Stantec

Town of the Blue Mountains

Corporate Energy Conservation and Demand Management Plan

Overview Presentation to the Committee of the Whole

January 28, 2020

Objectives

Staff have developed a draft Energy Conservation and Demand Management Plan.

Today, we will provide some context prior to a motion to approve:

- **Who?:** Introduce the team
- **Why?:** Describe the imperative for action
- **Where?:** Clarify the focus
- **How?:** Explore the process
- **What?:** Define the Plan and key actions
- **How?:** Establish an implementation framework
- **When?:** Outline next steps (Jeffery Fletcher)

All photos by Brian Gibson & Jody Wilson. Courtesy of the Town's online Photo Gallery.

Introductions

Amanda Kennedy, MSc
Facilitator and Engagement Specialist
A Kennedy Consulting Ltd.

Gizem Gunal-Akgol, P.Eng
Senior Atmospheric Engineer
Project Manager
Stantec Consulting Ltd.

Daniel Hegg
Senior Carbon Mitigation and Climate Resilience Specialist
Stantec Consulting Ltd.

Introductions

Staff team comprised of

- Jeffery Fletcher, Manager Solid Waste and Special Projects (Project Manager)
- Vicky Bouwman, Financial Analyst
- Aaron McMullen, Facilities Manager, Community Services
- Jennifer Moreau, Director of Human Services
- Tim Murawsky, Chief Building Official
- Cameron Wilson, Public Works Compliance Coordinator

The Plan's Objective

- To move the Town closer to reducing its corporate greenhouse gas (GHG) emissions by 40% below 2005 levels by 2025 and its long-term target of achieving carbon neutrality by 2050 by establishing short-term initiatives that build momentum and lay the groundwork for deeper energy and GHG emissions reduction actions to be implemented post-2025.

Clarify the focus

- Town of the Blue Mountains' corporate operations and facilities

  ….which in turn support the community

Not a plan for community-wide emissions reduction

The imperative for action

- The Town is required, by provincial regulation, to update the corporate Energy Conservation and Demand Management Plan (ECDM Plan) every five years
  - Town Staff developed a Corporate ECDM Plan in 2014
  - Most of those projects were completed or completed in-part
- Provides strategic alignment for ongoing and planned work
- Alignment with other Council-approved documents and initiatives (forthcoming Corporate Strategic Plan, Our Sustainable Path, etc.)
- Urgent need to act on emissions reductions
- Potential reduction in utility costs

