the envelope of the building to address known air leakage issues and addition of an electric boiler to the pool's heating systems. The study recommended a combination of these measures which would reduce MPSC's annual GHG emissions by 69 per cent from 2019 levels, getting the building almost all the way to the targeted emissions outlined in the GHG Reduction Plan.

### MPSC Building Envelope

In 2015, a Wall and Window Condition Assessment Report (Condition Assessment Report) was conducted by Read Jones Christoffersen Ltd. (RJC) (Appendix D) following an investigation and inventory of the building system which identified several building deficiencies including the exterior wall and window assemblies.

Several critical replacement or rejuvenation projects identified in the Condition Assessment Report have been completed, including the natatorium dehumidifier replacement, the arena's refrigeration safety code upgrades, roof replacement and arched window replacement. However, as recommended in the Condition Assessment Report and confirmed in a subsequent engineer's review, the next identified critical rejuvenation project includes replacement of the existing exterior insulating and finishing wall system, metal cladding wall assemblies and restoration of the corroded steel stud framing around the pool. Modification to the masonry base of the wall along the arena and administration building is also recommended. The Condition Assessment Report informed the envelope repairs described in the Feasibility Study.

## MPSC Retrofit Project Finances

The RMOW has previously pursued two grant opportunities to assist with the costs of implementing the necessary energy and envelope upgrades at MPSC, both of which were unsuccessful. The first grant opportunity was the Clean Fund, presented to Council on May 24, 2022 [Administrative Report No. 22-076](#). A Feasibility Study was conducted as part of this application (attached as Appendix C), which was used as the basis for the scope of work applied for in all subsequent grant applications. The (unsuccessful) second grant application was the first intake for the GICB grant in fall 2023.

Since the RMOW was not successful on these applications, a review of other funding sources was carried out. Another grant scan was conducted in mid-2024 to identify additional potential funding sources for this project. The scan results indicated that the GMF grant was a good match for this project. After the grant scan was conducted, the Government of Canada announced another intake for the GICB grant and staff determined that the RMOW should apply for this grant again.

## Analysis

To ensure responsible asset management, extend the useful life of the building, and reduce GHG emissions, both envelope and energy upgrades are necessary at MPSC. While this Council report ultimately seeks Council support for the grant applications, it also outlines the budget considerations for the RMOW should one or more of the grant applications be successful as well as a scenario where none of the grant applications are successful.

Outlined below is the scope of the MPSC retrofit project. These retrofit measures are further described in the Feasibility Study conducted as part of Clean Fund grant application (Appendix C).

### Scope of MPSC Retrofit Project

#### *Arena-Side Heat Recovery and Interconnection between Arena and Pool*

The first measure includes the installation of a heat recovery chiller within the arena-side. This measure reduces GHG emissions through the improvement of energy efficiency. By retaining as much heat within the building as possible during winter conditions and operating a heat recovery chiller at a favorable coefficient of performance, the heating demand of the building can be met with a lower quantity of energy as well as by a less emission-intense energy type.

After the implementation of the arena side heat recovery system, the opportunity would exist to connect the arena's new heat recovery system to the pool's heating system. This would effectively allow heat to be recovered from the arena's desuperheater and used to heat the pool. This measure reduces GHG emissions from the improvement of energy efficiency. By allowing the heat recovery system described above to provide heating and cooling to a greater variety of spaces, the building's heating demand can be met by the heat recovery system more often.

#### *Envelope Upgrade*

The opportunity exists to have the envelope of the building upgraded to mitigate known air leakage issues around the glazing on the arena-side and small cracks admitting outside air in the pool area. This measure would match the envelope upgrades including the replacement of windows along the upper wall of the arena and replacement of specific sections of the walls around the building.

