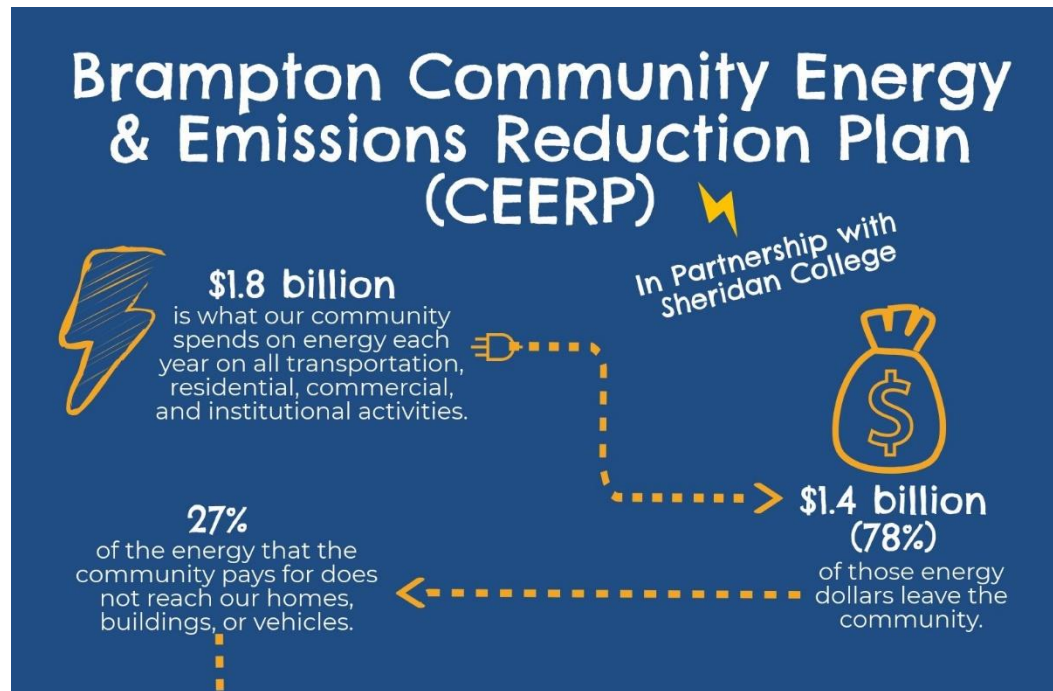


Community Energy And Emissions Reduction Plan

Task Force Meeting #5



Key Piece of The Mosaic

City of Brampton

Community Energy & Emissions Reduction Plan

1. Welcome and Opening Remarks
 - Co-Chair

CEERP Task Force #5

High Level Overview

1. Review of Vision, Mission, Goals, Principles
2. Process of Reporting and Approval
 - *Final Analytical Report*
 - *Framework for CEERP Strategy and Priority Projects Report*
 - *Final Task Force Meeting and Council Receipt*
3. Engagement Activity Updates
4. Institute of Sustainable Brampton

City of Brampton

Community Energy & Emissions Reduction Plan

2. Introductions

- a) Project Working Team (City & Sheridan-GIL)*
- b) Task Force Members*

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Community Energy & Emissions Reduction Plan

3. Agenda Review

- a) Meeting Package*
- b) Approval of Agenda*
 - *Co-Chair*

City of Brampton

Community Energy & Emissions Reduction Plan

4. Task Force Business

- a) Addition of Task Force #6*
- b) Review of Pathway to Project Completion*
- c) Review Vision, Goals, Targets, Principles*

CEERP Planning Process

Transition from Analytics to Recommendations

- ✓ Baseline
- ✓ Draft Framing Goals
- ✓ Base Case (BAU) and Risks
- ✓ Scenarios and Opportunities



- Preliminary Recommendations
- Final Goals and Recommendations

CEERP Planning Process

Reporting Framework

Project Working Team



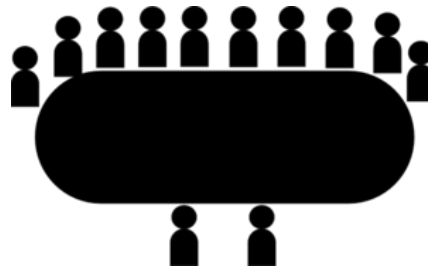
CEERP Report to Task Force

- 2041 CEERP Strategy and 2020 - 2025 Priority Projects
- Background Analytical Document (Appendices)
- Engagement Summary and Evaluation (Appendices)



Staff Report to Council

- Cover for CEERP Report
- 2041 CEERP Strategy and 2020 - 2025 Priority Projects
- Recommendations for Municipal Role in Supporting the Implementation of the CEERP
- Presented by Staff AND Task Force



