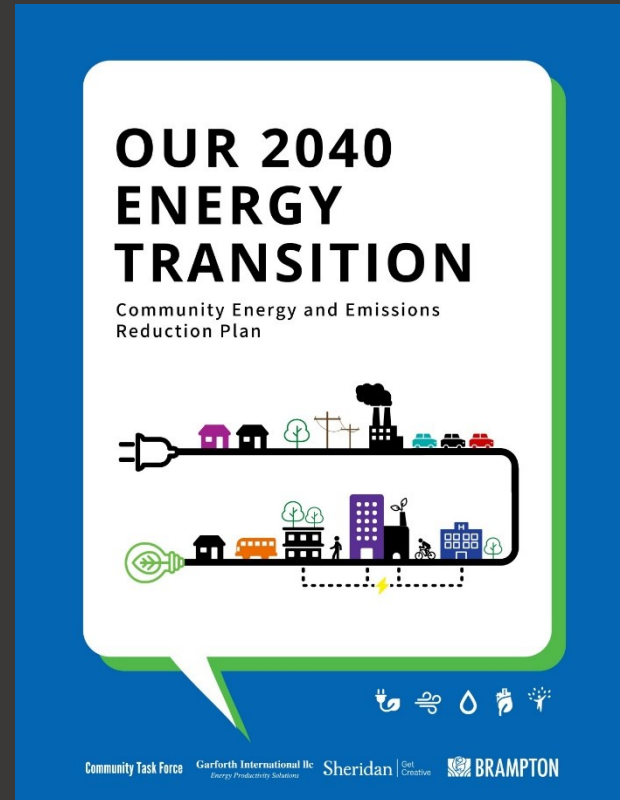


# Community Energy & Emissions Reduction Plan

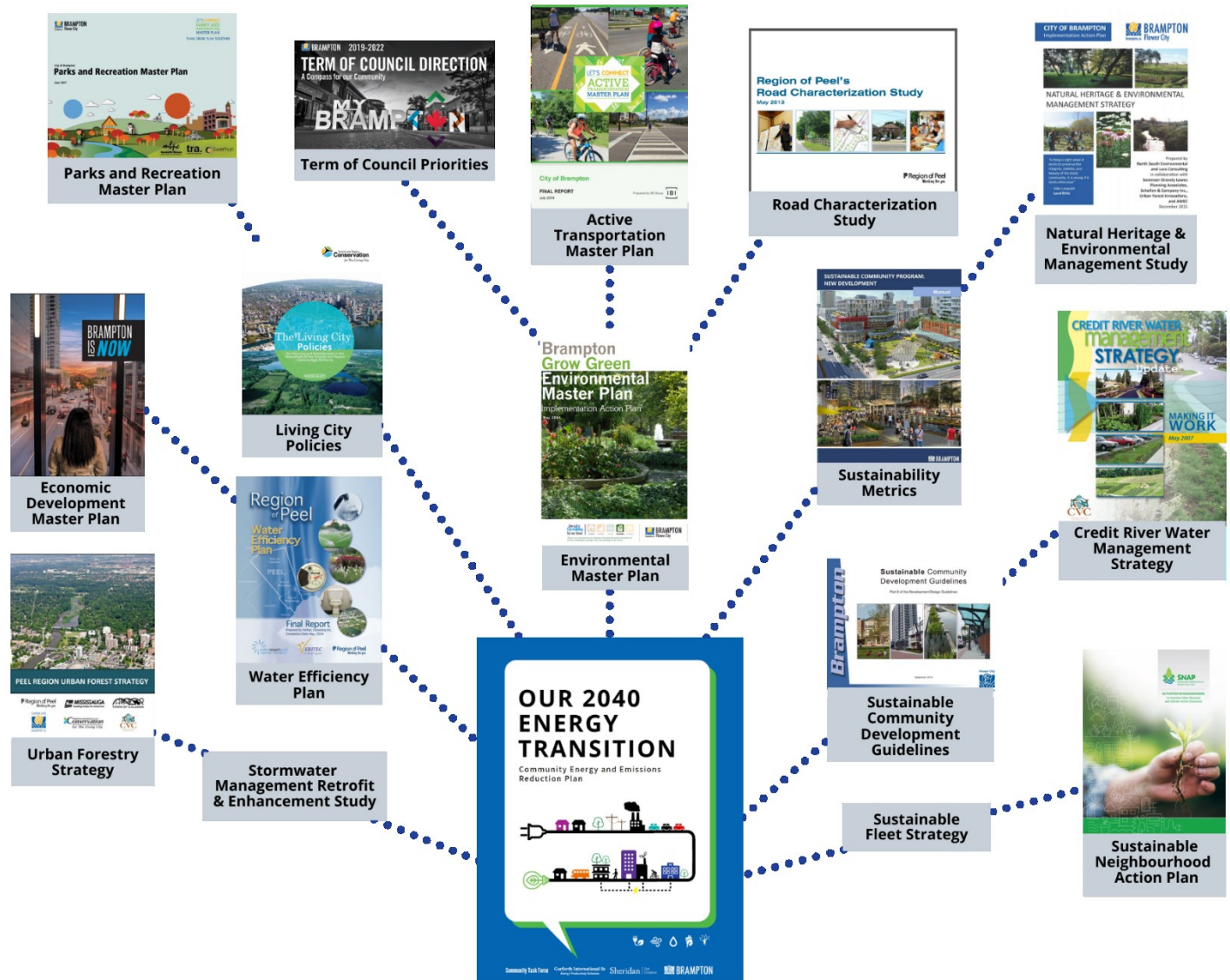
Committee of Council  
September 23, 2020



