

Update on District Energy in the City of Mississauga

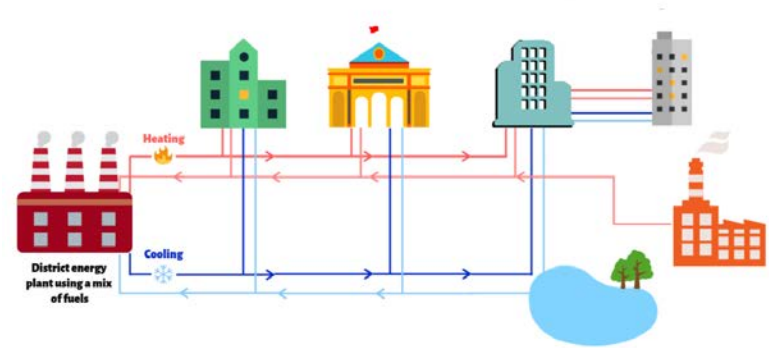
Environmental Action Committee

September 15, 2020



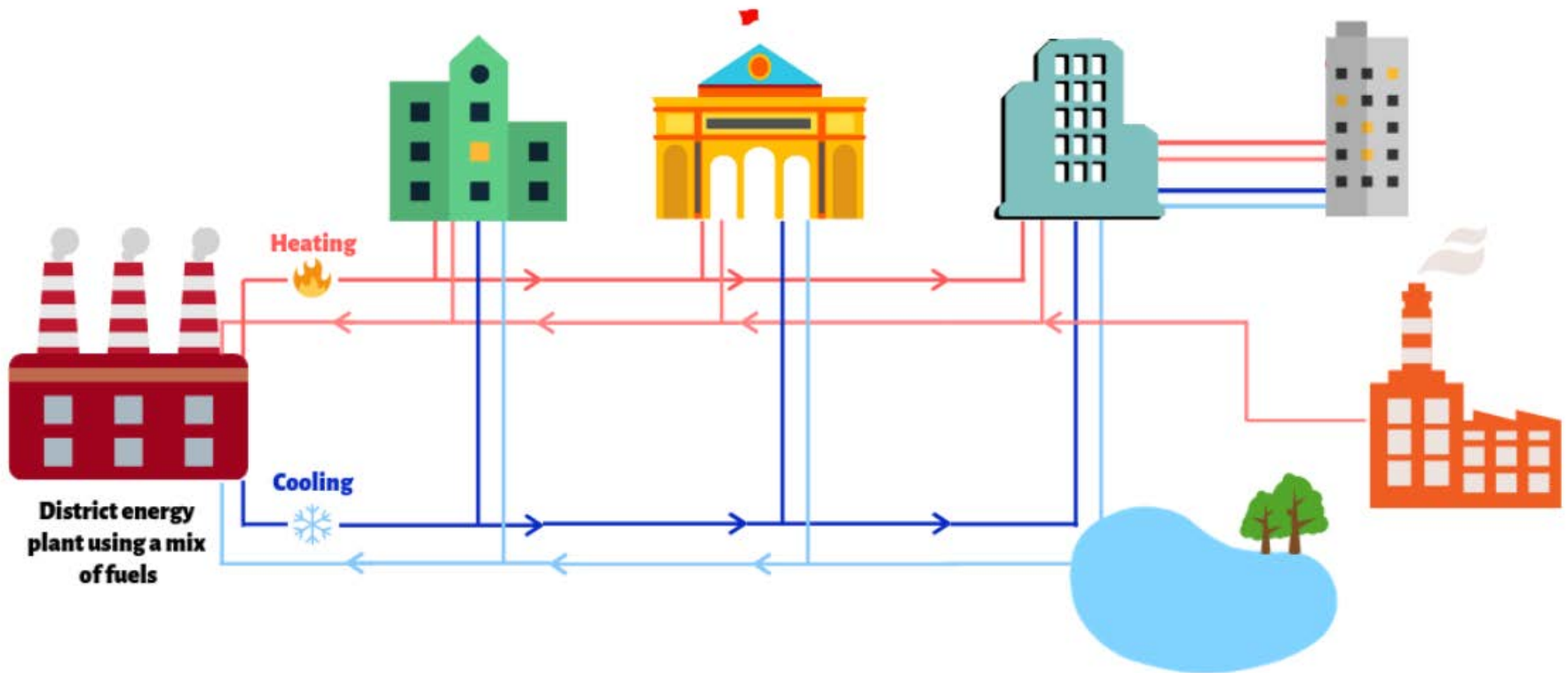
What is District Energy?

