



# 2021 PROJECT FUNDING REQUEST FORM

Number: **21180**

Project Name: **Recreation Waste Heat Recovery Systems**

Project Cost: **\$47,000**

Commission: Community & Fire Services

New Asset/Expansion

Department: Recreation Services

Useful Life: 15 Pre Approval: ☐

Project Mgr: Ryan Hanna

Category: Minor

Ward(s): CW ☐ 1 ☒ 2 ☐ 3 ☒ 4 ☐  
5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

## DETAILED DESCRIPTION (SCOPE OF PROJECT):

Solar Ontario was commissioned to inspect and evaluate four (community centre) swimming pools and provide an initial mechanical and economic feasibility report about the installation of pool water heat recovery systems. All of the pools were dropping water at volumes that exceeded the amounts necessary by code. In some cases the volume of water dropped was several times the necessary amount. Providing a device/machine that controls and regulates the exchange of water from the pools can and will dramatically reduce and potentially eliminate the large excesses of water being dropped from the pools.

**BUILDING MARKHAM'S FUTURE TOGETHER:** Safe & Sustainable Community

| <u>PROJECT COSTS (\$)</u>  | <u>2021</u>   | <u>Future Phases</u> | <u>NOTES</u>   |
|----------------------------|---------------|----------------------|--|
| Cost/Quote:                | 39,187        | 0                    | Water Heat Recovery Systems capture lost heat from hot water going down the drain and uses it to pre-heat cold water entering the water heater. Energy is saved when using hot water at the same time it is flowing down the drain. Funding source: Markham Energy Conservation Office (MECO).<br>E3:<br>Pan Am annual savings \$3,414, payback 5.86 years<br>Thornhill annual savings \$5,223, payback 2.87 years |
| Internal Charges:          | 0             | 0                    |  |
| External Consulting:       | 7,000         | 0                    |  |
| Sub Total:                 | 46,187        | 0                    |  |
| HST Impact:                | 813           | 0                    |  |
| <b>Total Project Cost:</b> | <b>47,000</b> | <b>0</b>             |  |

| <u>SOURCE(S) OF FUNDING (\$)</u> | <u>Components</u> |                   |               |                  |                    | <u>Future Phases</u> |
|----------------------------------|-------------------|-------------------|---------------|------------------|--------------------|----------------------|
| <u>Funding Type</u>              | <u>Budget</u>     | <u>Consulting</u> | <u>Pan Am</u> | <u>Thornhill</u> | <u>Contingency</u> | <u>TOTAL</u>         |
| Other Internal                   | 47,000            | 7,123             | 20,352        | 15,225           | 4,274              | 46,974               |
| <b>TOTAL FUNDING</b>             | <b>47,000</b>     |                   |               |                  |                    | <b>46,974</b>        |

| <u>OPERATING BUDGET IMPACT</u> | <u>Personnel</u> | <u>Non Personnel</u> | <u>Revenues</u> | <u>Expenditures/(Revenues)</u> |
|--------------------------------|------------------|----------------------|-----------------|--------------------------------|
|                                | \$0              | -\$4,319             | \$0             | -\$4,319                       |

## DCA/LIFE CYCLE DETAILS

| <u>DCA</u>   | <u>Year</u> | <u>Amount</u> | <u>Amount in Study</u> | <u>Life Cycle</u>                      |
|--|-------------|---------------|------------------------|--|
| <u>Name</u>  |             |               |                        | Amount in Study: <input type="text"/>  |
|  |             |               |                        | Amount Incl HST <input type="text"/>   |
|  |             |               |                        | Year in the study <input type="text"/> |
| DCA and/or Life Cycle: Explain if there is a change in the year and/or cost: |             |               |                        |  |
|  |             |               |                        |  |

