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## Environmental Action Committee

### Date

2019/05/14

### Time

9:30 AM

### Location

Civic Centre, Committee Room A - Second Floor,  
300 Civic Centre Drive, Mississauga, Ontario, L5B 3C1

### Members

Matt Mahoney	Councillor - Ward 8 (Chair)
Stephen Dasko	Councillor - Ward 1 (Vice-Chair)
George Carlson	Councillor - Ward 11
Brad Bass	Citizen Member
Chelsea Dalton	Citizen Member
Lea Ann Mallett	Citizen Member
Pujita Verma	Citizen Member
Leena Baber	Peel Environmental Youth Alliance
Simran Persaud	University of Toronto Mississauga
Vacant	Group Representative/Stakeholder Member
Vacant	Group Representative/Stakeholder Member
Vacant	Group Representative/Stakeholder Member
Vacant	Group Representative/Stakeholder Member

### Contact

Dayna Obaseki, Legislative Coordinator, Legislative Services  
905-615-3200 ext. 5425  
[dayna.obaseki@mississauga.ca](mailto:dayna.obaseki@mississauga.ca)

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**AGENDA INDEX****1. CALL TO ORDER****2. APPROVAL OF AGENDA****3. DECLARATION OF CONFLICT OF INTEREST****4. MINUTES OF PREVIOUS MEETING**

4.1. Environmental Action Committee Minutes – April 16, 2019

**5. DEPUTATIONS**

5.1 Keith Burrows, Low Carbon Buildings Manager, The Atmospheric Fund to present on Heat Pumps

5.2. Jessica Wiley, Manager, Forestry to present on the Public Tree By-law

**6. PUBLIC QUESTION PERIOD - 15 Minute Limit (5 Minutes per Speaker)**

*Pursuant to Section 42 of the Council Procedure By-law 0139-2013, as amended:*

Environmental Action Committee may grant permission to a member of the public to ask a question of Environmental Action Committee, with the following provisions:

1. The question must pertain to a specific item on the current agenda and the speaker will state which item the question is related to.
2. A person asking a question shall limit any background explanation to two (2) statements, followed by the question.
3. The total speaking time shall be five (5) minutes maximum, per speaker.

**7. MATTERS TO BE CONSIDERED**

7.1. Group Member Appointments to the Environmental Action Committee

7.2. Environmental Action Work Plan

**8. INFORMATION ITEMS****9. OTHER BUSINESS****10. DATE OF NEXT MEETING**

Tuesday, June 11, 2019 at 9:30am  
Committee Room A, Civic Centre  
300 City Centre Drive  
Mississauga, ON L5B 3C1

**11. ADJOURNMENT**

# City of Mississauga

## Minutes



### Environmental Action Committee

#### Date

2019/04/16

#### Time

9:30 AM

#### Location

Civic Centre, Committee Room A - Second Floor,  
300 Civic Centre Drive, Mississauga, Ontario, L5B 3C1

#### Members Present

Matt Mahoney	Councillor - Ward 8
George Carlson	Councillor - Ward 11
Stephen Dasko	Councillor - Ward 1
Brad Bass	Citizen Member
Chelsea Dalton	Citizen Member
Lea Ann Mallett	Citizen Member
Pujita Verma	Citizen Member
Vacant	Group Representative/Stakeholder Member
Vacant	Group Representative/Stakeholder Member
Vacant	Group Representative/Stakeholder Member
Vacant	Group Representative/Stakeholder Member
Simran Persaud	University of Toronto Mississauga

#### Members Absent

Leena Baber	Peel Environmental Youth Alliance
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#### Staff Present

Andrea J. McLeod, Manager, Environment  
Lisa Urbani, Environment Research Assistant, Environment  
Jodi Robillos, Director, Parks & Forestry  
Dayna Obaseki, Legislative Coordinator, Legislative Services

#### Find it online

<http://www.mississauga.ca/portal/cityhall/environmentalactioncommittee>

1. **CALL TO ORDER** – 9:32 AM

Councillor Mahoney called the meeting to order in the absence of a Chair.

2. **APPOINTMENT OF THE CHAIR**

Ms. Obaseki, Legislative Coordinator, called for nominations for appointment of the Chair for Environmental Action Committee for the term ending November 14, 2022.

Councillor Carlson nominated Councillor Mahoney and Councillor Mahoney accepted the nomination.

No further nominations were received.

**RECOMMENDATION**

That Councillor Matt Mahoney be appointed Chair of the Environmental Action Committee for the term ending November 14, 2022 or until a successor is appointed.

Approved (Councillor Carlson)  
Recommendation EAC-0006-2019

*Councillor Mahoney took over as Chair for the remainder of the meeting.*

3. **APPOINTMENT OF THE VICE-CHAIR**

Councillor Mahoney, Chair of EAC, called for nominations for appointment of the Vice-Chair for Environmental Action Committee for the term ending November 14, 2022.