Key accomplishments from 2014-2019

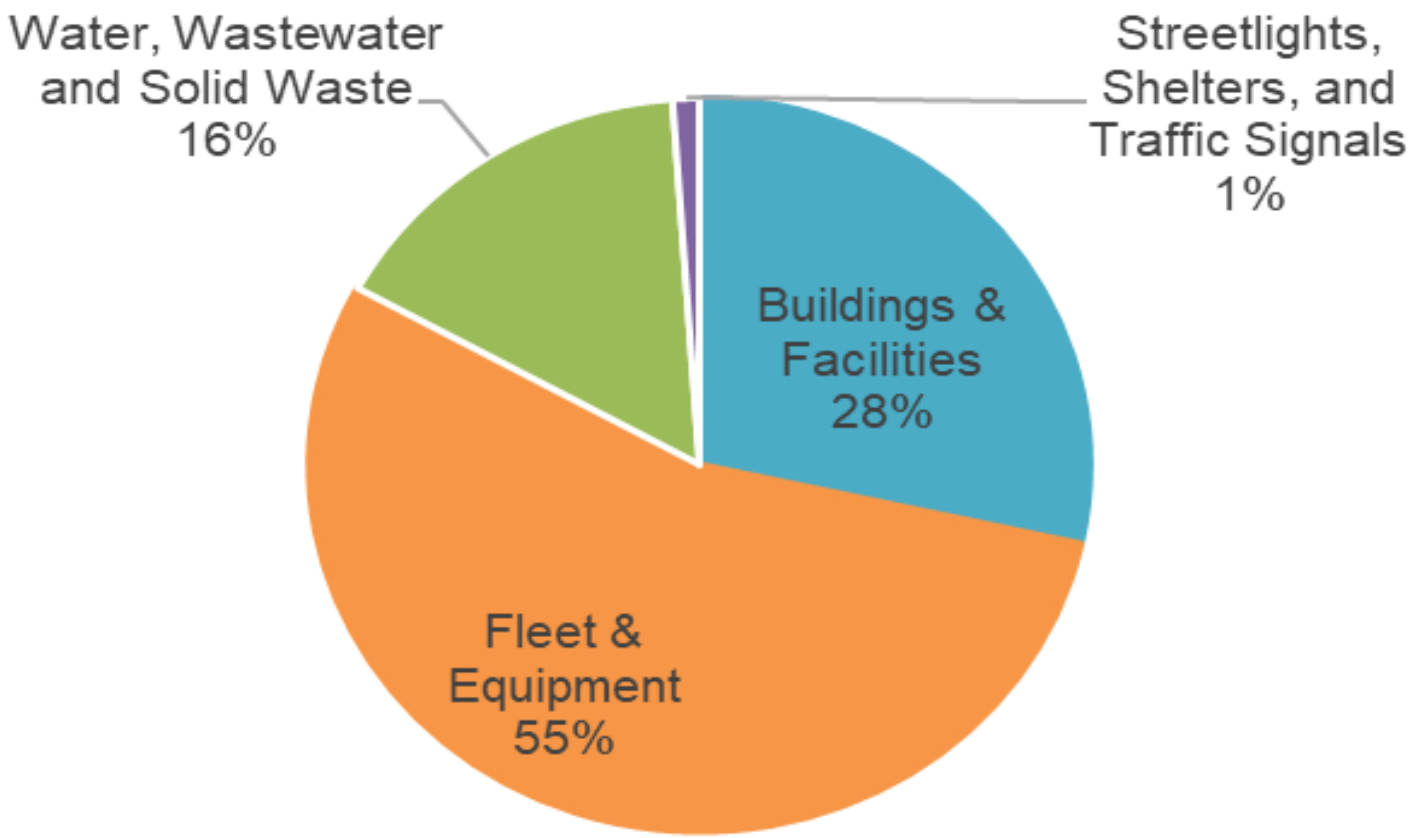
- The last ECDMP drove the completion of key corporate priorities, including:
  - Lighting retrofit of L.E. Shore Memorial Library
  - Compressor replacements and other upgrades at Beaver Valley Community Centre
  - Conversion to LED streetlights and fixtures

Explore the process

- Started in February 2019
- Initiatives were identified through a combination of:
  - Staff engagement
  - Currently and formerly completed location-based site visits
  - A best-in-class review of other municipalities
  - Input from internal and external subject matter experts

