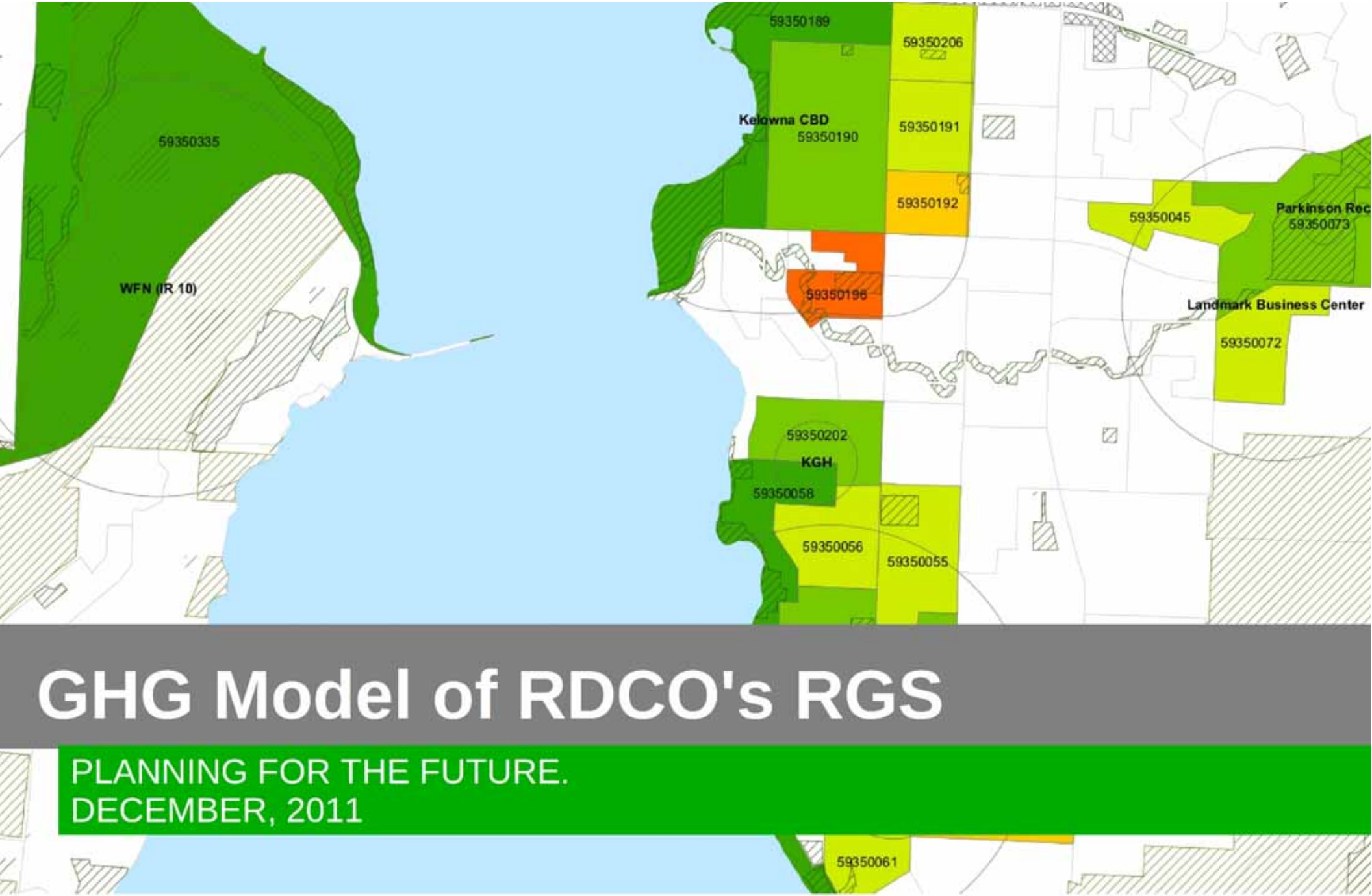


GHG Model of RDCO's RGS

PLANNING FOR THE FUTURE.
DECEMBER, 2011

GHGProof

Purpose

- Purpose: Evaluate the GHG emissions implications of land-use decisions for the RGS;
- Used GHGProof, SSG's open-source model;
- GHGProof has been used for similar analyses with more than fifteen municipalities and regional districts including Capital Regional District and Fraser Valley Regional District.

