

Regional District of Okanagan Similkameen Electoral Areas

Community

CLIMATE ACTION PLAN

Executive Summary

Prepared by Stantec Consulting Ltd.
January 2011



WHERE ARE WE NOW?

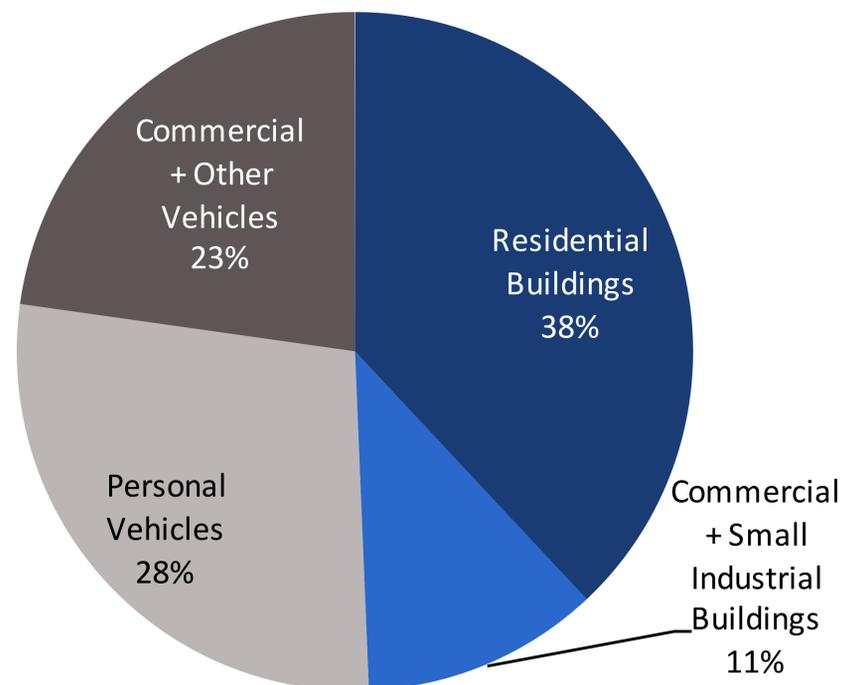
A baseline inventory helps us understand how much energy we use, where we use it, and how this contributes to GHG emissions in our community. Once we know that, we can make a plan to conserve energy and reduce GHG emissions.

2007 Baseline:

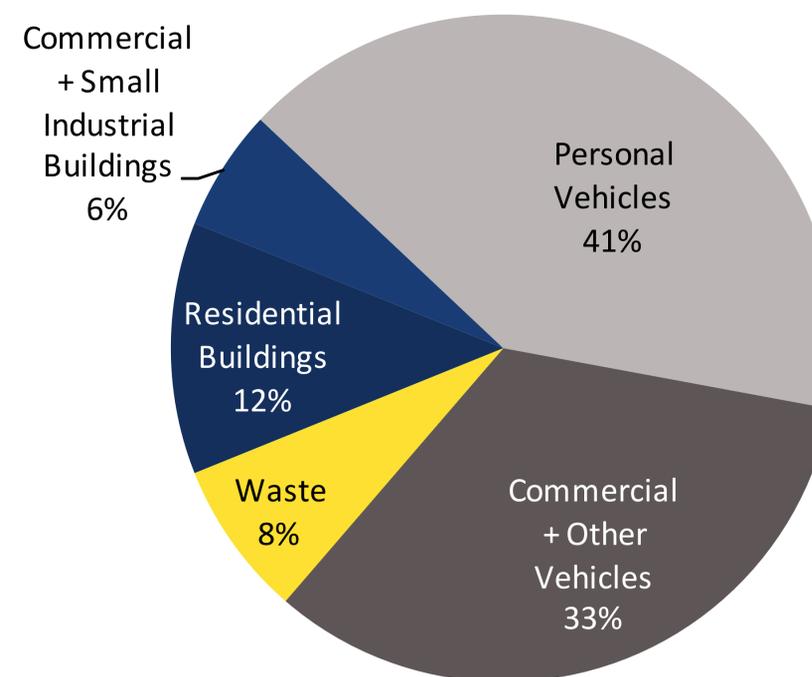
- **240,900 Gigajoules (GJ)** of energy consumed
- **10,200 tonnes of CO₂e** or **GHGs** emitted
- **\$4 million** spent on energy in the community or **\$2,100** per person

- **Buildings:** We use energy and produce GHG emissions when we heat, cool and power our buildings using natural gas, propane, heating oil and electricity. Our community inventory includes all residential, commercial and small/medium industrial buildings.
- **Transportation:** We use a combination of gasoline, diesel and propane in our vehicles to get ourselves around (commuting, shopping, recreation) and to keep our businesses going. Our inventory includes only vehicles registered in our community.
- **Solid Waste:** Our waste goes to landfills where it decomposes and releases methane gas, a potent GHG.

WHERE DO WE USE OUR ENERGY?



THE SOURCE OF OUR GHG EMISSIONS



WHERE ARE WE GOING?

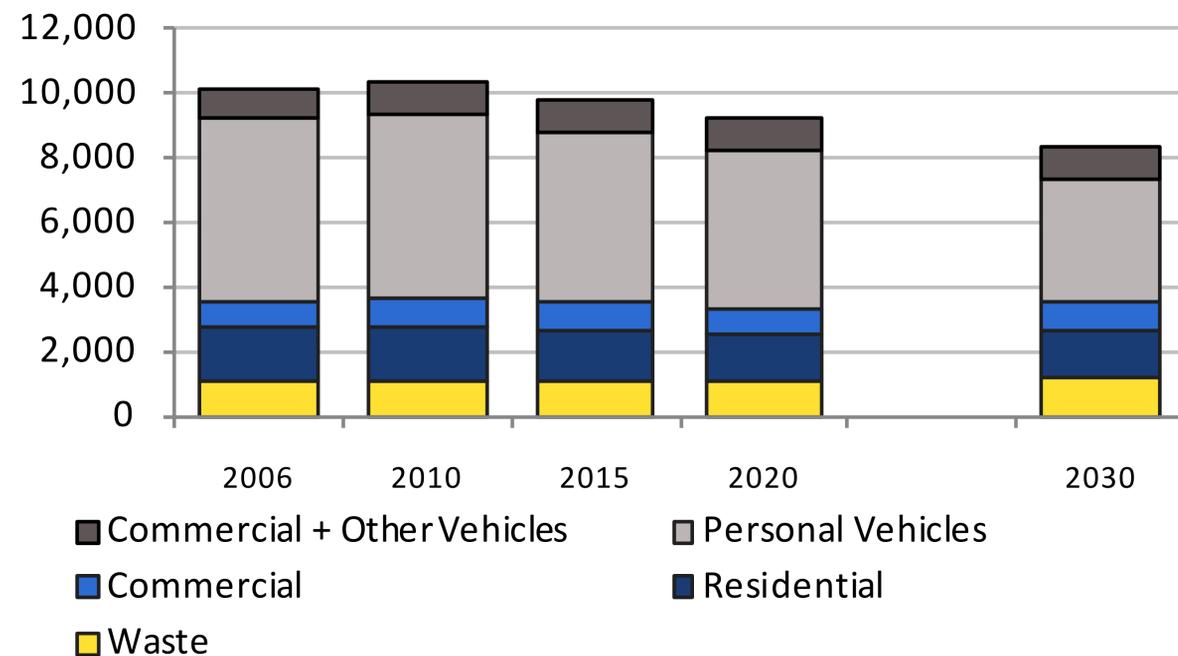
Our population is expected to grow from about **1,900** to **2,200** by 2030. The way our communities grow and develop is directly related to our building and transportation energy use and GHG emissions. As illustrated in the graph below, our GHG emissions are projected to decrease by **19%** over the next 20 years (from our current emissions), in a “Business-As-Usual” scenario.