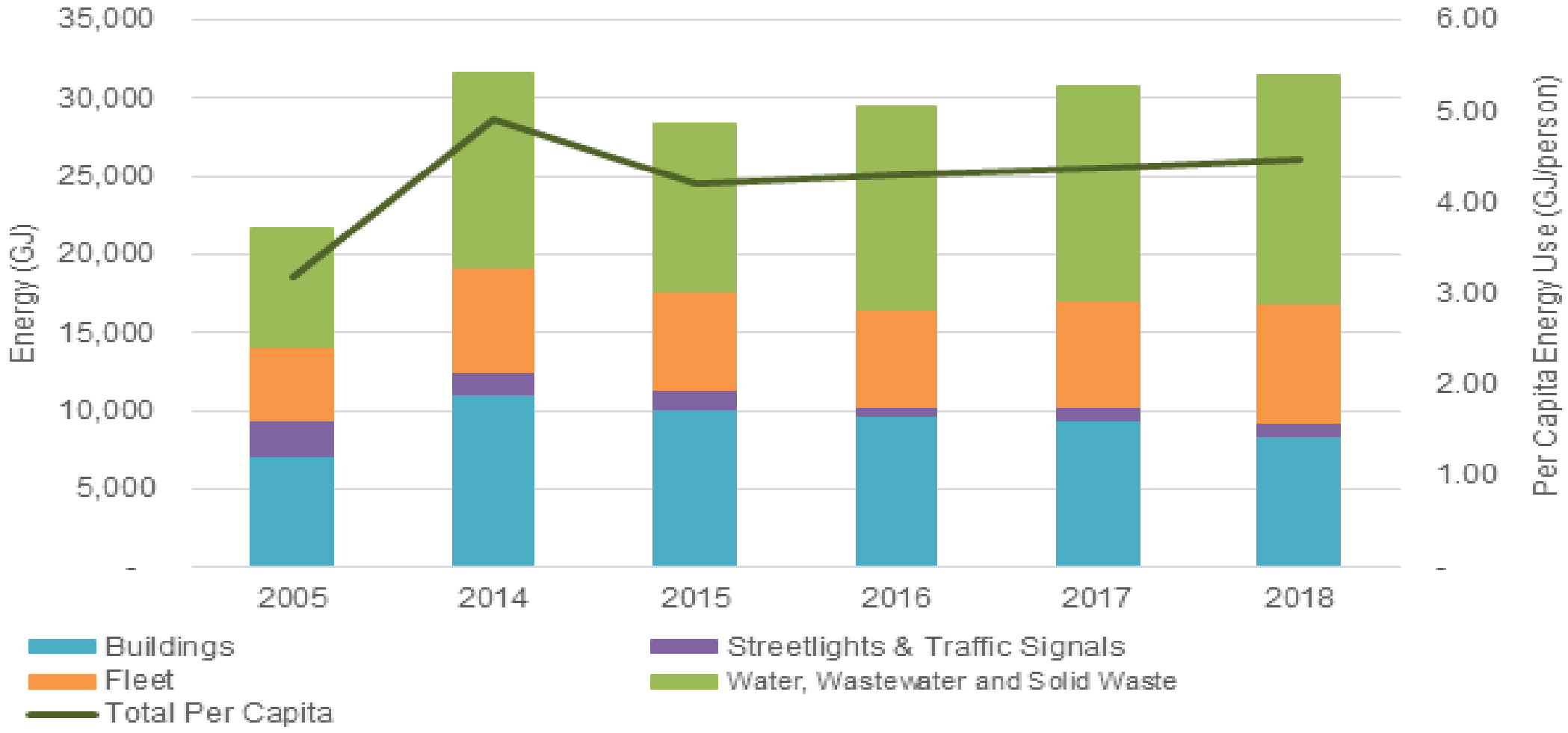
Where are we now?

In 2018, the Town's corporate GHG emissions amounted to 1,016 tonnes of carbon dioxide equivalent (tCO2e), or 144 kilograms CO2e per person in the community.