Committee/Council

- Approves
- Directs Staff

CEERP Planning Process

Key Dates to Completion

- Wk of Sept. 9, 2019 Nordic Cites
- Oct 31, 2019 Senior Leadership Team Update
- Nov 20, 2019 Municipal Department Engagement (MD3)
- Nov 4, 2019 Analytical Plan/Strategy and Priority Projects 1st draft
- Wk of Nov 18, 2019 Distribute Analytical Plan to TF
- Dec 2, 2019 Task Force #5/PWT Meeting
- Dec 2, 2019 Strategy and Priority Projects
- Wk of Dec 9, 2019 Engagement report draft to PWT
- Dec 9, 2019 Council Workshop
- Wk of Jan 13, 2020 Engagement report draft to TF
- Wk of Jan 13, 2020 PWT Meeting Approve Strategy and Priority Projects Report
- Wk of Jan 13, 2020 Task Force #6
- Feb 2020 Final CEERP to City of Brampton for prep of report to Council
- Feb 2020 Preparation for Task Force delegation(s) to Council
- March 4, 2020 Council Meeting

CEERP Task Force Report

Task Force Strategy - Guiding Principles

Guiding Principles

Leverage community relationships and serve as a knowledgeable and trusted connector and advocate for a sustainable energy future that is clean, affordable and resilient. We will be guided by the following principles:

1. Environmental

- *A sustainable energy system balances opportunities to benefit the environmental, economic and social future of Brampton.*
- *Respect the climate science and work towards climate neutrality.*

2. Energy

- *Energy performance is benchmarked against global best practice*

3. Economic

- *All energy related investments will meet acceptable risk-adjusted returns*
- *Energy costs will be competitive compared to comparable North American communities*
- *High-quality employment will be generated.*

4. Reliability

- *Energy systems will be designed to meet the challenges of changing user expectations, climate uncertainty and new technology options*

CEERP Task Force Report

Task Force Strategy – Proposed Report Structure

- **Background**
- **Task Force History**
- **Vision**
- **Mission**
- **Goals**
 - *Energy Goal*
 - *Emissions Goal*
 - *Economic Goal*
 - *Reliability Goal*
- **Guiding Principles**
 - *Environmental*
 - *Energy*
 - *Economic*
 - *Reliability*
- **Focus Areas**
 - *Transportation Efficiency*
 - *Home & Building Efficiency*
 - *Industrial Efficiency*
 - *Local Energy Supply*
- **Projects**
- **KPIs**

CEERP Task Force Report

Task Force Strategy - Vision

Vision

- “Brampton’s energy future is clean, sustainable, resilient and supports the Brampton 2040 Vision”

CEERP Task Force Report

Task Force Strategy - Mission

Mission

- “To advance community driven energy solutions”
- “Mobilize the entire community to transform Brampton’s energy systems to achieve the Plan targets”

CEERP Task Force Report

Task Force Strategy – Goal Setting Principles

Goal Setting Principles

- *Data-informed*
- *Time-Bound*
- *Specific*
- *Measurable*
- *Embrace* Climate Science
- *Recognize the urgency of Climate Change*
- *Integrate* Global Best Practice
- *Attainable*
- *Drive the Transformation*

CEERP Task Force Report

Task Force Strategy - Energy Goals

Energy Goals

- *Based on global best-practices the community-wide energy end use will be at least 50% below 2016 level by 2041*

CEERP Task Force Report

Task Force Strategy - GHG Goals

GHG Goals

- *“To reduce community-wide emissions by 50% in 2040 and to establish a pathway to reduce emissions by **at least 80%** in 2050 **and meet or exceed** Federal and Provincial targets”*

CEERP Task Force Report

Task Force Strategy - Economic Goals

Economic Goal

- *“All Energy investments will meet acceptable returns, create competitive advantage over other **North American** communities, and generate high-quality employment”*

CEERP Task Force Report

Task Force Strategy - Reliability Goals

Reliability Goal

- *“Energy systems will evolve to meet community requirements, improve service quality, and be resilient”*

[Should this be a Principle?]