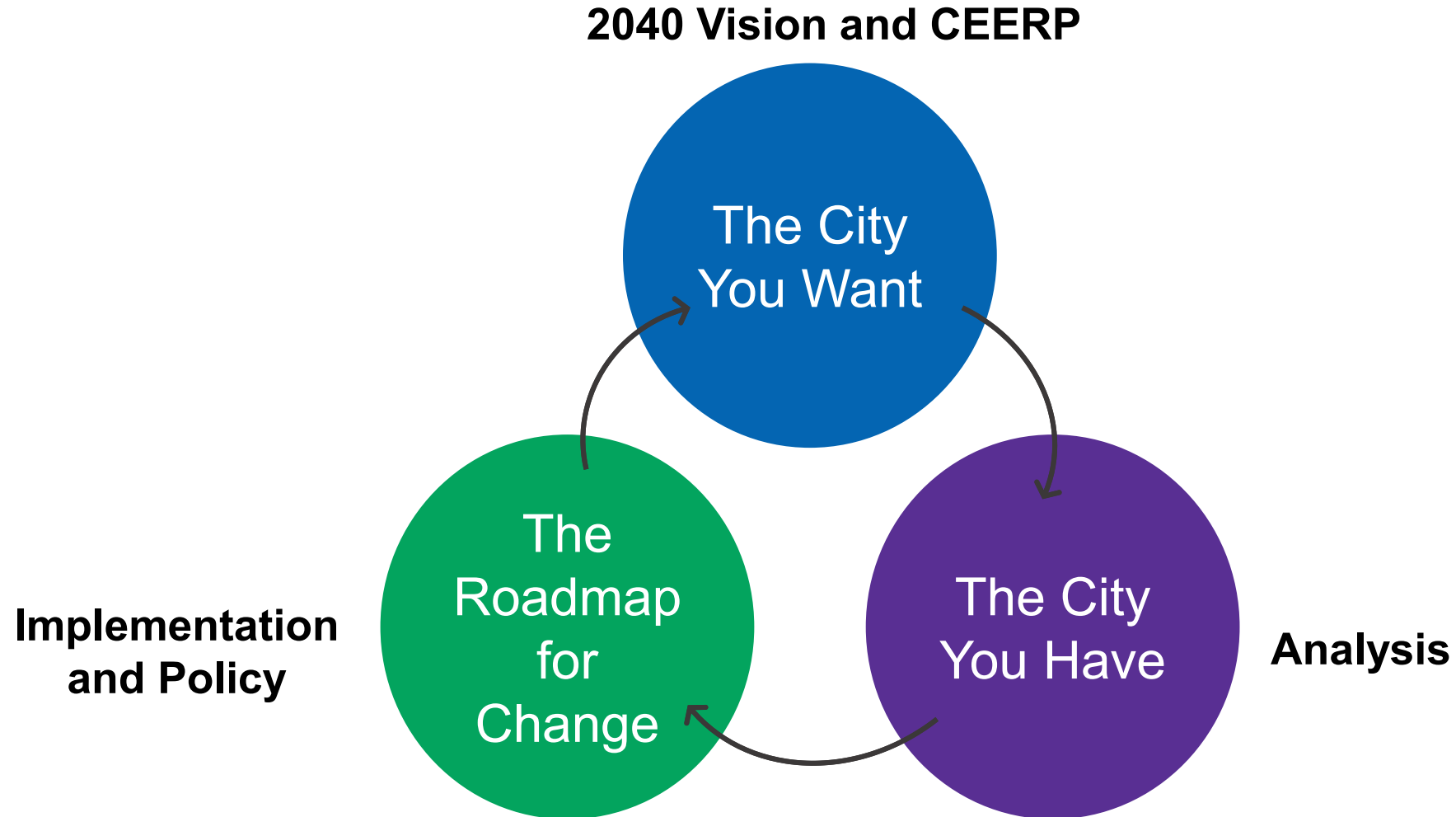


# CEERP

- Partnerships
- Foundational document
- History of municipal leadership on climate change



# Transforming Our City: Collective Action



# CEERP: Brampton's Response to the Climate Emergency

## Brampton City Council Declares Climate Emergency

by Dylan Olley on June 6, 2019  
in News, Hot Topics, Politics

Like Share Tweet



The Brampton City Council is looking to take action against climate change.