What is a “Business-As-Usual” (BAU) Forecast?

A BAU forecast estimates what our community’s GHG emissions will be if our population grows as projected and if we continue to live the way we currently do. The forecast takes into account expected efficiency improvements, such as:

- Improvements to passenger vehicle fuel standards
- Energy efficient building codes

BUSINESS AS USUAL FORECAST



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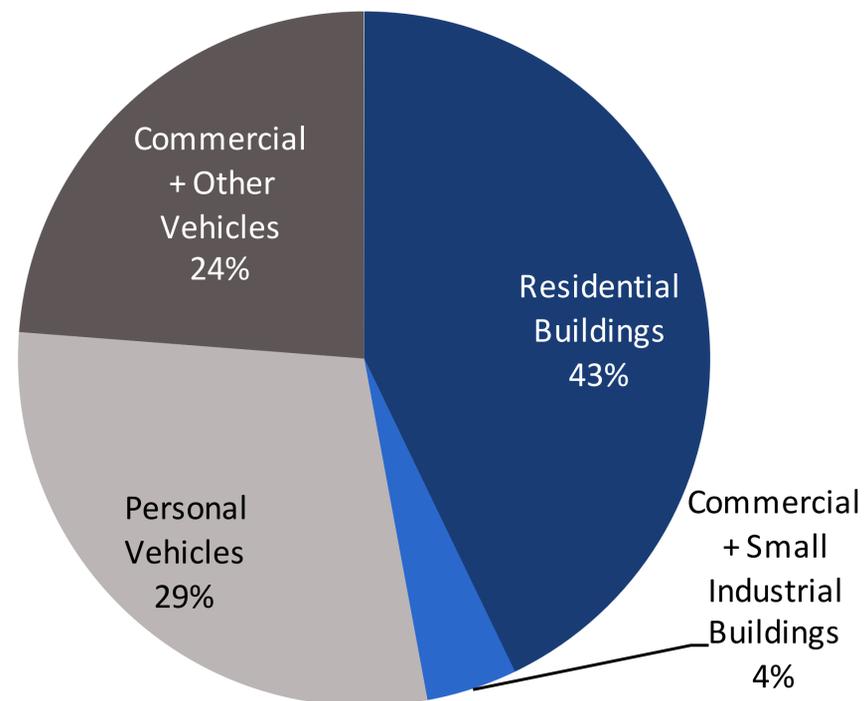
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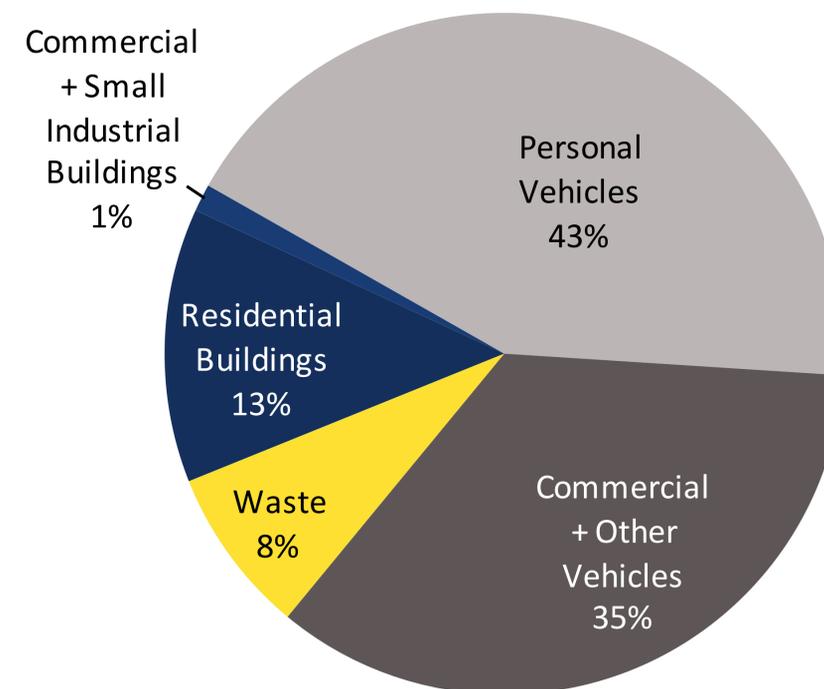
- **128,600 Gigajoules (GJ)** of energy consumed
- **5,400 tonnes of CO₂e** or **GHGs** emitted
- **\$4 million** spent on energy in the community or **\$2,100** per person

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THE SOURCE OF OUR GHG EMISSIONS



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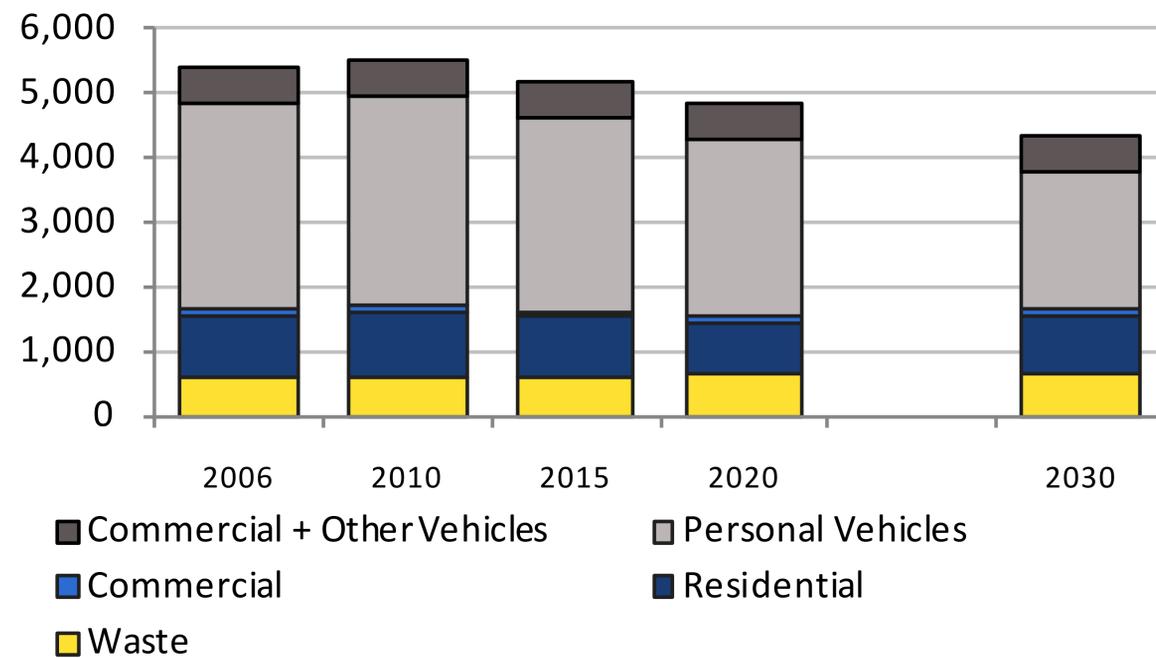
Our population is expected to grow from about **1,100** to **1,200** by 2030. The way our communities grow and develop is directly related to our building and transportation energy use and GHG emissions. As illustrated in the graph below, our GHG emissions are projected to decrease by **20%** over the next 20 years (from our current emissions), in a “Business-As-Usual” scenario.