www.sustainabilitysolutions.ca/tools/GHGProof

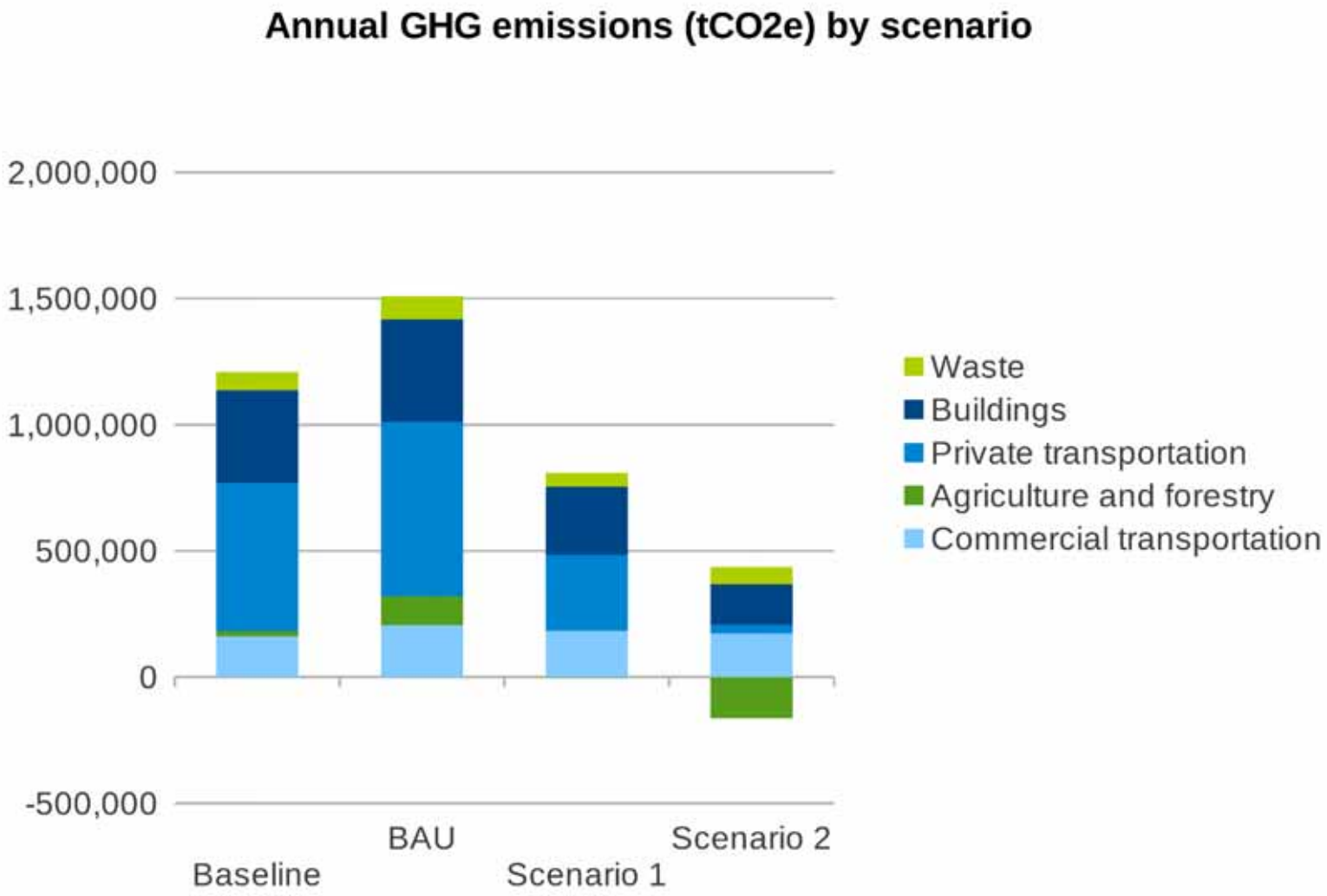
GHGProof


GHGProof
Agriculture
Transport of food
Agricultural practices
Waste
Solid
Liquid
Forests
Transportation
Walking/ cycling
Public transit
Private/ commercial vehicles
Buildings
Energy efficiency
Dwelling type
District energy
District energy
Residential/ commercial