# Co-Benefits

- Environmental
- Social
- Health
- Economic

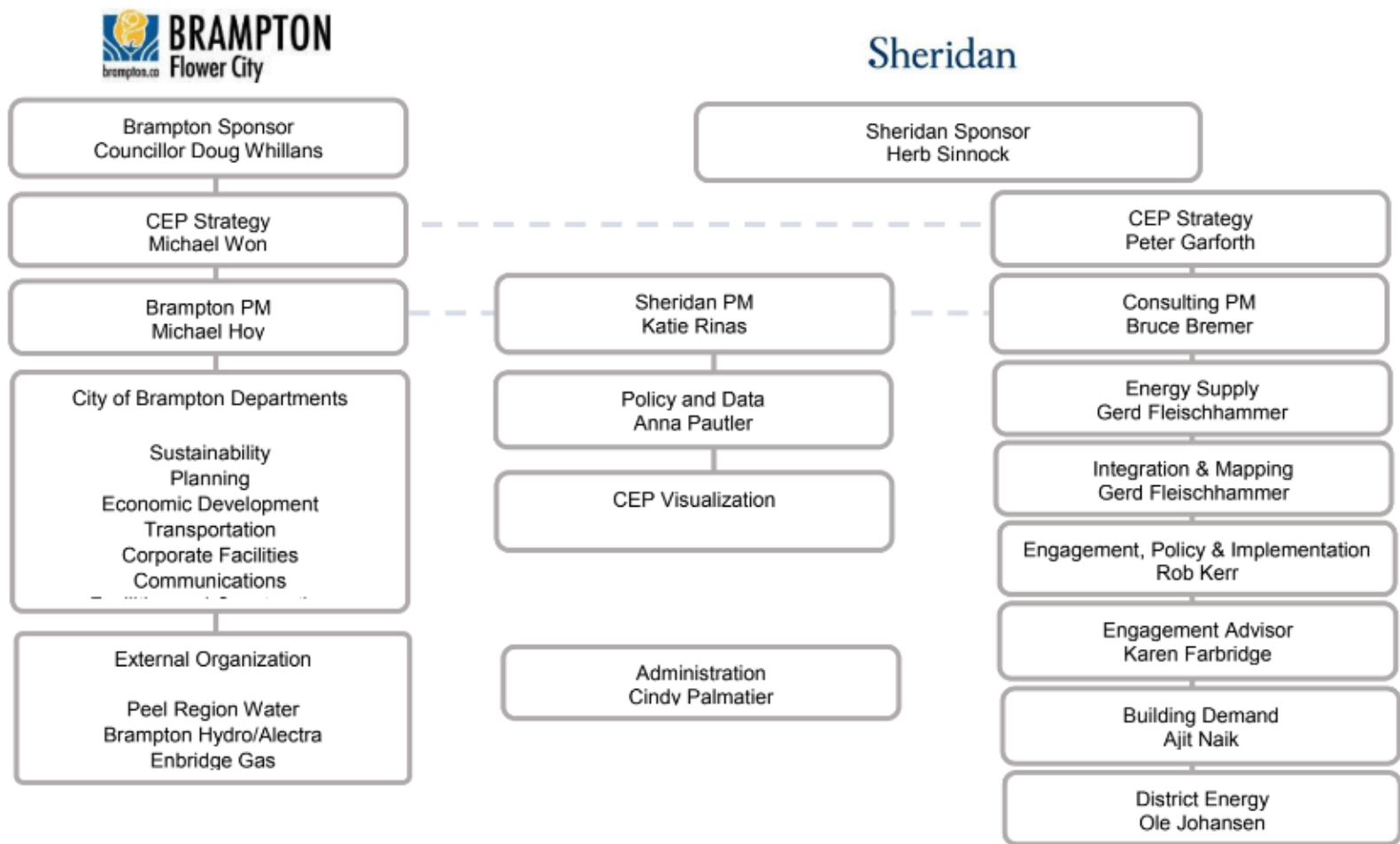




# Community Task Force

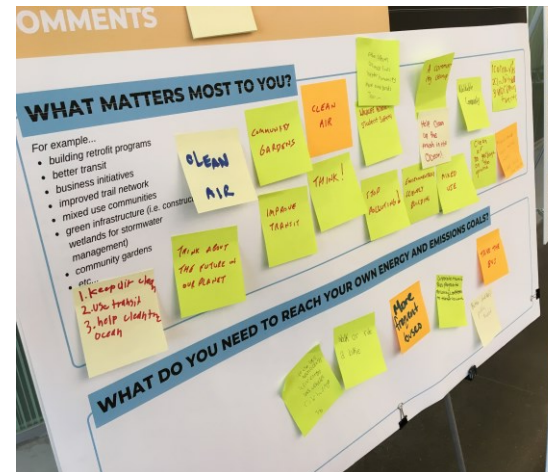


# Project Working Team



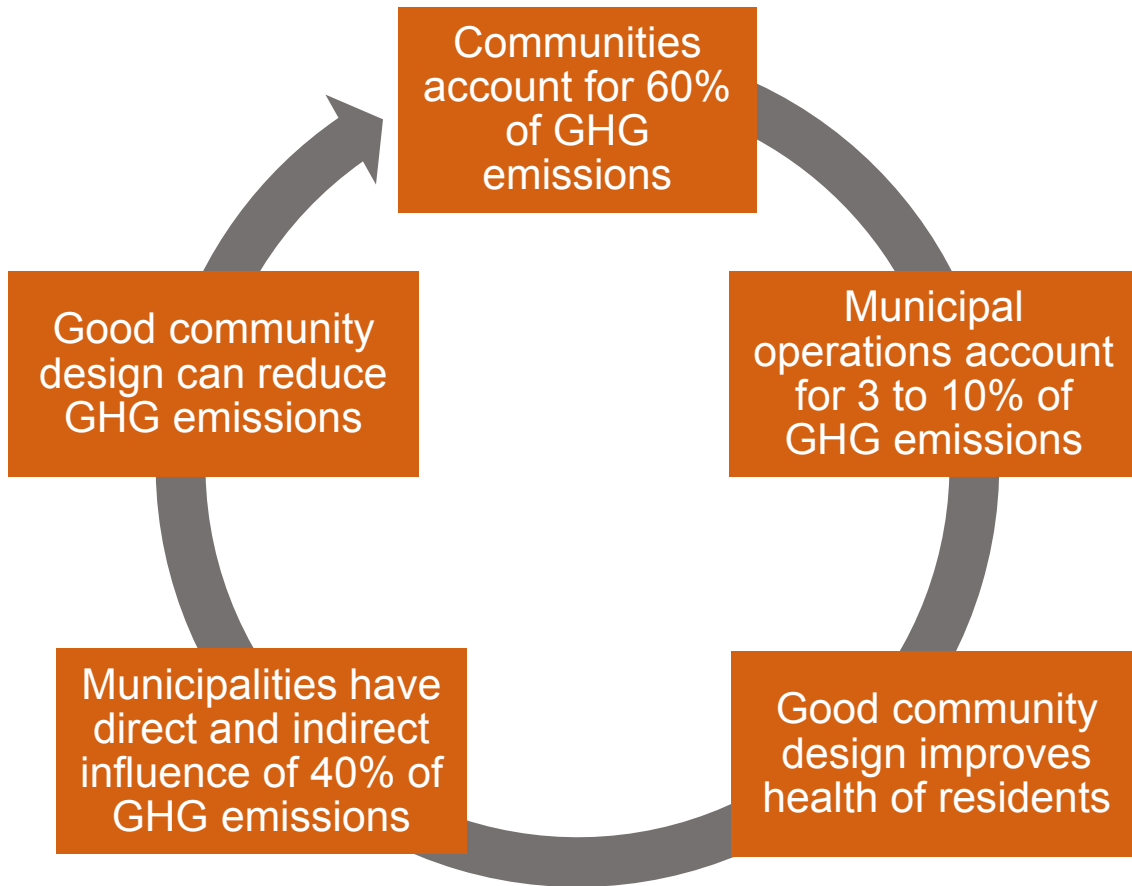
# Engagement

- Council workshops
- Departmental/divisional consultations
- Environment Advisory Committee meetings
- Stakeholder presentations (Association of Energy Engineers, Partners in Project Green, BILD, York University)
- CEERP Task Force meetings
- Nordic City Solutions workshop
- Grow Green Team meetings
- Community Survey
- Mapping workshop
- Public events (tree plantings, open houses, Vision Celebration, Public Works week, Heart Lake Run, Farmers Market)
- Public information sessions
- Social media (Twitter, Instagram, Facebook)