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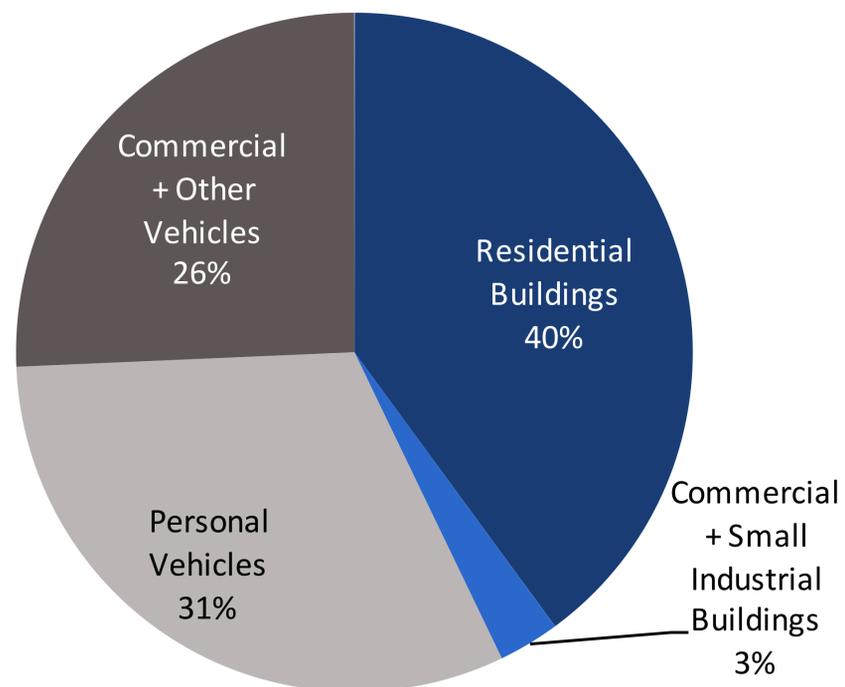
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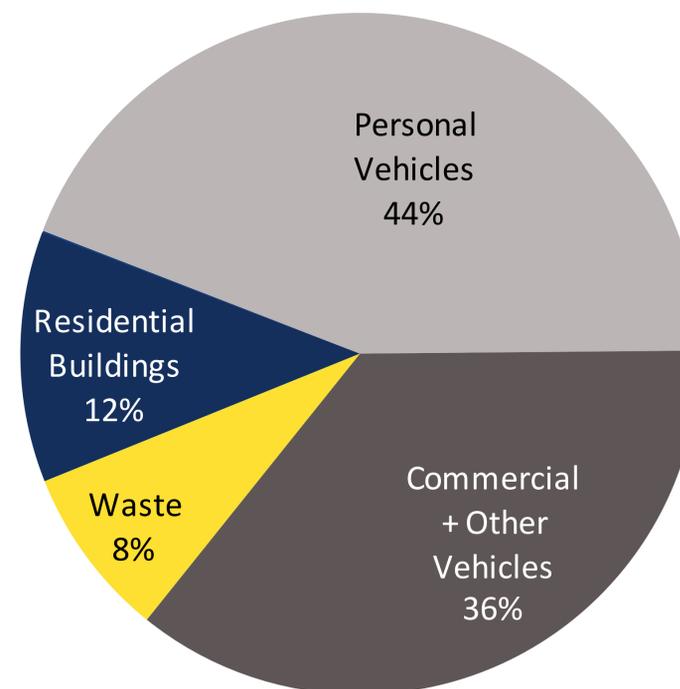
- **421,000 Gigajoules (GJ)** of energy consumed
- **18,800 tonnes of CO₂e** or **GHGs** emitted
- **\$8 million** spent on energy in the community or **\$1,900** per person

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WHERE DO WE USE OUR ENERGY?



THE SOURCE OF OUR GHG EMISSIONS



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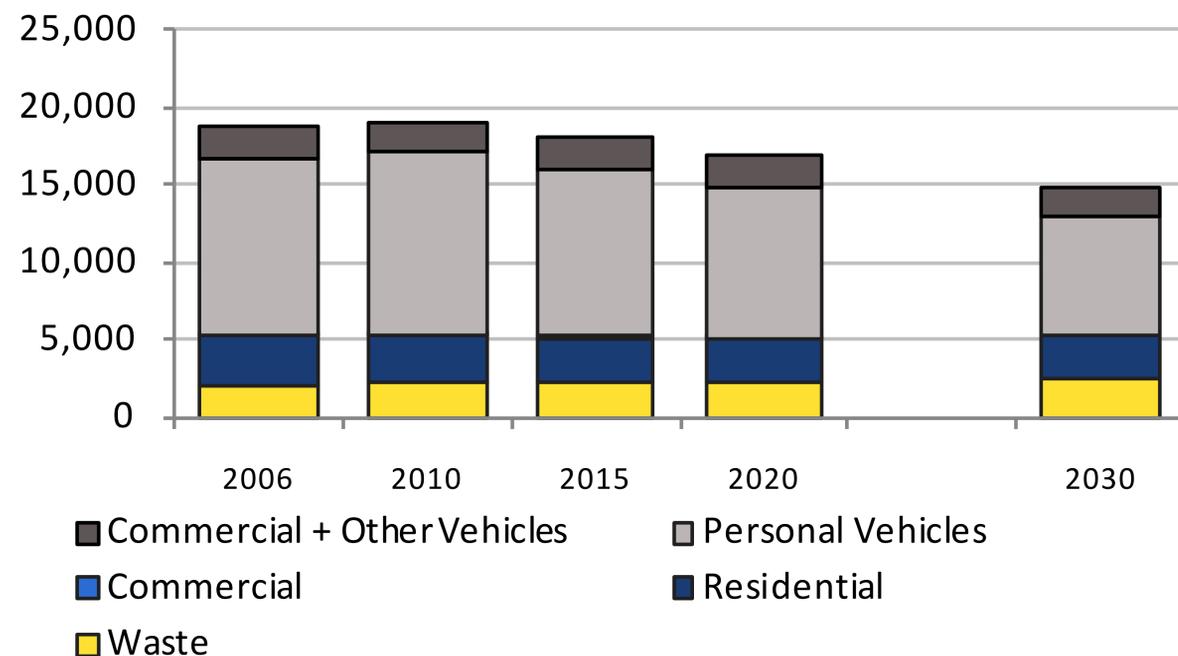
Our population is expected to grow from about **4,000** to **4,400** by 2030. The way our communities grow and develop is directly related to our building and transportation energy use and GHG emissions. As illustrated in the graph below, our GHG emissions are projected to decrease by **21%** over the next 20 years (from our current emissions), in a “Business-As-Usual” scenario.