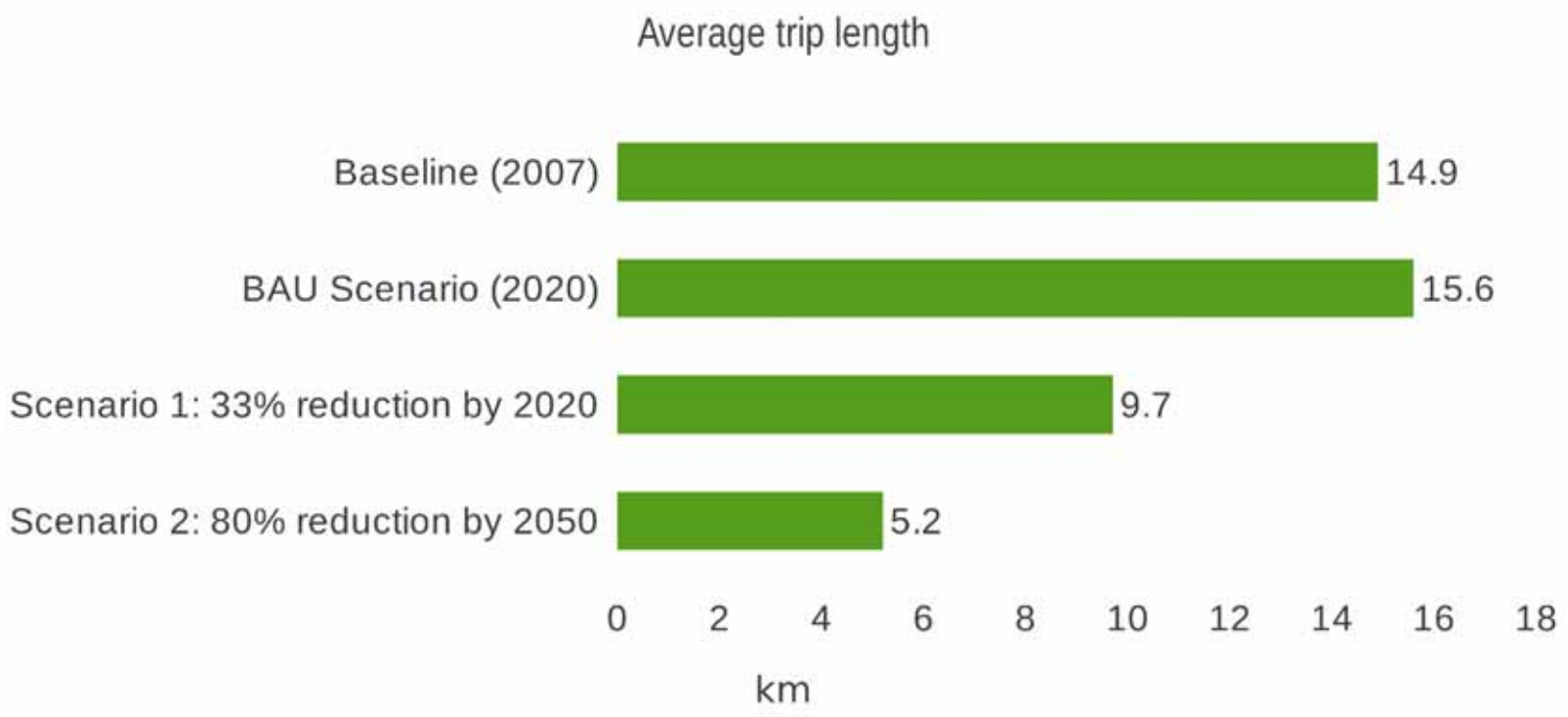
GHGProof


2. OCP
What will happen if the OCP is implemented
1. Baseline
What are the current GHG emissions?
3. 2030 GHG Target
What is required for a 33% reduction?
4. 2050 GHG Target
What is required for a 80% reduction?