City of Brampton

Community Energy & Emissions Reduction Plan

5. Analytical Process

a) Review of Final Analytical Plan - Feedback

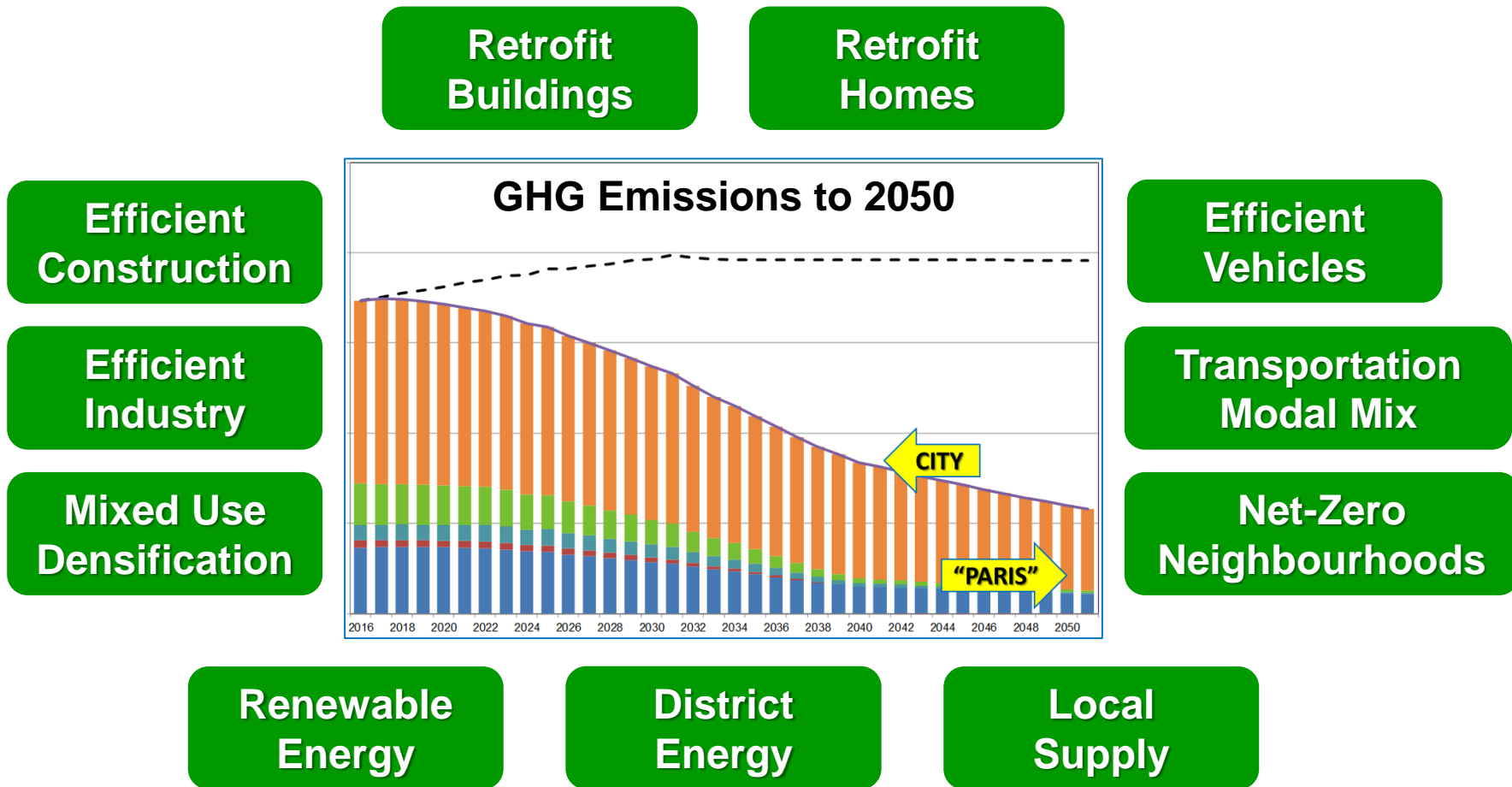
Brampton 2040 Vision

“Living the Mosaic”