#### *Electric Boiler*

The pool's heating system is known to have issues using its air-source heat pump in cold outdoor conditions, making the prospect of using an electric boiler as an intermediate source of electrified heating attractive, since Whistler experiences below-freezing temperatures for a significant portion of the year. This measure would involve placing an electric boiler in the pool's mechanical room and using

the electric boiler as an intermediate source of heat for the pool before calling upon the fossil fuel-fired condensing boilers as back-up. The system would prioritize heating the pool from excess heat recovered by dehumidifying the pool and from the geo-field. The system would then call upon the air-source heat pump to top up heat to the pool if outdoor weather conditions are favorable before finally activating the electric boilers. The amount of achievable savings from this measure would scale with the amount of electric boiler heating capacity installed. Savings in the Feasibility Study assume the installation of a 50 kW electric boiler. This measure would not necessarily seek to replace the existing boiler plant with electric boilers, but rather to have a small amount of electric boiler capacity available to mitigate a base load of fossil gas-supplied heating to the pool in winter conditions.

Table 1 provides a summary of the GHG savings and capital cost associated with each of the retrofit measures outlined above as well as the total GHG savings and capital cost for the entire project.

Table 1. Summary of MPSC Capital Project Cost and GHG Savings from Feasibility Study

Retrofit measures	GHG savings *based on 2019 data	Capital Cost (total cost not incremental)
Arena-Side Heat Recovery and Interconnection between Arena and Pool	54% (370 → 170 t CO <sub>2</sub> e)	\$1,700,000
Envelope Upgrade	14% (370 → 320 t CO <sub>2</sub> e)	\$10,000,000
Electric Boiler	14% (370 → 320 t CO <sub>2</sub> e)	\$300,000
<b>All retrofit measures [heat recovery, interconnection, envelope upgrade and electric boiler]</b>	<b>69% (370 → 115 t CO<sub>2</sub>e)</b>	<b>\$12,000,000</b>

The budget considerations section below outlines the financial scenarios for this project in each of the potential grant outcomes.

If the grant applications are successful, construction is anticipated to begin in the spring of 2025 and continue until 2029, with most of the work commencing in 2026.

GMF Community Buildings Retrofit Initiative

The FCM created the CBR initiative to help municipalities retrofit community buildings while managing their capital expenditures and minimizing ongoing operating and maintenance costs. There are several funding streams under the CBR depending on the project stage. Since the RMOW has already conducted a Feasibility Study as part of the Clean Fund application, the RMOW qualifies for the GHG Impact Retrofit Capital Project stream. This funding opportunity is a combined grant and loan for up to 80 per cent of eligible project costs. The grant portion covers 25 per cent of this, while the loan makes up the remainder. The municipality is required to cover the 20 per cent of project costs not covered by the grant or loan and is required to repay the loan over a predetermined amortization period.

## GICB Program

The Government of Canada's GICB program supports retrofits, repairs or upgrades of existing publicly accessible community buildings and the construction of new publicly accessible community buildings for underserved and high-needs communities across Canada. The funding opportunity is a grant for up to 60 per cent of eligible costs. The RMOW is required to cover the remaining 40 per cent of the cost.

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## **POLICY CONSIDERATIONS**

### **Relevant Council Authority/Previous Decisions**

[January 23, 2024, Information Report No. 24-005](#): These grant applications and proposed funded activities directly support the GHG Reduction Plan.

This application also supports the [2022 Big Moves Climate Action Implementation Plan](#), Big Move 5, "Make Existing Buildings Better", with the 2030 goal that emissions are reduced by 20 per cent from residential buildings and by 40 per cent from large commercial buildings.

- Key initiative 5.3: Demonstrate RMOW leadership for municipal building efficiencies and GHG emission reductions by identifying retrofit opportunities in all corporate buildings, developing a timeline and implementing.

Past Council reports related to grant applications for this scope of work includes the [May 24, 2022, Administrative Report No. 22-076](#), MPSC Energy Performance Upgrades Clean Fund Application.

### **2023-2026 Strategic Plan**

The 2023-2026 Strategic Plan outlines the high-level direction of the RMOW to help shape community progress during this term of Council. The Strategic Plan contains four priority areas with various associated initiatives that support them. This section identifies how this report links to the Strategic Plan.

### **Strategic Priorities**

Housing

*Expedite the delivery of and longer-term planning for employee housing*

Climate Action

*Mobilize municipal resources toward the implementation of the Big Moves Climate Action Plan*

Community Engagement

*Strive to connect locals to each other and to the RMOW*

Smart Tourism

*Preserve and protect Whistler's unique culture, natural assets and infrastructure*

Not Applicable

*Aligns with core municipal work that falls outside the strategic priorities but improves, maintains, updates and/or protects existing and essential community infrastructure or programs*

### **Community Vision and Official Community Plan**

The Official Community Plan (OCP) is the RMOW's most important guiding document that sets the community vision and long-term community direction. This section identifies how this report applies to the OCP.