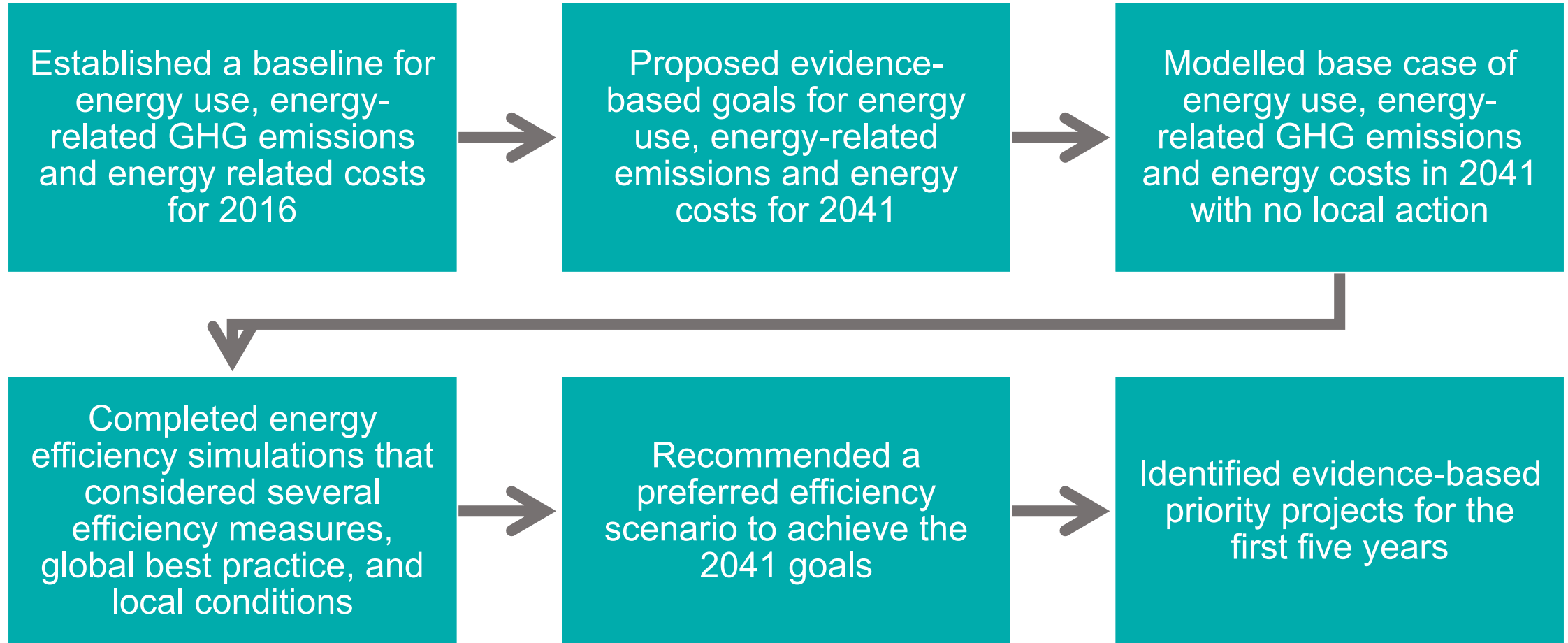


# Local Planning Matters



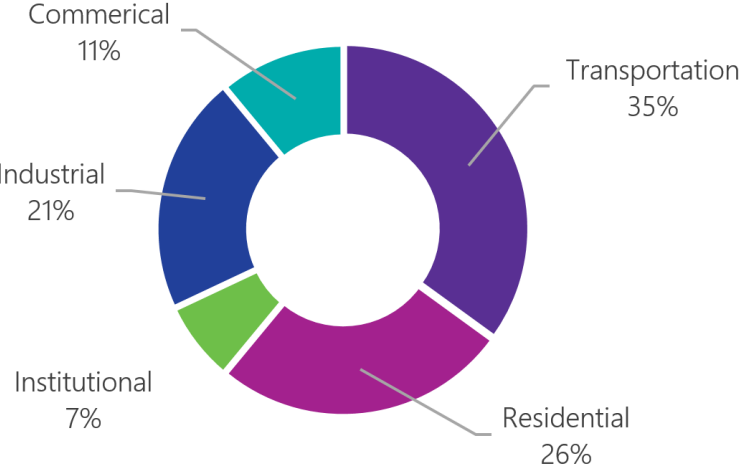
- Economic, environmental, social, and cultural outcomes:
- Healthier communities, denser, convenient, more housing choices, local jobs
- More transit, cycling, and walking
- Reduced energy costs
- Attract new business and create green jobs
- Improve building energy efficiency
- Achieve international GHG reduction targets
- Increase energy security
- Enhance climate change resilience