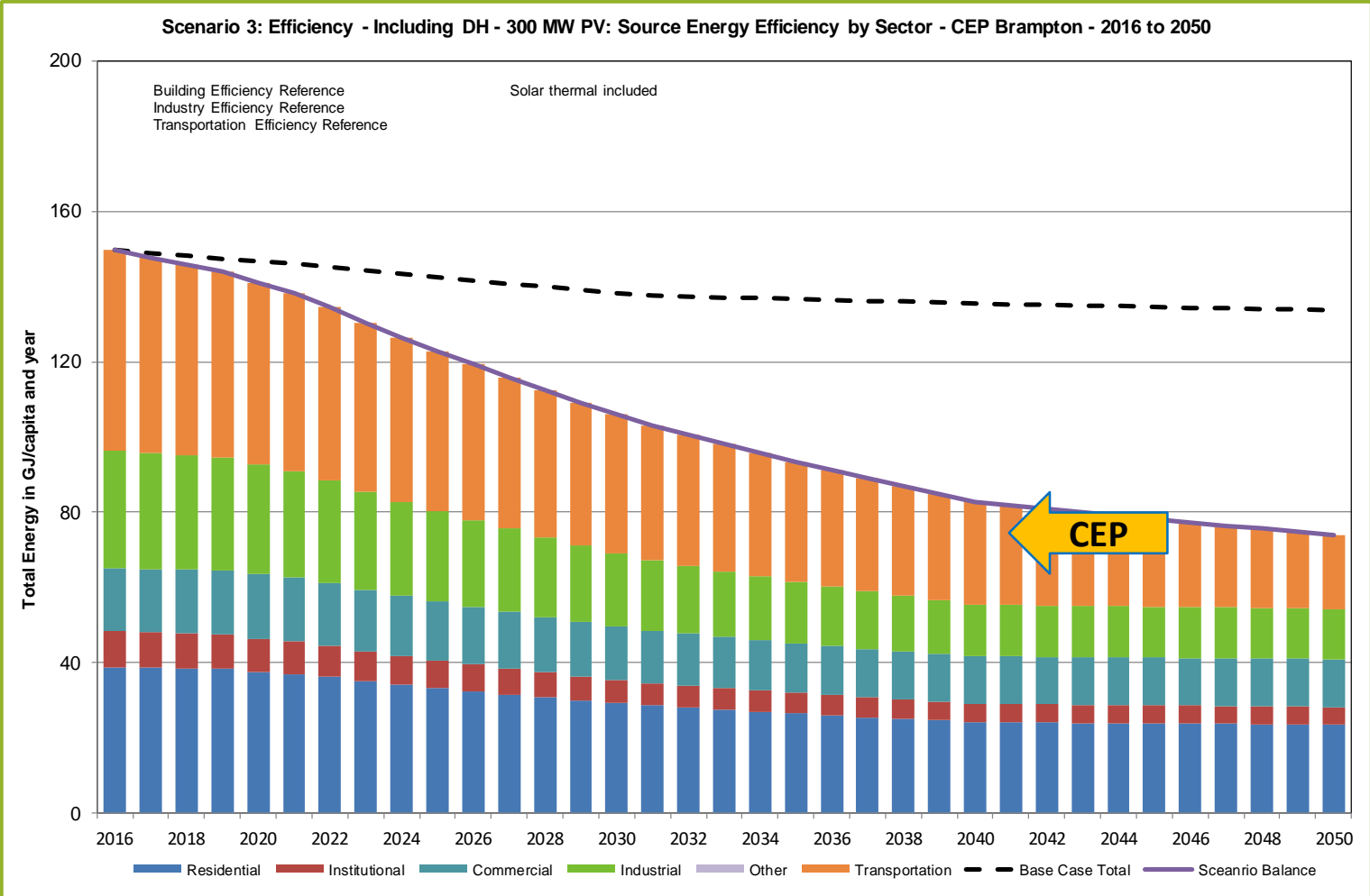
Outstanding Plan – CEERP Adds Energy Layer

