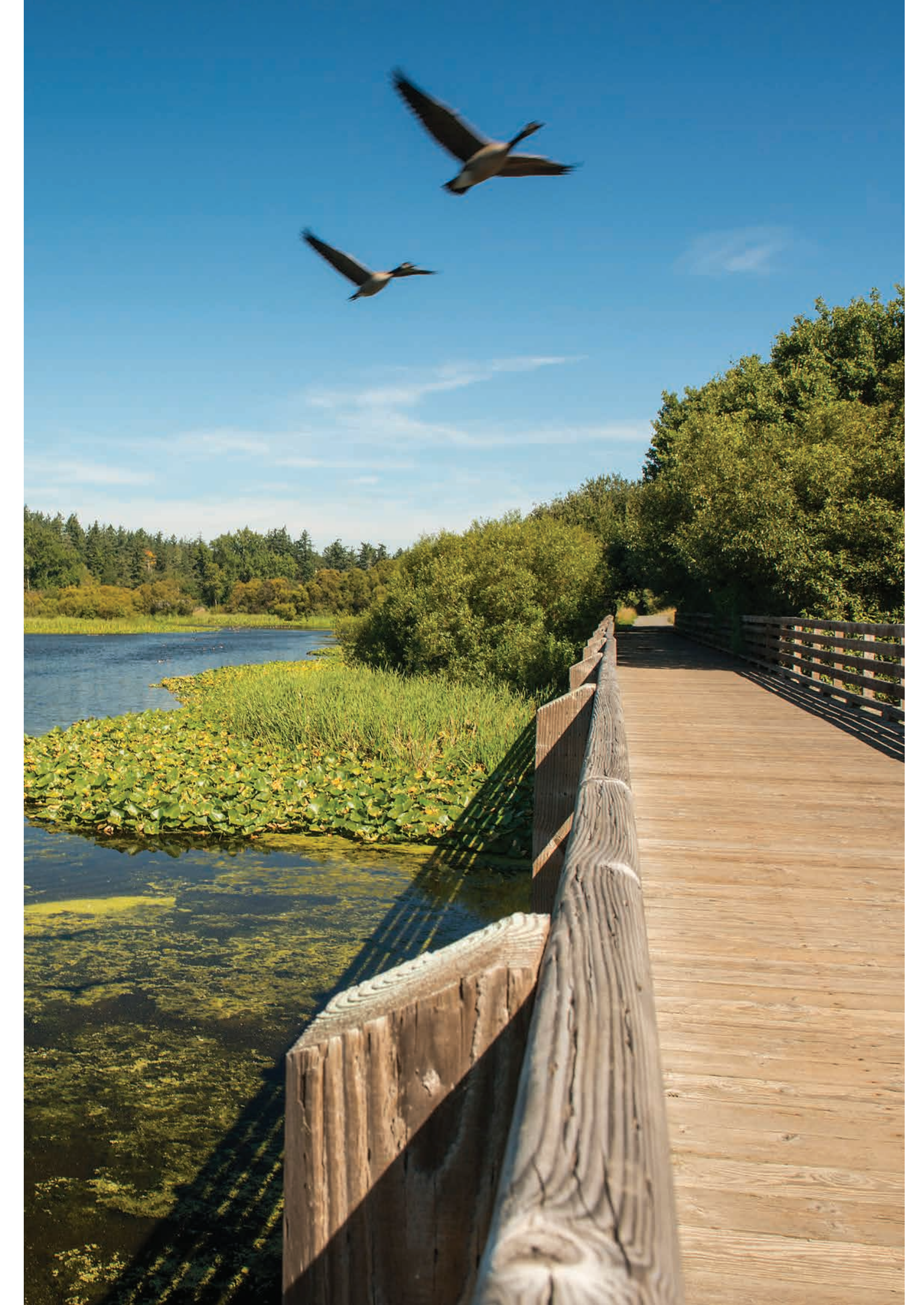


# OVERVIEW

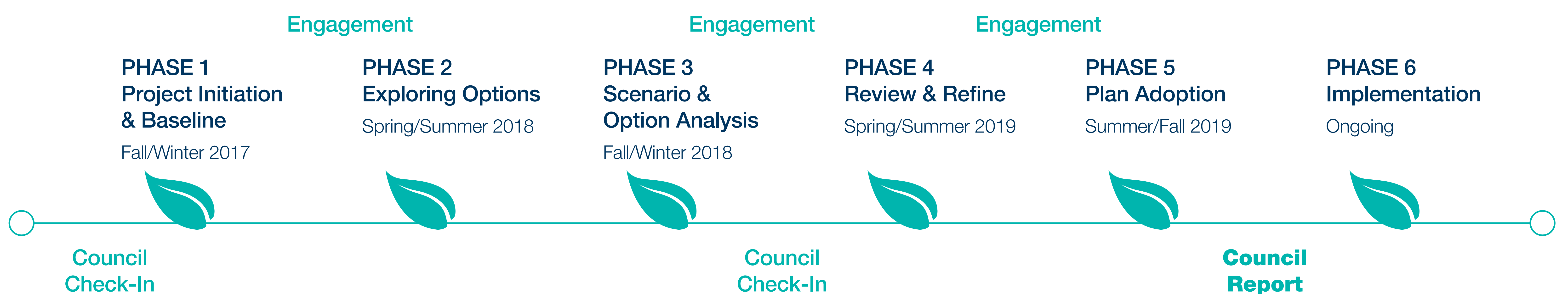


## SAANICH IS DEVELOPING A PLAN TO:

- **Become a 100% renewable energy community**
- **Reduce our greenhouse gas emissions by 80% below 2007 levels**
- **Prepare for a changing climate**

A 100% Renewable Energy target helps us recognize that a step change is needed, and will allow our community to save money on carbon taxes, improve air quality and health, and develop new economic opportunities and jobs.

## CLIMATE PLAN PROCESS AND TIMELINE





# OVERVIEW

## WHY ACT ON CLIMATE CHANGE?

1

### IMPROVE QUALITY OF LIFE

Acting on climate change provides us with opportunities to save money, create a diverse economy and lasting jobs, improve air quality, and protect our natural environment.

2

### LEAD LOCALLY

196 countries, including Canada, have committed to reducing GHG emissions enough to keep global temperature rise below 2°C. Local communities have an important part to play in meeting these goals.

3

### AVOID GRAVE RISKS

Failure to act will drive rising global temperatures, more extreme storms, rising sea levels, droughts, and other impacts that will have devastating impacts on our health, environment, economy, and future generations.

## WHY DOES IT MATTER WHAT SAANICH RESIDENTS DO?

It may seem that Saanich has a small part to play in the grand scheme of climate change, and that the pollution from other countries is so significant that our efforts will be in vain. However, in 2016, of the 195 countries in the world and over 7.6 billion people in it:

- Only 6 countries had bigger total CO<sub>2</sub> emissions than Canada.
- Per capita, only 7 countries have bigger CO<sub>2</sub> emissions than Canadians.

## RENEWABLE ENERGY AROUND THE WORLD

### Saanich is part of a worldwide transition to renewable energy and climate resilience.

- Hundreds of communities world-wide have committed to becoming 100% renewable. In Canada, Saanich joins Victoria, Vancouver, Nelson, Slokan and Oxford County.
- Britain, France, China, India and Norway are phasing out the sale of fossil-fuelled vehicles.
- China is on track to meeting its 2020 climate targets, while the EU met its 2020 targets 6 years early.
- Businesses around the world are investing millions in renewable energy:
  - Apple's data centres
  - Google's global operations
  - Nike's North American operations

***are all powered by 100% renewable energy!***



SAANICH ALREADY USES RENEWABLE ENERGY AND OUR GRID ELECTRICITY IS CURRENTLY 98% RENEWABLE



# OVERVIEW

## WHAT WILL THE PLAN INCLUDE?

The Plan will apply to both the District of Saanich's own Corporate operations and the wider Saanich Community and will embed the principles of Environmental Integrity, Social Well-being and Economic Vibrancy.



It will include actions under both our control and influence

### Control

**Direct** – e.g. leading by example through our municipal infrastructure and operations, policy and regulations, etc.

**Indirect** – e.g. through land use and transportation planning and policy, building standards, waste diversion and participation on regional decision making boards, etc.

### Influence

**Direct** – e.g. policies, programs, incentives and partnerships with stakeholders, institutions, agencies and other levels of government, etc.

**Indirect** – e.g. through advocacy, information sharing, municipally supported education programs, etc.

## WHY 100% RENEWABLE ENERGY?

Renewable, low carbon energy will meet our needs with considerably lower impacts than non-renewable fossil fuels. Our plan is to become a 100% Renewable Energy Community by 2050, and the pathway relies on drastically reducing our energy waste in addition to switching to renewable supply. Overlaying this is the need to ensure we adapt to a changing climate.

## OUR PLAN HIERARCHY

### REDUCE

**REDUCE** - We will reduce our energy and material consumption and our waste generation through conservation, efficiency, and redesign.

### RENEWABLE

**RENEWABLE** - We will shift to renewable energy sources to power our remaining energy needs.

### RESILIENT

**RESILIENT** - We will design a responsive community that is prepared for a changing climate.



# OVERVIEW

## WHAT IS THE PLAN'S APPROACH?

Actions will be evaluated to maximize co-benefits and prevent negative impacts, for example, on equity, our ecosystems, and our health and well-being. We will be using the One Planet Living framework alongside an equity framework to help inform, evaluate and prioritize the potential actions and strategies identified for the Climate Plan. There are several local stakeholders such as shops, schools, businesses and non-profits also currently developing One Planet Action plans as part of the One Planet Saanich project – more information can be found at [oneplanetsaanich.org](http://oneplanetsaanich.org).

## ONE PLANET FRAMEWORK



	Health and happiness
	Equity and local economy
	Culture and community
	Land and nature
	Sustainable water
	Local and sustainable food
	Travel and transport
	Materials and products
	Zero waste
	Zero carbon energy



## WHAT WILL IT MEAN FOR OUR QUALITY OF LIFE?

Many countries have a comparable quality of life with lower per capita emissions:

- Canada has 18.62 tonnes of GHG emissions per capita
- Saanich has 7.7 tonnes of GHG emissions per capita if we consider our consumption based emissions
- Greenland as 0.03 tonnes of GHG emissions per capita
- Sweden has 4.54 tonnes of GHG emission per capita, and
- The UK has 5.57 tonnes of GHG emissions per capita.

Our quality of life does not need to decrease and, if anything, addressing climate change can help improve our health, comfort, wealth and community equity as well as reducing our risk and liabilities.



# MEASUREMENT

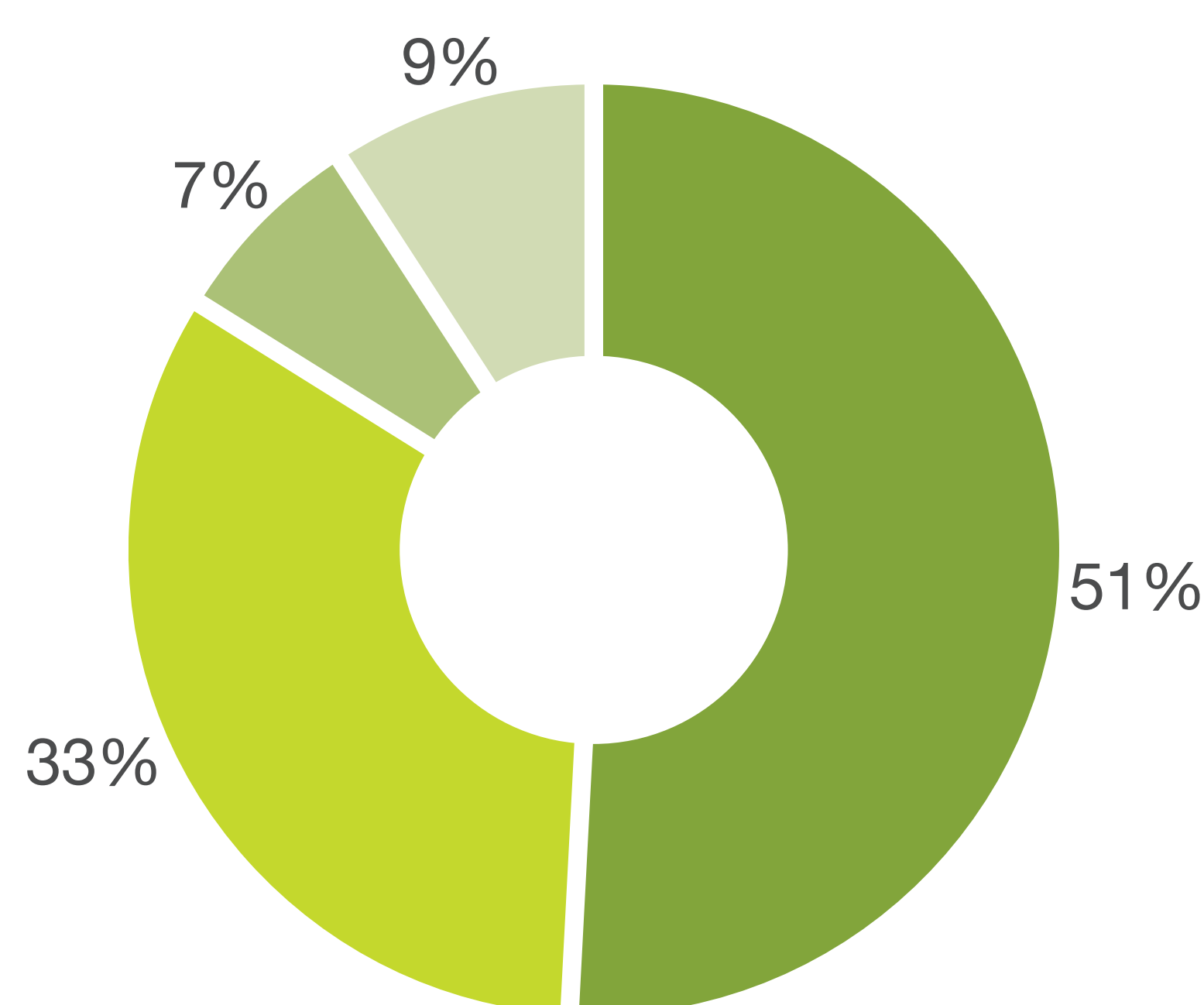
## WHAT WILL WE MEASURE?

We measure our climate impact by calculating the greenhouse gases (GHG) we emit as a community within our municipal boundaries – our **Territorial GHG Emissions Inventory**. The majority of our emissions are from transportation, followed by buildings and then a smaller proportion from waste.

However, there are also climate impacts from the products we consume, like our food and clothing, which may have been produced and processed outside of Saanich and imported for our use. This is called our **Consumption Based GHG Emissions Inventory** – and it measures the GHG emissions from all of the goods and services that the Saanich Community consumes, regardless of where those goods and services are produced.