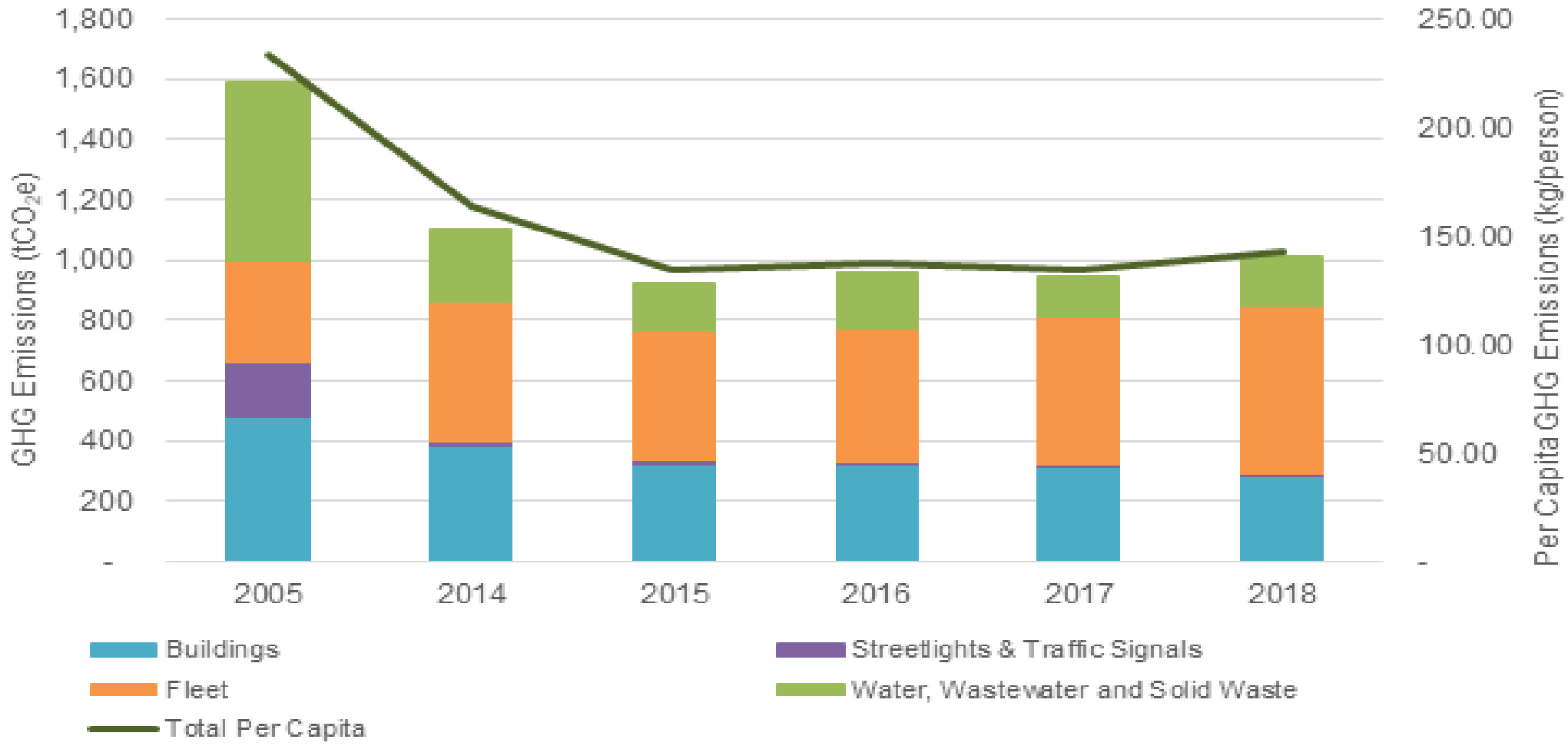


Corporate GHG Emissions (tCO_2e) by Sector, 2018