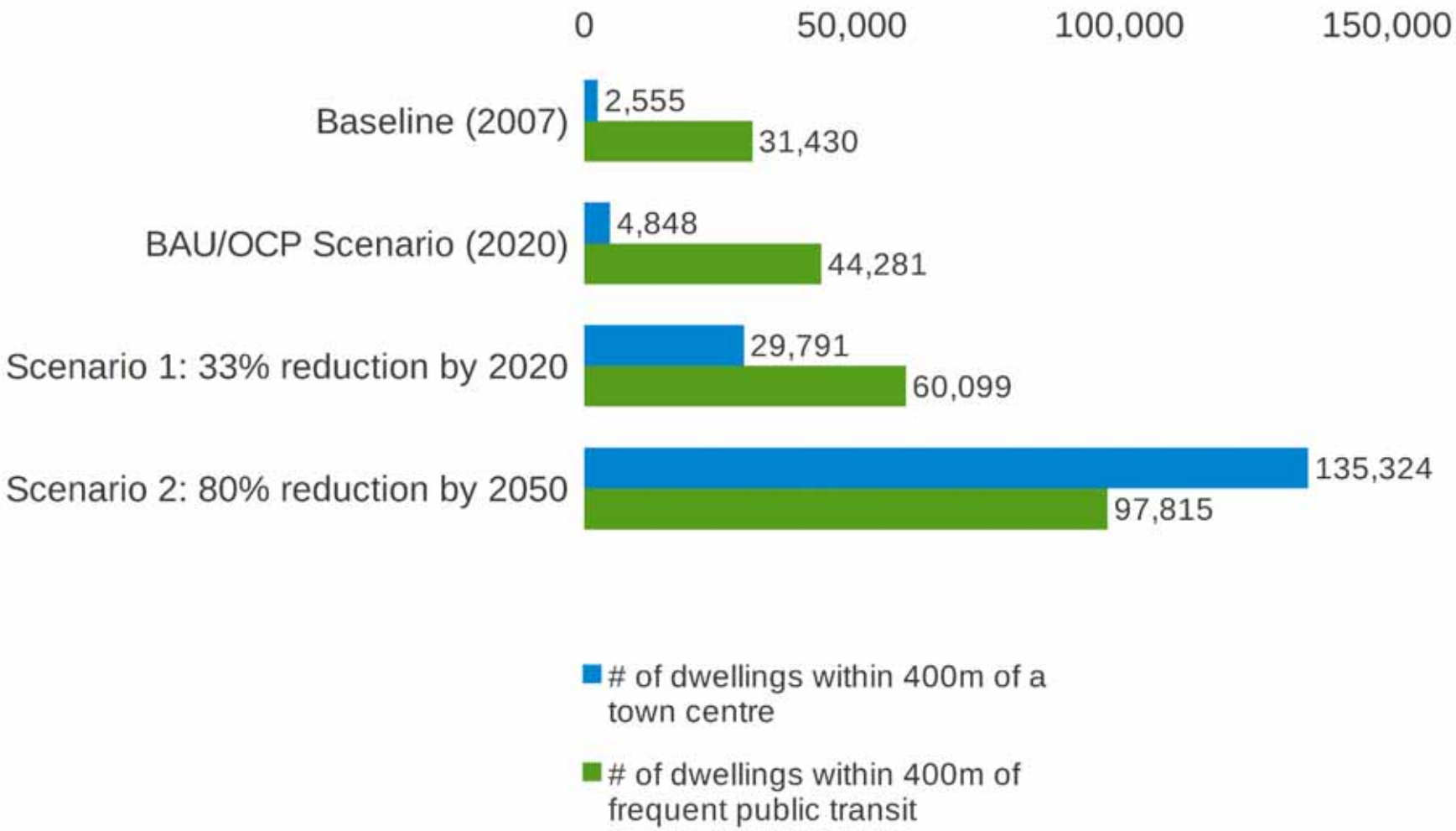
GHG Emissions



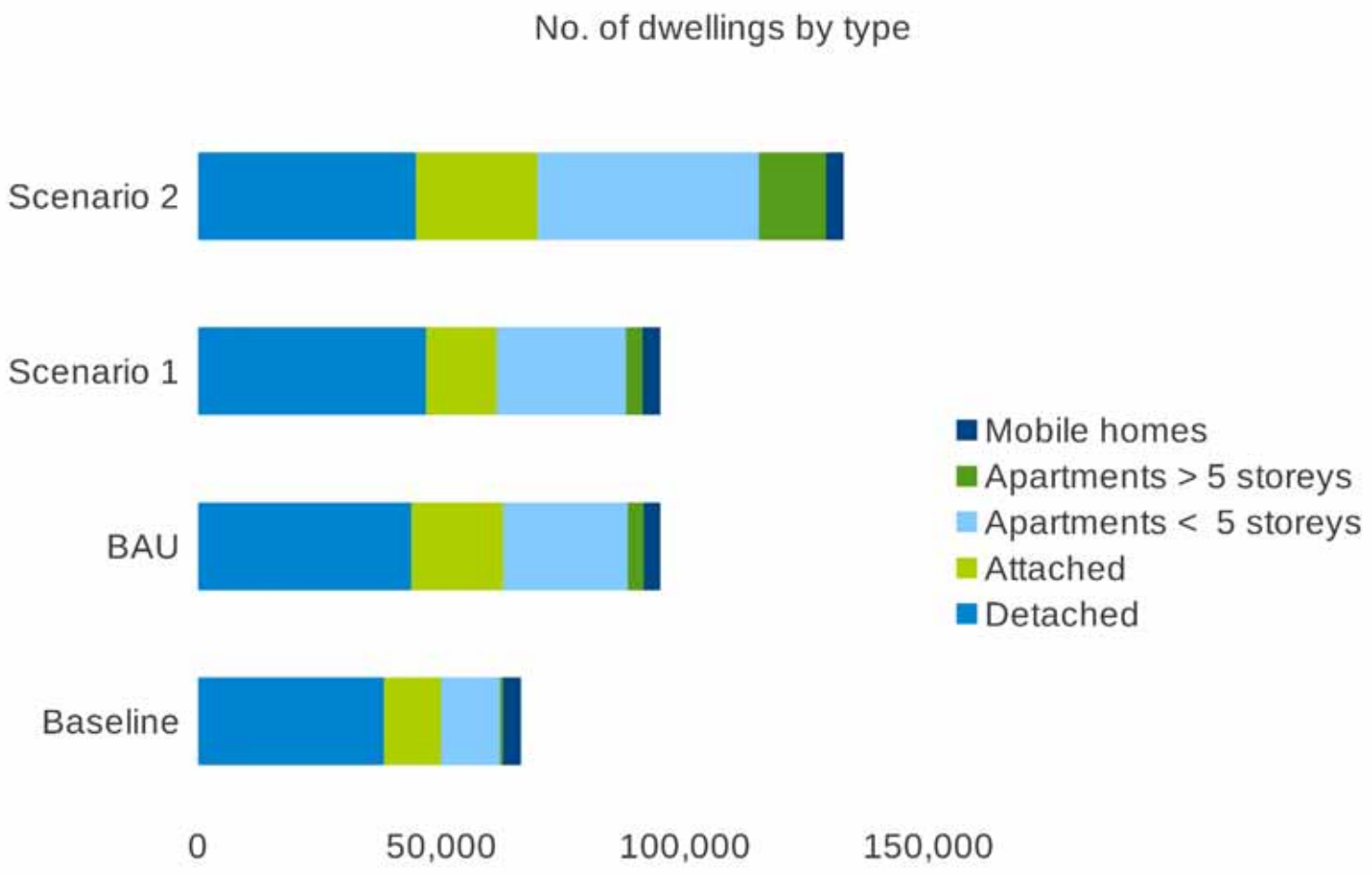
Vehicle kilometres travelled (VKT)