### 2007 Baseline Territorial GHG Inventory

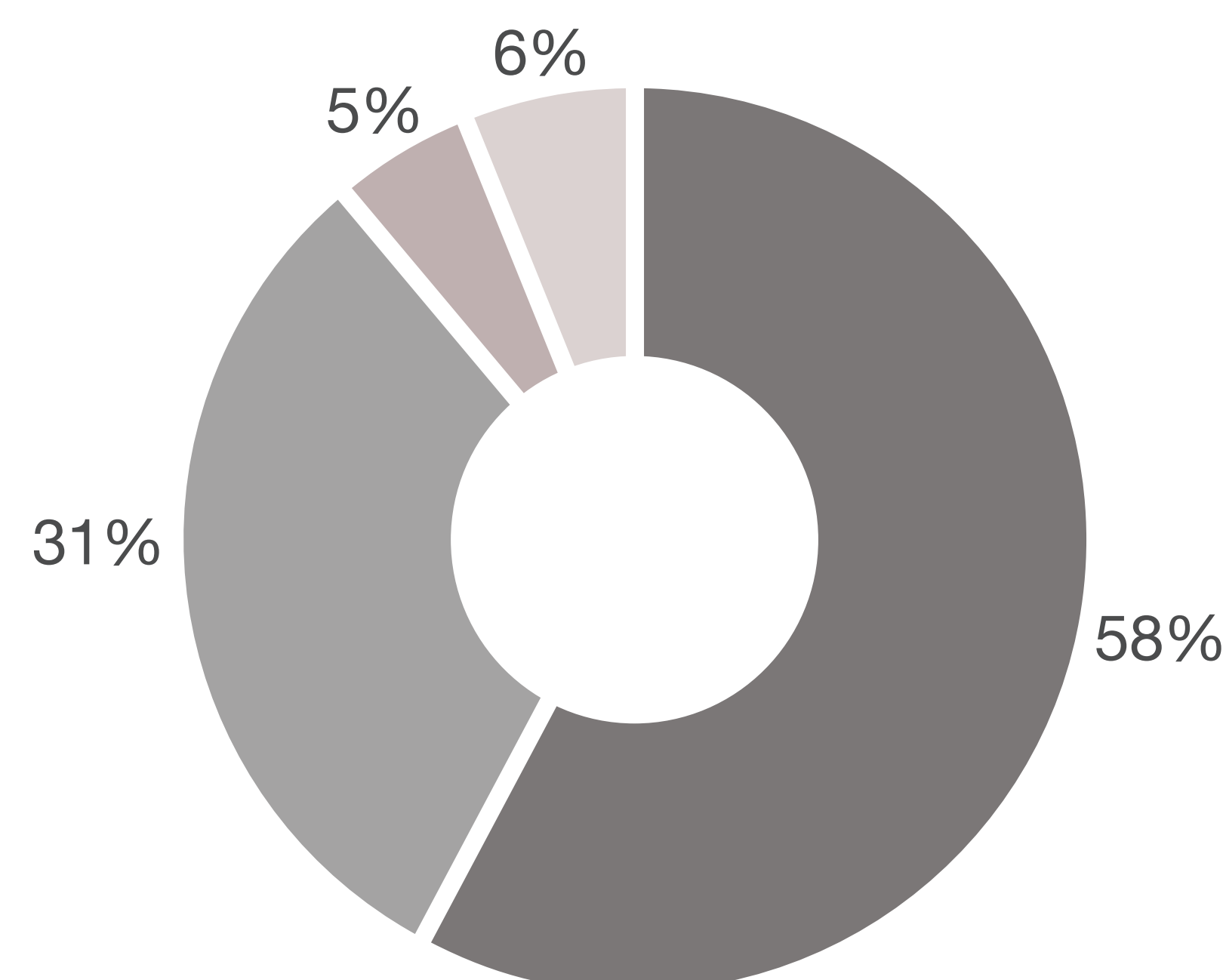
= 495,384 tonnes carbon  
= 4.4 tonnes carbon/person



51% Transportation  
33% Buildings  
7% Waste  
9% Other  
Industrial Processes, and Product Use (IPPU)  
Livestock, Land and Agriculture (AFOLU)

### 2017 Territorial GHG Inventory

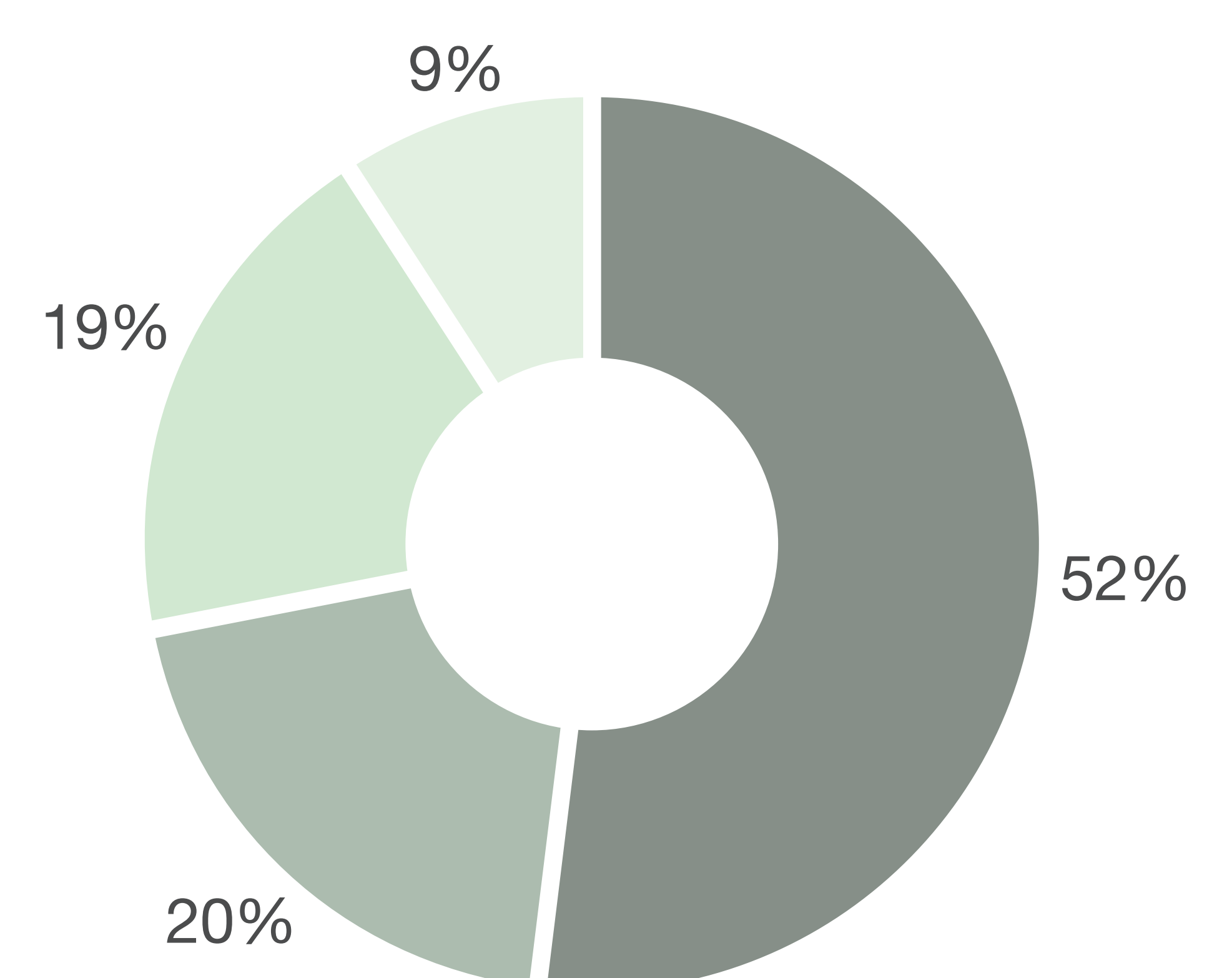
= 512,901 tonnes carbon  
= 4.5 tonnes carbon/person



58% Transportation  
31% Buildings  
5% Waste  
6% Other  
Industrial Processes, and Product Use (IPPU)  
Livestock, Land and Agriculture (AFOLU)

### 2015 Consumption Based GHG Inventory

= 881,000 tonnes carbon  
= 7.7 tonnes carbon/person



52% Transportation  
20% Buildings  
19% Food  
9% Consumables & Waste

While the Climate Plan's new targets apply to territorial emissions, the plan will also address our Consumption Based emissions.

## WHY HAVE OUR EMISSIONS NOT GONE DOWN SINCE 2007?

There have been great number of climate actions implemented by both the community and the District of Saanich. However, our emissions have increased since 2007:

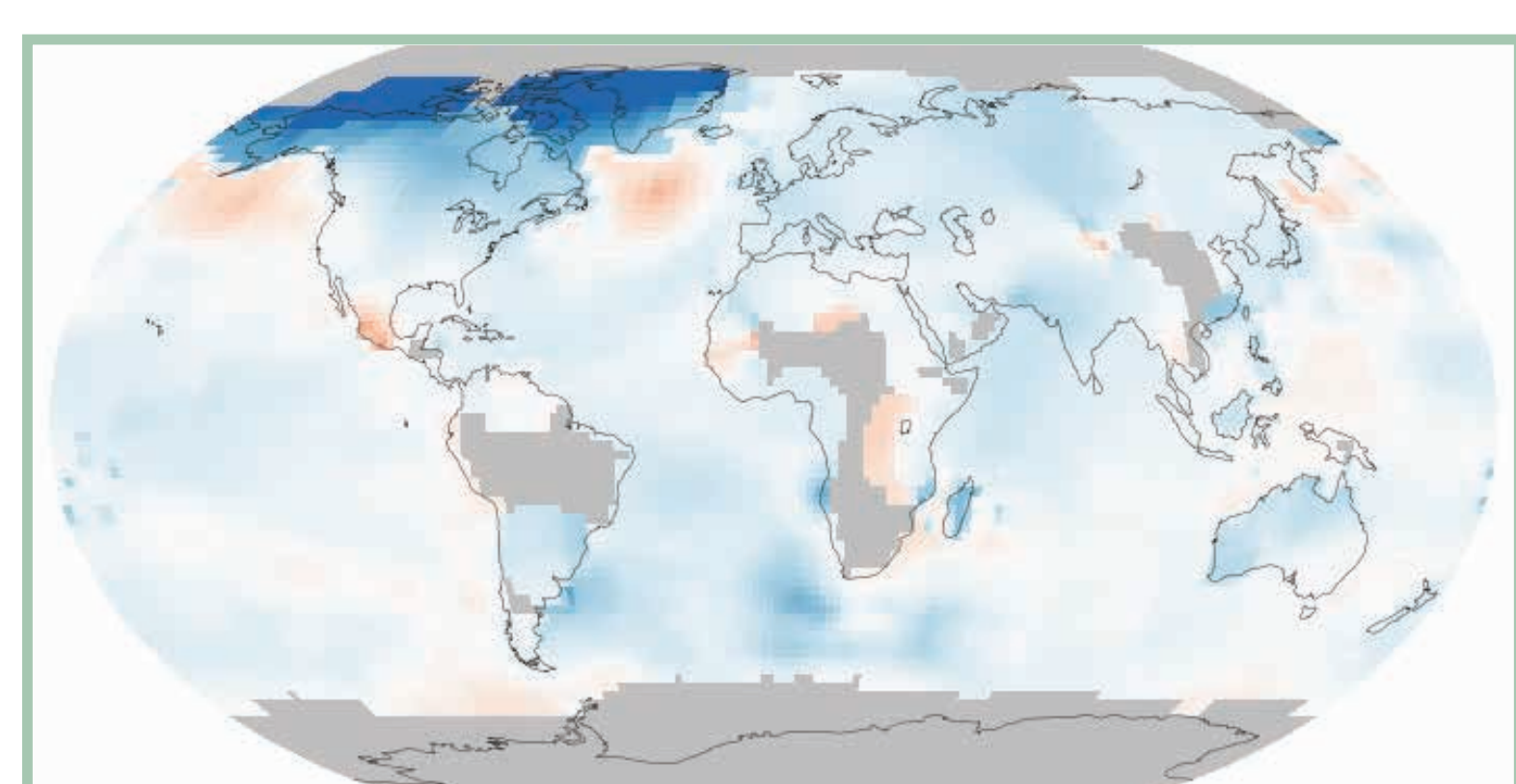
- **Building emissions** went down until 2016 given Provincial Building Code energy efficiency standards and home energy retrofit rebates. However, 2017 was a much colder winter and there has been a notable increase in buildings switching from renewable electricity to natural gas for heating in the last two years. Alongside increased development, this may explain the increase in building emissions seen between 2016 and 2017.
- **Waste emissions** have also decreased since 2007 with the introduction of the Greener Garbage Program.
- **Transportation emissions** increased significantly between 2007 and 2016, owing potentially to an increase in vehicle size and non-renewable use given low fuel prices and increased wealth. However, there has recently been a considerable increase in active transportation, which, alongside improved vehicle emissions standards, likely contributed to the first decrease in transportation emissions seen in 2017 since our baseline. Current and reliable transportation data remains a constraint when monitoring our GHG emissions inventory and the District of Saanich continues to work with the Province and ICBC on this issue.