CEERP Recommendation *Implementation on Multiple Fronts*

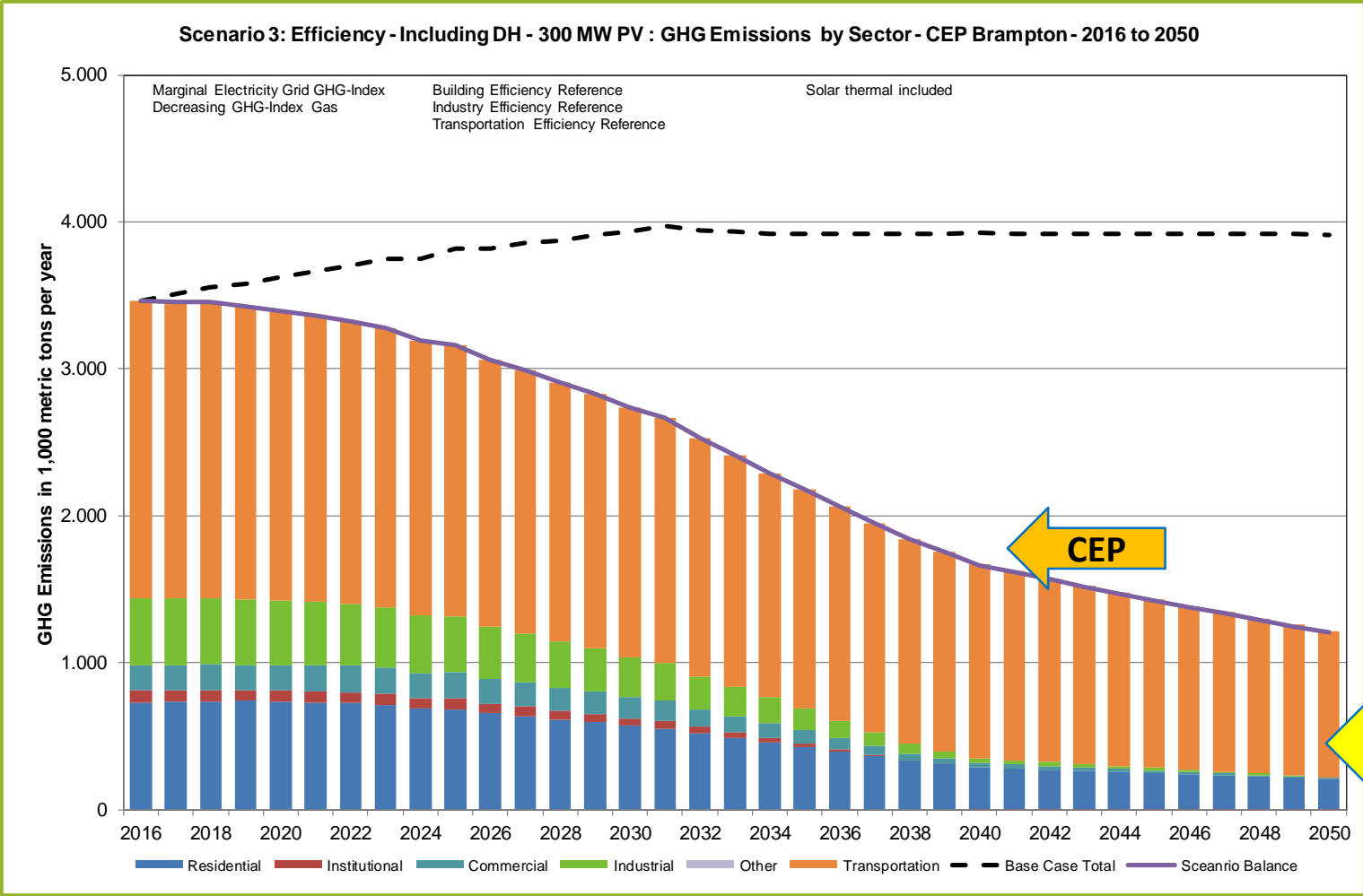


CEERP Recommendation

Source Energy Efficiency by Sector

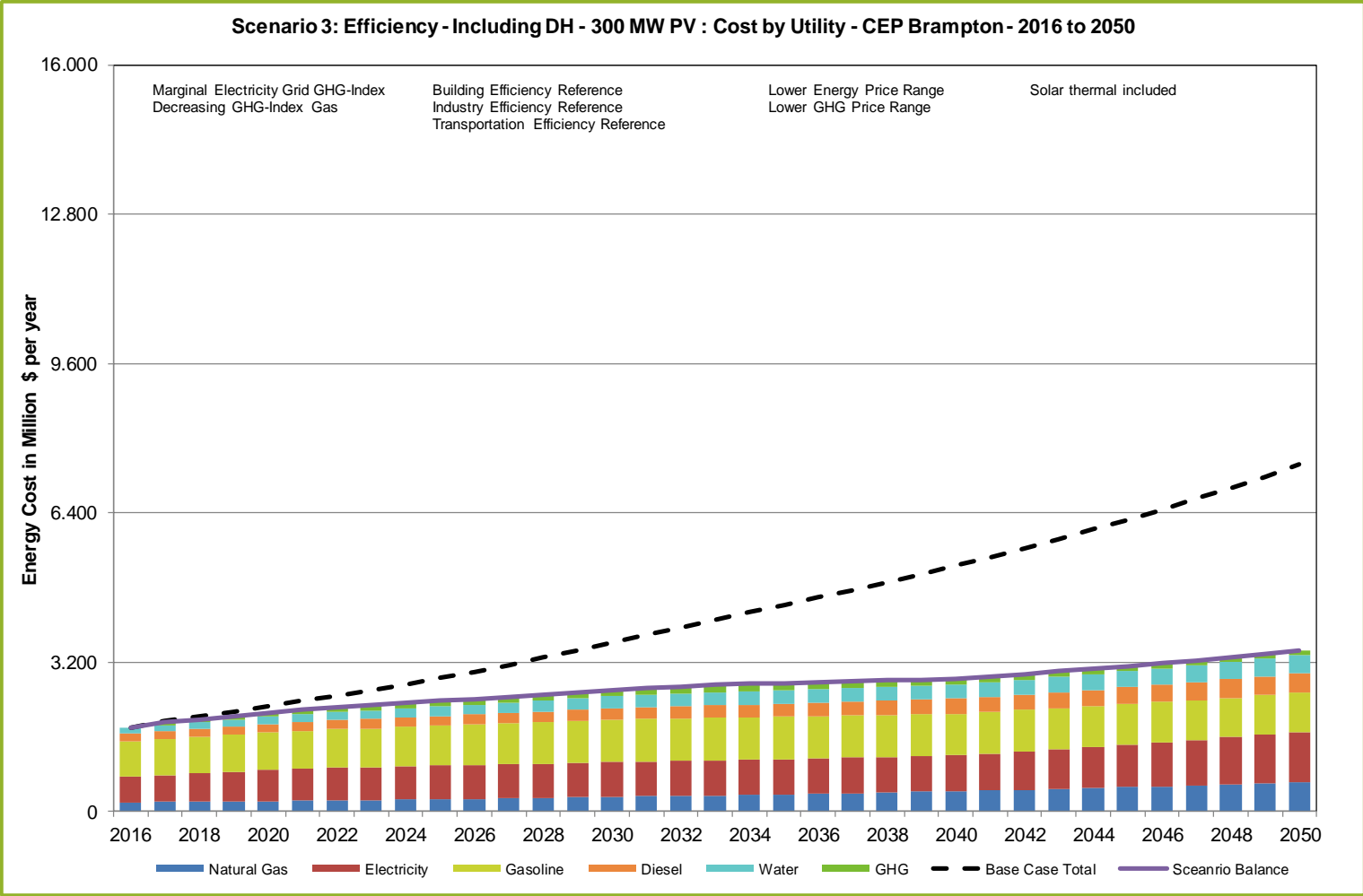


CEERP Recommendation GHG by Sector



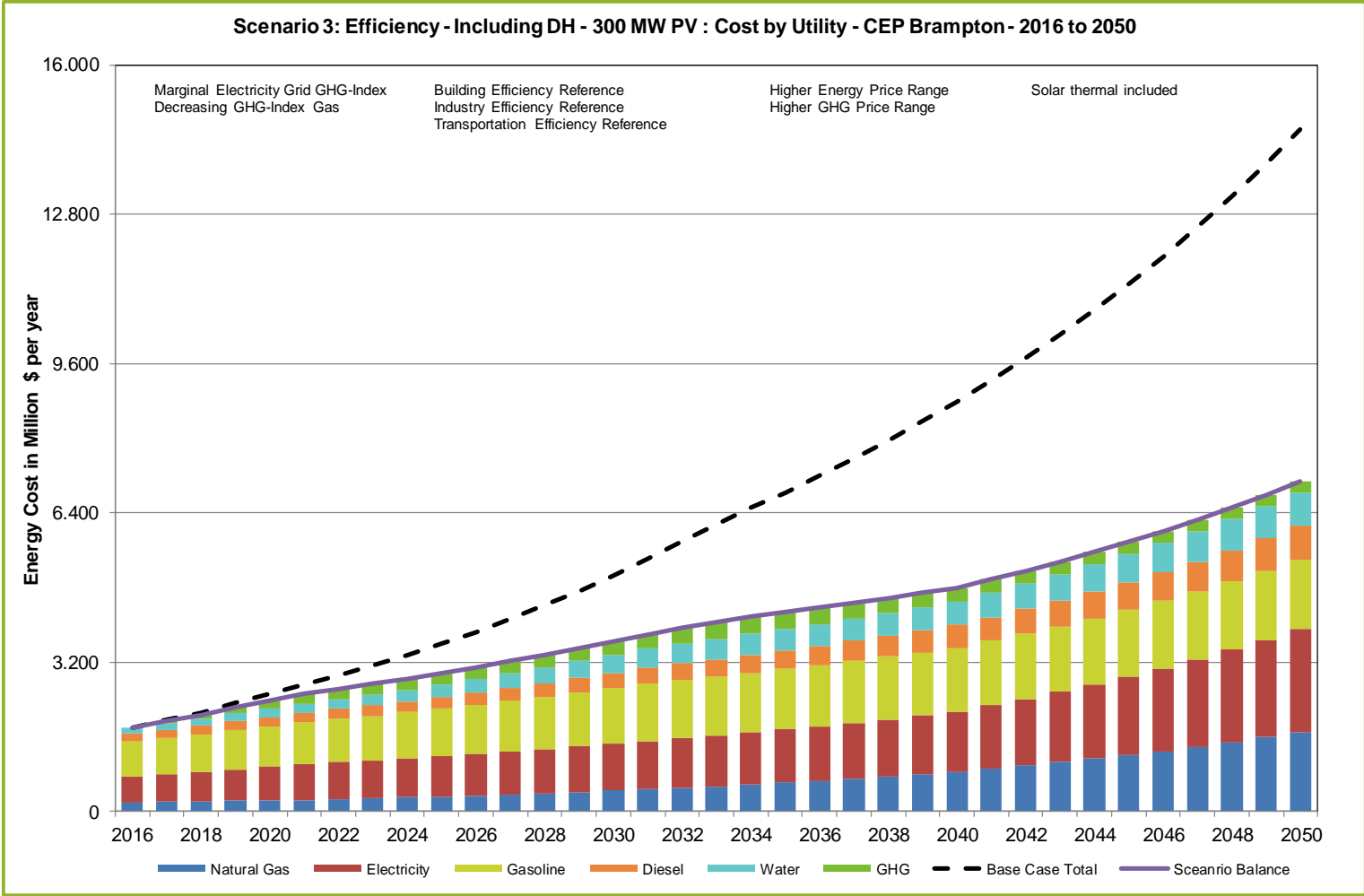
CEERP Recommendation

Utility Cost – Lower Range



CEERP Recommendation

Utility Cost – Higher Range



CEERP Implementation *Outcomes*

- More Jobs
- More Investments
- Less Emissions
- Affordable Energy
- Enhanced Reputation

City of Brampton

CEERP Documents

Document	Purpose	Owner	Submitted to
2041 CEERP Strategy and 2020 - 2025 Priority Projects	Summarizes the recommended strategy and priority projects.	Task Force	City Council
2019 Analytical Report and Appendices (this document)	Summarizes the evidence-based rationale for the recommended strategy and priority projects.	Project Working Team	Task Force
2019 Engagement Report and Appendices	Summarizes the year-long process that culminated in the recommended strategy and priority projects.	Project Working Team	Task Force

?

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Four Priority Areas

1. Home and Building Efficiency
2. Industrial Efficiency
3. Local Energy Supply & Distribution
4. Transportation Efficiency

City of Brampton

Priority Area: Home and Building Efficiency

Priority Area	#	CEERP Strategic Objective	2041 Target
Home and Building Efficiency	1A	Increase efficiency of existing homes.	Achieve a 35% residential sector efficiency gain by retrofitting 80% of existing homes.
	1B	Increase efficiency of existing buildings.	Achieve a 22% commercial and institutional sector efficiency gain by retrofitting 60% of existing buildings.
