

Resilient Energy and Zero-Waste Systems

Vision for 2050

Surrey's energy systems are free of carbon pollution. Most uses rely on electricity, while renewable fuels are prioritized for the most difficult to decarbonize uses. Goods and materials are produced and reused in a circular manner that avoids waste and generates value for the community.



Measures and Targets

OUTCOME	MEASURE	2030	2040	2050
District Energy GHGs	Surrey City Energy GHG intensity (kg CO ₂ e/MWh)	70	35	0
Solid Waste GHGs	GHG emissions from City-collected solid waste (tCO ₂ e/y)	TBD	TBD	0

GOAL 1

Work toward zero waste and a circular economy

Where We Are Now



Strengths to Build On

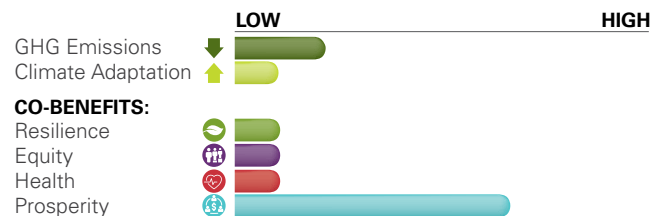
- > City biofuel facility is a leading facility in North America
- > City diverts 70% of organics and recyclable materials from landfill
- > Waste collection vehicles generate net zero emissions by using biofuel

Shifts* – What is needed to reach this Goal?

- Z1** Support and collaborate with Metro Vancouver to update the regional Integrated Solid Waste and Resource Management Plan.
- Z2** Continue to enhance waste reduction, diversion and circular economy programs and services for residential and commercial sectors.
- Z3** Increase diversion and reuse of waste materials generated from construction and demolition.

Potential outcomes and benefits of implementing these Shifts

- > Diverting organic waste reduces methane emissions (a potent GHG), but waste is a small contributor to community emissions
- > Biofuel system generates low-carbon fuel standard credits, generating revenue
- > Waste collection vehicles fueled by RNG provides a leading example of circular economy



*See Implementation Table (Section G) for specific Actions supporting these Shifts

GOAL 2

Transition to zero-carbon, resilient energy systems

Where We Are Now



Strengths to Build On

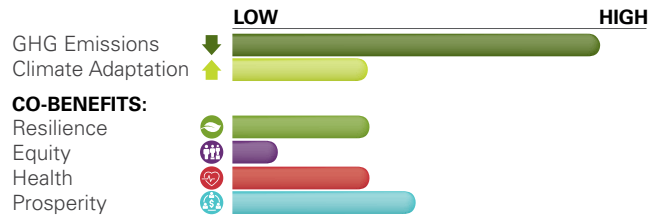
- > BC's electrical grid is 98% renewable
- > Surrey has a leading district energy system in process of transitioning to zero-emissions energy
- > Rapid acceleration of and investment in renewable energy technologies is occurring globally

Shifts* – What is needed to reach this Goal?

- Z4** Support broad-scale electrification and zero-carbon resilient energy networks.
- Z5** Transition Surrey City Energy to zero carbon and scale the system to best support zero-carbon buildings.

Potential outcomes and benefits of implementing these Shifts

- > Electrification is the primary pathway to drive down global and local GHGs
- > Renewable district energy will significantly cut GHGs from buildings in City Centre
- > Decentralized energy systems can improve resilience to energy grid disruptions
- > The zero-carbon transition creates clean energy job growth opportunities



*See Implementation Table (Section G) for specific Actions supporting these Shifts