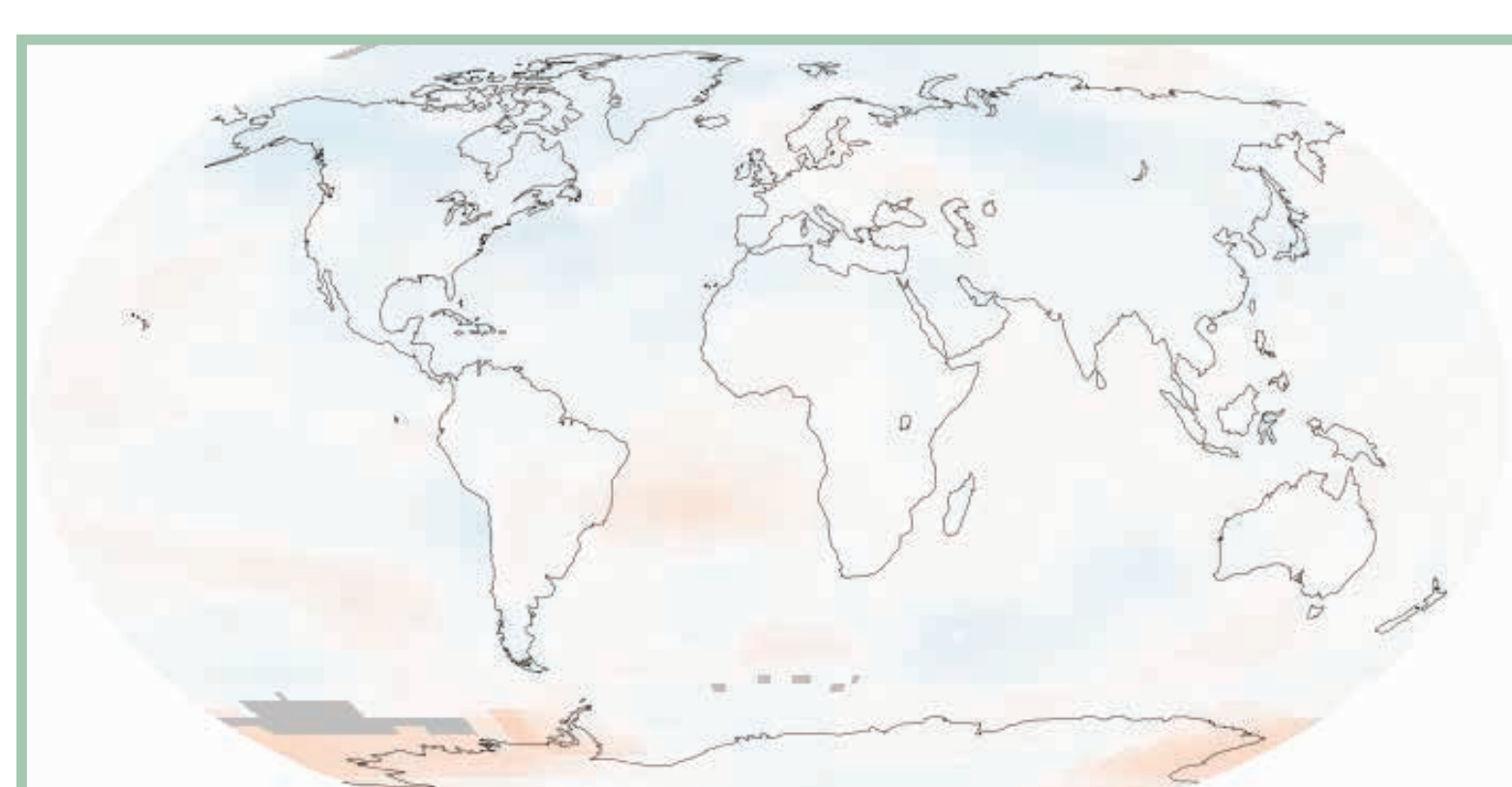
# CLIMATE PROJECTIONS & SEA LEVEL RISE

## CLIMATE CHANGES

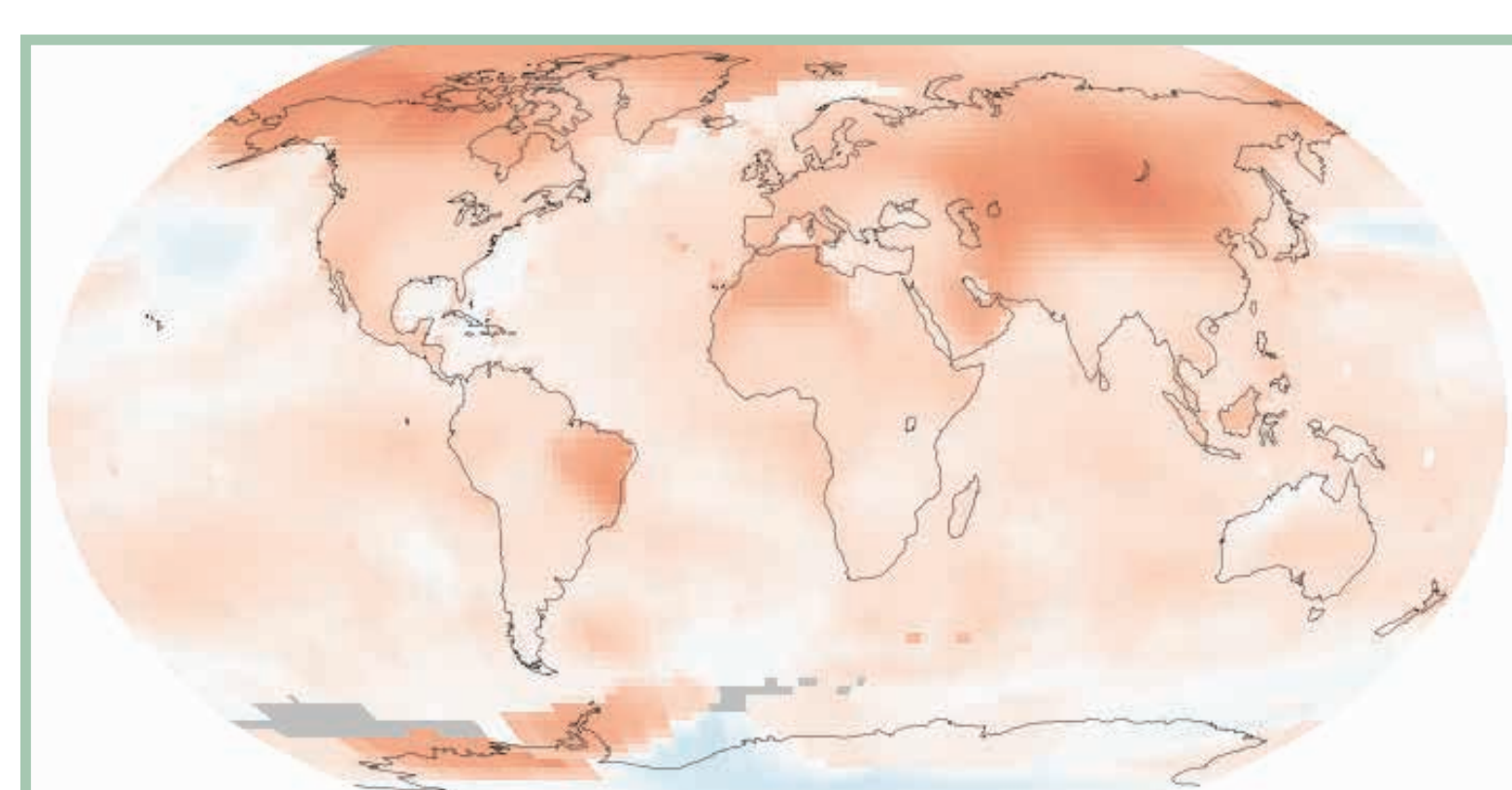
**Globally** our climate is warming and changes of this magnitude are now disrupting global air and water circulation systems such as currents and jet streams. This leads to a much wider variation in temperature extremes and weather patterns year to year.