	1C	Increase delivered efficiency of new property	Achieve a 17% Ontario Building Code efficiency gain.
	1D	Increase water efficiency of existing homes and buildings	Achieve a 34% water efficiency gain

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Priority Area: Industrial Efficiency

Priority Area	#	CEERP Strategic Objective	2041 Target
Industrial Efficiency	2A	Proliferate best practice to all local industry	Achieve a 20% industrial sector efficiency gain.

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Priority Area: Local Energy Supply & Distribution

Priority Area	#	CEERP Strategic Objective	2041 Target
Local Energy Supply & Distribution	3A	Implement district energy in high growth districts with a mix of combined heat and power and other low-carbon heating and cooling sources	Serve 70% of existing target property and 80% for new target property with district heating in areas targeted for densification or new growth.
	3B	Install solar hot water in lower growth districts	Serve 10% of hot water and heating needs in homes not served by district energy with solar hot water.
	3C	Generate significant amounts of solar power installed on suitable rooftops and other locations	Supply 8% of Brampton's electricity needs with locally generated solar power.

City of Brampton

Priority Area: Transportation Efficiency

Priority Area	#	CEERP Strategic Objective	2041 Target
Transportation Efficiency	4A	Reduce average trip length	Reduce average trip length by 7.5% for light-duty vehicles.