Councillor Carlson nominated Councillor Dasko and Councillor Dasko accepted the nomination.

No further nominations were received.

**RECOMMENDATION**

That Councillor Stephen Dasko be appointed Vice-Chair of the Environmental Action Committee for the term ending November 14, 2022 or until a successor is appointed.

Approved (Councillor Carlson)  
Recommendation EAC-0007-2019

4. **APPROVAL OF AGENDA**

Approved (C. Dalton)

5. **DECLARATION OF CONFLICT OF INTEREST** – Nil.

## 6. **MINUTES OF PREVIOUS MEETING**

### 6.1 Environmental Action Committee Minutes – February 19, 2019

Approved (B. Bass)

Jodi Robillos introduced herself as the Director to Parks and Forestry and provided a brief overview of the re-organization regarding the Environment Division.

## 7. **DEPUTATIONS**

### 7.1 Climate Smart Business Program

Brad Butt, Vice-President, Government & Stakeholder Relations, Mississauga Board of Trade (MBOT) provided an overview on the Climate Smart Business Program, noting benefits to the participating businesses.

Representatives from John Brooks Company Limited and Musket Transport highlighted the advantages and successes their companies have experienced since participating in the Climate Smart Business program.

#### RECOMMENDATION

That the deputation by Brad Butt, Vice-President, Government & Stakeholder Relations, Mississauga Board of Trade (MBOT) to speak on the Overview of Climate Smart Business Program be received.

Received (B. Bass)

Recommendation EAC-0008-2019

### 7.2 Sustainable Procurement Policy

Natalie Adams, Sustainable Procurement Coordinator provided an overview on the Sustainable Procurement Policy. The Policy was enacted in January 2018 as a three year implementation (2018-2020) and focuses on environmental, ethical and social aspects. The three main implementation goals are leadership, integration and impact.

Members of the Committee spoke to the matter and raised the following questions:

- Inquired if there has been any resistant from the internal staff and/or external clients;
- Product quality and availability;
- Inquired about green washing products; and
- Inquired if each department in the City has a green/environmental representative.

Ms. Adams responded to questions from the Members of the Committee;

- Noted there has been no resistant from internal staff or external clients and that the contract managers are in support of this type of inclusion into the procurement policy.

- Product quality and availability is ensured through fair bids competitions and by conducting thorough research sector by sector.
- Green washing products is a considered factor, however it goes beyond just the label (e.g. refillable pens vs pens with high recyclable parts, the latter is better option since many individuals lose their pens).
- Material Management Process is one wants to submit a bid and an evaluation is done to determine whether sustainability should be involved and the team would consist of the Coordinator (Ms. Adams), the buyer responsible for the purchase and their corresponding team.

#### RECOMMENDATION

That the deputation and associated presentation by Natalie Adams, Sustainable Procurement Coordinator to present on the Sustainable Procurement Policy be received.

Received (Councillor Carlson)  
Recommendation EAC-0009-2019

### 7.3 Smart City Master Plan

Anthea Foyer, Project Leader Smart Cities presented an overview on the Smart City Master Plan. The Plan's initiatives focus on creating vibrant, inclusive communities with a high quality of life by using technology to address urban challenges. Ms. Foyer discussed Living Labs that are test neighbourhoods that give the community a chance to provide feedback based on the pilot projects and use technology in the area.

#### RECOMMENDATION

That the deputation and associated presentation by Anthea Foyer, Project Leader Smart Cities to present on the Smart City Master Plan be received.

Received (P. Verma)  
Recommendation EAC-0010-2019

### 8. PUBLIC QUESTION PERIOD - 15 Minute Limit (5 Minutes per Speaker)

*No members of the public requested to speak.*

### 9. MATTERS CONSIDERED

Councillor Dasko raised the growing concern for cigarette butts on the streets. Chelsea Dalton, Citizen Member noted that the University of Toronto Mississauga Campus using Terracycle to recycle the cigarette butts. Andrea McLeod, Manager of Environment noted that new waste bins will be installed from a BIA grant that will include cigarette butt receptacles and noted that this matter regarding cleaner streets would be referred back to staff.

## 9.1 Group Member Appointments to Environmental Action Committee

Members of the Environmental Action Committee discussed potential Group Member Appointments to the Committee. The possibility of revising the Terms of Reference to extend the number of Group Representatives was suggested. Committee Members were requested to send the Legislative Coordinator their suggested Environmental Organizations to be addressed, further discussed and approved at the next EAC meeting.

RECOMMENDATION

That the Group Member Appointments to Environmental Action Committee be deferred to the next EAC meeting for further discussion.