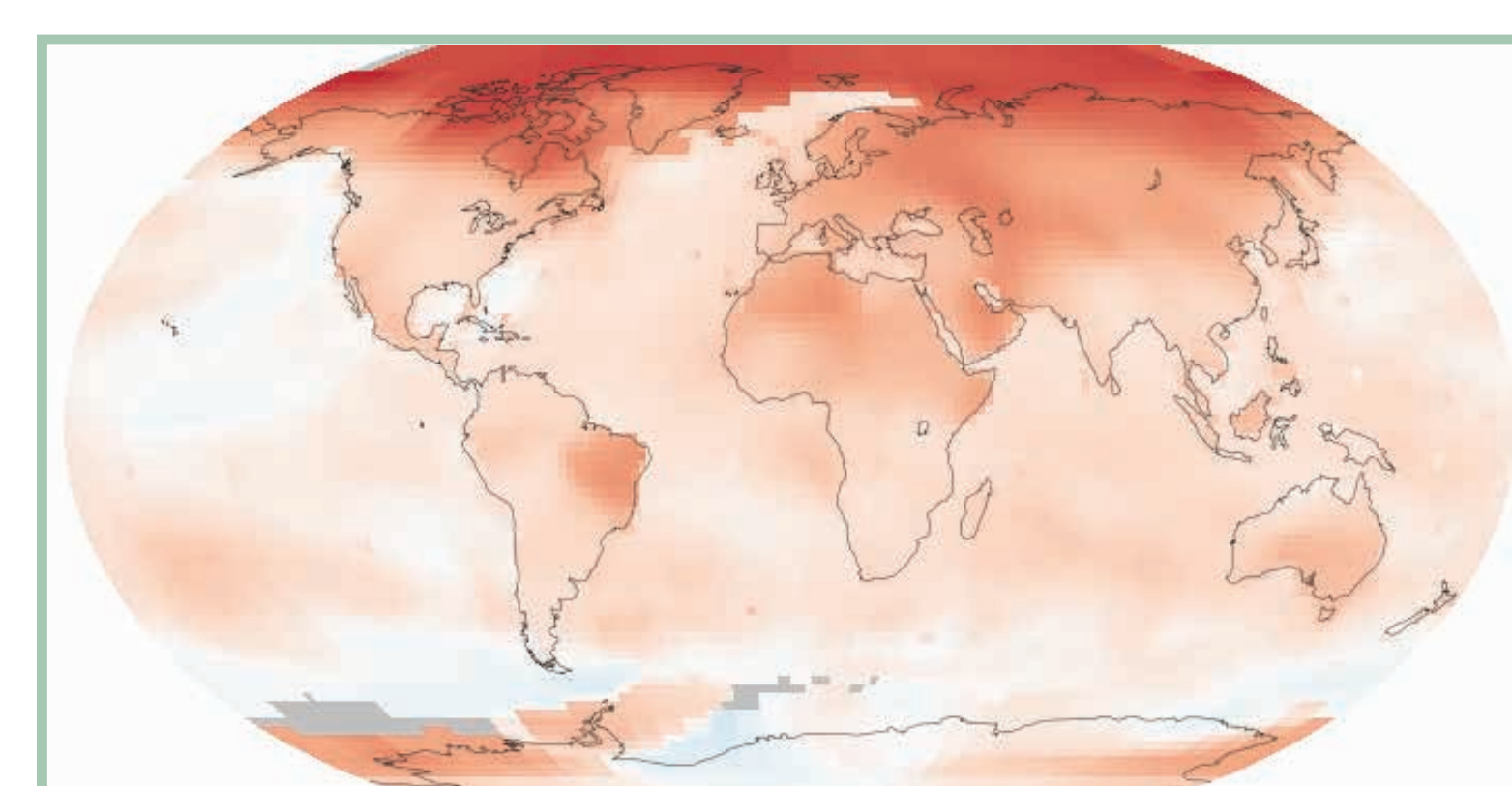
1885-1894



1965-1974



1995-2004



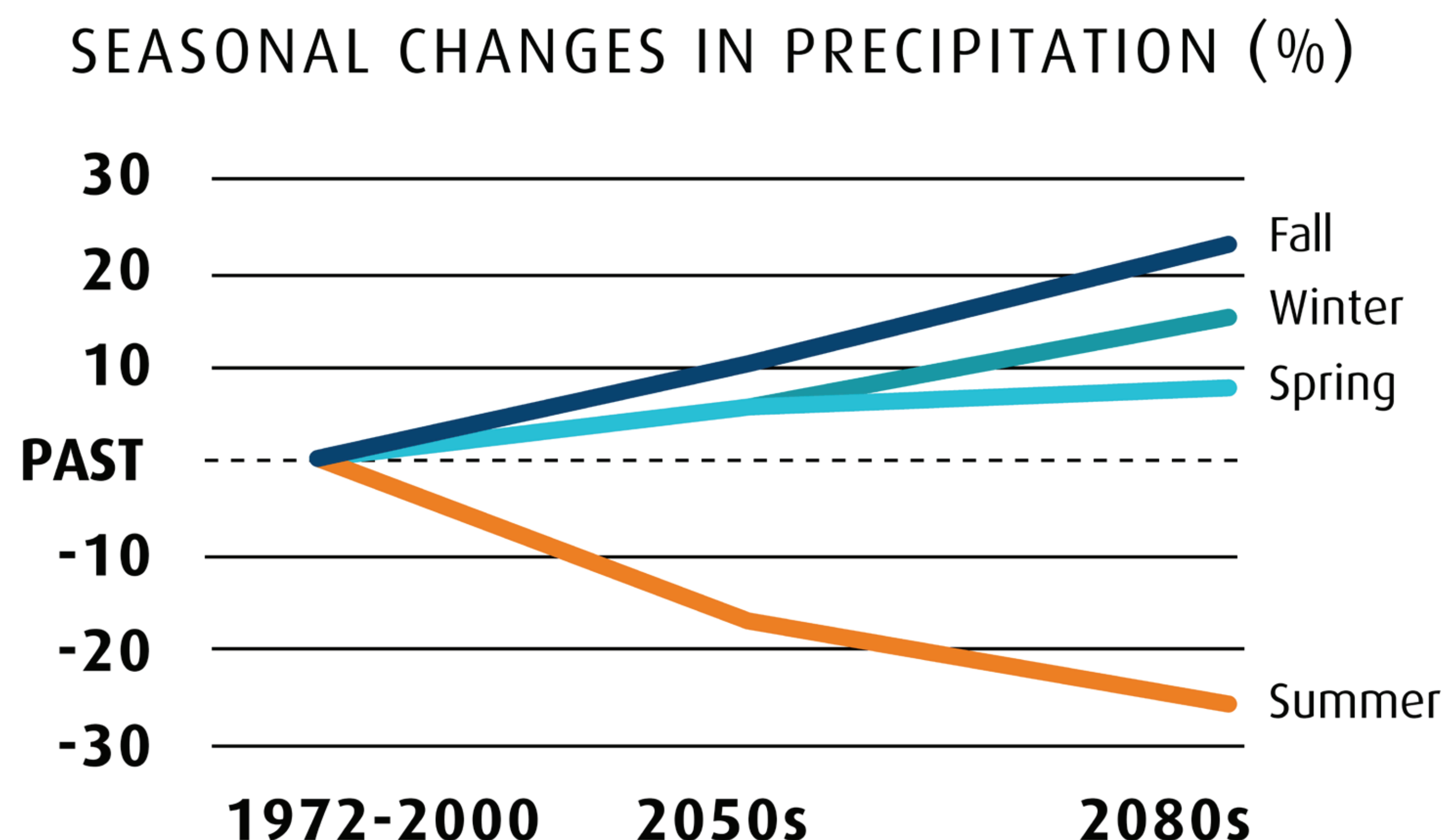
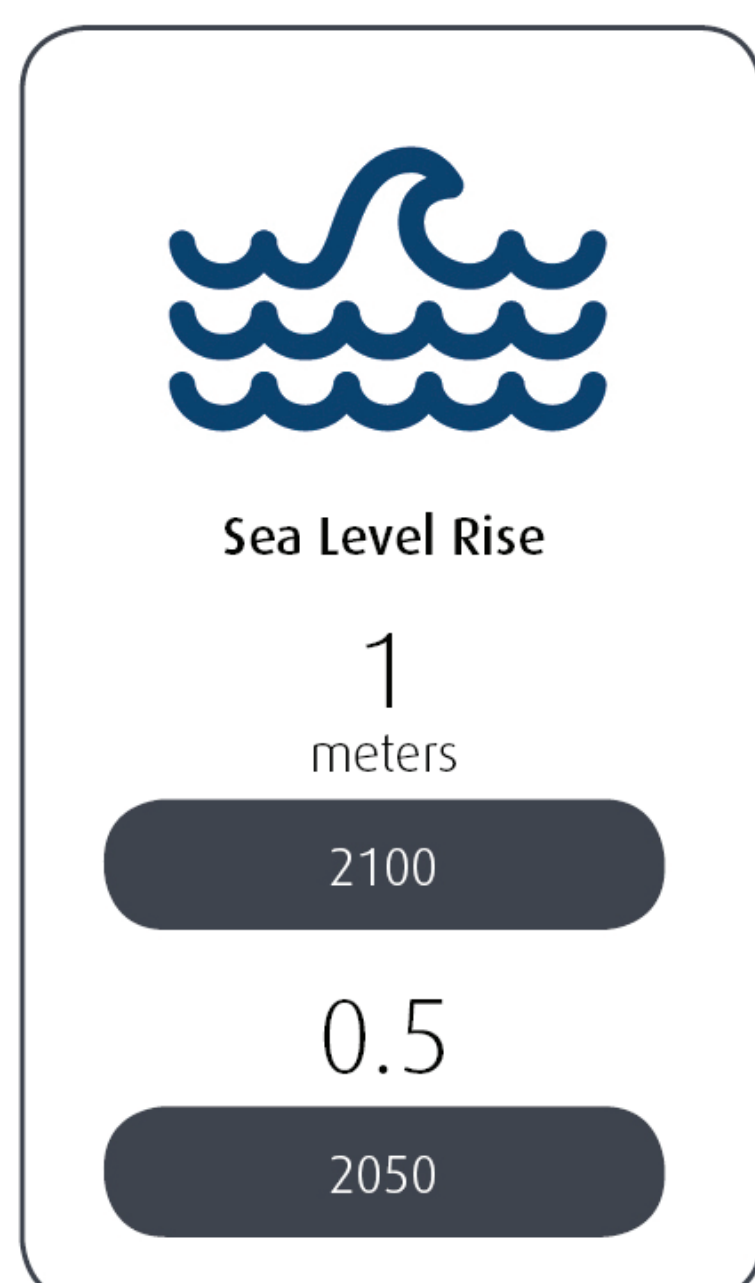
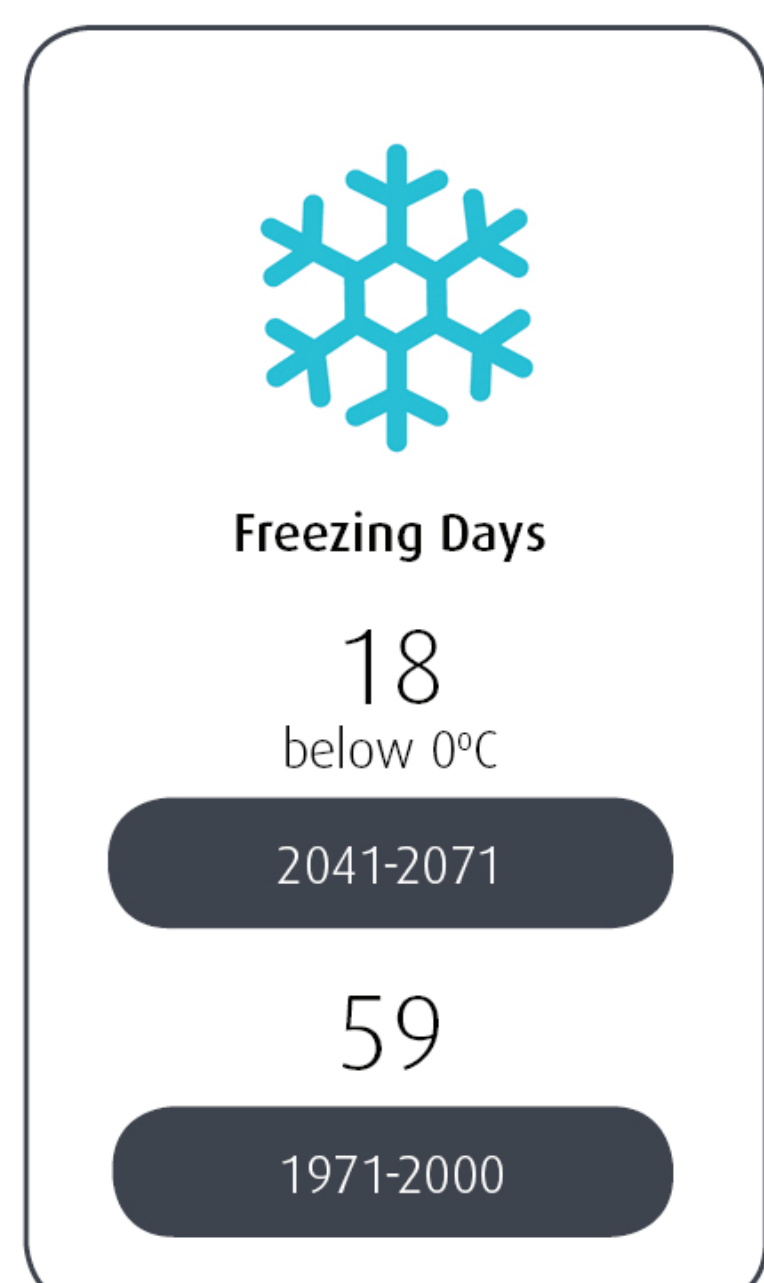
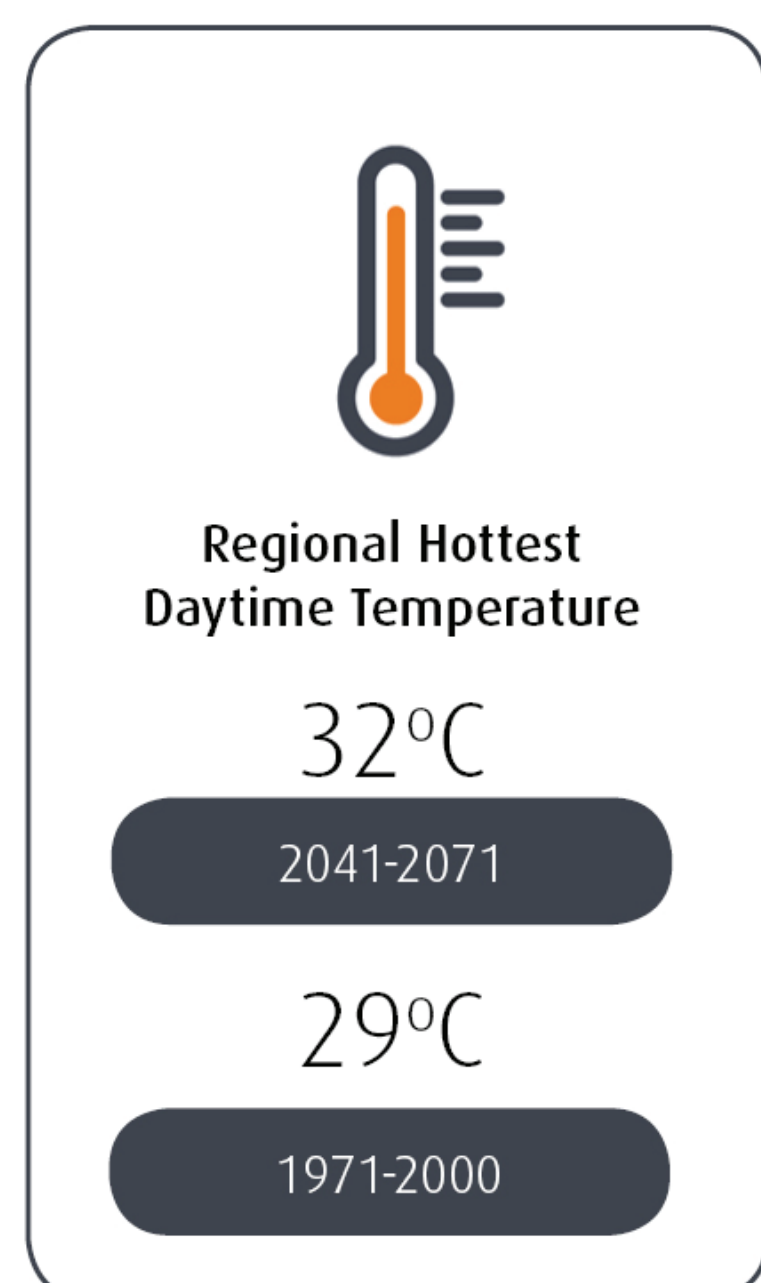
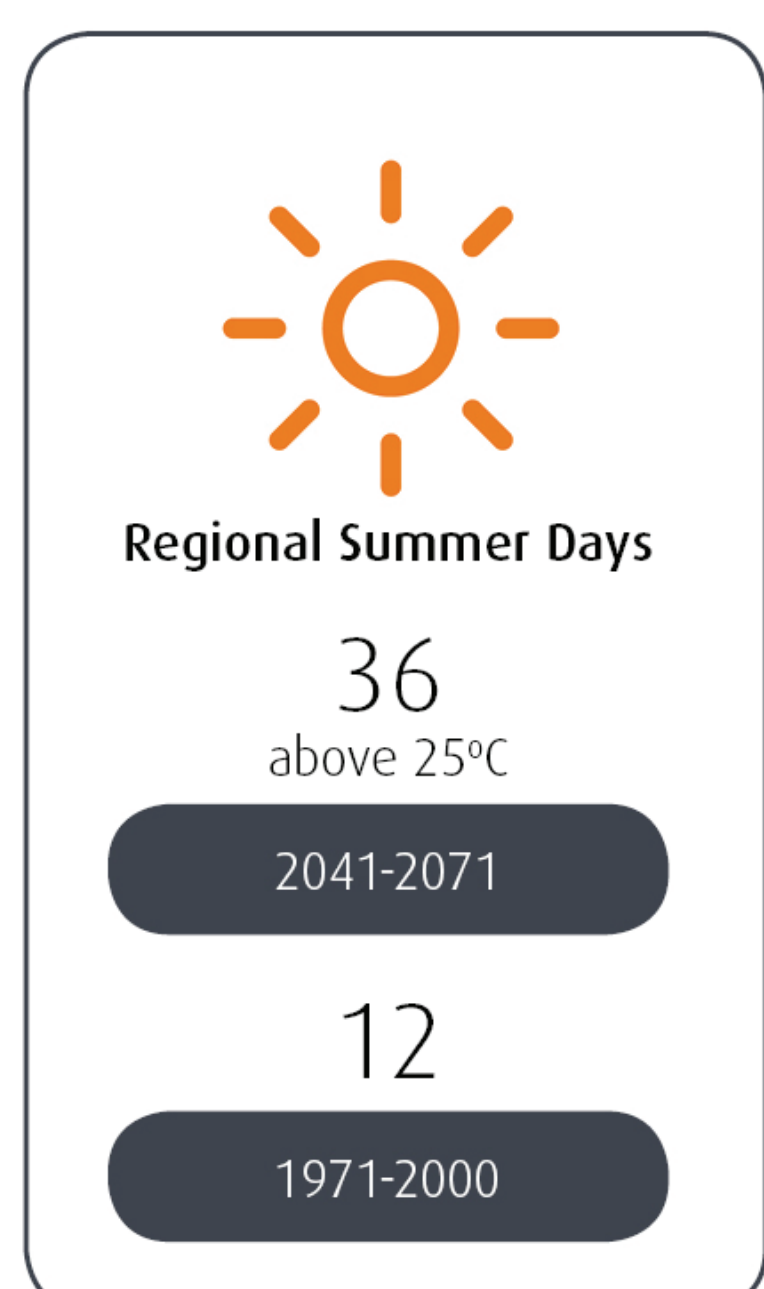
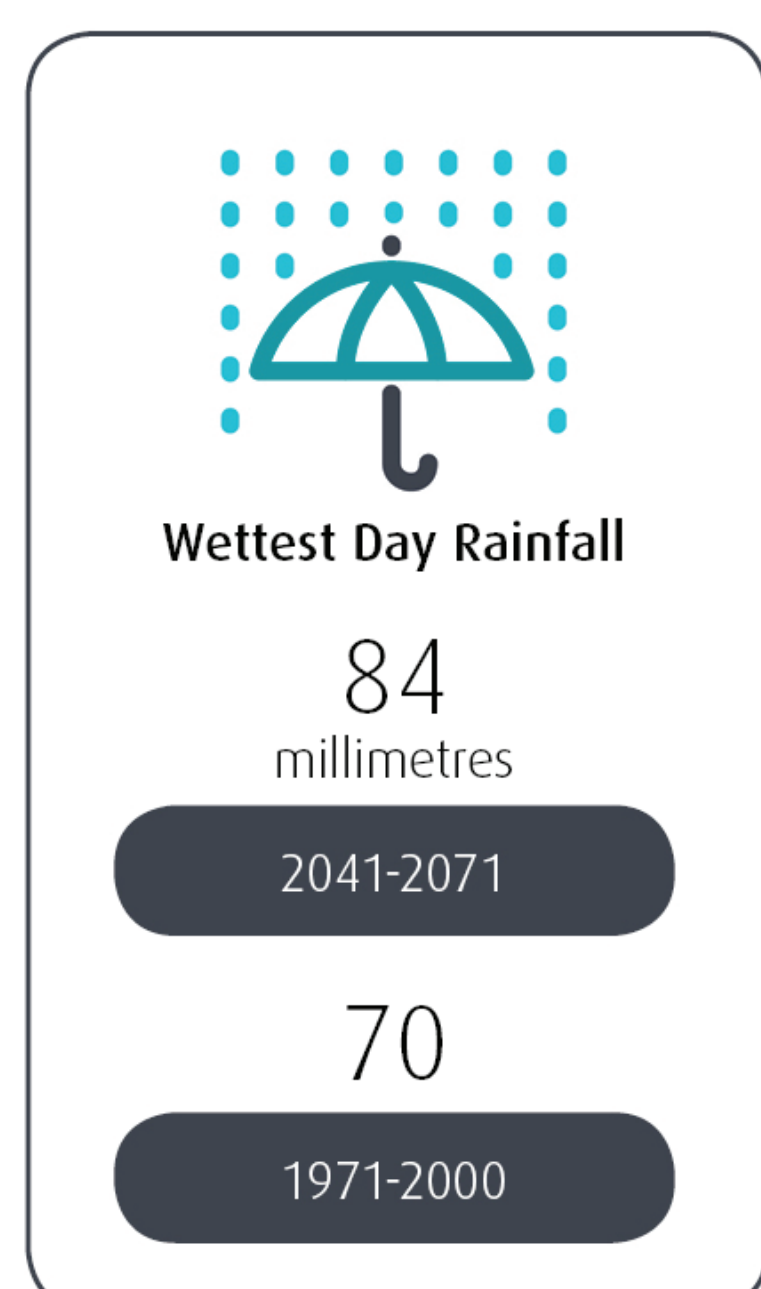
2005-2016 NASA

**Locally** temperatures are also warming and are projected to increase by 3°C by the 2050s.

As our local climate warms, we will face hotter and drier summers, increased numbers and intensity of winter storms and sea level rise.

For details see Capital Regional District, 2017, “Climate Projections for the Capital Regional District”, at [crd.bc.ca/data](http://crd.bc.ca/data)

## SELECTED CLIMATE PROJECTIONS FOR THE CAPITAL REGION





# CLIMATE PROJECTIONS & SEA LEVEL RISE

## WHAT ARE THE RISKS?

Costs, manpower, environmental degradation, health impacts and compromised quality of life.

- **Human Health**

e.g. hot summers & forest fires = heat exposure, disease and respiratory illnesses.

- **Buildings & Infrastructure**

e.g. increased rainfall and storms = flooding, erosion, slope instability, property damage.

e.g. increased heat = need for cooling.

- **Ecosystems and Species**

e.g. changes in temperature and rainfall patterns = increased invasive species and changes in species survivability and decline of biodiversity.

- **Food and Agriculture**

e.g. larger growing season could = economic benefits. However, floods, summer drought, heat stress, invasive species and increased pests and disease could have considerable negative impacts.



## RISING WATERS

### What could happen at 1 meter of sea level rise?

In the Capital Region, especially during storm surges, we could see flooding in:

- Gyro Park and neighbouring blocks
- Parts of the Saanich Gorge neighbourhood
- Victoria Inner Harbour marina
- Water and stormwater infrastructure
- And many other areas.