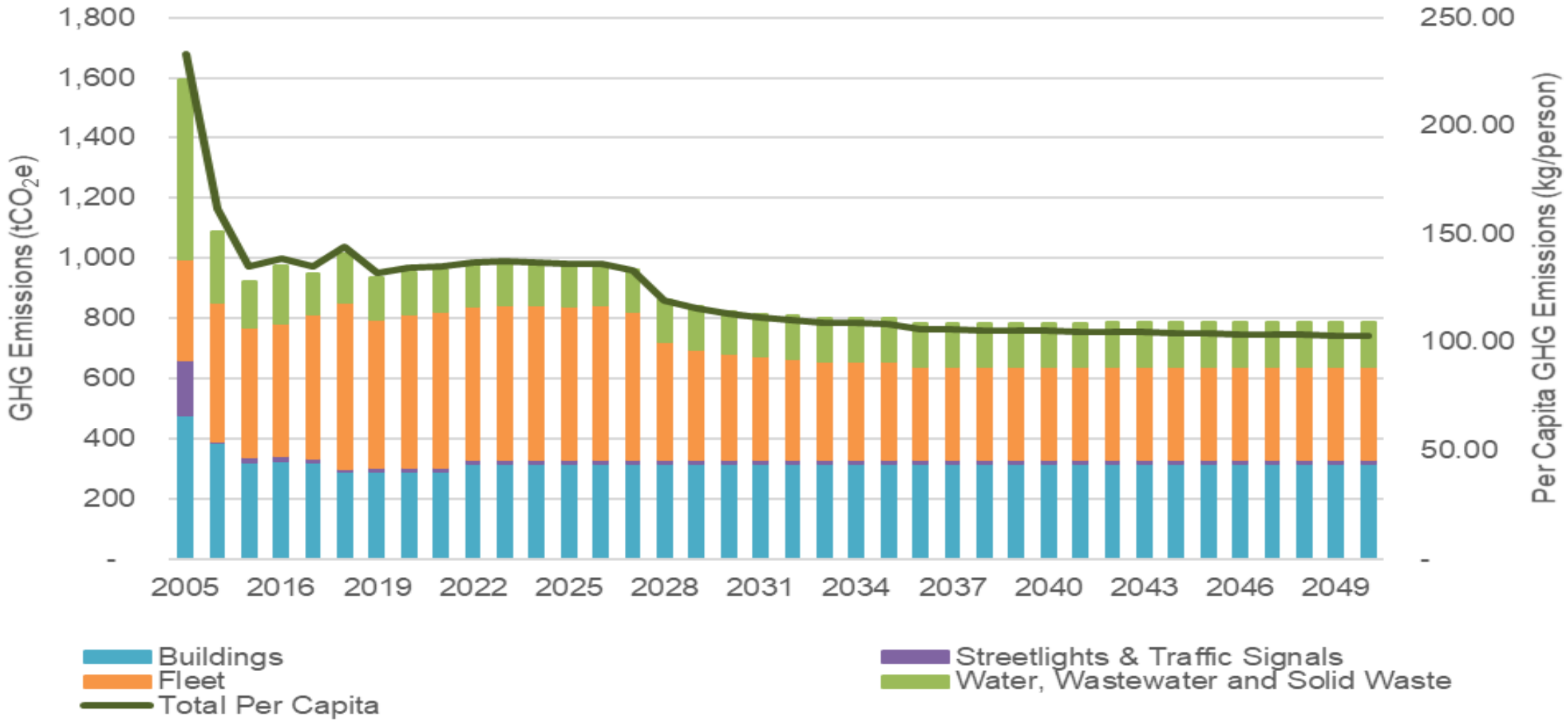
Historical Trends: Energy Use



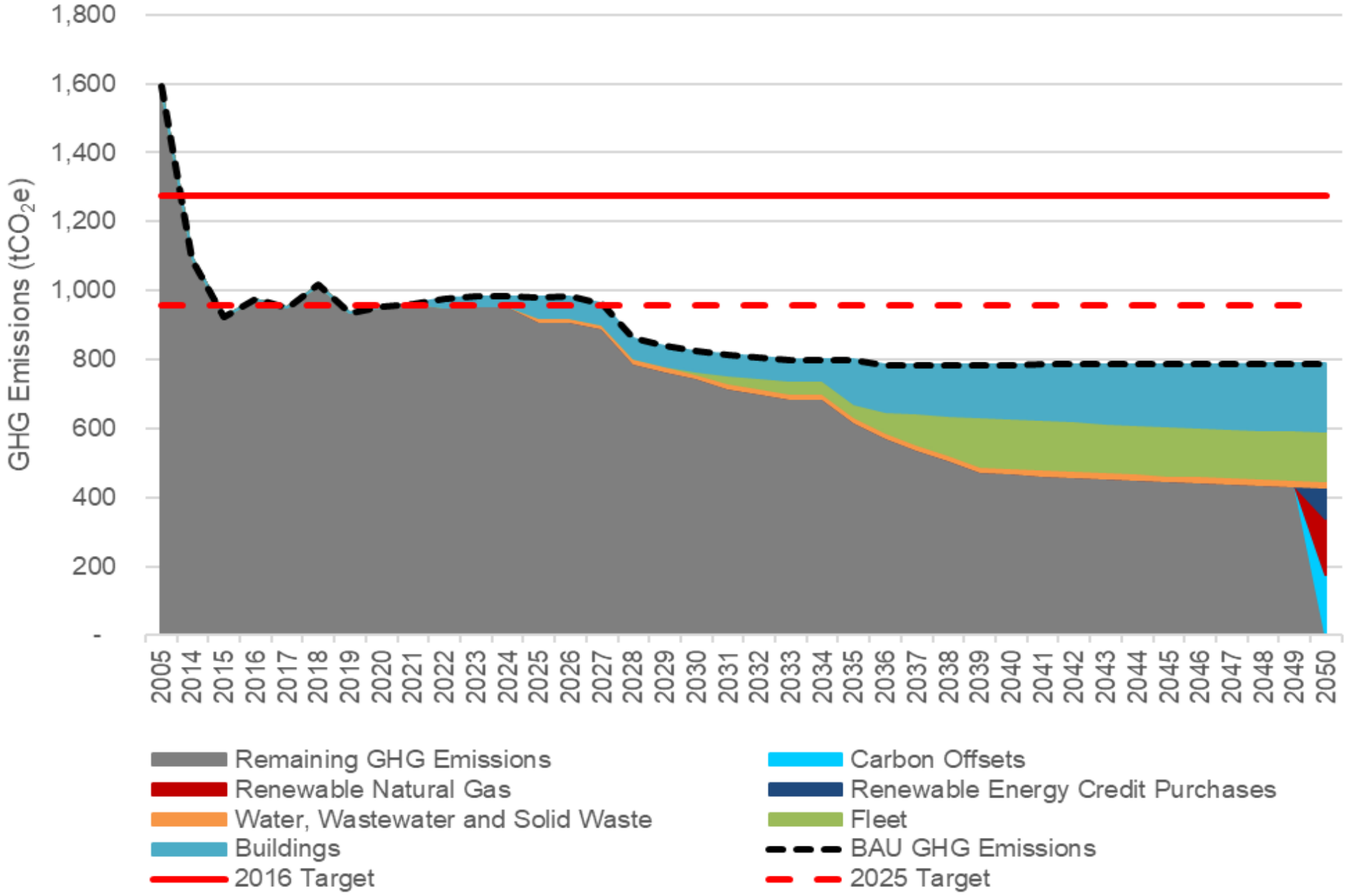
Historical Trends: GHG Emissions



What if we didn't change anything? (Business as usual)