	4B	Increase trips by bike and walking	Increase the share of passenger kilometers travelled (PKT) by bus, bike and walking by 10%
	4C	Increase trips by bus and GO Train	Increase the share of passenger kilometers travelled (PKT) by GO Train by 15%
	4D	Increase use of electric vehicles	Increase electric share of light-duty vehicles by 30% and heavy-duty vehicles by 10%
	4E	Increase efficiency of vehicles	Increase efficiency of gas/diesel vehicles by 36% efficiency gain and electric vehicles by 20%

City of Brampton

Community Energy & Emissions Reduction Plan

6. Strategy and Priority Projects

a) Proposed Framework

CEERP Report Package

Strategy and Priority Projects - Main Report

- Executive Summary (including discussion re: energy and transformative city building)
- Background and Context
 - *Climate Change*
 - *Federal legislation, policy and programs*
 - *Provincial legislation, policy and programs*
 - *Regional legislation, policy and programs*
 - *Brampton energy and climate policies and programs*
 - *History of Energy Transitions*
 - *Ontario's Energy System*
 - *Localization of Energy*
 - *Suburban Context*

CEERP Report Package

Strategy and Priority Projects -Main Report (cont.)

■ Introduction

■ *Targeting Carbon*

■ *Reduce, Refuse, Reuse and Recycle*

■ *Energy-related sources versus non-energy related sources*

■ *What is a community energy plan?*

■ *Why develop the CEERP (e.g. economics, reliability)*

■ *What is the Municipal Role/What isn't the Municipal Role?*

■ *What is the Community's Role?*

■ *How did the CEERP get started?*

■ *Project Governance*

■ *Project Reporting*

CEERP Report Package

Strategy and Priority Projects -Main Report (cont.)