Approved (Councillor Dasko)  
Recommendation EAC-0011-2019

10. INFORMATION ITEMS

Based on the new term of council and new members to the EAC Committee - Councillor Mahoney, Chair, requested everyone present at the meeting introduce themselves.

11. OTHER BUSINESS

11.1 Andrea McLeod, Manager, Environment provided a reminder regarding the 20 Minute Makeover litter clean up taking place at Camilla Park on April 23, 2019 at 2:00pm – please RSVP by April 18, 2019.

11.2. Councillor Dasko mentioned that he will be participating in a shoreline clean on April 27 in the Lorne Park area.

12. DATE OF NEXT MEETING(S) - Tuesday, May 14, 2019 - 9:30am, Committee Room A

13. ADJOURNMENT – 10:48 AM (L. Mallet)

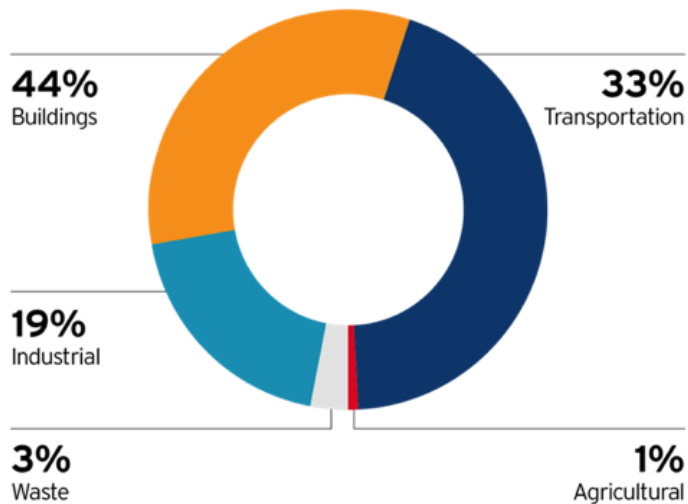
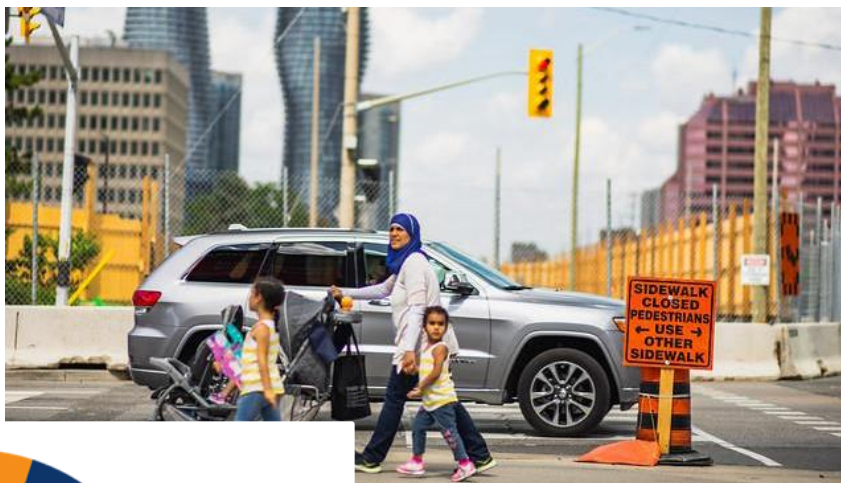
# Electrification of Heating