- Efficient way to provide heating and cooling
- Does **not** produce electricity (on its own)



Source: EFIEES (modified from original)
www.efiees.eu/key-concepts/

Components of a District Energy System



Source: EFIEES (modified from original)
www.efiees.eu/key-concepts/

Benefits of a DE System

1. Potential for Significant GHG reductions
 - More efficient
 - Opportunity for renewable energy
2. Potential for more resilience
 - Centralized with professionals
 - Stormwater management
 - Local sources of energy
3. Other Environmental Benefits (e.g., air quality)
4. Local Jobs
5. Cost savings (e.g., boilers, space)
6. Attracting businesses (Markham)



Considerations for DE

1. High upfront capital costs
2. Not suited for every community
 - Anchor client
 - Density
 - Diversity of load
3. Retrofits
4. Ownership & Governance
5. Room in rights-of-way



Examples of ON Cities with DE Systems

1. Markham
2. Toronto
3. London
4. Ottawa
5. Hamilton



Source: Wikipedia

Why is the City interested in DE?



Climate Change Action Plan Goals

- Reduce GHG emissions 80% by 2050, with a long-term goal of becoming a net-zero community
- Increase resilience and the capacity to withstand and respond to climate events



Climate Change Action Plan

- Support and encourage developer-led efforts to include low carbon energy systems in new development
- Conduct a district energy feasibility study in the downtown for community and municipal buildings



Recent DE Events in the City

May-June 2020

Partnered with Nordic Heat and others on three webinars to advance DE in the city (>600 registrants)