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A BAU forecast estimates what our community’s GHG emissions will be if our population grows as projected and if we continue to live the way we currently do. The forecast takes into account expected efficiency improvements, such as:

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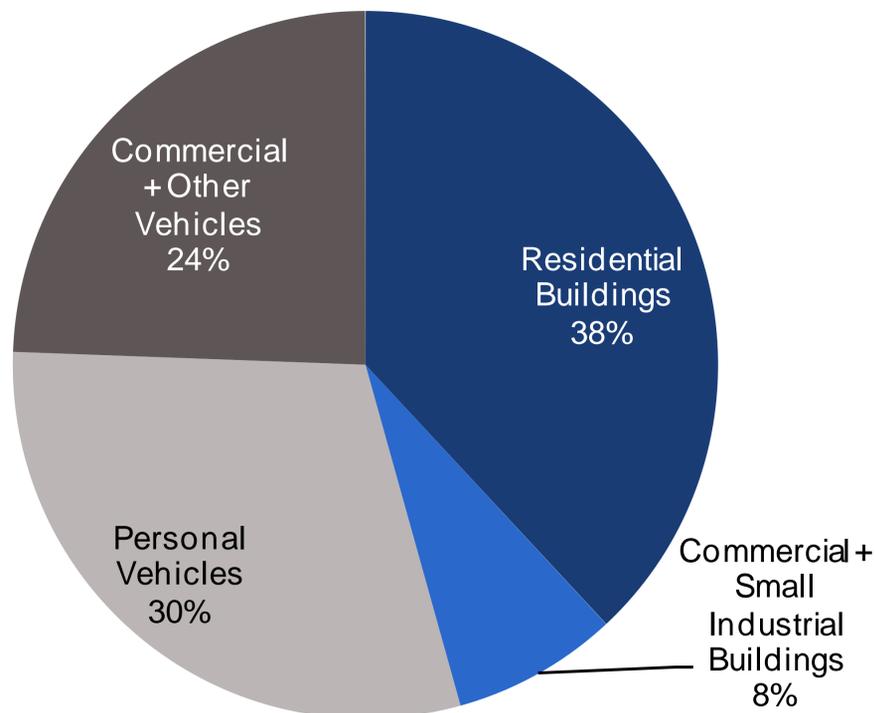
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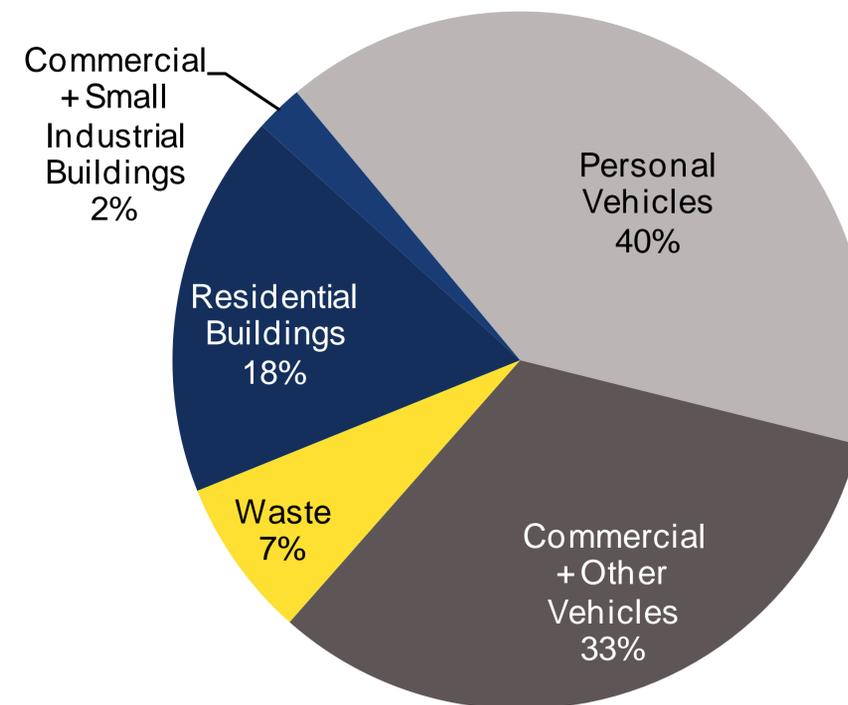
- **680,000 Gigajoules (GJ)** of energy consumed
- **32,500 tonnes of CO₂e** or **GHGs** emitted
- **\$13 million** spent on energy in the community or **\$2,200** per person

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WHERE DO WE USE OUR ENERGY?



THE SOURCE OF OUR GHG EMISSIONS



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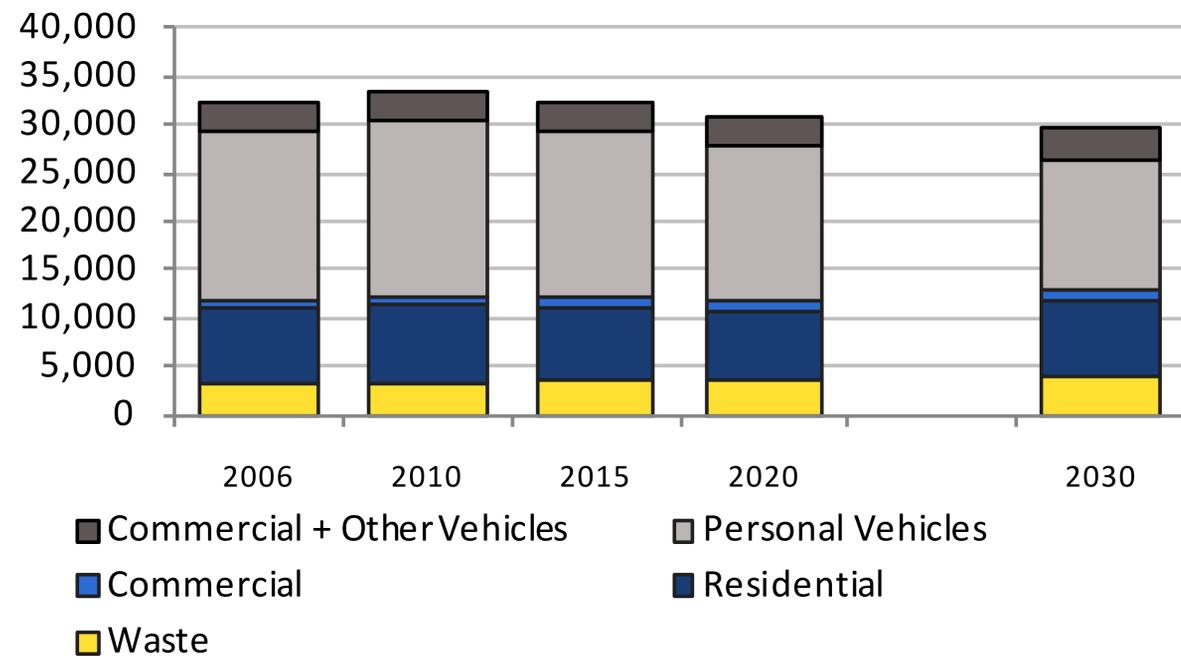
Our population is expected to grow from about **6,000** to **7,600** by 2030. The way our communities grow and develop is directly related to our building and transportation energy use and GHG emissions. As illustrated in the graph below, our GHG emissions are projected to decrease by **9%** over the next 20 years (from our current emissions), in a “Business-As-Usual” scenario.