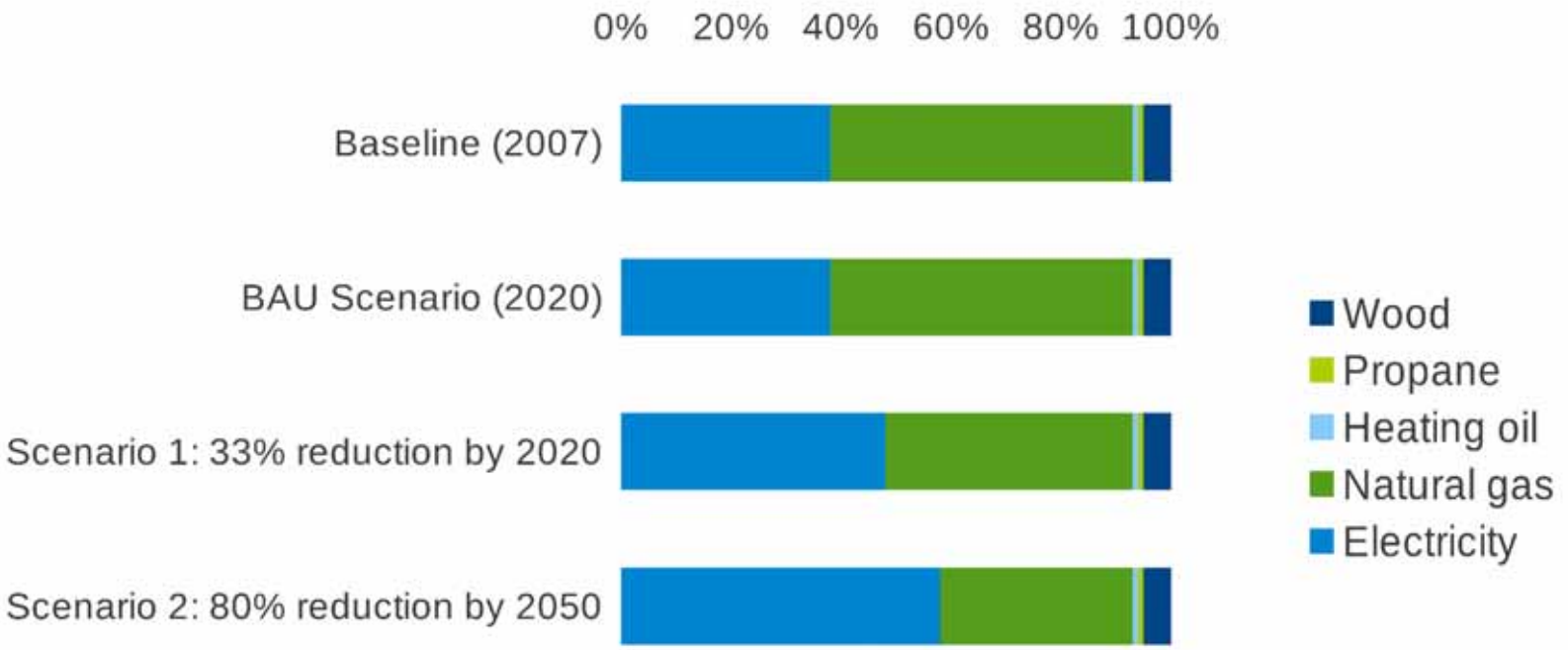
Reductions due to proximity



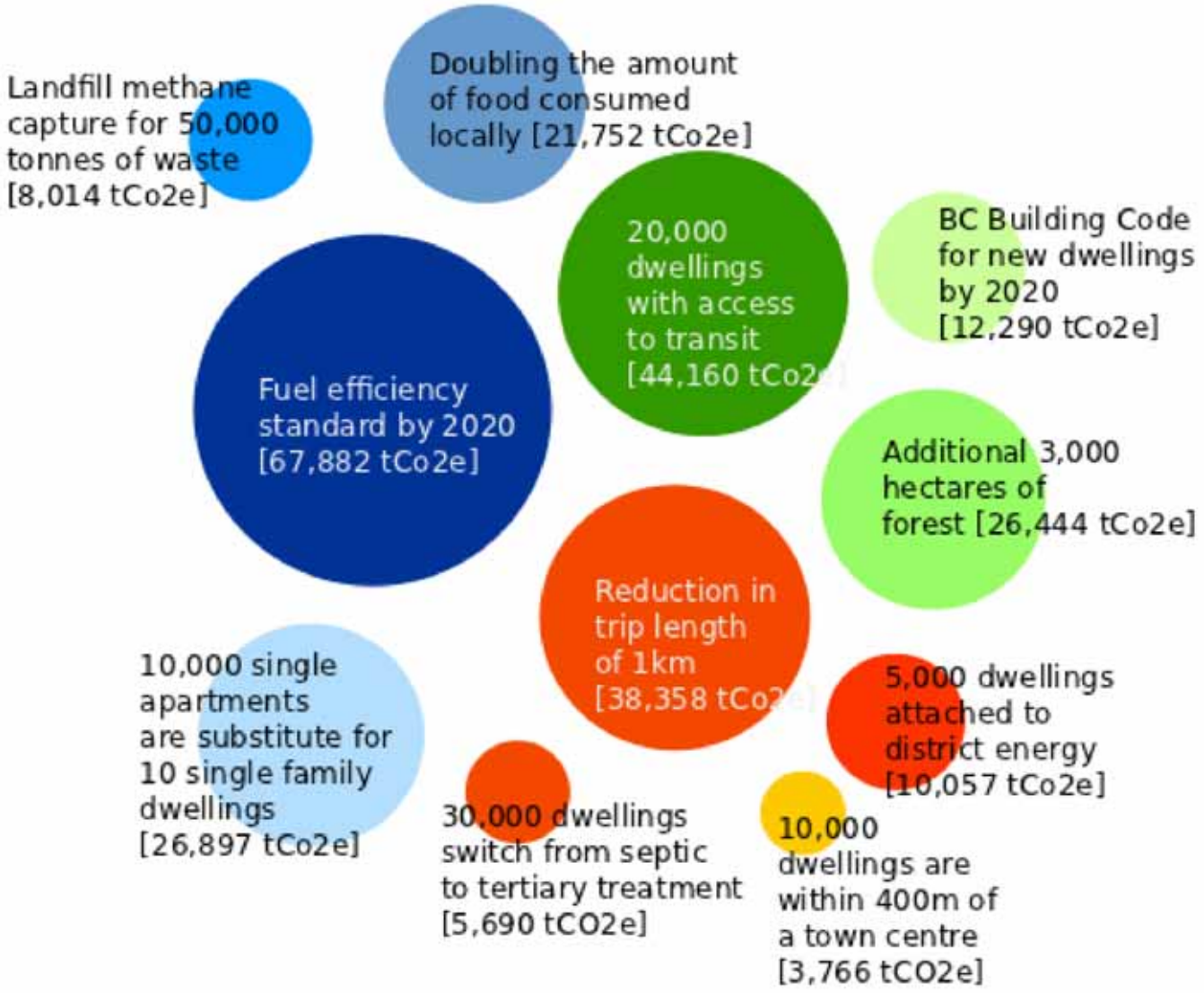
Dwelling mix



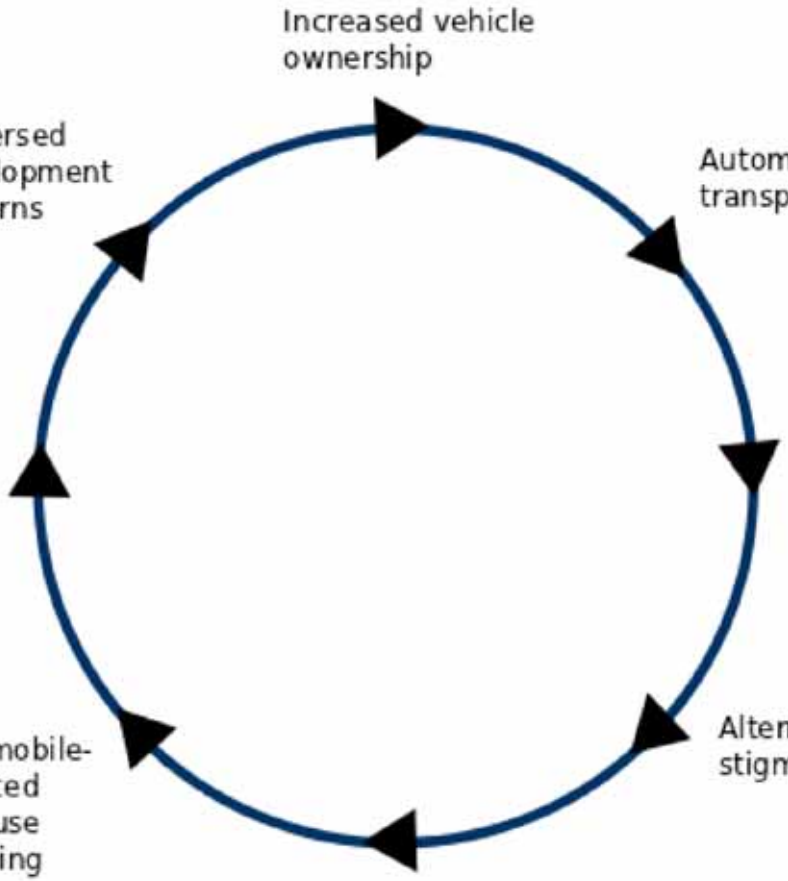
Energy mix


0%
20%
40%
60%
80%
100%
Baseline (2007)
BAU Scenario (2020)
Scenario 1: 33% reduction by 2020
Scenario 2: 80% reduction by 2050
Wood
Propane
Heating oil
Natural gas
Electricity