## Heat Pumps in Residential Buildings

– an opportunity for Mississauga



# INVESTING IN LOW-CARBON SOLUTIONS



# MULTI-PRONGED APPROACH



**GOAL:**  
**80%**

Reduction in GTHA  
carbon emissions  
by 2050

## TAF INVESTS IN SEVERAL APPROACHES

Collaboration  
and Partnership



Information  
and Analysis



Innovation  
Capacity



Demonstrating  
Solutions



Reflection, Learning,  
and Sharing



## IN ORDER TO GROW OUR IMPACT

Mobilize Resources  
and Champions



Grow Proven  
Solutions



Influence  
Decisions



## AND GENERATE AND ACCELERATE THE CONDITIONS NECESSARY



Market Readiness



Political Support



Institutional Readiness



Public Support

## FOR THE DEPLOYMENT OF LOW-CARBON SOLUTIONS AT SCALE.

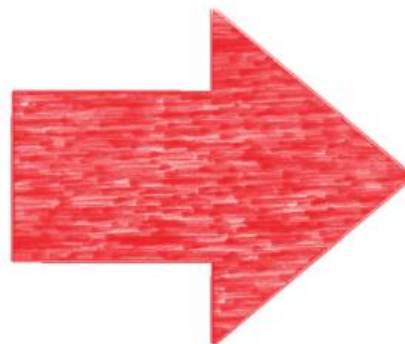
# HEAT PUMP OVERVIEW

**Low temperature renewable heat  
recovered from the environment**



**Minor Electricity  
Input Required**

**Heat Pump**



**Heat distributed to  
Buildings for  
SPACE/WATER Heating**

**High Temperature/Volume  
Heat Output**

# HEAT PUMP OVERVIEW





# TYPES OF HEAT PUMPS

## ELECTRIC

Air source, conditioned air or water, cold climate

Ground source or geo-exchange

Water

## GAS

Absorption

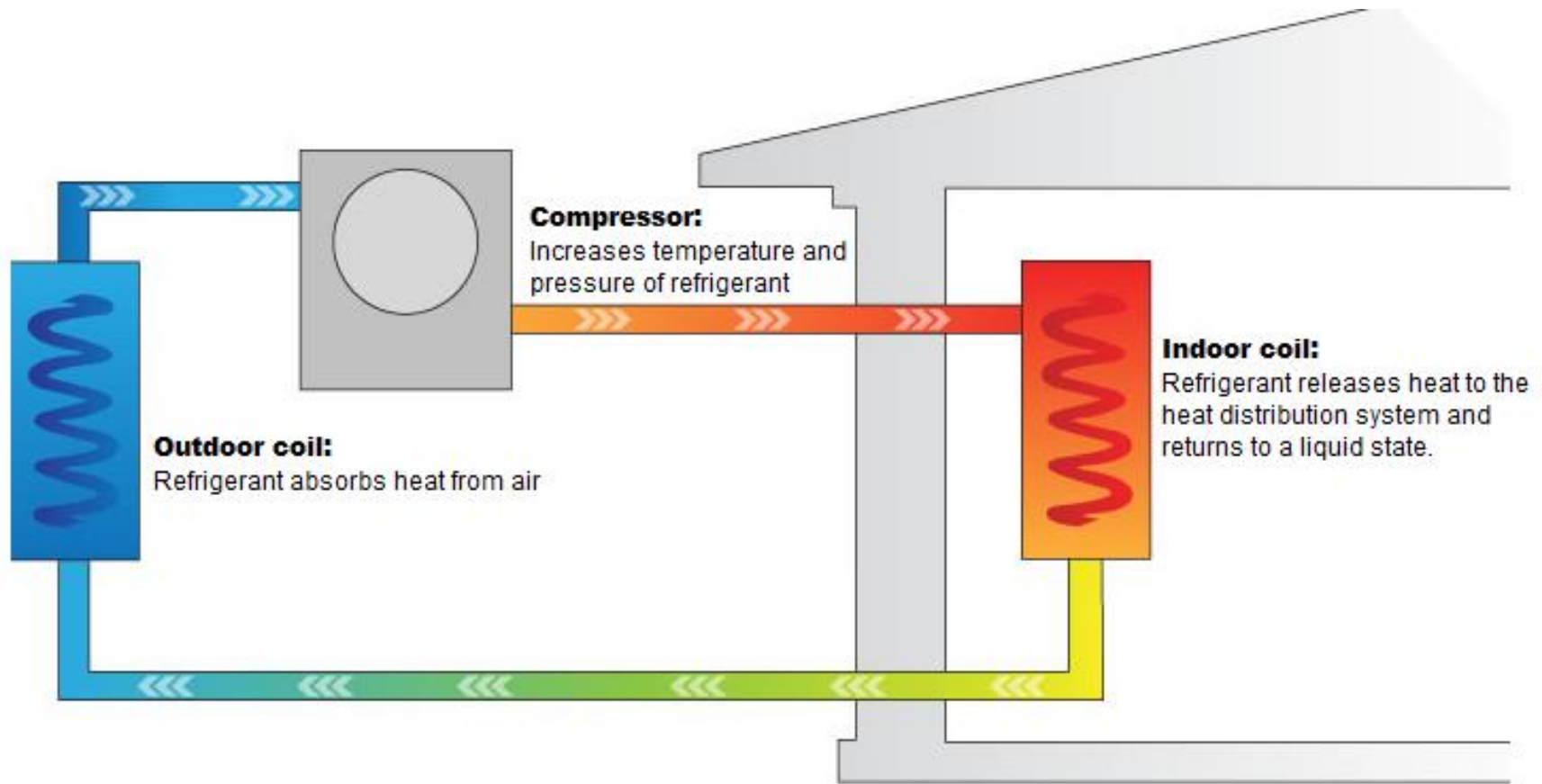
Engine

## HYBRID

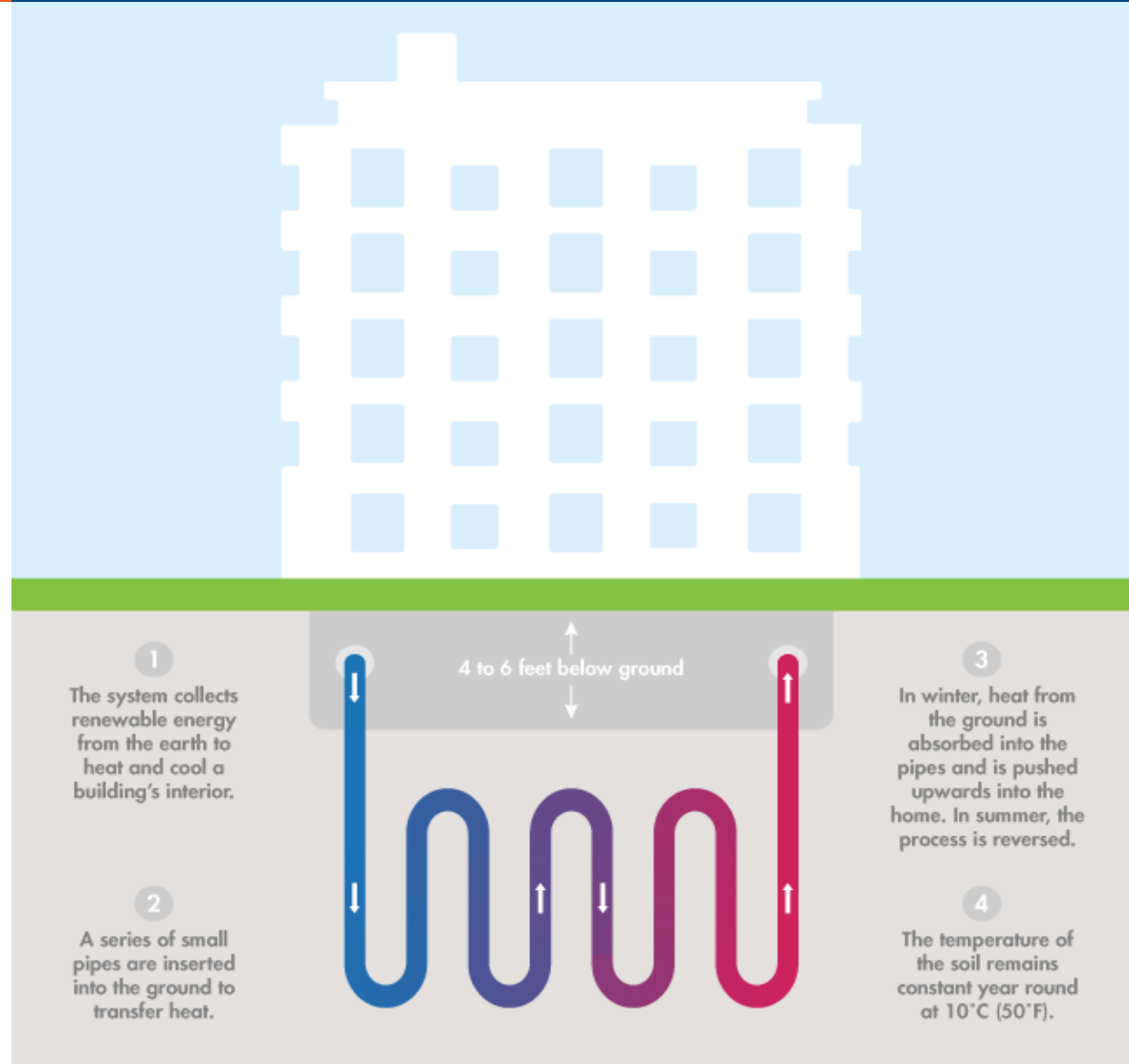
Works with 2-pipe systems



# AIR-SOURCE HEAT PUMP



# GROUND-SOURCE HEAT PUMP



# HYBRID

Can be dual fuel

Can provide simultaneous heating and cooling

Cooling via in-suite compressors