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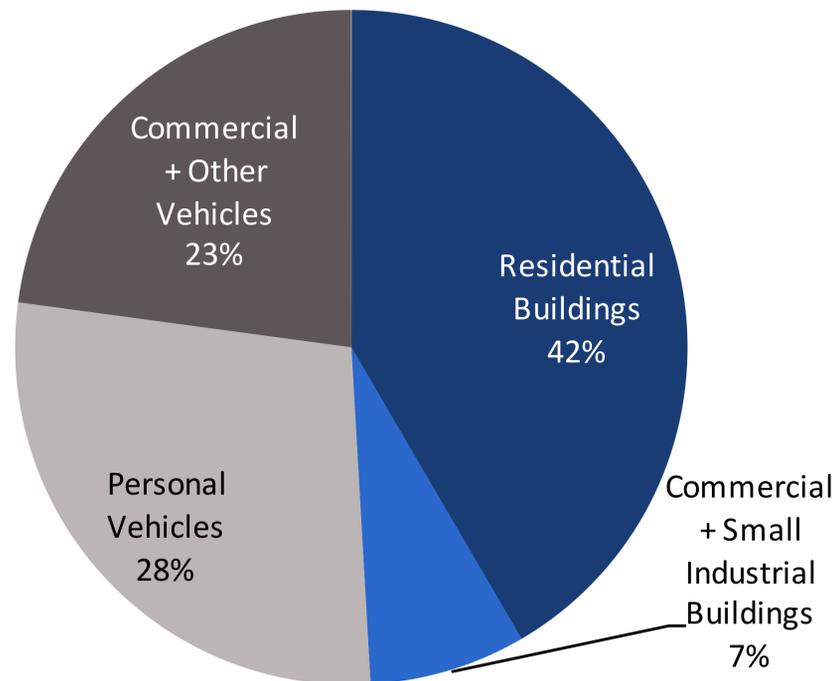
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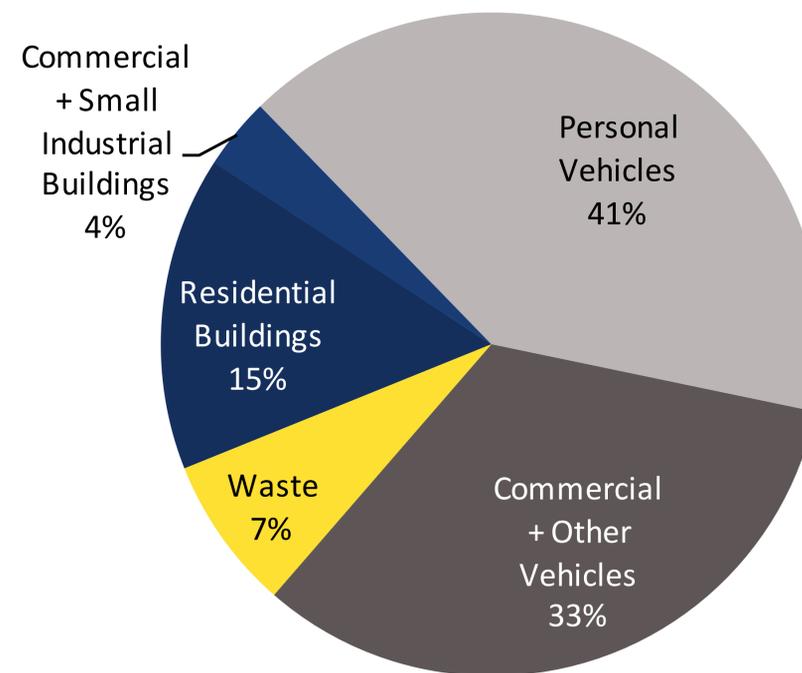
- **250,400 Gigajoules (GJ)** of energy consumed
- **10,800 tonnes of CO₂e** or **GHGs** emitted
- **\$4 million** spent on energy in the community or **\$2,100** per person

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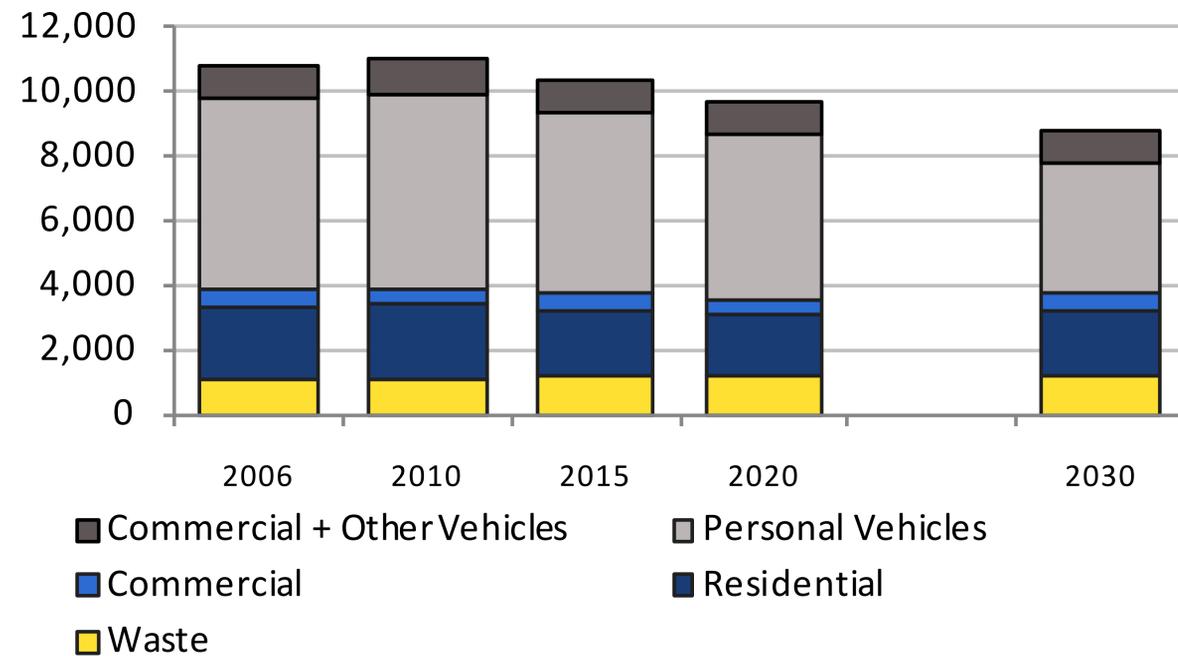
Our population is expected to grow from about **2,000** to **2,300** by 2030. The way our communities grow and develop is directly related to our building and transportation energy use and GHG emissions. As illustrated in the graph below, our GHG emissions are projected to decrease by **19%** over the next 20 years (from our current emissions), in a “Business-As-Usual” scenario.