# Evidence Based Process

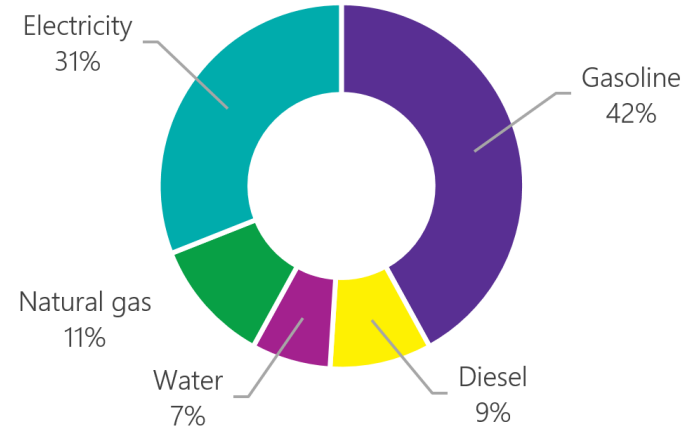


# 2016 Base Case

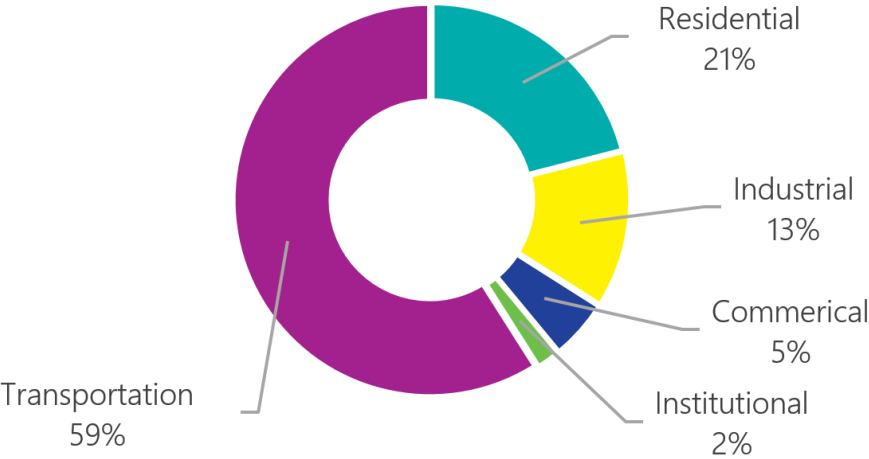
**Brampton Source Energy Use by Sector, 2016**



**Brampton Energy Costs by Utility, 2016**



**Brampton Emissions by Sector, 2016**

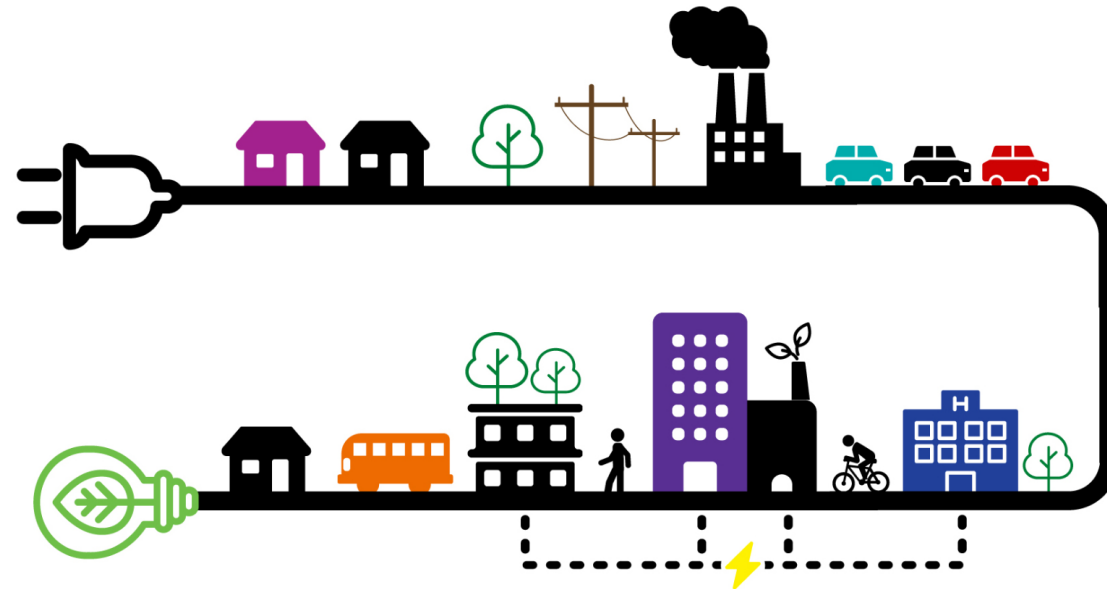




# CEERP Framework

Addressing the Climate Change Emergency requires:

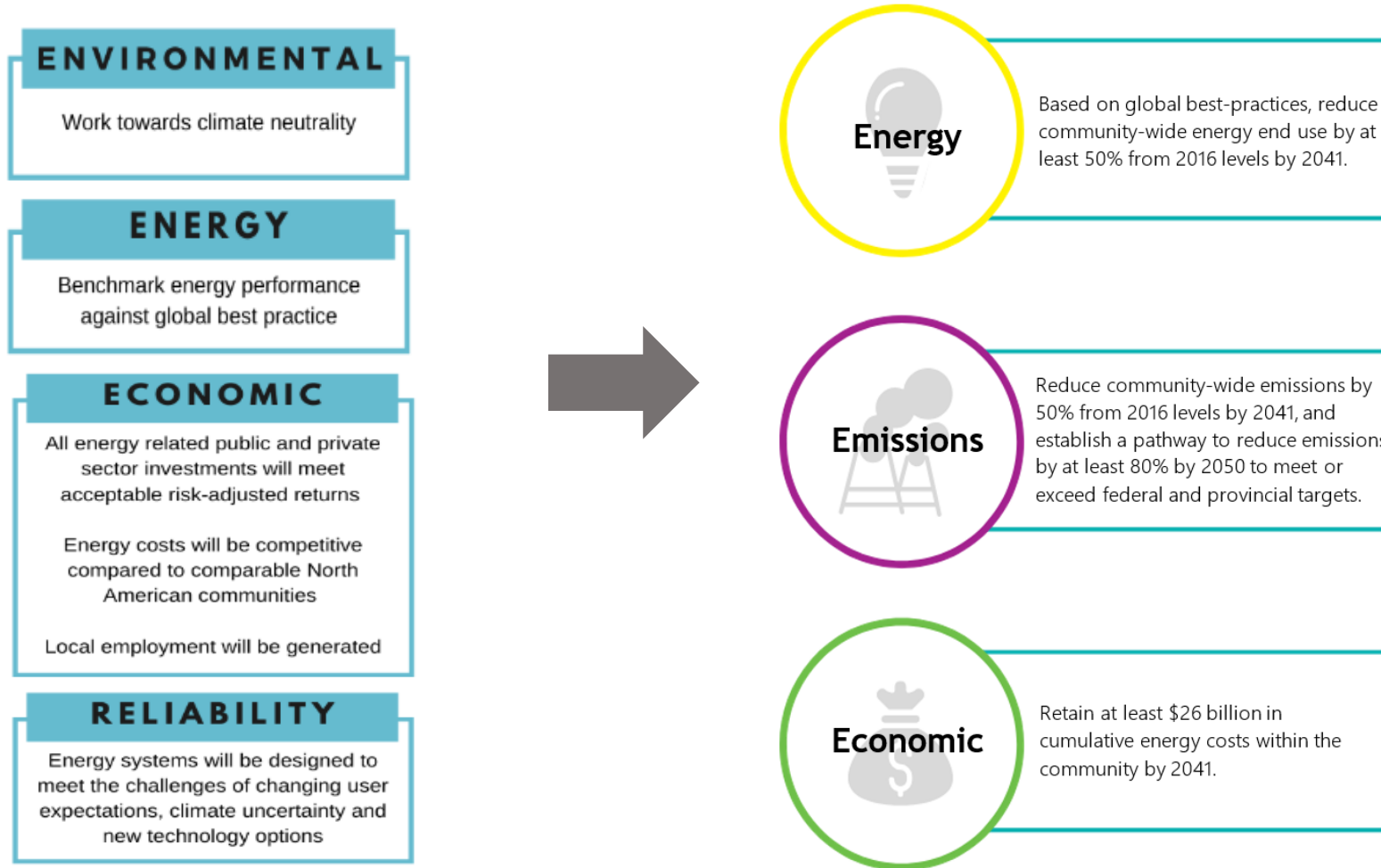
- Urban transition
- Energy transition
- Community commitment and collaboration



# **Vision Statement**

**Brampton's energy future is clean,  
sustainable, resilient, and supports  
the Brampton 2040 Vision.**

# Principles and 2041 Goals





# Strategic Directions



**GREEN  
COMMUNITIES**



**TRANSPORTATION  
EFFICIENCY**



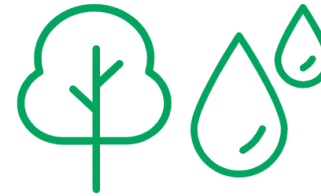
**HOME AND BUILDING  
EFFICIENCY**



**LOCAL ENERGY SUPPLY  
AND DISTRIBUTION**



**INDUSTRIAL  
EFFICIENCY**



**GREEN  
INFRASTRUCTURE**



**COMMUNICATION,  
ENGAGEMENT, AND  
MONITORING**

# 2041 Targets

## Green Communities

- Attain near net-zero GHG emissions for new communities in Heritage Heights, and new buildings in Town Centres and Major Urban Growth Areas

## Home and Building Energy Efficiency

- Retrofit 80% of homes to achieve a 35% efficiency gain

## Transportation

- Reduce trip lengths by 3.75%
- Increase Active Transportation to 7%
- Increase trips using Brampton Transit to 9%
- Increase trips using GO transit to 8.5%





# 2041 Targets

## Industrial Efficiency

- Achieve a 20% industrial sector efficiency gain from 2016 levels

## Energy Supply and Distribution

- Increase solar energy by 8%
- Serve 80% of new growth areas with district energy
- Serve 70% of existing high growth areas with district energy

## Green Infrastructure

- Plant 1 million trees by 2040
- Increase restoration and enhancement management to 45 ha/year
- Determine dollar value for the city's natural assets





# Priority Projects

1. Ensure City of Brampton policies and programs are aligned with supporting the CEERP objectives and targets;
2. Establish a system to deliver standardized retrofits to Brampton homes;
3. Update the Transportation Master Plan (TMP) to reflect complete streets and the integrated nature of mobility and built form;
4. Integrate District Energy Systems in appropriate locations within Brampton;
5. Develop Integrated Energy Master Plans for public facilities and private development; and
6. Establish a Community Organization to lead the development and implementation of select priority projects.

# Action Plan

- Five year action plan
- Actions for each strategic direction
- Identifies leads and partners
- Example actions:
  - Implement Active Transportation Master Plan
  - Integrated Energy Plan for Shoppers World redevelopment
  - Launch electric buses and charging stations
  - Grow City-owned EV Charging stations
  - Update City's Sustainability Metrics
  - Undertake Heritage Heights Community Energy Plan