Heats via fan-coils served by central plant

Designed well for retrofits





# ENERGY SAVINGS POTENTIAL

**50 - 70%**

Space HEATING  
energy savings

Up to **75%**

Space COOLING  
energy savings

# EMISSIONS SAVINGS POTENTIAL

**3X**

Less carbon per kWh  
than natural gas

**3X**

More efficient than gas  
heating systems

**9X**

Carbon reduction

# IDEAL USE: NEW CONSTRUCTION



# IDEAL USE: RETROFITS



# BARRIERS

FINANCIAL

AWARENESS AND CAPACITY

RISK

# REMOVING BARRIERS

## FINANCIAL

Grants to Municipalities and Non-profits  
Impact Investments

## AWARENESS AND CAPACITY

Demonstration Work  
Knowledge Sharing  
Alliances

## RISK

Demonstration Work  
Knowledge Sharing

# CARBON PRICE SENSITIVITY

## **\$50 per Tonne CO<sub>2</sub>eq (2022)**

GSHP operation less expensive than high-efficiency gas condensing boiler

ASHP operation less expensive than low-efficiency (65%) boiler

## **\$150 per Tonne CO<sub>2</sub>eq**

ASHP and GSHP less expensive to operate than high efficiency gas boiler

# MADE-IN-ONTARIO ENVIRONMENT PLAN

Increase access to clean and affordable energy for families:

“Encourage the use of heat pumps for space and water heating where it makes sense”



# HVAC INDUSTRY LETTER TO PROVINCE

## Overcoming Barriers

Provide incentives for heat pumps (electricity, propane, fuel oil now; gas in the future)

Provide incentives for heat pumps in new construction

Support project financing for heat pump deployment (Local Improvement Charge, on-bill financing, etc.)