Dec 2019

- Kick-off meeting with Bloomberg
- Creation of internal working group



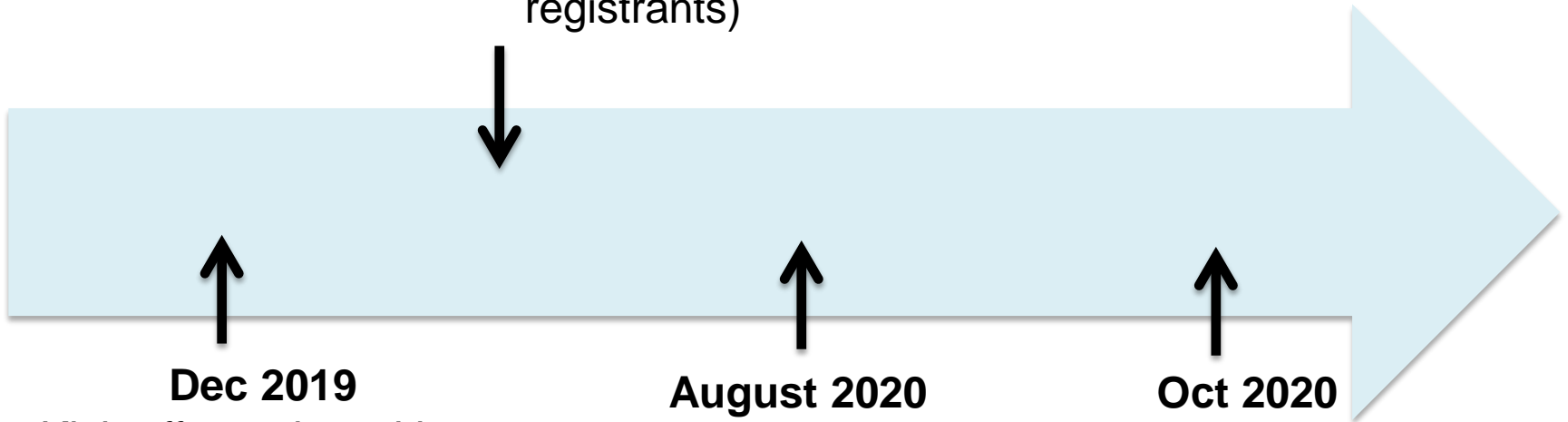
August 2020

Applied to TAF to help fund feasibility study

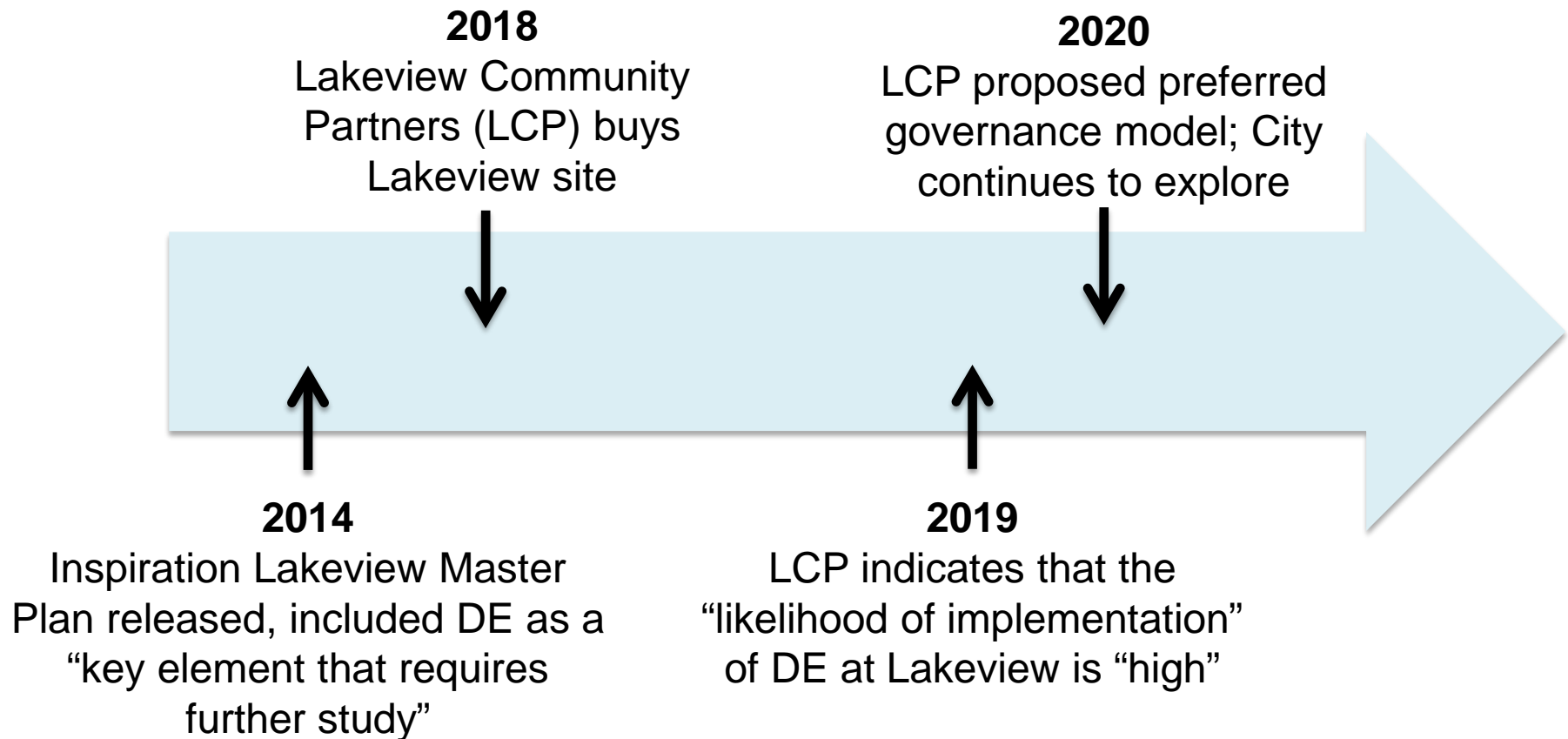


Oct 2020

First meeting of Downtown DE Working Group



DE Events: Lakeview



Lakeview: Next Steps

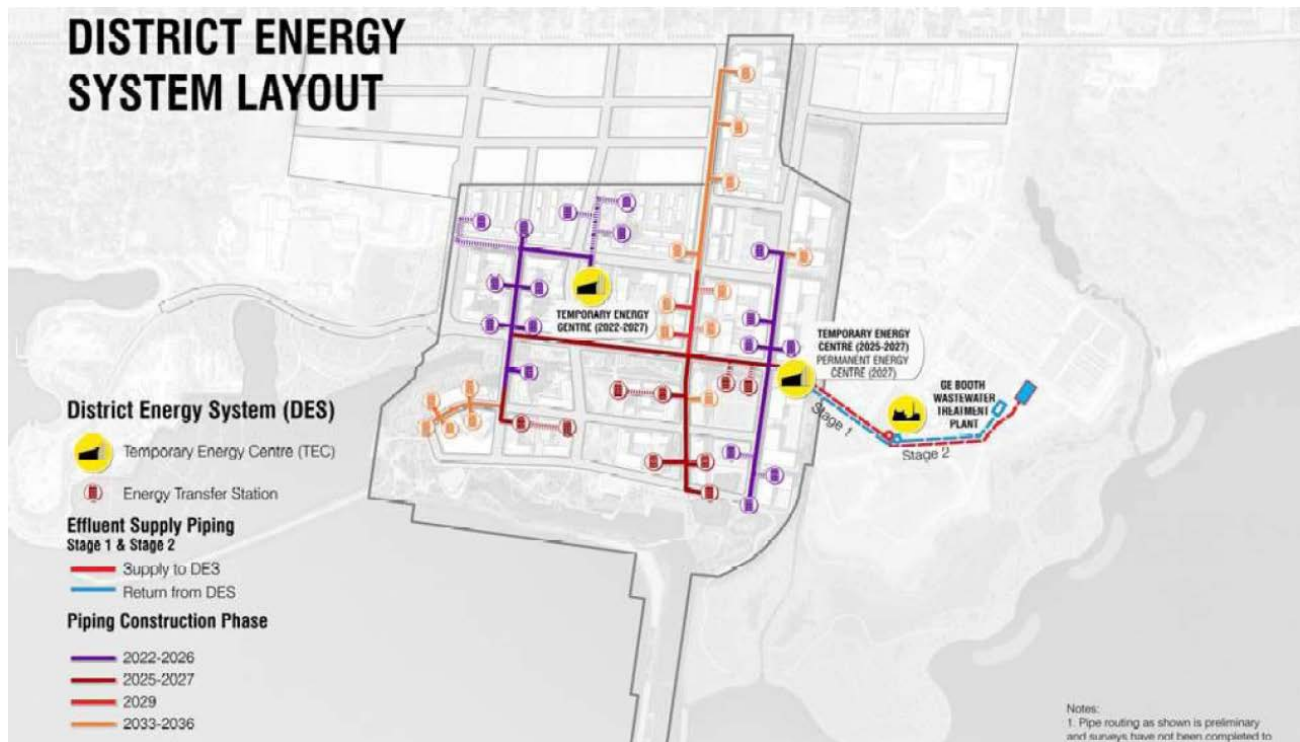
- Unique opportunity to use waste heat from wastewater treatment plant, and to show that Mississauga is a climate leader