## Local Energy Supply and Distribution

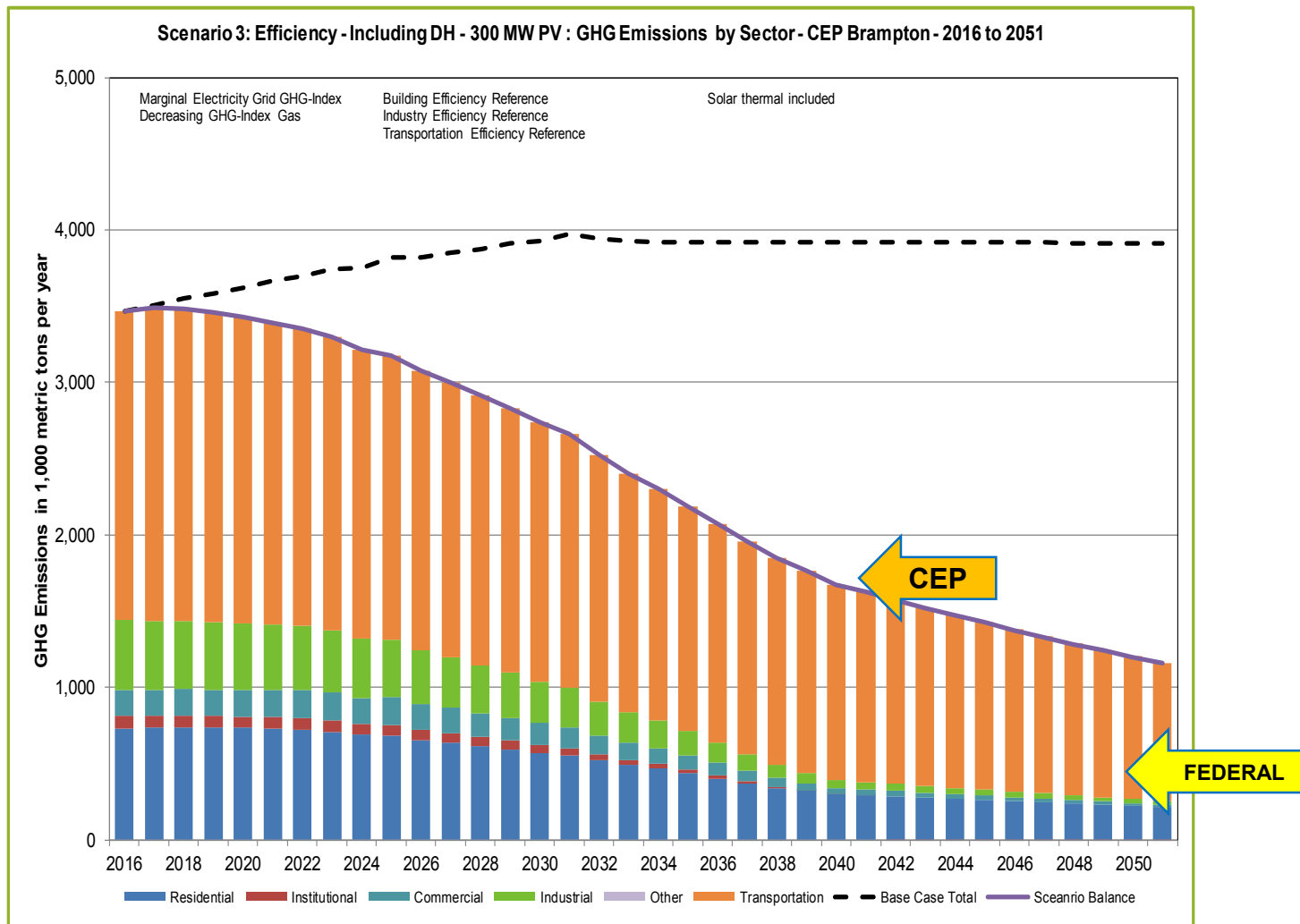
#	Action	Lead	Partner(s)	Timeline
Corporate				
5.1.1	Complete Integrated Energy Management Plans for priority municipal facilities to align with the targets of the Corporate Energy and Emissions Management Plan 2019-2024: A Zero Carbon Transition and the CEERP.*	COB	COMM, DEV	Medium-term
5.1.2	Investigate distributed energy options for City facilities, including solar, geothermal, and waste heat recovery.	COB	COMM	Medium-term
District Energy				
5.2.1	Develop business cases for District Energy System, including but not limited to, low carbon fuel options (e.g. geothermal, heat recovery, wastewater heat recovery, solar PVT, and hybrid of PV and thermal) in areas identified the CEERP energy district mapping. *	COMM	COB, DEV, ROP, BUS	Short-term
5.2.2	Investigate the requirements for the use of City road right of ways for the purposes of installing district energy infrastructure.*	COB	ROP	Medium-term
5.2.3	Develop a Business Case for establishing a district energy company to distribute thermal energy to homes and buildings.*	COM	COB, ROP, UT	Short-term
5.2.4	Identify and pursue opportunities for combined heat and power (CHP) partnerships for district energy.*	COB	COMM	Medium-term

## Industrial Efficiency

#	Action	Lead	Partner(s)	Timeline
Corporate				
6.1.1	Implement an Economic Development marketing campaign highlighting Brampton energy advantages as an incentive to locate business in this city.	COB	COMM	Medium-term
6.1.2	Establish or join an existing community of practice for facility energy managers from public and private sectors to share local industrial energy management expertise.	COMM	BBOT, DEV, PPG	Short-term
6.1.3	Develop a comprehensive inventory of large energy users in Brampton.	COMM	COB	Medium-term
6.1.4	Develop a comprehensive inventory of "green" employers in Brampton.	COMM	COB	Medium-term