Impact of different measures



Barriers: lock-in



Increased municipal servicing costs

Houses isolated from destinations

Valuable space used for parking

Youth, elderly and poor isolated

Less people walking and cycling

Household energy costs increase

Increased deaths from accidents, levels of obesity and heart disease

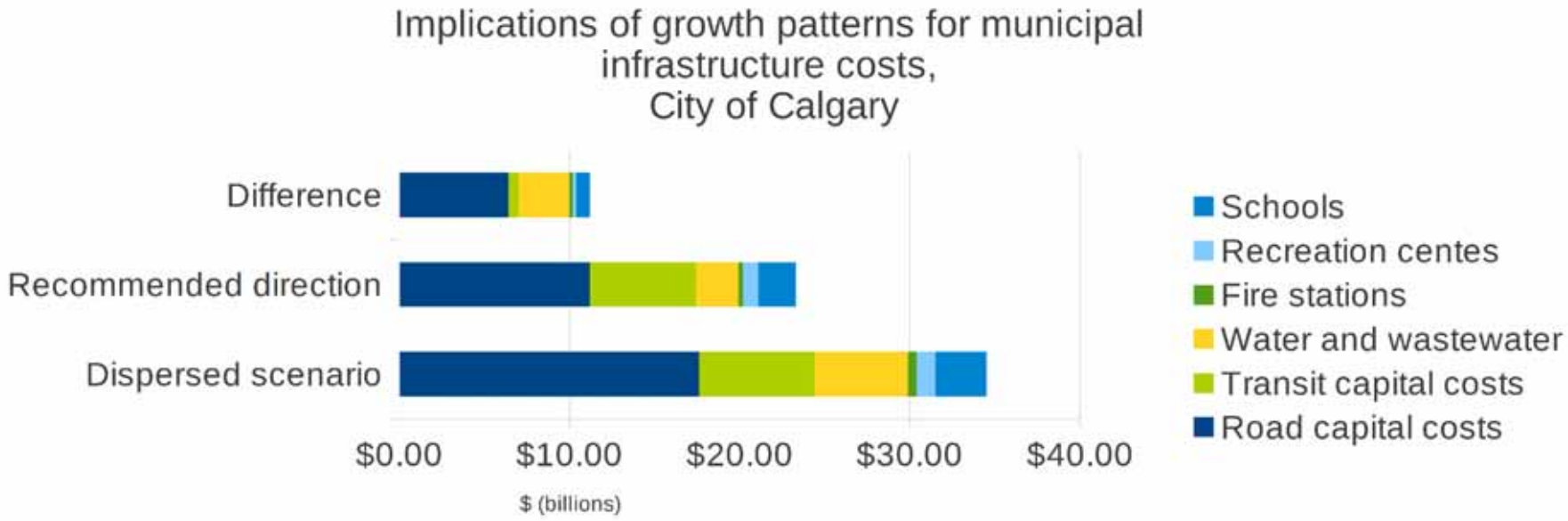
Frequent transit costly to implent

Illustration adapted from: Litman, T. (2011). Evaluating transportation land-use impacts. Victoria Transport Policy Institute

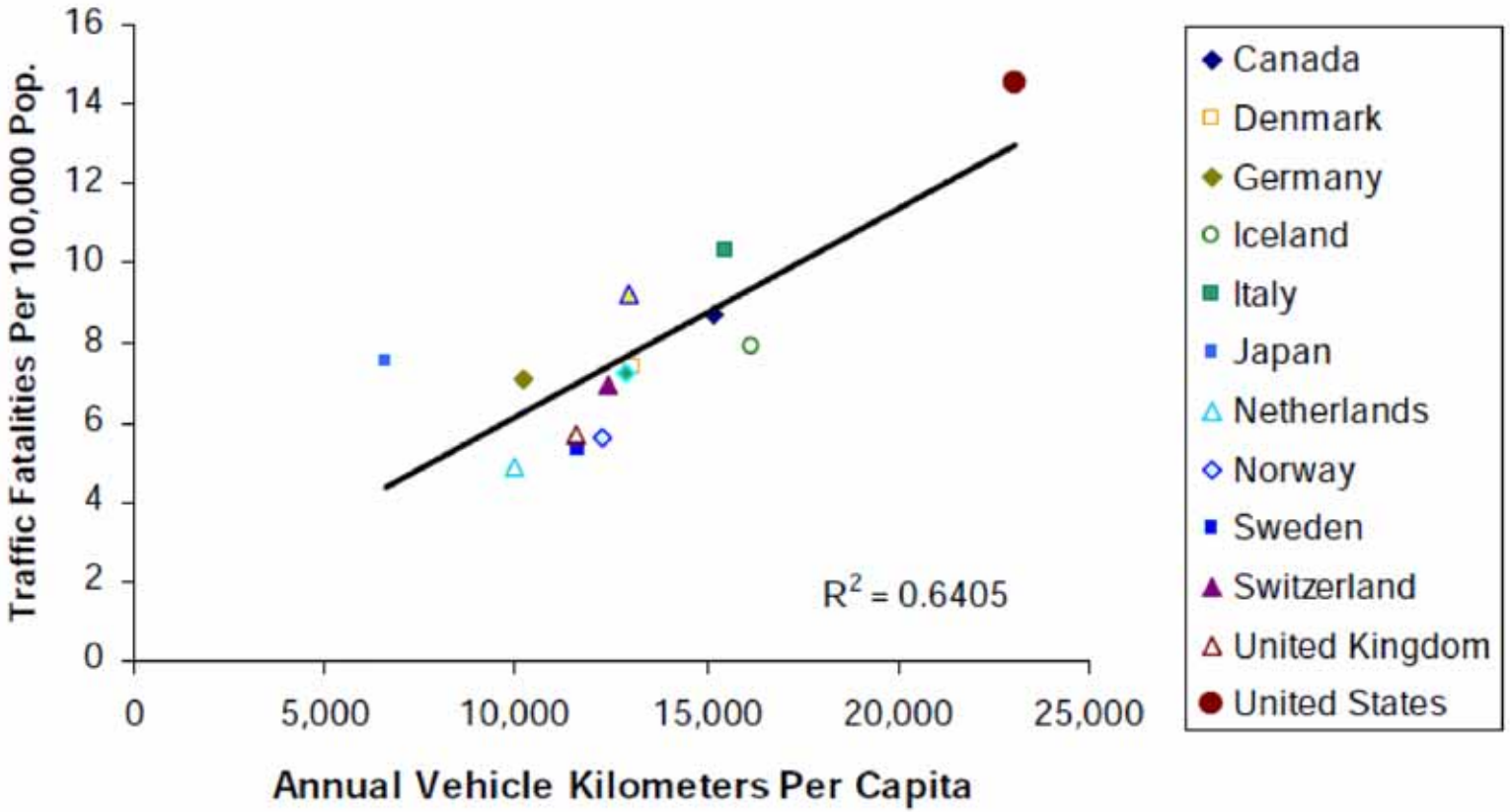
Win-win-win-win

Low GHG emissions=

+ Health
+ Economic opportunities
+ Social capital
+ Reduced infrastructure costs