Support heat pump adoption through the Ontario Building Code

# INCENTIVES FOR HEAT PUMP RETROFITS

PROGRAM	OFFERING
<i>Save On Energy</i> RETROFIT – Custom Track	\$0.10/kWh
<i>Save On Energy</i> Pay for Performance (P4P)	\$0.04/kWh/year
<i>SaveOnEnergy</i> Process and Systems	\$0.20/kWh
<i>Ontario's -</i> AffordAbility Fund	Up to \$15,000 per suite

# RESOURCE: RETROFIT GUIDE

## Step-by-step guide

for retrofitting electrically heated buildings with heat pumps

### STEP 1

Preliminary  
assessment

### STEP 2

In-depth  
investigation

### STEP 3

Financing &  
procurement

### STEP 4

Implementation

### STEP 5

Post Retrofit

[taf.ca/publications/heat-pumps-retrofit-guide-ontario-buildings/](https://taf.ca/publications/heat-pumps-retrofit-guide-ontario-buildings/)

# RESOURCE: BUSINESS CASE ASSESSMENT TOOL

[taf.ca/publications/bcat/](http://taf.ca/publications/bcat/)



## MY HEAT PUMP RETROFIT OPPORTUNITY ASSESSMENT



### SPACE HEATING ELECTRICITY USE BASELINE

The amount of electricity my property currently uses annually for space heating in kilowatt hours and as a percent of total electricity used in my property.

#### Current Annual Electricity Use

**730,000** kWh

#### Percent of Total Electricity Use

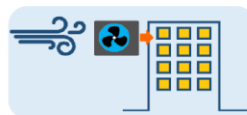
**45.6** %

**Save BIG on your heating bill by retrofitting with heat pumps!**

Some heat pump system options to consider:

#### AIR-SOURCE HEAT PUMPS (ASHP)

Harvest heat from the outdoor air.



#### GROUND-SOURCE HEAT PUMPS (GSHP)

Harvest heat from beneath the ground.



### YOUR ESTIMATED BENEFITS FROM HEAT PUMP RETROFITS:

These are estimates of what you could achieve from retrofitting with air or ground source heat pumps.