See [crd.bc.ca/data](http://crd.bc.ca/data) for more information.

Additional sea level rise mapping in 2019 will help us better understand the impacts and risk.





# CLIMATE PROJECTIONS & SEA LEVEL RISE

## WHAT CAN WE DO?

### Consider Building Upgrades

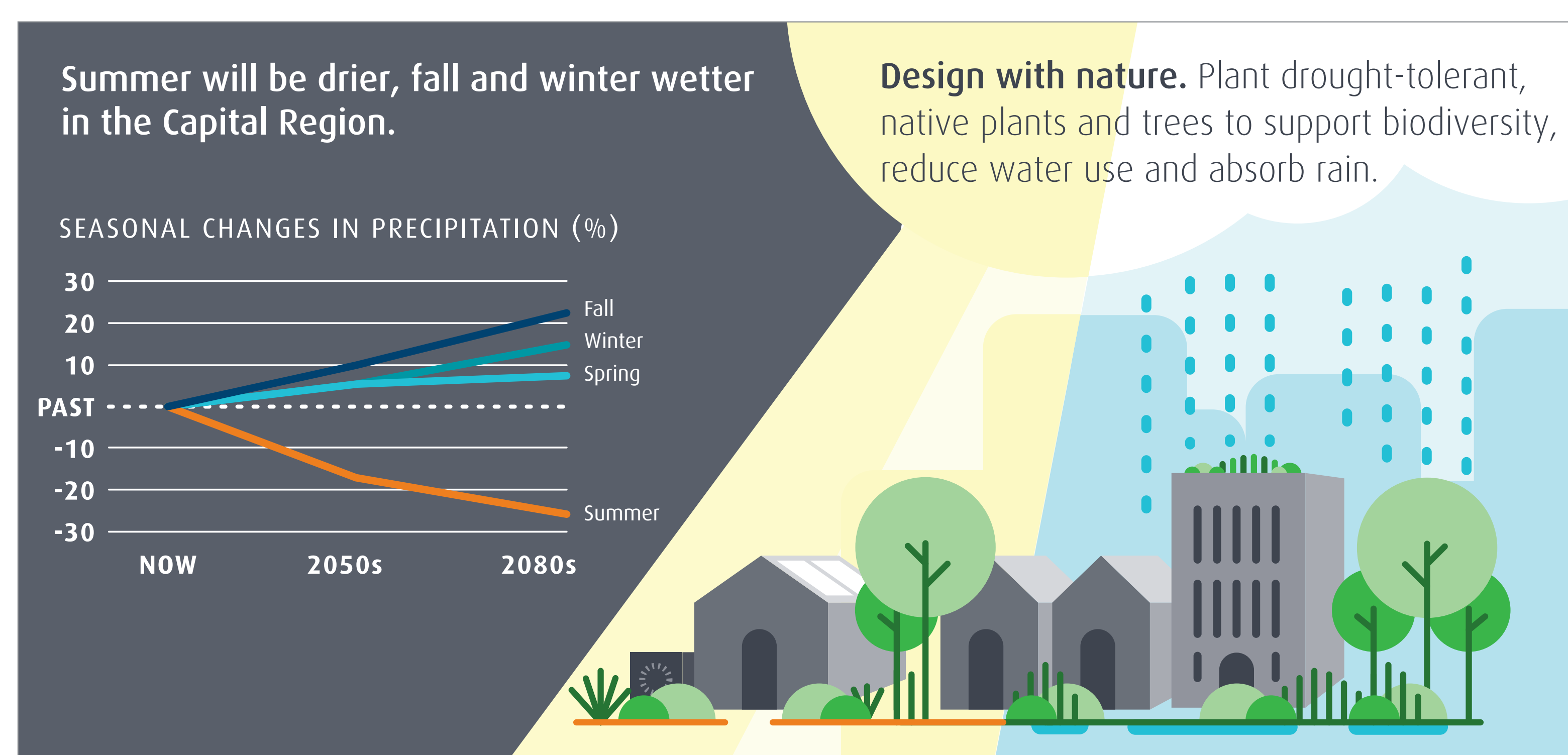
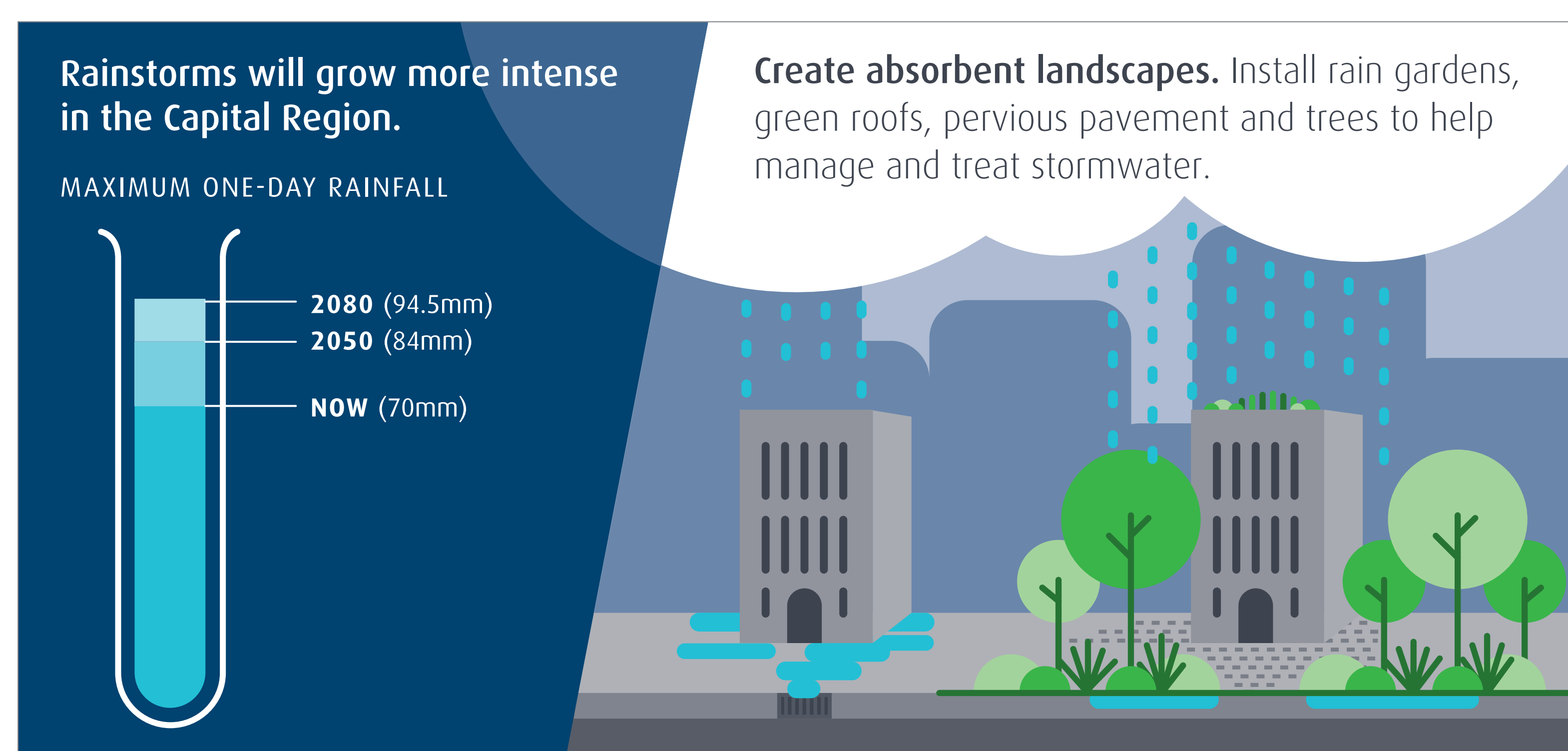
- Improve insulation, windows, and air sealing to keep heat out in summer and keep cozy in the winter.
- Consider installing a heat pump for efficient cooling (air conditioning) in the summer and affordable heating in the winter.
- Visit [saanich.ca/rebates](http://saanich.ca/rebates)

### Conserve water

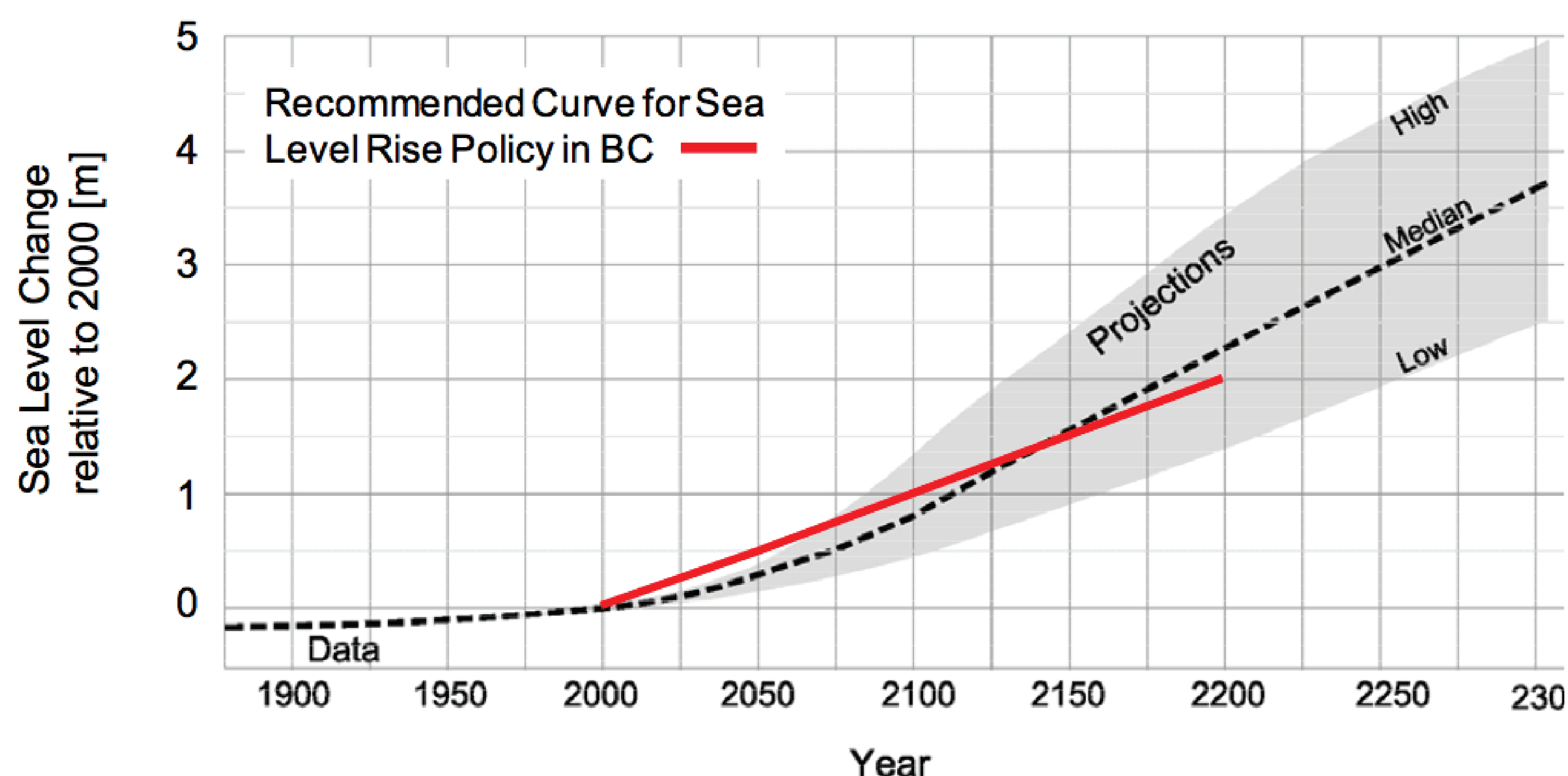
- Install high-efficiency water fixtures and appliances.
- Plant drought-tolerant, native species.
- Harvest rainwater.
- Reclaim greywater.

### Prepare for Extreme Weather Events

- Get to know your neighbours.
- Make an emergency plan.
- Keep an emergency kit.
- Visit [saanich.ca](http://saanich.ca) and search for “Emergency Program” to learn more.



- We must incorporate future climate projections and sea level rise into our decision making – most decisions are still based on historic weather data and do not consider that the buildings and infrastructure we build today will still exist in 50 years’ time in an extremely different climate.
- Update our Sea Level Rise Mapping starting in 2019, in alignment with provincial guidelines, including additional height factors for storm surge and wave effects.





# RENEWABLE ENERGY

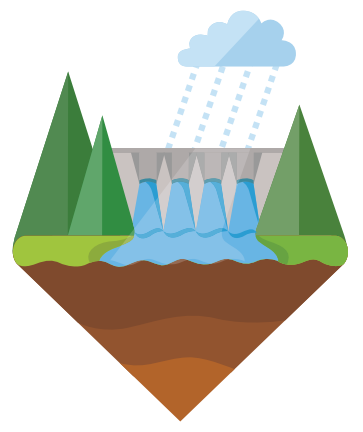
## RENEWABLE ENERGY

### CAN INCLUDE:

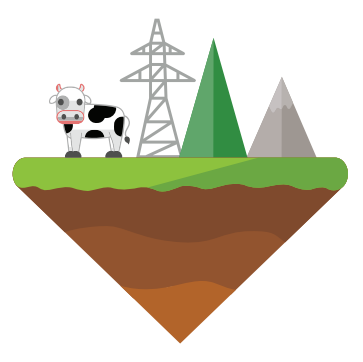
Hydro Electricity  
Solar  
Wind  
Geothermal  
Bioenergy  
Wave & Tidal Power

## WHAT IS RENEWABLE ENERGY?

Renewable energy is energy derived from natural processes (e.g. sunlight and wind) that are replenished at a faster rate than they are consumed.



**BC Hydro: hydro electricity** purchased from BC Hydro is currently 98% renewable. It uses hydroelectric generation – which harnesses the power of moving or falling water to produce energy. This means that Saanich residents who use electricity for all of their home’s energy needs, including space and water heating, are already living in a 98% renewable home!



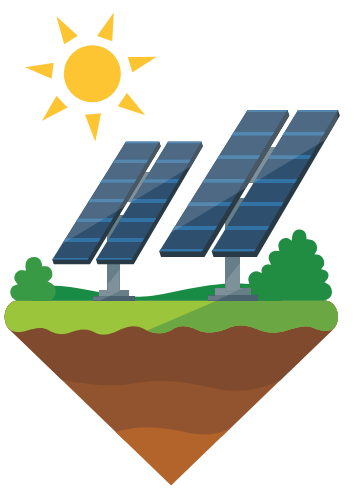
**Fortis BC: Renewable Natural Gas** customers can choose to purchase Renewable Natural Gas (RNG). This is natural gas that is produced from decomposing organic waste from landfills, agricultural waste and wastewater from treatment facilities. Learn more at [fortisbc.com/NaturalGas/RenewableNaturalGas](https://fortisbc.com/NaturalGas/RenewableNaturalGas)



**Biomass energy** is the creation of heat and/or power from biofuel such as wood, agricultural crops, aquatic plants and animal wastes. Biomass technologies are generally considered to be renewable and carbon neutral due to the short processing cycle combined with replanting.