Source: Lakeview Community Partners (cropped from original)

Lakeview: Next Steps

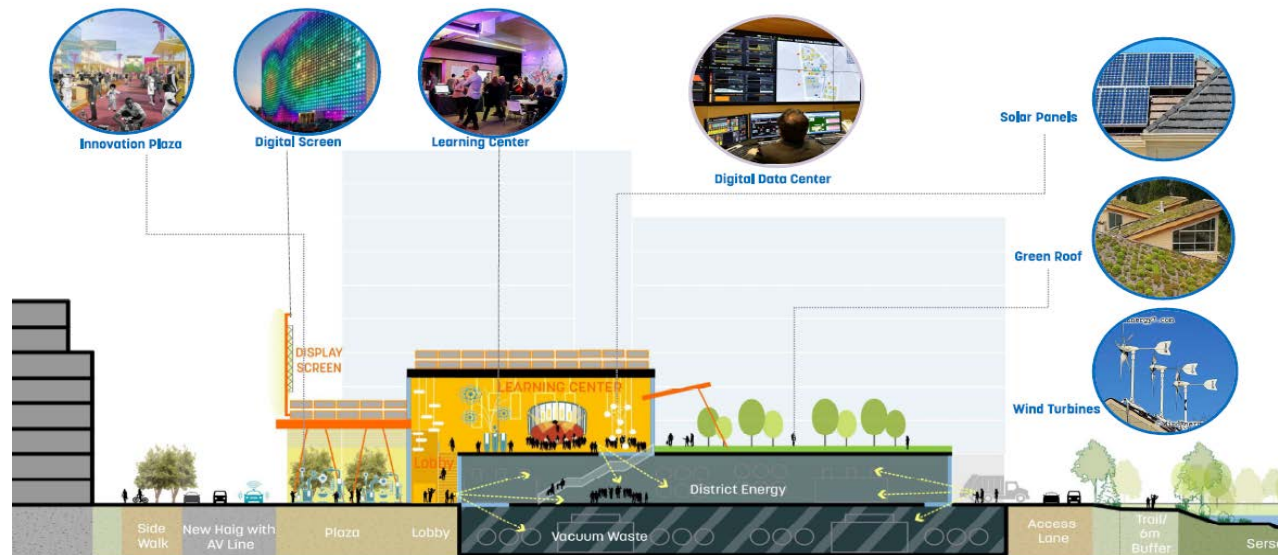
- Determine whether DE will move forward at Lakeview



Source: Lakeview Community Partners

Lakeview: Next Steps

- Must answer a number of questions first:
 - How will the funding gap be closed?
 - Should the City have a role? If so, what role?
 - Who else should be involved?



Source:
Lakeview
Community
Partners

THANK YOU!