**6.1 Goal:** Provide effective and appropriate municipal infrastructure (including facilities and amenities) that minimizes taxpayer costs by making a financial investment to upgrade building systems to an increased energy performance reducing GHG emissions and operating costs.

**10.1. Goal:** Municipal decision-making is well-structured to achieve energy efficiency goals and GHG reduction targets.

**10.3. Goal:** Substantially reduce GHG emissions from buildings and infrastructure.

## BUDGET CONSIDERATIONS

The estimated capital cost to complete the above-described retrofit project is \$12Mm. The tables below outline the financial scenarios for each potential grant outcome.

### Scenario 1: RMOW is successful on both the GMF and GICB grants.

Grant total	\$8,160,000
Loan total	\$2,880,000 + interest
RMOW total	\$960,000 + loan repayment

If the RMOW is successful on both grant applications, the grant funds can be stacked as outlined above. The RMOW would be required to pay \$960,000 between 2025 and 2029 as well as repay a loan in the amount of \$2,880,000 plus interest, over a 20-year amortization period.

### Scenario 2. RMOW is successful on the GMF grant, but not the GICB grant.

Grant total	\$2,400,000
Loan total	\$7,200,000 + interest
RMOW total	\$2,400,000 + loan repayment

If successful on only the GMF grant, the RMOW would be required to pay \$2,400,000 between 2025 and 2029 as well as repay a loan of \$7,200,000 plus interest over a 20-year amortization period.

### Scenario 3. RMOW is successful on the GICB grant but not the GMF grant

Grant total	\$7,200,000
Loan total	\$ -
RMOW total	\$4,800,000

If successful only on the GICB grant, the RMOW would be required to pay \$4,800,000 between 2025 and 2029.



Scenario 4. RMOW is unsuccessful on both the GMF and GICB grants

Grant total	\$ -
Loan total	\$ -
RMOW total	\$12,000,000

If unsuccessful on both grants, the RMOW would be responsible for the total project cost of \$12Mm, but the schedule may need to be adjusted to match budget constraints (not all work may be completed by 2029). Note that this scenario is provided for information purposes only. Staff are not requesting Council to commit the RMOW to paying for all of the \$12Mm upgrade as part of this report, but portions of this work will be included for consideration in the upcoming Five-Year Financial Plan.

When the results of the grant applications are known, staff will return to Council with an update on the budget and schedule for this project.

**LÍLWAT NATION & SQUAMISH NATION CONSIDERATIONS**

The RMOW is committed to working with the Lílwat People, known in their language as *L'il'wat7úl* and the Squamish People, known in their language as the *Skwxwú7mesh Úxwumixw* to: create an enduring relationship; establish collaborative processes for planning on unceded territories, as currently managed by the provincial government; achieve mutual objectives and enable participation in Whistler's resort economy.

There are no specific considerations to include in this report.

**COMMUNITY ENGAGEMENT**

Level of community engagement commitment for this project:

- Inform     Consult     Involve     Collaborate     Empower

**REFERENCES**

- Appendix A – Green Municipal Fund Community Buildings Retrofit Application Guide
- Appendix B – Green and Inclusive Community Buildings Application Guide
- Appendix C – Meadow Park Sports Centre Clean BC Communities Fund Feasibility Study Report
- Appendix D – Meadow Park Sports Centre Wall and Window Condition Assessment

**SUMMARY**

The RMOW proposes to apply for over \$10Mm in grant funding and loans from the FCM and Government of Canada to conduct necessary energy and envelope repairs at MPSC. Staff are seeking Council endorsement and authorization to apply to the GMF and GICB grants and if successful, direct staff to provide overall grant management in accordance with grant guidance. In addition, staff seek

Council endorsement to commit the necessary cost share portion of these grants from the General Capital Reserve if the grant applications are successful.

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**SIGN-OFFS**

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