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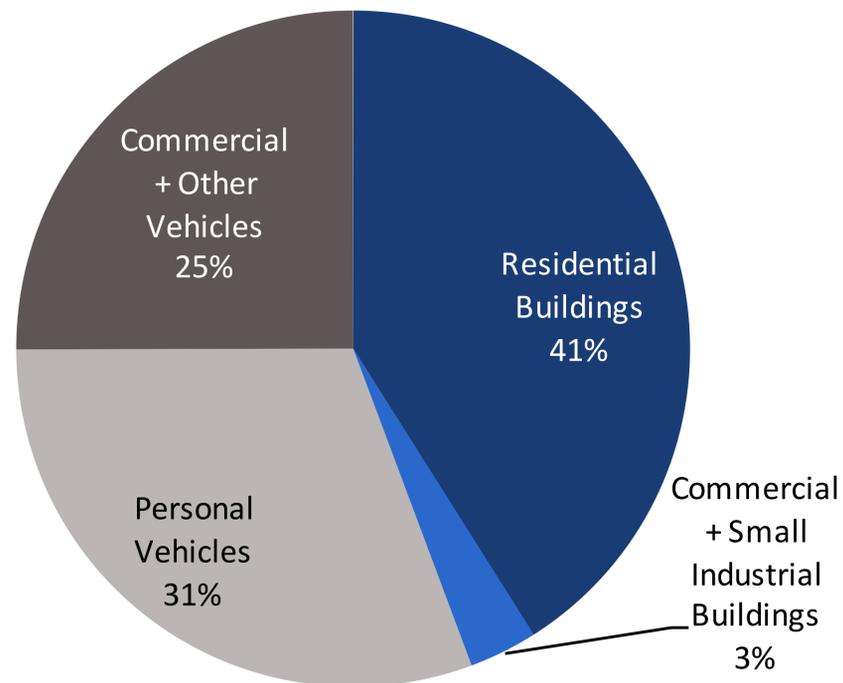
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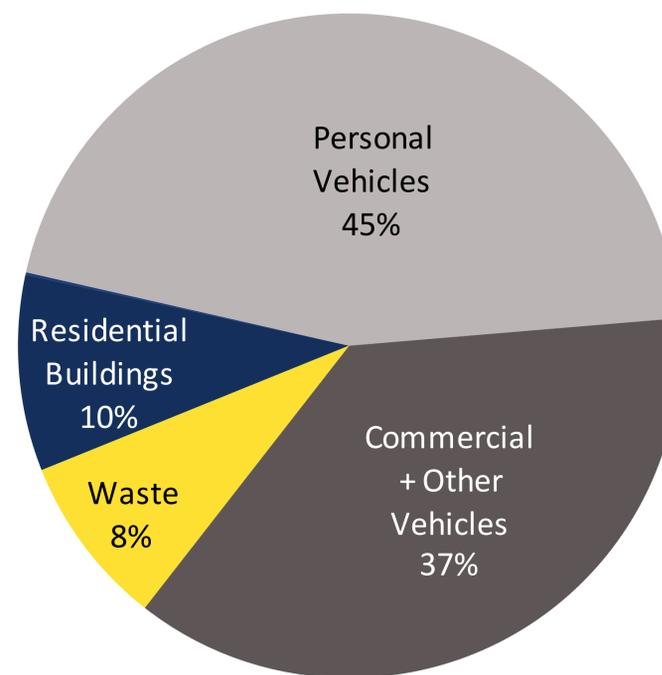
- **224,300 Gigajoules (GJ)** of energy consumed
- **9,400 tonnes of CO₂e** or **GHGs** emitted
- **\$8 million** spent on energy in the community or **\$1,800** per person

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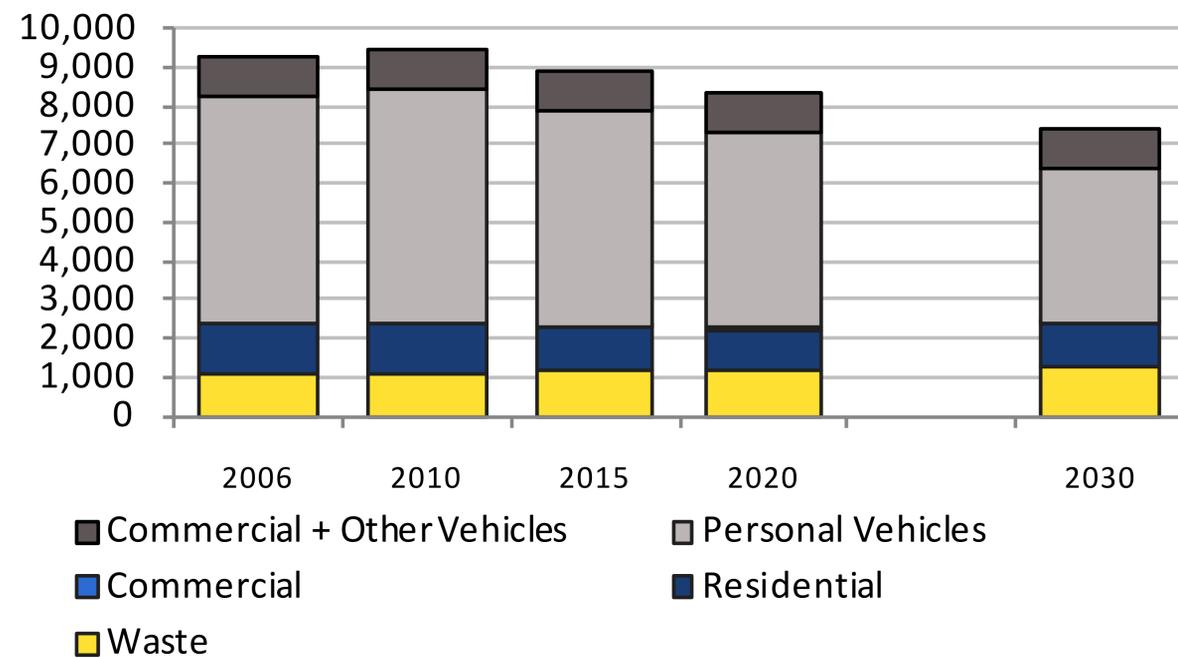
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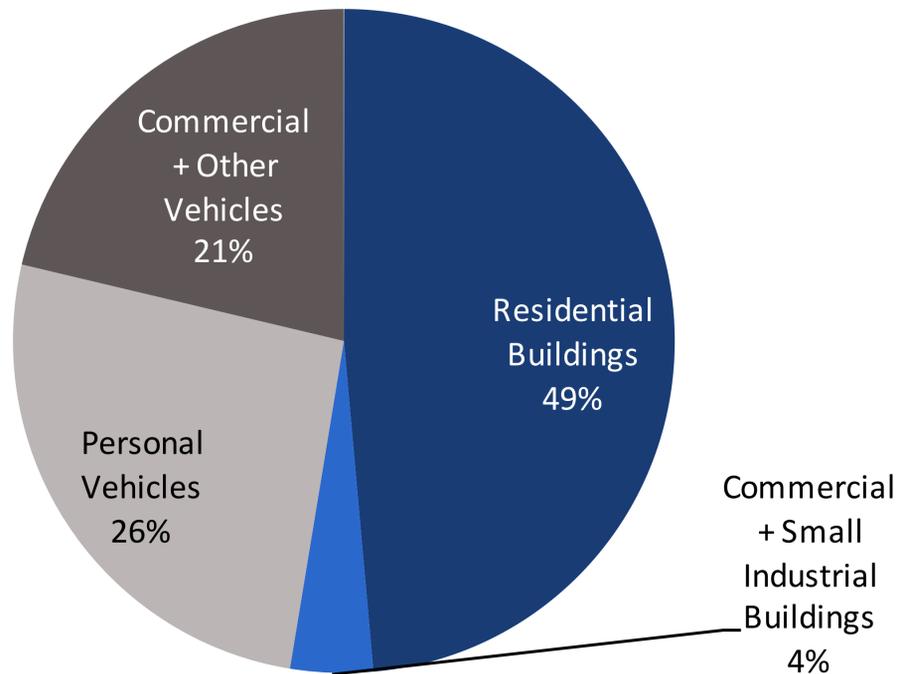
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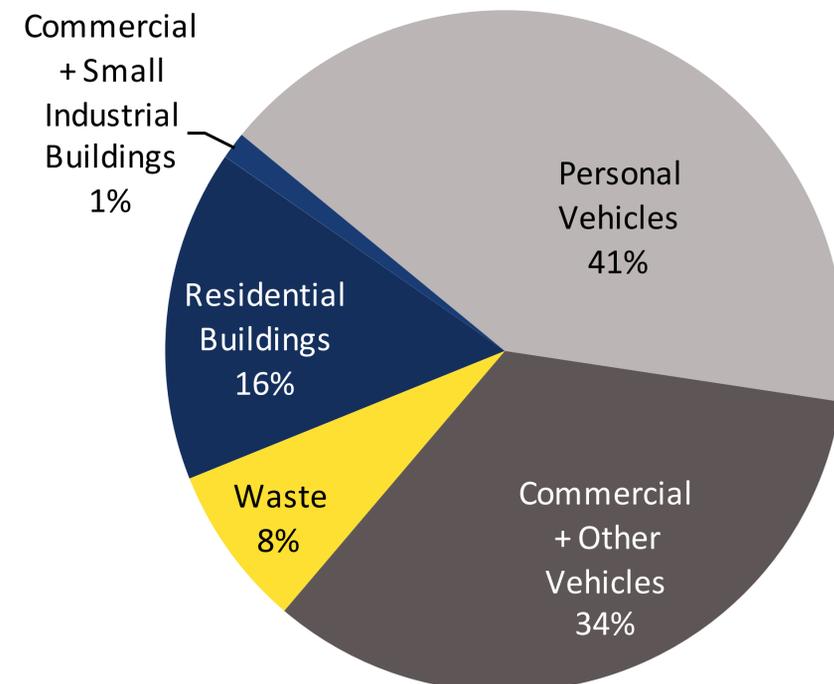
- **313,600 Gigajoules (GJ)** of energy consumed
- **12,000 tonnes of CO₂e** or **GHGs** emitted
- **\$5 million** spent on energy in the community or **\$2,200** per person