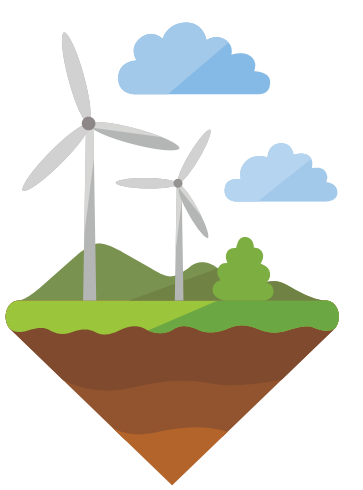
**Solar thermal** captures the sun’s energy as heat, typically for domestic water heating. Currently, at least 39 Saanich households are using solar thermal systems.



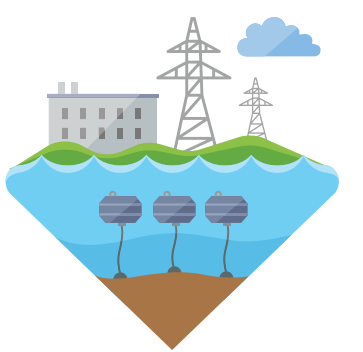
**Solar photovoltaic (PV)** transforms the sun’s energy into electricity for local use or selling to the grid. Currently, 55 Saanich residents and six businesses are producing solar electricity and are “net metering” customers with BC Hydro. Learn more at [bchydro.com/netmetering](https://bchydro.com/netmetering)



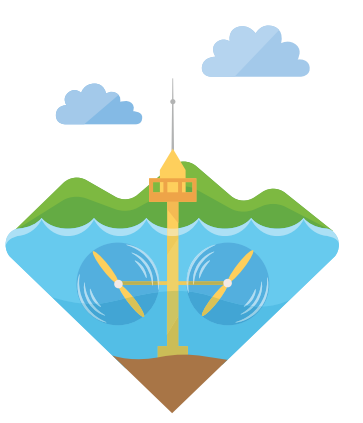
**Geothermal energy** is the use of heat stored in the Earth to generate electricity, and boost efficiency. A ground source heat pump is a common technology used to capture geothermal energy.



**Wind energy** harnesses the kinetic energy from the wind and converts it into electrical energy through wind turbines. BC has almost 700 MegaWatts of wind energy, supplying nearly 2% of our demand with large on-shore wind farms. Small scale generation (up to 1 MegaWatt) has been successful in urban settings in Europe.



**Wave power** is designed to capture the energy found near the surface of the water. BC has some of the best wave energy potential in the world with two projects on the west coast of Vancouver Island.



**Tidal power** is the energy generated from power found in ocean tidal currents and the use of tidal height differences. BC got an early lead in tidal development with the Race Rocks Tidal Project in 2006, just off Vancouver Island.



**“Negawatt”**: while not technically a source of energy, a negawatt is energy saved through conservation or an efficiency improvement. Negawatts can power new energy needs without having to generate new energy. Over 4000 Saanich households have participated in energy saving programs in the past 10 years, reducing utility bills and improving home comfort and longevity.



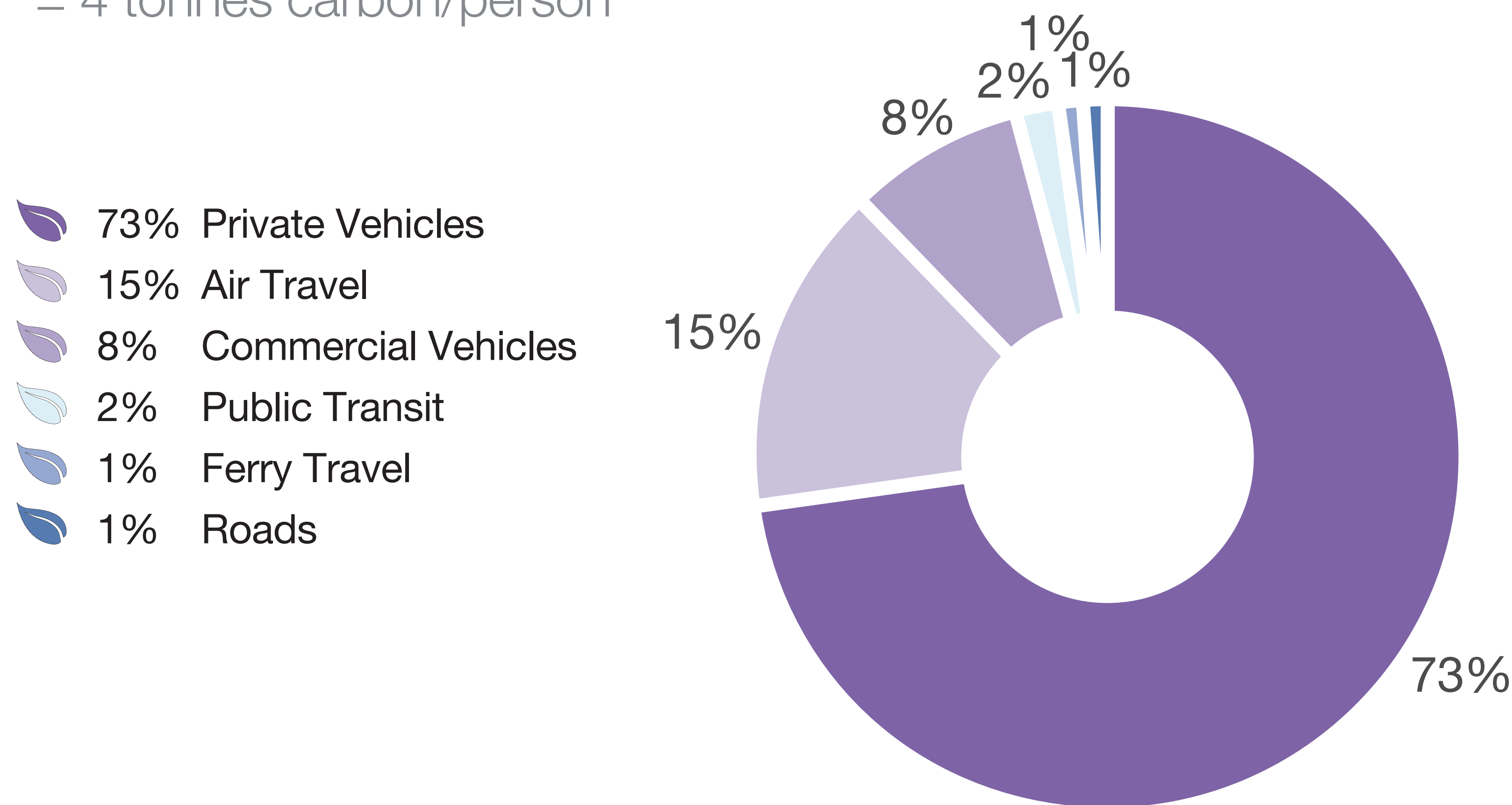
# TRANSPORTATION

## TRANSPORTATION - OUR BIGGEST EMITTER

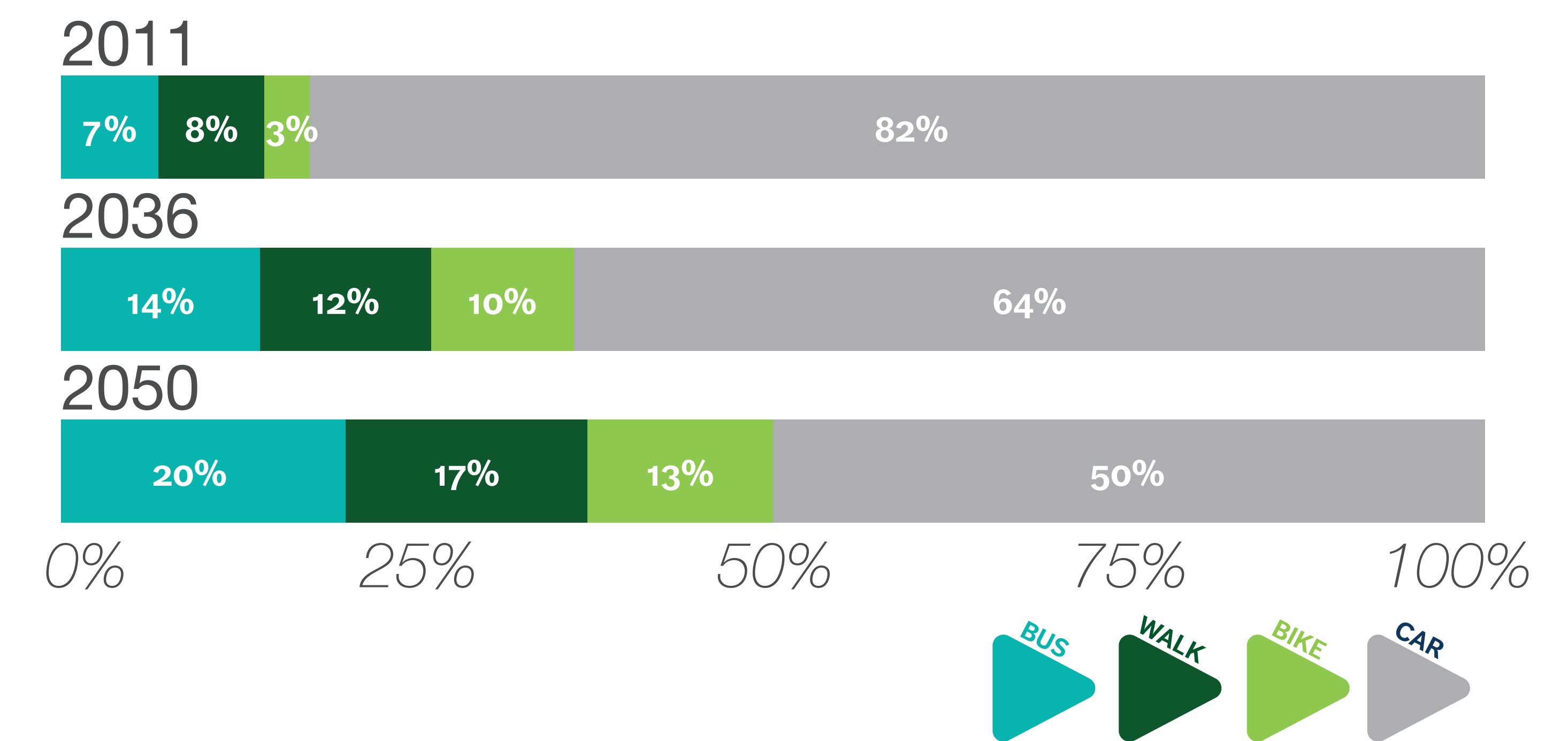
Transportation is the greatest source of GHG emissions in Saanich, responsible for 52% of our total climate impact (from our 2015 Consumption Based Emissions Inventory). The majority of transportation GHG emissions come from the use of private vehicles with significant contribution also from air travel.

### GHG Emissions from Transportation (CBEI)

= 455,000 tonnes carbon  
= 4 tonnes carbon/person



### Mode Share Targets in Saanich



Actions that decrease our transportation GHG emissions not only reduce our climate impact, they also improve our health and equity, minimize noise and air pollution and improve our experience of moving through our community.



## NEIGHBOURHOOD DESIGN

Focusing new and more dense development in Saanich “centres” helps in the creation of complete and livable communities. It supports a mix of different land uses such as housing, businesses, amenities, and parks in a walkable environment, where the cycling network and frequent transit services are more viable.

By building complete, compact and livable communities, we can protect green space, save on infrastructure costs and make it easier for people of all ages and abilities to get around sustainably.





# TRANSPORTATION

## ACTIVE TRANSPORTATION

Walking and biking not only reduce our GHG emissions, they also save us money, help us stay fit and healthy, and allow us to more easily interact with friends, neighbours, and local businesses.

Saanich is improving the active transportation network by developing more sidewalks and cycling facilities for all ages and abilities as well as improving accessibility for those with mobility challenges. Read the Active Transportation Plan: *Moving Saanich Forward* to learn more: [saanich.ca/movingsaanichfwd](http://saanich.ca/movingsaanichfwd)

## RENEWABLE FUELS

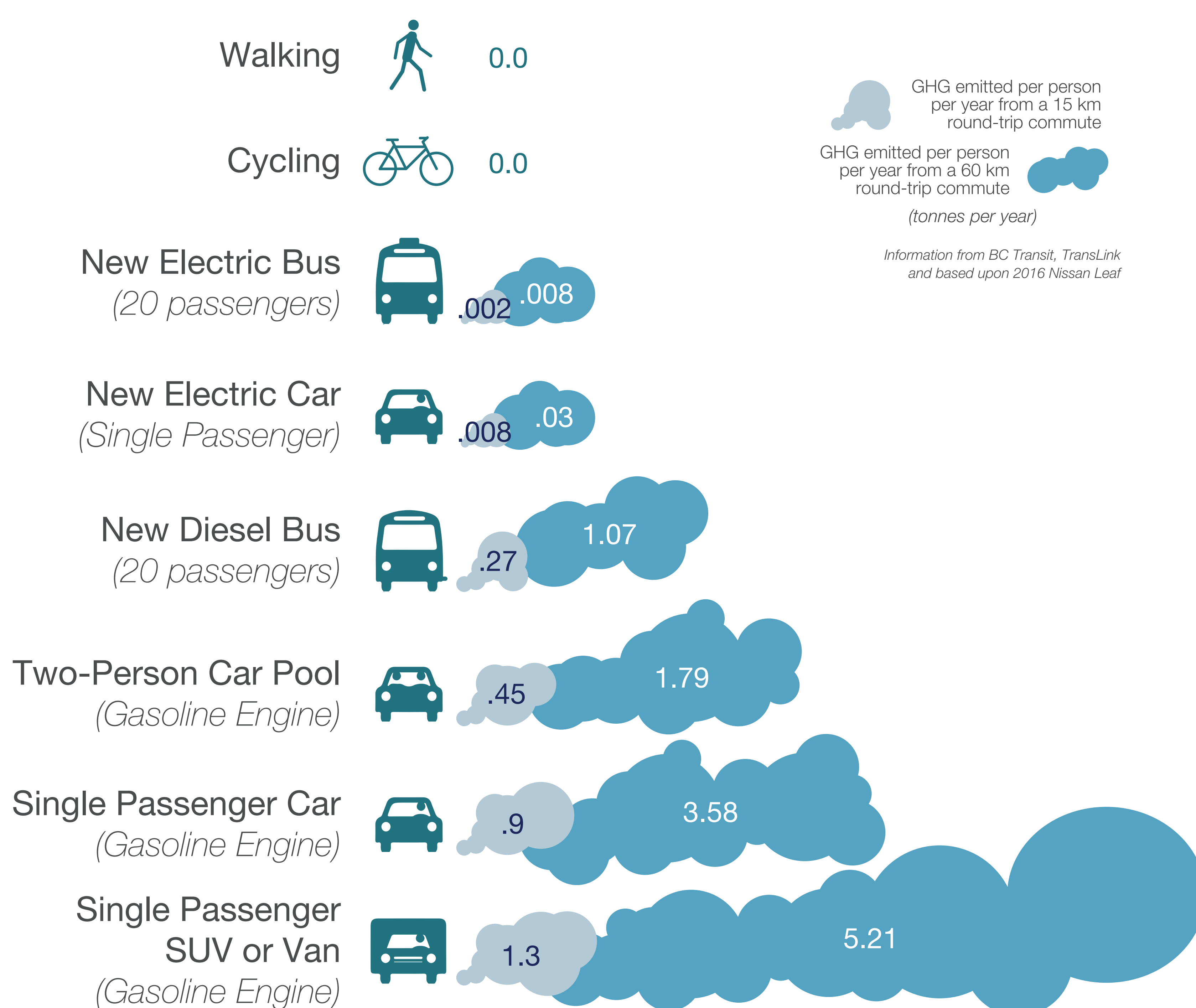
Electric vehicles (EVs) are quiet and inexpensive to operate compared to internal combustion engine vehicles, and can be powered by low carbon, renewable energy. Thanks to superior fuel efficiency and low maintenance, they also cost less over their lifetimes. Some models today can go over 400km on a single charge and fueling can be done at home or any of the growing number of charging stations in the region ([plugshare.com](http://plugshare.com)).