■ **Preparing for Action**

- *What does the data tell us about the relationship between energy and emissions?*

■ **Strategy and 5-year Implementation Plan**

- *Vision, Mission, Goals*
 - *Energy, Emissions, Economic Goal*
- *Guiding Principles*
- *Priority Areas*
- *2041 CEERP Strategic Objectives*
- *5-year Implementation Plan 2020-2024*
 - *Municipal Priority Actions*
 - *Community Actions*

■ **Delivery oversight and action**

City of Brampton

Community Energy & Emissions Reduction Plan

7. Engagement Updates

- a) *Engagement Plan/Report and Final Report Package*
 - Activities Update
- b) *Partners in Project Green*
- c) *Nordic Cities*
- d) *CEERP Implementation – Neighbourhood Project Activity*

CEERP Report Package

Engagement Report Framework

- Introduction
- Project Governance
- Public and Stakeholder Engagement Results
 - *Mayor and Council*
 - *Task Force*
 - *Target Networks*
 - *Municipal Departments*
 - *Public*
- Communications
- List of Appendices
 - *Appendix 1 – Engagement Plan*
 - *Appendix 2 – Task Force Composition*
 - *Appendix 3 – Task Force Charter*
 - *Appendix 4 – Survey Results*
 - *Appendix 5 – Communication Collateral*

City of Brampton

Community Energy & Emissions Reduction Plan

8. Institute for Sustainable Brampton

a) Update

Institute for Sustainable Brampton (ISB)

VISION

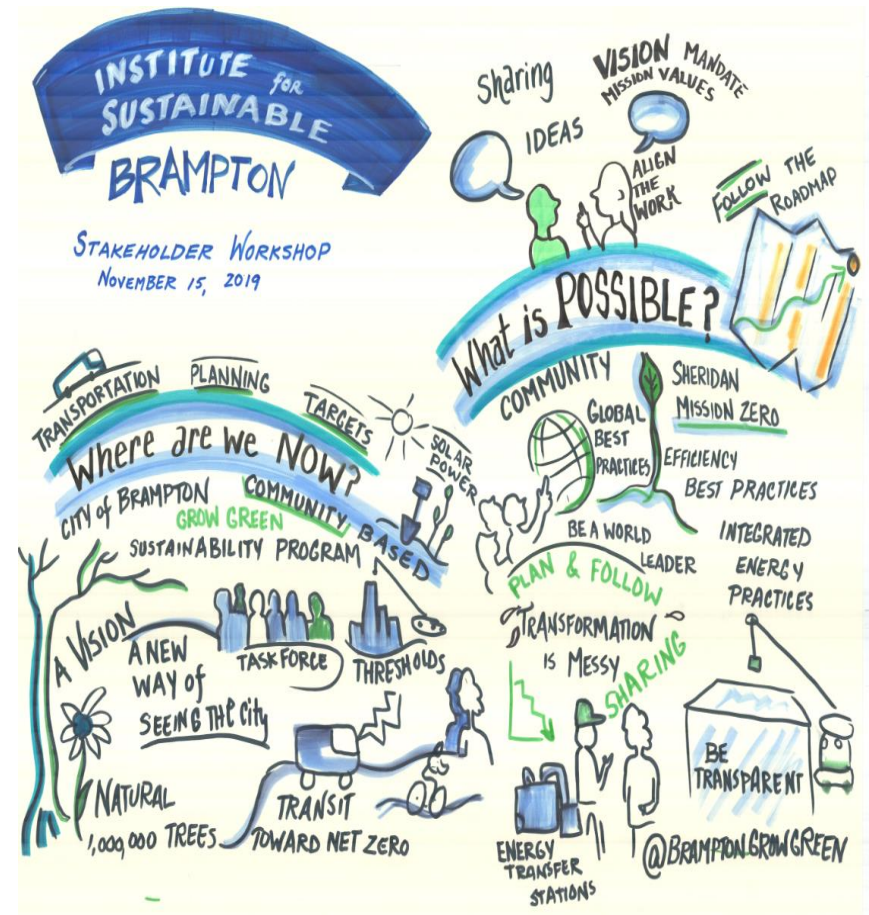
A sustainable energy future

MISSION

To lead an inclusive suburban energy transformation

MANDATE

The ISB will be an action-oriented organization focused on convening partners to implement catalytic priorities from Brampton's Community Energy and Emissions Reductions Plan



City of Brampton

Community Energy & Emissions Reduction Plan

9. Next Meeting

a) Week of January 14, 2020 (TBC)

City of Brampton

Community Energy & Emissions Reduction Plan

10. Adjourn

THANK YOU
And
GOOD DAY