A look ahead - Achieving carbon neutrality



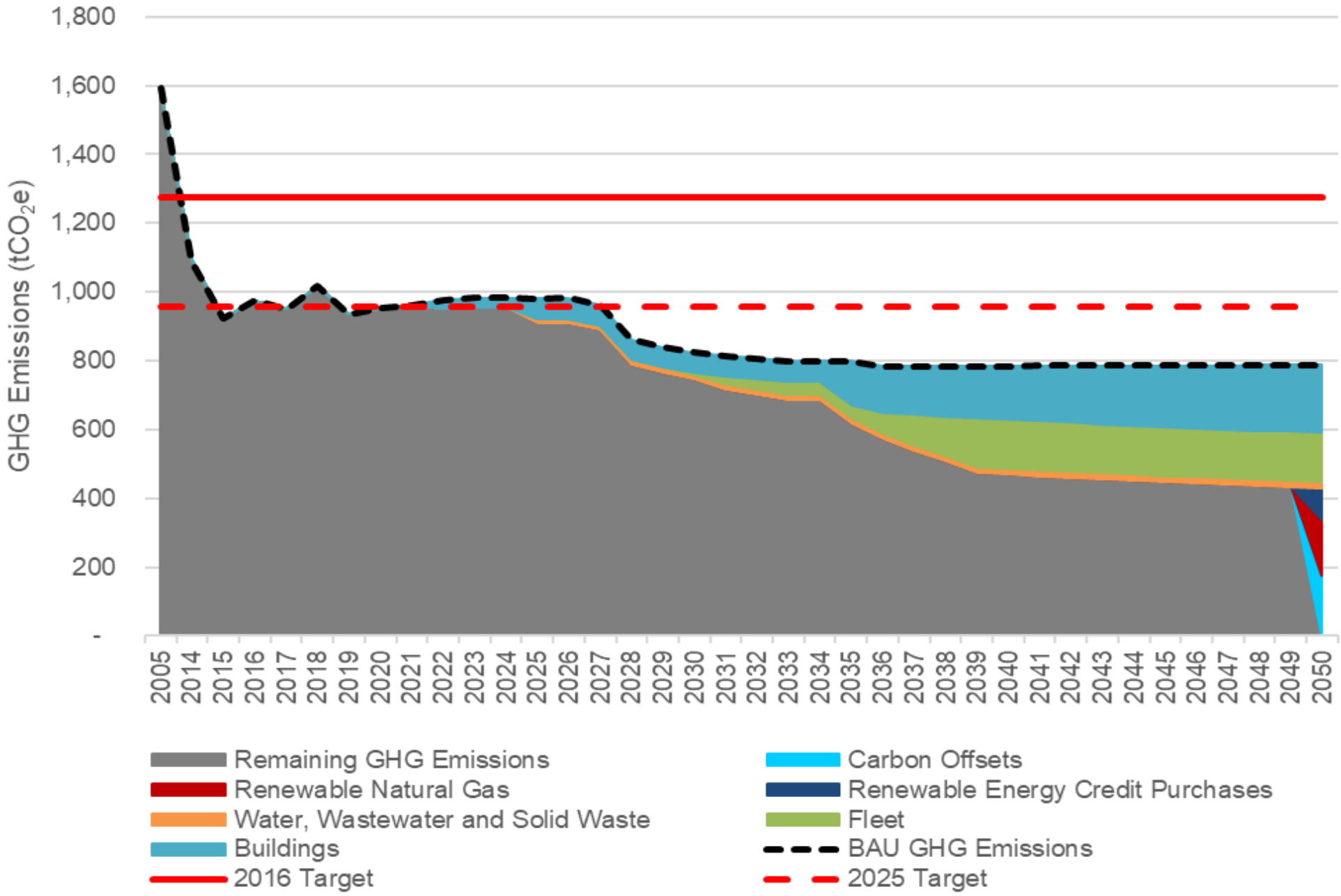
Key Recommended Actions

- Thought-out mix of policy, projects, and programs
- Staggered implementation between 2020 and 2030
- Purposeful focus on buildings, facilities, fleet, equipment, and corporate operations
- Considers population growth and technological changes

Recommended Actions

- Develop a Low Carbon Building Policy
- Investigate Additional Energy Conservation Opportunities
- Accelerate Building LED Replacements
- Prioritize Deep Energy Retrofits Over Like-For-Like Replacements
- Implement a Building Commissioning Program
- Implement an Energy Performance Monitoring Program
- Hire a Dedicated Energy Manager
- Develop a Low Carbon Fleet Management Policy
- Opportunistically Switch Light Duty Vehicles (LDV) to Electric
- Pilot New Technologies & Techniques
- Incorporate Life Cycle Considerations into Capital Planning and Purchases
- Develop an Internal Cost of Carbon (ICC) Policy
- Develop a Carbon Neutral Policy
- Develop a Sustainable Infrastructure Policy

The path to carbon neutrality



Implementation Considerations

- Governance and collaboration
- Monitoring existing and evaluating new initiatives
- Taking advantage of funding
- Monitoring and reporting

Key Performance Indicators

Key Performance Indicator (KPI)	Measurement
Building Energy Intensity	Energy use per unit area
Building Emissions Intensity	Greenhouse gas emissions per unit area
Building Energy Cost Intensity	$ per unit area
Fleet Fuel Efficiency	Fuel quantity per kilometer
Fleet Total Fuel Used	Fuel quantity
Fleet Number of Vehicles in Different Classes	Number of vehicles with greater fuel efficiency, hybrid, electric vehicle etc.
Streetlights	Energy use per light

Recommended Communication Tactics

- Host quarterly ECDM Plan Meetings
- Develop an annual corporate Energy and GHG Emissions Progress Report
- Increase awareness of the ECDM Plan and implement general energy skills training for all staff
- Work to integrate key messaging into existing communications
- Create (and publicize) a “Bright Lights” program
- Facilitate open lines of communication

So… what's next?
Jeffery Fletcher