- Approximately 600 Saanich residents drive electric cars.
- In January 2018, BC Transit started piloting electric buses in the region and is exploring a commitment to 100% electric vehicles by 2030. Many private enterprises in BC including tour bus companies and delivery fleets are also going electric.
- BC ferries has committed to hybrid electric – diesel for some vessel replacements due in 2020 and the first fully electric ferry is now being operated in Norway.
- Vehicles can also be powered by other renewable fuels including hydrogen fuel cells (with hydrogen produced from renewable energy), renewable diesel, biogas and Renewable Natural Gas (RNG).

## PUBLIC TRANSIT

Public transit can move more people using less space and resources than if everyone uses their own car, and is essential for moving people efficiently in urban areas.

BC Transit is already introducing dedicated bus lanes and trialing electric buses in the region, with real-time information to follow late 2018/early 2019.





# BUILDINGS

## THE IMPACT OF OUR BUILDINGS

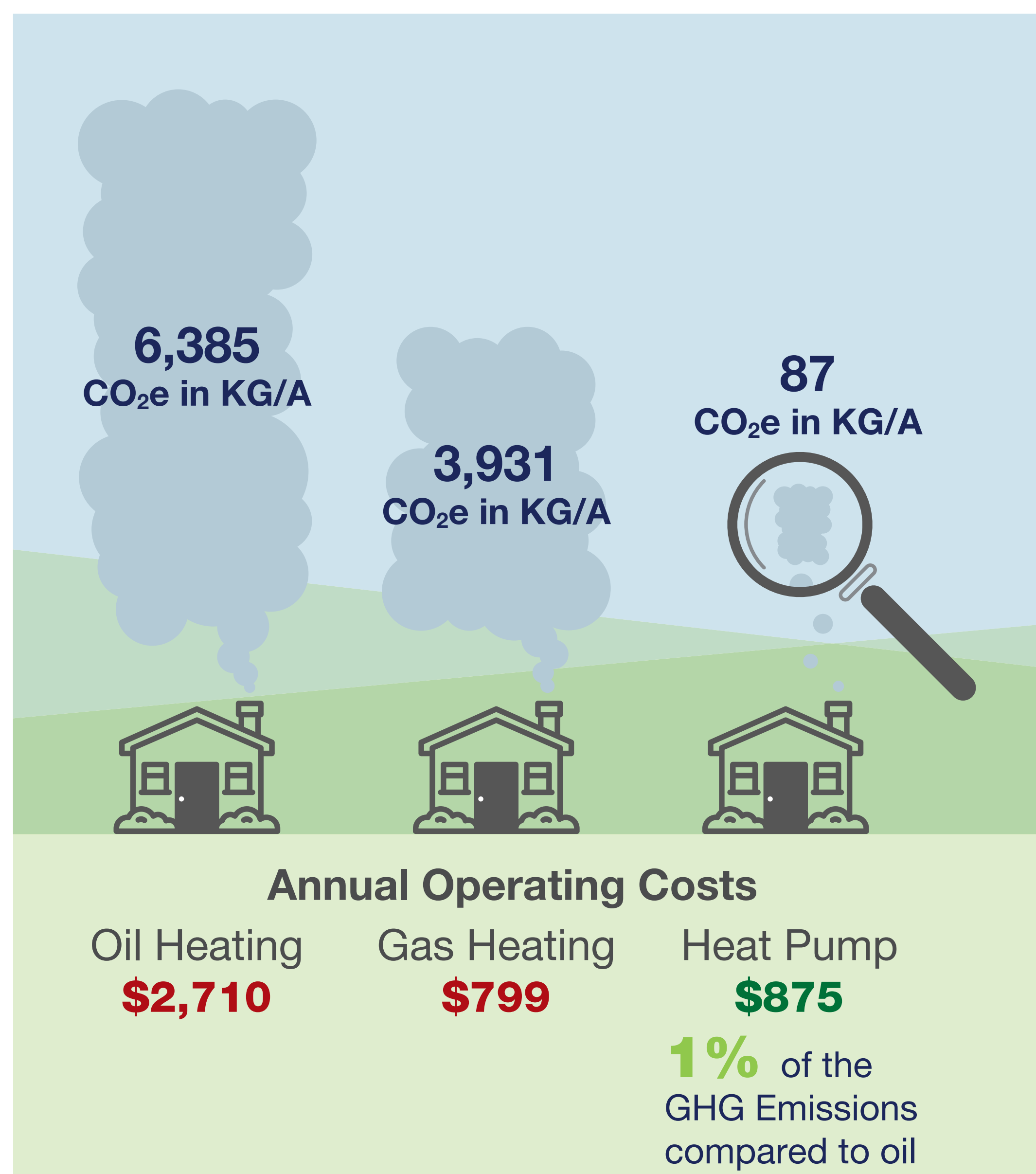
Buildings (including homes and businesses) in Saanich are responsible for 28% of our greenhouse gas (GHG) emissions based on a Territorial Inventory, and 20% of our overall greenhouse gas (GHG) emissions based on our Consumption Based Emissions Inventory.

### New Construction vs. Renovation

Over 330 new buildings are developed in Saanich each year. Buildings constructed today, and many older buildings that are already in the community, will still exist and be contributing to our community wide GHG Inventory in 2050.



## LOW CARBON, RENEWABLE ENERGY HOMES



Fossil fuels are the most GHG intensive heating fuels, with oil having the highest emissions, followed by propane and natural gas. Electricity has the lowest GHG emissions, as over 93% of electricity in BC is from renewable hydroelectricity.

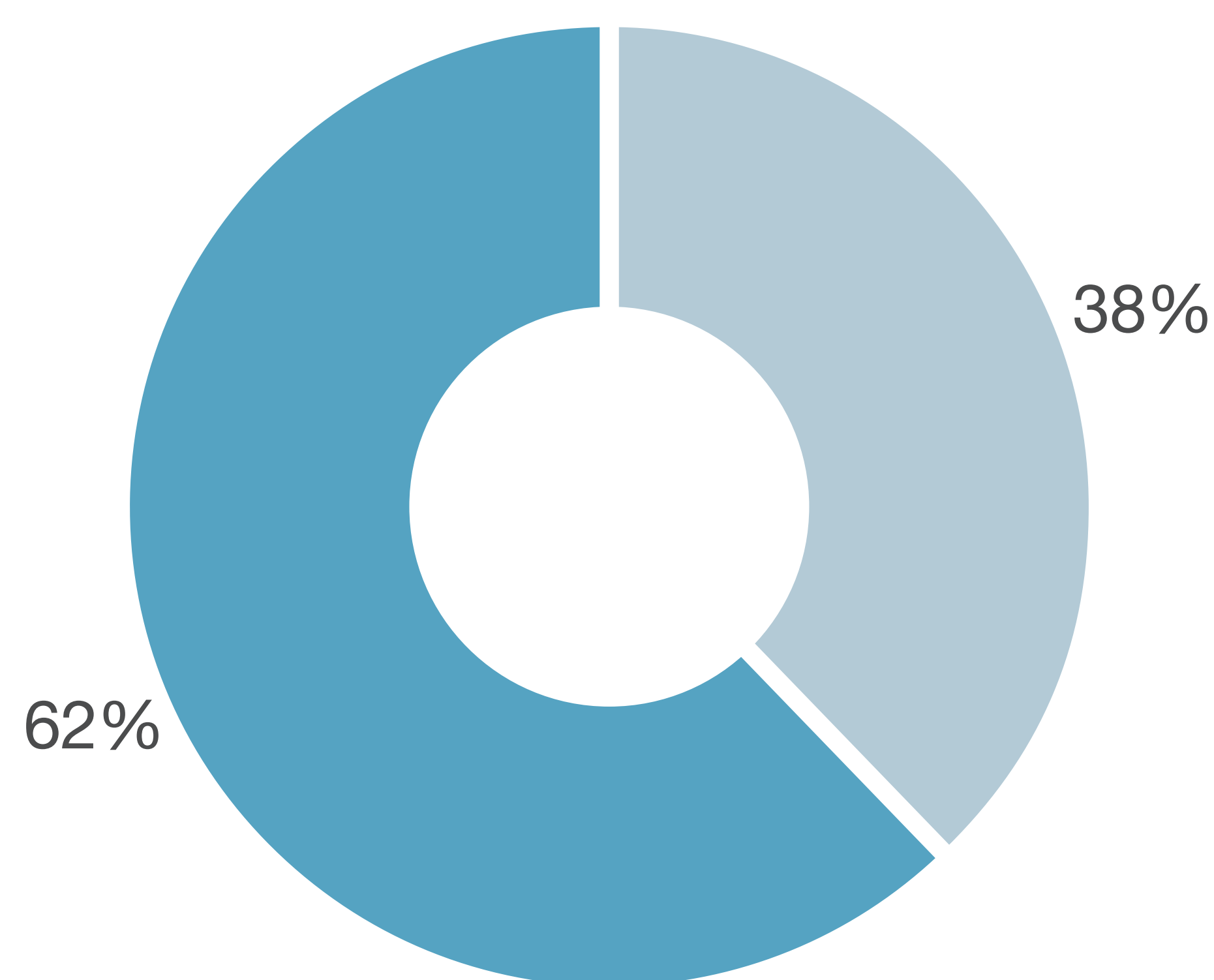
If you are using oil and your home hasn't been upgraded for energy efficiency, your home may be emitting more GHGs than a typical car every year.

If your home uses electricity for space and water heating, it is already 97% renewable, and has very low carbon emissions.

Making energy efficiency improvements, such as upgrading insulation, windows, and draftproofing, and choosing efficient space and water heating systems, lighting, and appliances, can make a home more comfortable with more affordable energy bills.

### Embedded vs. Operating Energy in Residential Buildings

In a consumption-based emissions inventory, the majority (62%) of the GHG emissions from residential homes comes from operating energy and 38% from embodied energy (the energy used in creating and delivering building materials including the energy used for extraction of raw materials, manufacturing and transportation of the end product.) The key to reducing these emissions is to build or renovate our homes to high energy efficiency standards and build them to last in a changing climate.