#### ANNUAL SAVINGS

LOWER

Air Source

Ground Source

HIGHER

ESTIMATED  
SAVINGS

414,855

to

530,502

kWh

\$67,621

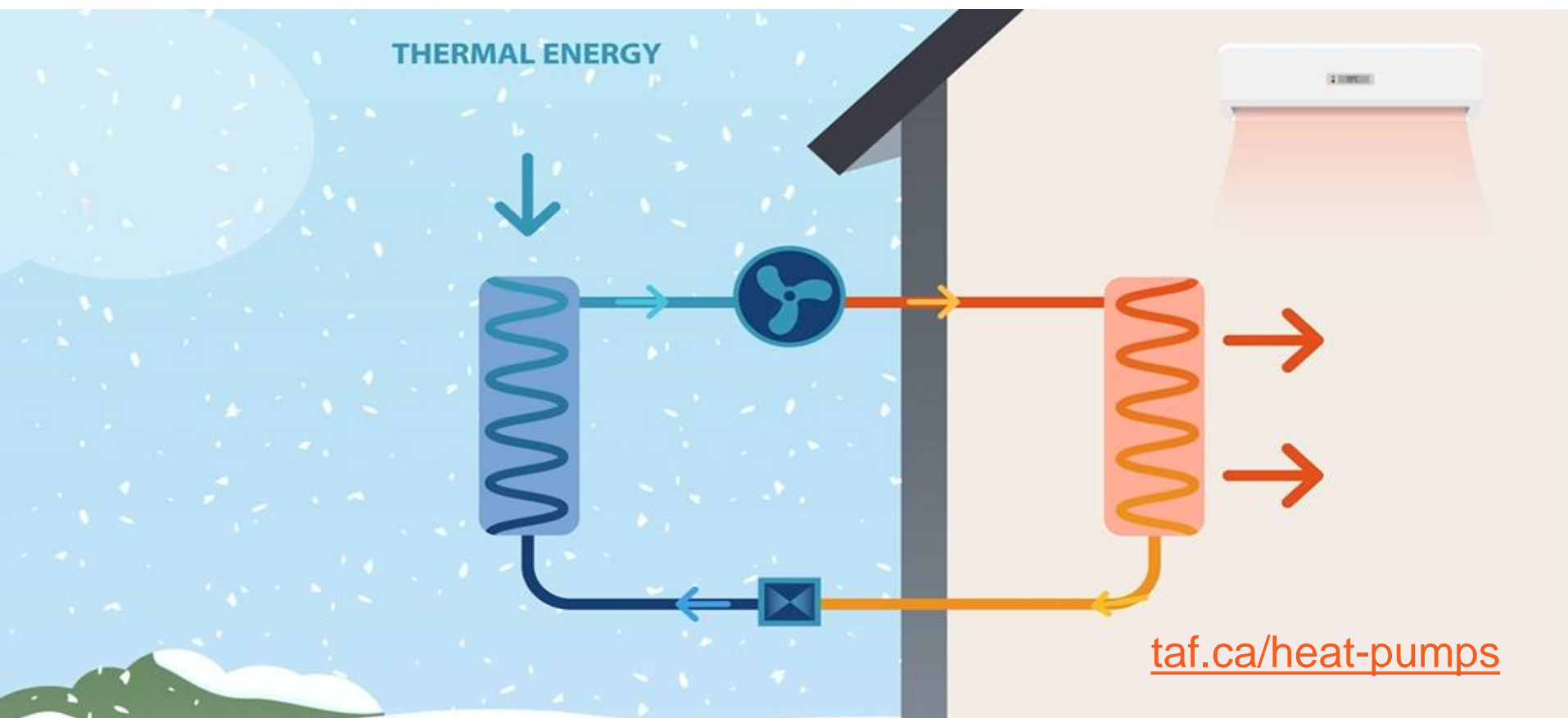
to

\$86,472

On average, ground source systems are more efficient and provide higher savings.

On average air source heat pump systems will be cheaper compared to ground source due to higher upfront cost for system features like in-ground equipment.

# RESOURCE: TAF!



# SUMMARY: WHY HEAT PUMPS

**Electrification of heating key to emission reductions**

**Highly efficient electric heating and cooling solution**

**Cooling becoming a necessity**

**Economic benefits and jobs**



**Heat pumps improved the comfort of residents in our building, all of whom are seniors. A system like this can put people in a better mood.**

Marie M. Dynes, resident



# THANK YOU

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**KEITH BURROWS**  
**LOW CARBON BUILDINGS MANAGER**  
**KBURROWS@TAF.CA**

The Atmospheric Fund  
75 Elizabeth Street, Toronto, ON M5G 1P4  
[taf.ca](http://taf.ca)