# Brampton's GHG Emissions Target

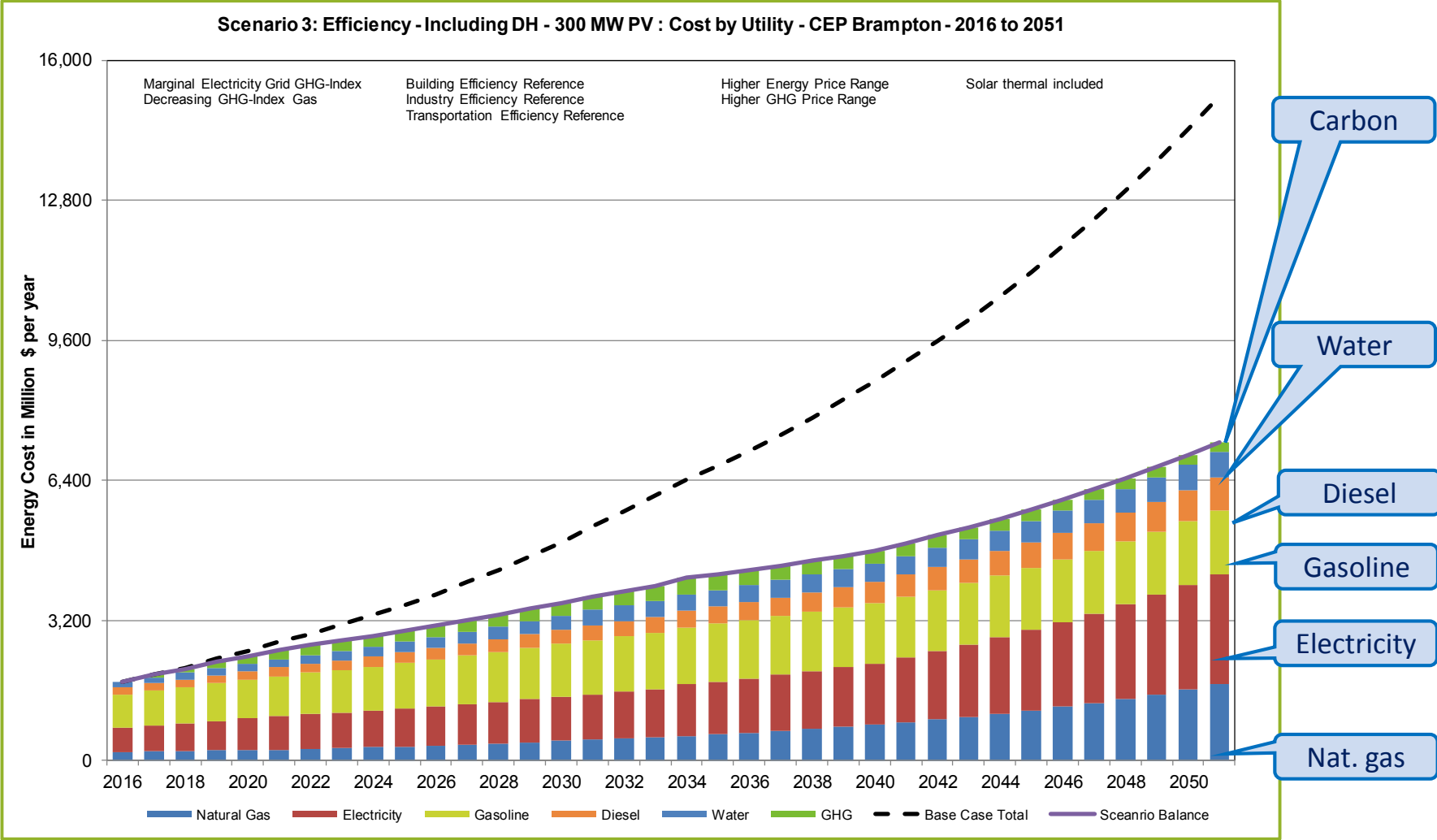
- GHG Emission reduction of 50% by 2041





# Brampton's Energy Savings

- Potential cumulative energy savings of \$26 billion by 2040



# Moving Forward

- Municipal resources through corporate Green Team
- Implement Action Plan
- Implement Priority Projects
- Ensure municipal policy/program alignment
- Work to establish CCET
- Develop District Energy Business Case
- Continue to develop Home Retrofit Business Case
- Monitor progress/report back
- Communication/outreach



# We Have Much to Be Proud Of



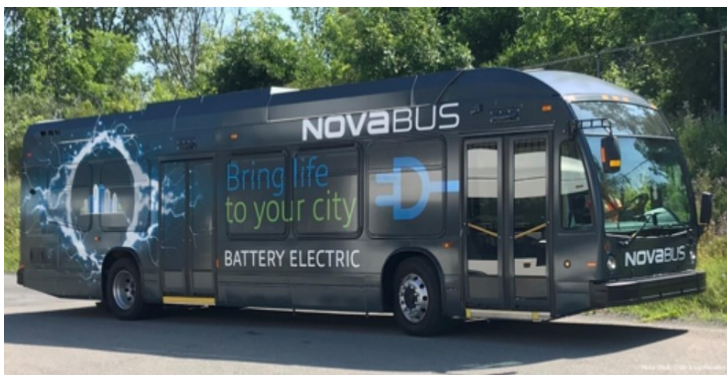
Climate Change Initiatives

**RENEWABLE ENERGY PROJECTS**



Climate Change Initiatives

**SUSTAINABILITY THRESHOLDS  
FOR NEW DEVELOPMENT**



Climate Change Initiatives

**ELECTRIC BUS FLEET PILOT PROJECT**



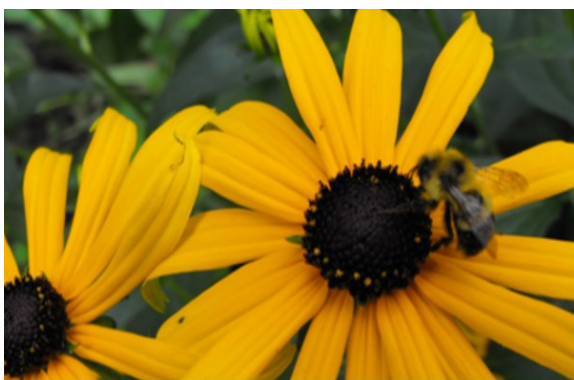
Climate Change Initiatives

**52 CITY-OWNED ELECTRIC VEHICLE  
CHARGING STATIONS**



Climate Change Initiatives

**ACTIVE TRANSPORTATION  
MASTER PLAN**



Climate Change Initiatives

**NATURAL HERITAGE  
RESTORATION PLAN**



Climate Change Initiatives

**CORPORATE ENERGY MANAGEMENT PLAN**  
SIX LEED STATUS CORPORATE BUILDINGS







By adopting the CEERP, Brampton will be joining the ranks of the global community of cities taking a leadership role in the fight against climate change. We can set an example as to what a successful, growing, suburban city looks like for others to follow.





# Thank you

Pam Cooper

Senior Environmental Planner

Public Works and Engineering

[pam.cooper@brampton.ca](mailto:pam.cooper@brampton.ca)

905.874.2265