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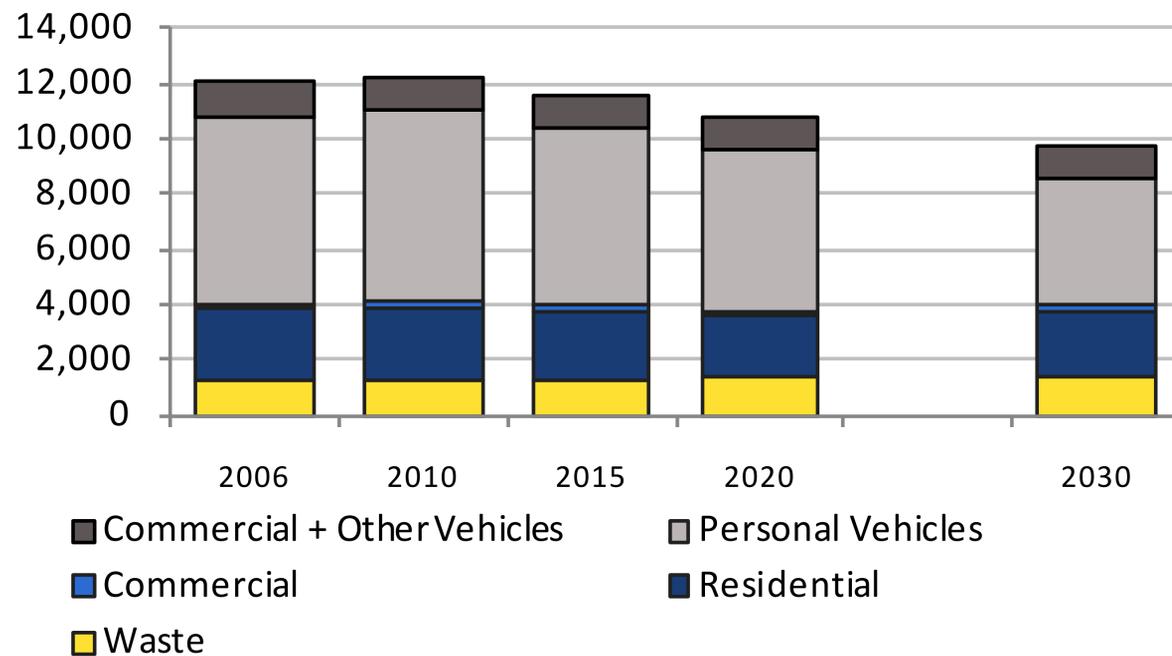
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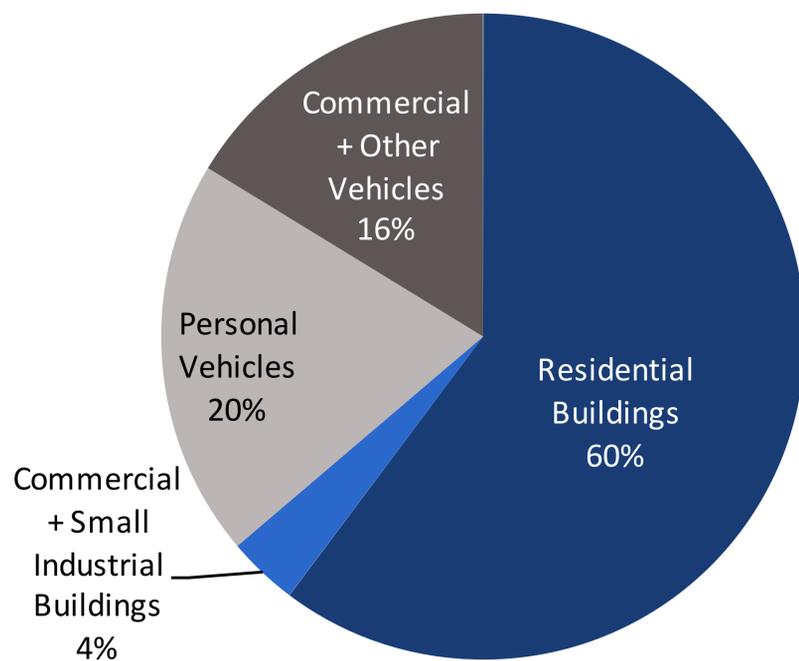
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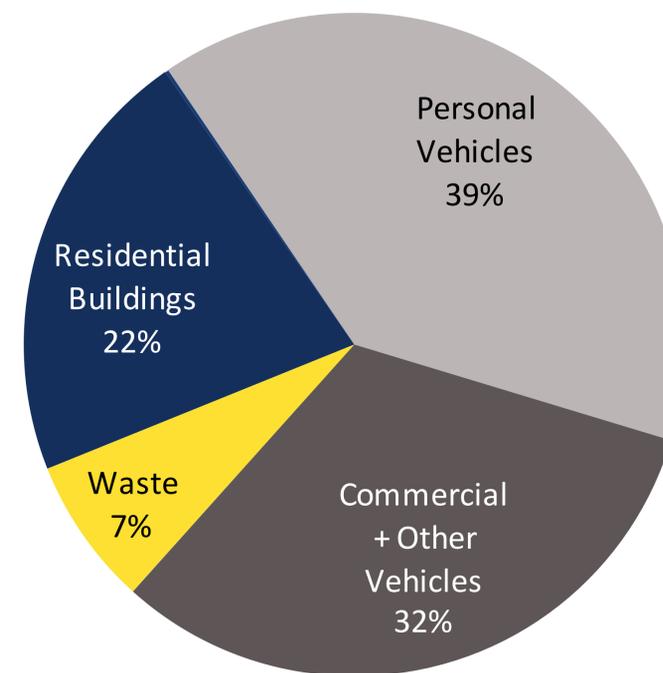
- **411,300 Gigajoules (GJ)** of energy consumed
- **12,500 tonnes of CO₂e** or **GHGs** emitted
- **\$5 million** spent on energy in the community or **\$2,400** per person