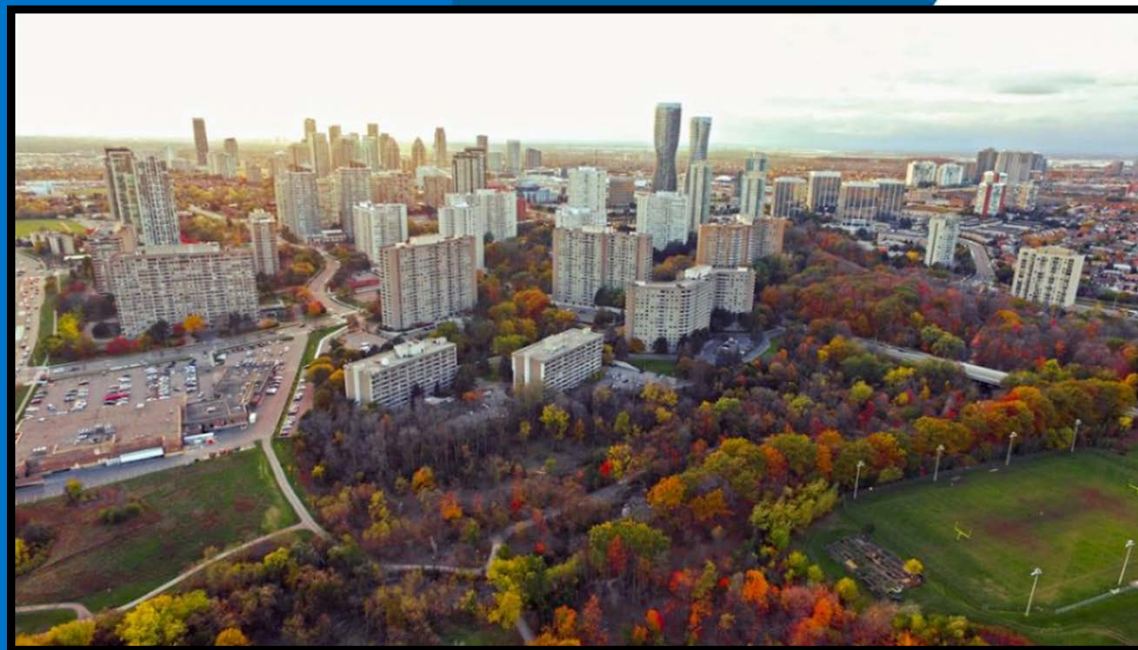


# Public Tree By-law

May 14, 2019

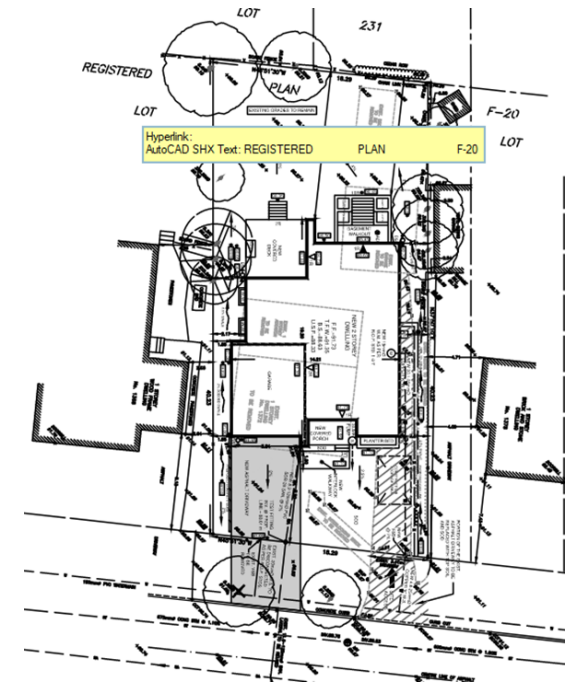
Environmental Action Committee

Jessica Wiley & Wayne Holder

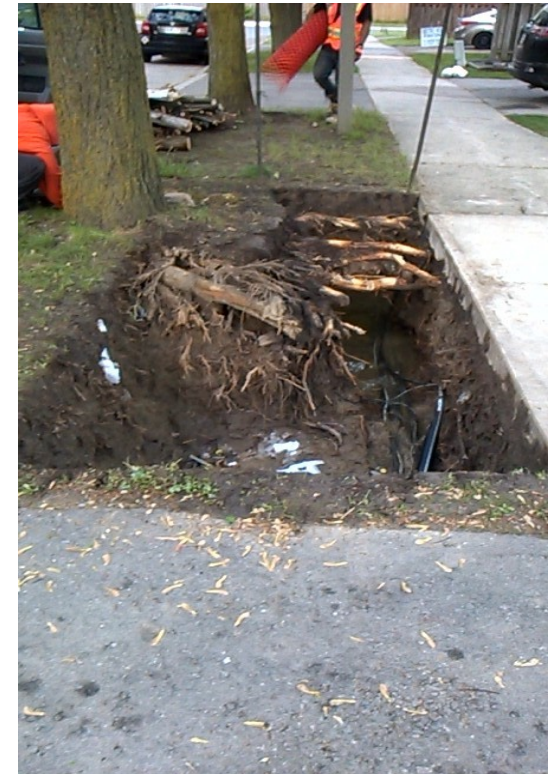


# Background and Issues

- Tree by-law 91-75 is out of date, no longer defensible
- Currently using Highway Traffic Act, Section 2(f)
  - Offender is only subject to a fine collected by by-law enforcement staff
- Increased tree damage
  - Staff hours 2016: 897
  - Staff hours 2017: 1,147
  - Staff hours 2018: 1608



# Tree Damage Examples













# Purpose and Goals

- Protection of public tree assets
- Modernize public tree by-law to current standards that is legally enforceable
- Educate and communicate to staff, public and the development community



# Highlights

- By-law administered by Forestry staff
- Application and agreement process
- Tree security
- Updated prohibitions
- Penalties
- Tree Replacements
- Public Tree Definition



# Public Tree Definition Change

- Want to take a proactive approach to tree preservation
- Update to our tree inventory ongoing
  - Trees being added and removed
  - Shared trees





# Communication Plan

- Forestry will engage with residents, businesses and, in particular, public utilities on the scope of the proposed by-law through the following tactics:
  - Public meetings will be held across the City to answer public questions and garner feedback.
  - Parks & Forestry digital channels (i.e. website, social media) will be used to promote awareness of the proposed by-law.
  - Mayor and Council will be provided with a toolkit including background information, text for their newsletters and suggested social media posts.
- Communicating Ownership Changes
  - All of the above tactics plus written communication to all impacted residents outlining changes to ownership as it applies to them

## Next Steps

- Stakeholder Meetings
  - Internal & External stakeholder groups
- Public information session
- Meeting with Councillors
- Corporate Report