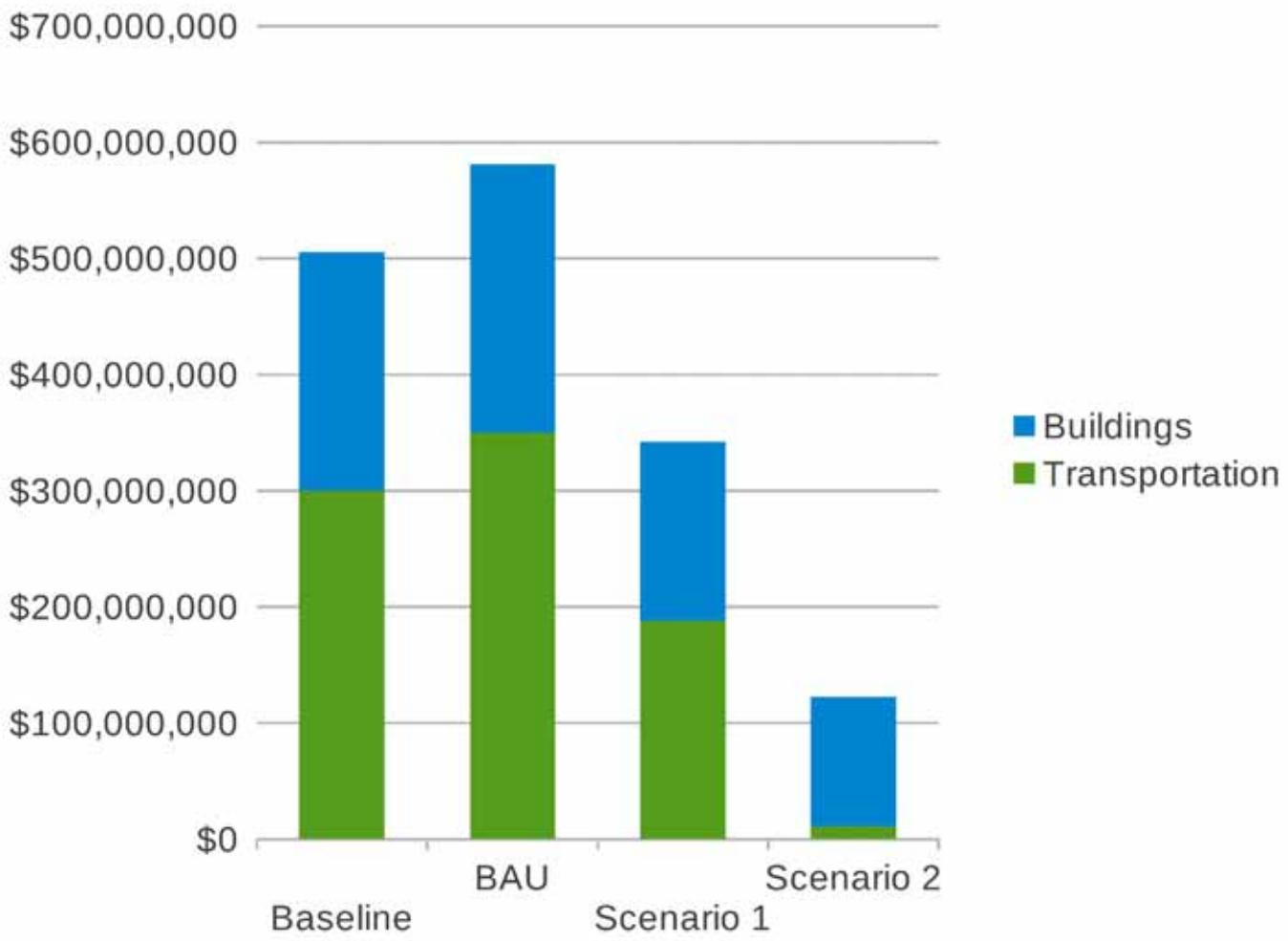


Co-benefits: health



Source: Victoria Transport Policy Institute, 2011

Annual private costs ($)



Reflections

1. BAU will result in an increase in GHG emissions.
2. The 33% target is very difficult;
3. Recommend 2020 target of stabilisation;
3. The 80% target provides more scope for reductions by 2050;
4. New policies and actions will be required;
5. These policies and actions will deliver significant additional benefits including in health outcomes, economic development opportunities, municipal infrastructure cost savings and household costs.
6. Additional study of these co-benefits will enhance this case.

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GHGProof