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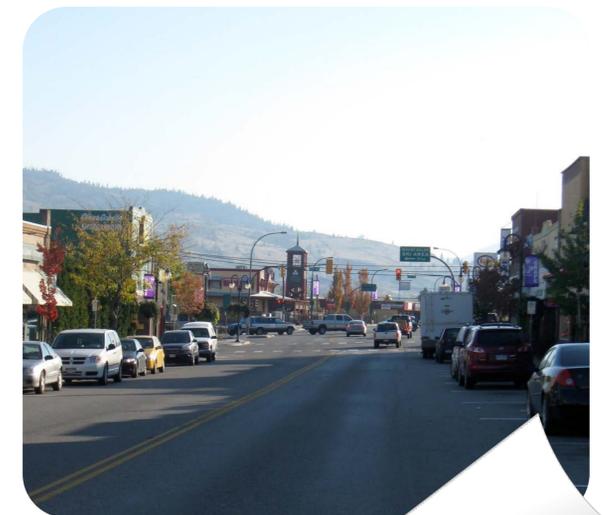
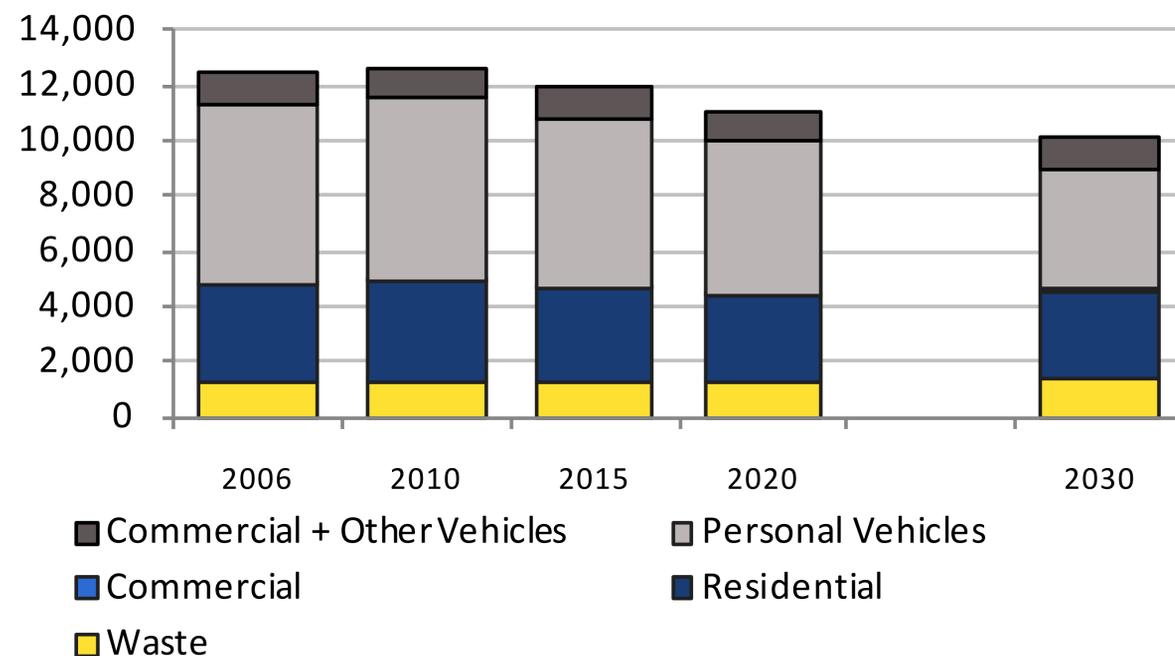
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WHAT CAN WE DO?

BUILDINGS



Build energy efficient buildings

- Promote existing education and incentive programs
- Train building inspectors in LEED for new construction or EnerGuide Rating for homes
- Post information and guidelines for energy efficient building practices on the regional website
- Create an energy efficient building checklist
- Explore offering 'Building Practices for Energy Savings' Info Sessions, in partnership with local organizations
- Establish a building permit rebate program for new construction
- Provide development cost charge (DCC) reductions to developers, where DCCs exist
- Amend building bylaw to require completion of an energy efficient building checklist prior to issuing the permit.

Improve energy efficiency of existing buildings

- Promote existing education and incentive programs, to both with Regional District staff and the public
- Post information and guidelines for energy efficient renovations on the regional website
- Create an energy efficient building checklist
- Explore offering 'Energy Saving' Info Sessions on building retrofits, in partnership with local organizations
- Amend the building bylaw to require the completion of an energy efficient building checklist

Increase use of alternative energy

- Post information on alternative energy supply options on the regional website
- Pilot an alternative energy supply project in the region to help promote alternative energy supply technologies
- Promote solar thermal energy
- Include criteria on alternative energy sources in the energy efficient building and development checklists
- Identify and promote "eco-industrial networking" opportunities
- Investigate the creation of development permit areas (DPAs) that include guidelines for the provisions of alternative energy supply
- Consider enacting an alternative energy system bylaw

LAND USE & TRANSPORTATION



Build energy efficient developments

- Post information and guidelines for energy efficient development practice on the regional website
- Explore offering 'Development Practices for Energy Savings' Info Sessions
- Create an energy efficient development checklist to accompany development permit and rezoning applications [in accordance with the RGS]. This includes guidelines on:
 - Solar orientation, density, water conservation, landscaping
- Allow density bonusing, where applicable
- Provide development cost charge (DCC) reductions to developers, where applicable
- Create policies to cluster development in nodes [COMPLETED in RGS]

Improve alternative transportation

- Distribute information about locally available transportation alternatives
- Improve pedestrian, cycling and public transit infrastructure and amenities
- Lobby the Ministry of Transportation to include wide or separated lanes for safe pedestrian and cycling access
- Develop an alternative transportation network plan & map – Master Plans

Promote more efficient vehicle use

- Implement and enforce an idling reduction bylaw

SOLID WASTE



Reduce & divert waste from landfills

- Implement the various measures identified in the 2011 Solid Waste Management Plan (SWMP) to reduce and divert waste

HOW MUCH CAN WE REDUCE?

GHG Emissions Reduction Potential:

The CAP includes GHG emissions reduction targets. These targets define the GHG reductions that we will be striving to achieve over the next 20 years. The approach taken to define the targets was pragmatic in nature; they are directly related to the types of actions that we will explore and implement as part of this CAP.

Electoral Area	Draft GHG Reduction Target (from 2007 levels)
A & C	20% per person by 2020 (15% total), 35% per person by 2030 (30% total)
Okanagan Falls & D	20% per person by 2020 (10% total), 35% per person by 2030 (20% total)
E & F	20% per person by 2020 (15% total), 35% per person by 2030 (30% total)
B, G & H	20% per person by 2020 (15% total), 30% per person by 2030 (25% total)