38% Embodied GHG  
62% Operating GHG



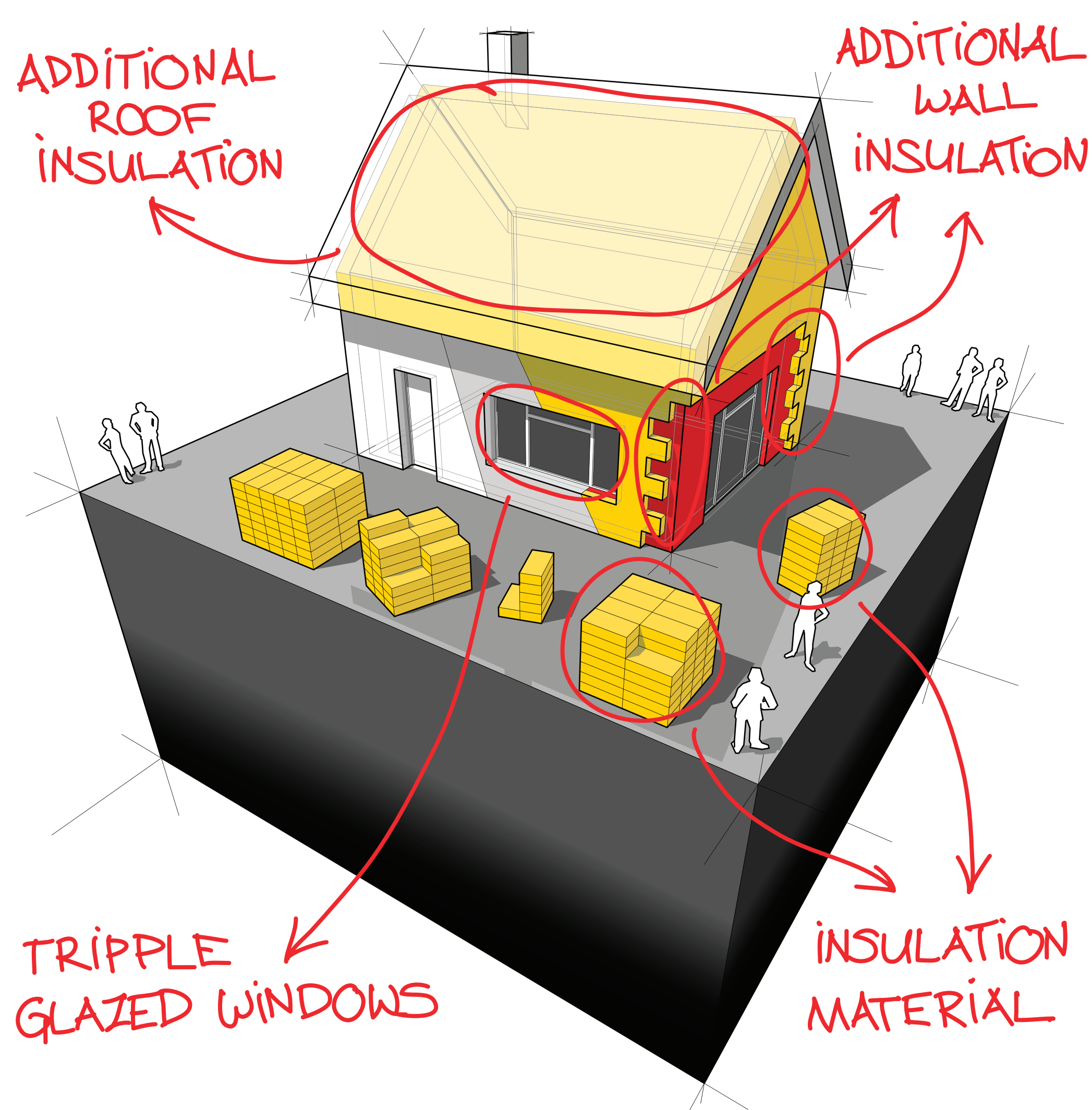
# BUILDINGS

## BUILDING RIGHT

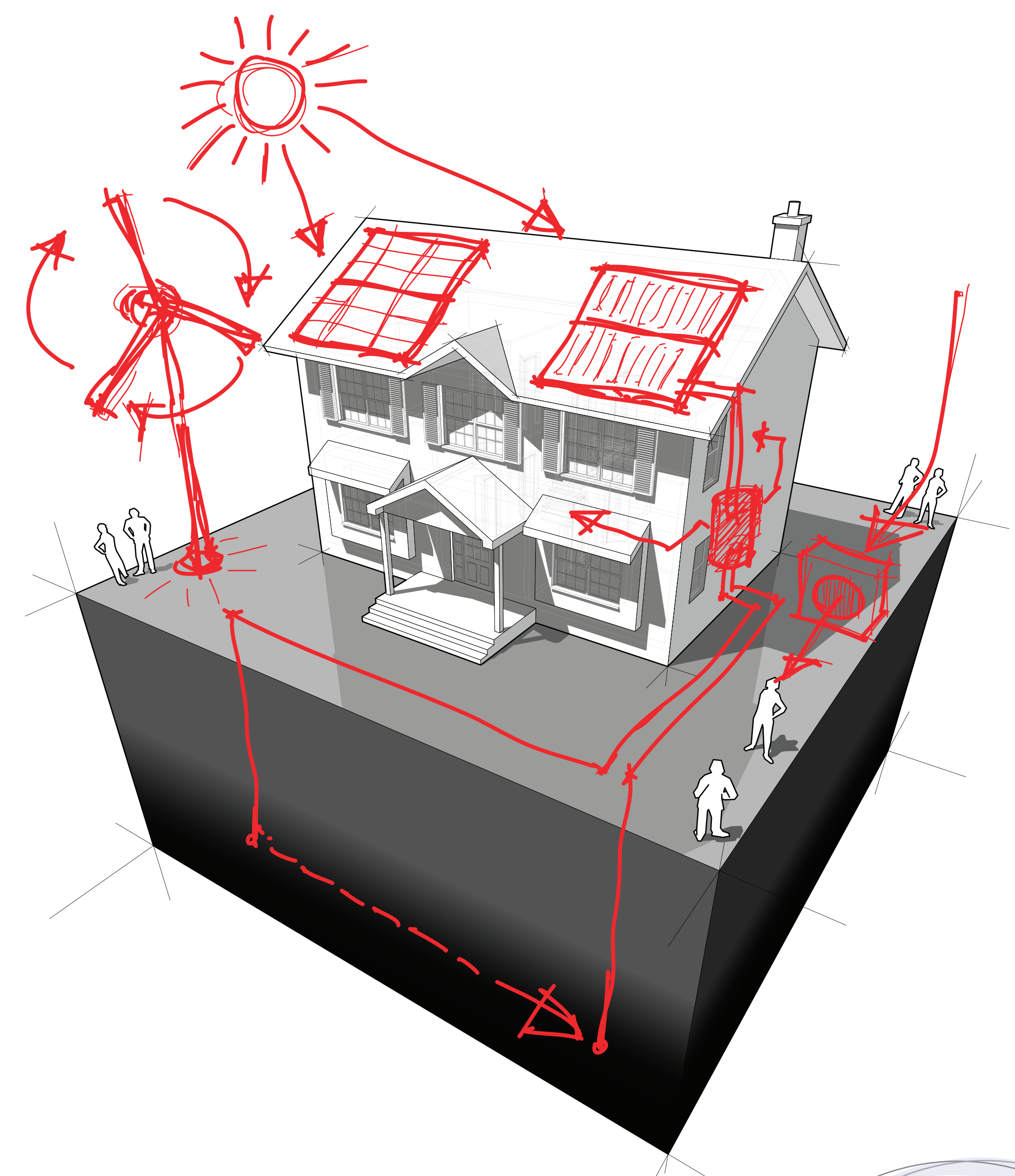
When shopping for a new car, you can easily compare fuel efficiencies. If you're buying a new home, how do you know how big your energy bills will be or how comfortable you will be living there?

Only a small portion of buildings in Saanich have been built to a certified sustainable standard with an energy label that helps us understand its performance. New building code legislation is moving towards Net Zero Energy ready buildings by 2032 and supports the introduction of building energy labeling to better inform buyers and renters.

Reduce energy use by improving efficiency, especially the building envelope.



Upgrade mechanical systems to use and/or produce renewable energy.



## RENOVATING FOR ENERGY EFFICIENCY & RENEWABLES

- **Start with an EnerGuide evaluation** using a certified energy-advisor, which helps you decide which upgrades work best for your home, how to prioritize them and which will save you most on utility bills.
- **Installing insulation** in the roof, attic and particularly in the walls and foundation is one of the most important upgrades for reducing energy use and improving home comfort in all seasons.
- **Air sealing or draft proofing** is a simple and cost effective way to cut heating and cooling costs. An EnerGuide evaluation can highlight the air leakage rate and uses infrared photography to show areas of the building that need sealing. Ideas for improvement could include caulking windows, weather stripping doors, installing foam gaskets behind outlets and sealing air leaks where plumbing, ducting or electrical wiring comes through the walls, floors and ceilings.
- **Replacing doors and windows** with higher energy efficiency models or installing storm windows can help reduce energy use, improve comfort and increase sound proofing.
- **Upgrade mechanical systems** to efficient models that use renewable energy, such as an electric heat pump that provides heating, cooling, and can also provide air filtering.

REBATES  
Visit [efficiencybc.ca](http://efficiencybc.ca)  
for rebates and free,  
expert advice



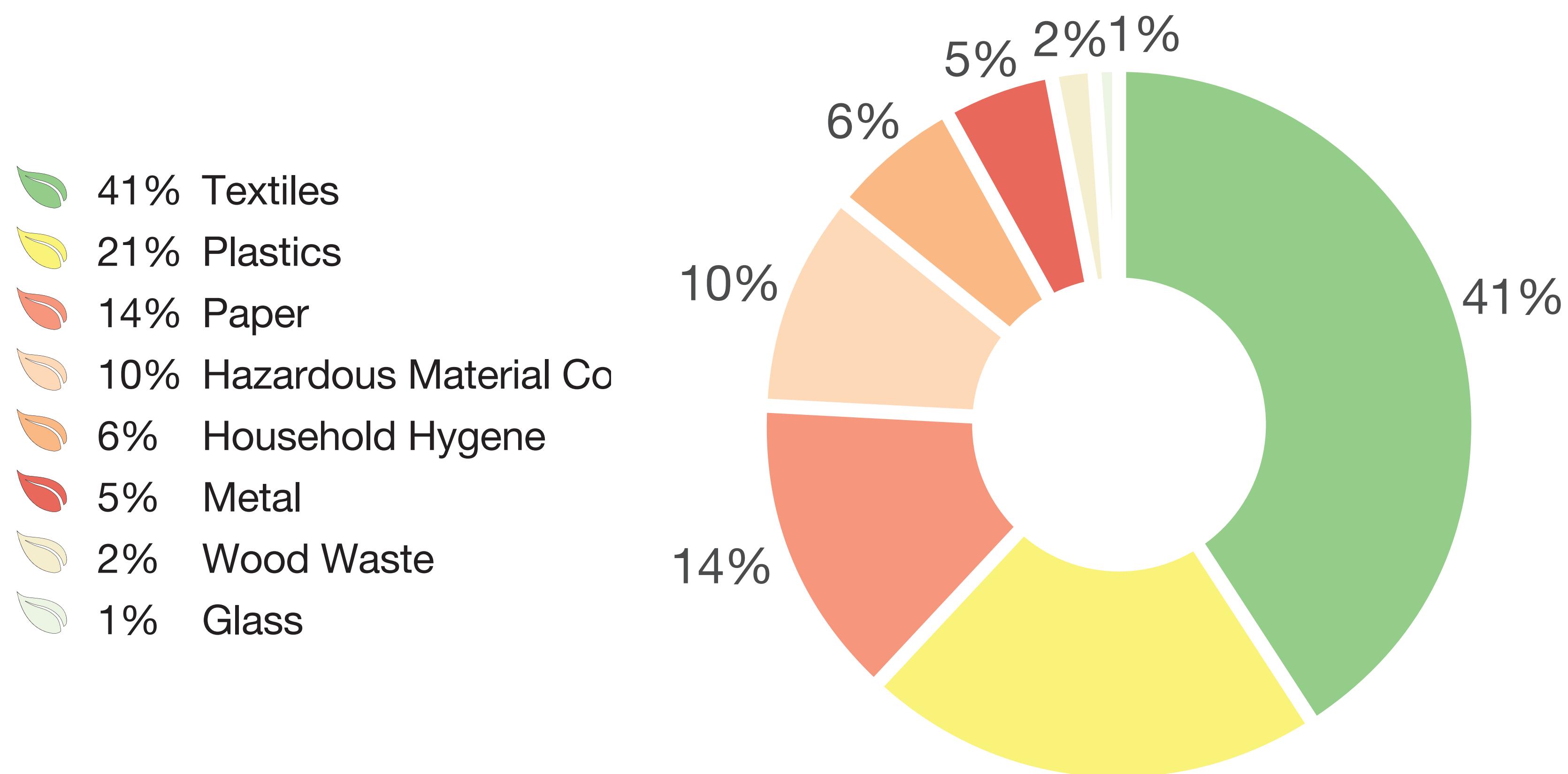
# CONSUMPTION & WASTE

## WHAT WE BUY AND THROW AWAY MATTERS

Saanich residents make choices about consumer goods and waste every day. The materials in the products we buy, their packaging, and how we dispose of them when they're no longer of use to us all have implications for our GHG emissions.

### GHG Emissions from Transportation (CBEI)

= 55,000 tonnes carbon  
= .5 tonnes carbon/person



GHG emissions from products we buy are not currently counted in Saanich's Territorial GHG Inventory or our 2050 targets unless the products are made in Saanich. However, if we use a Consumption-Based GHG Emissions Inventory, which considers the emissions that result from the production, transport, and disposal of goods consumed in Saanich regardless of where they are made, our community emissions nearly double, and consumables and waste account for 9% of our GHG emissions.

## WHAT CAN WE DO?

- Rent, borrow, or share rather than buy your own (e.g. car sharing, the library, tool libraries, etc.)
- Repair rather than buy new (learn more at [repaircafe.org](http://repaircafe.org))
- Reduce throw-away packaging by bringing your own containers & bags
- When you need to buy, consider the lifecycle of the product, and when it makes sense look for:



- well-made, long lasting products
- minimal or no packaging
- recycled content and ease of recycling/composting the product
- third-party certification for eco-friendliness
- energy efficient and renewable energy design
- Take part in the second-hand economy using the many online tools or local businesses available in the region.
- If a product is not useful for someone else when you're done with it, recycle or compost it. Check out [myrecyclopedia.ca](http://myrecyclopedia.ca) for tips about how to recycle just about everything and how to reduce and reuse, too!



# FOOD & AGRICULTURE

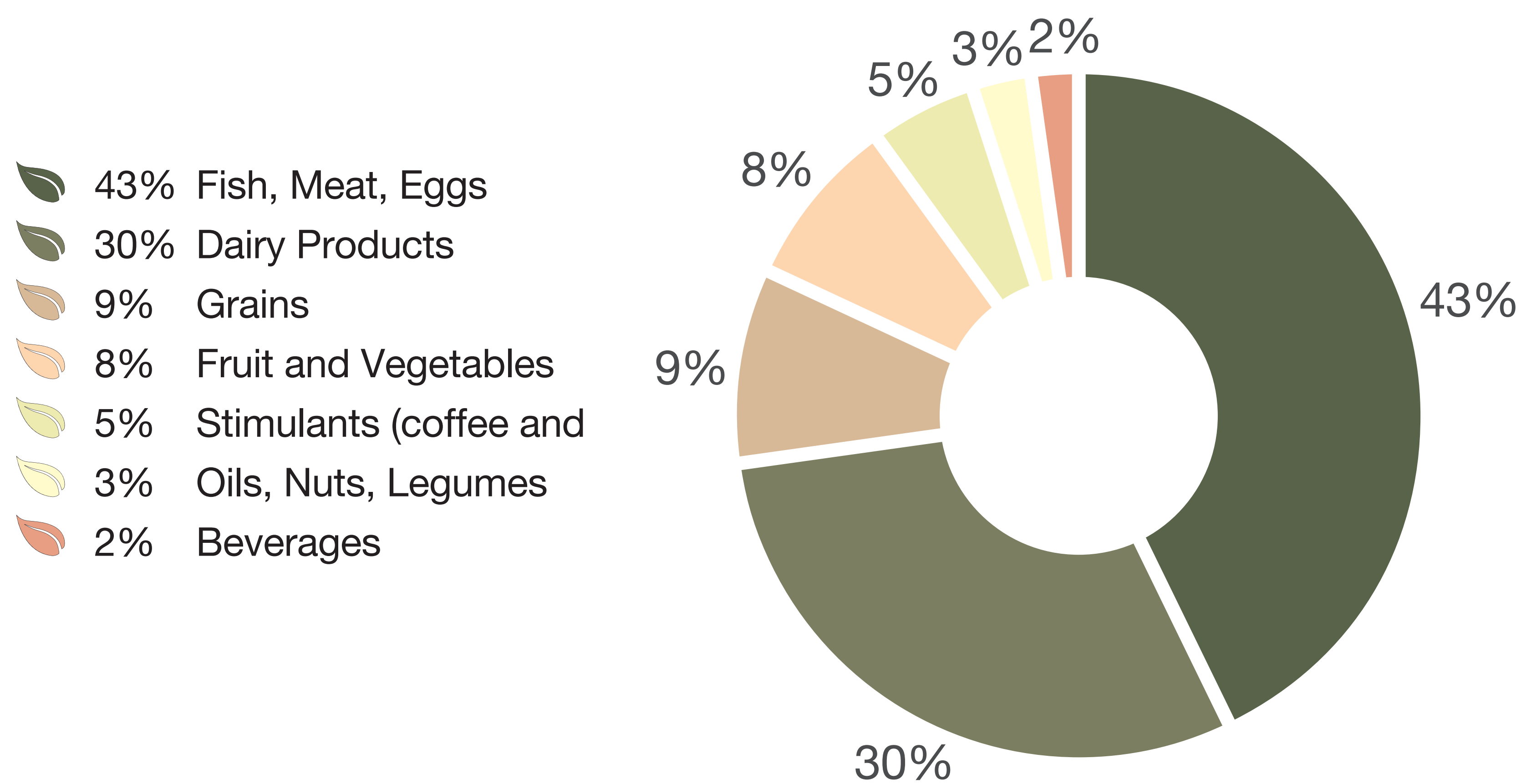
## FOOD CHOICES IMPACT CLIMATE

Food is not just a basic human need, but also plays an important role in culture and enjoyment of life. Our food choices can have a big impact on our household's climate impact. Using a consumption based GHG inventory, food represents 19% of our total emissions – this includes all the food purchased by residents and businesses in Saanich, whether it is grown and processed in Saanich or elsewhere in the world.

**Did you know? Only 7% of food emissions relate to transportation (or “food miles”).**

### GHG Emissions from Food (CBEI)

= 171,000 tonnes carbon  
= 1.5 tonnes carbon/person



In Saanich, the biggest sources of food GHG emissions are related to our food choice, not its transportation. Choosing lower carbon foods can significantly reduce your household's carbon footprint. In addition, in Canada, over \$31 billion of food is wasted each year. 47% of the value of food wasted in Canada can be attributed to households.

### WHAT CAN YOU DO?

- Choose low carbon foods
- Avoid food waste
- Compost, not landfill
- Support local food and farmers
- Cook with renewable energy (e.g. electricity or renewable natural gas)

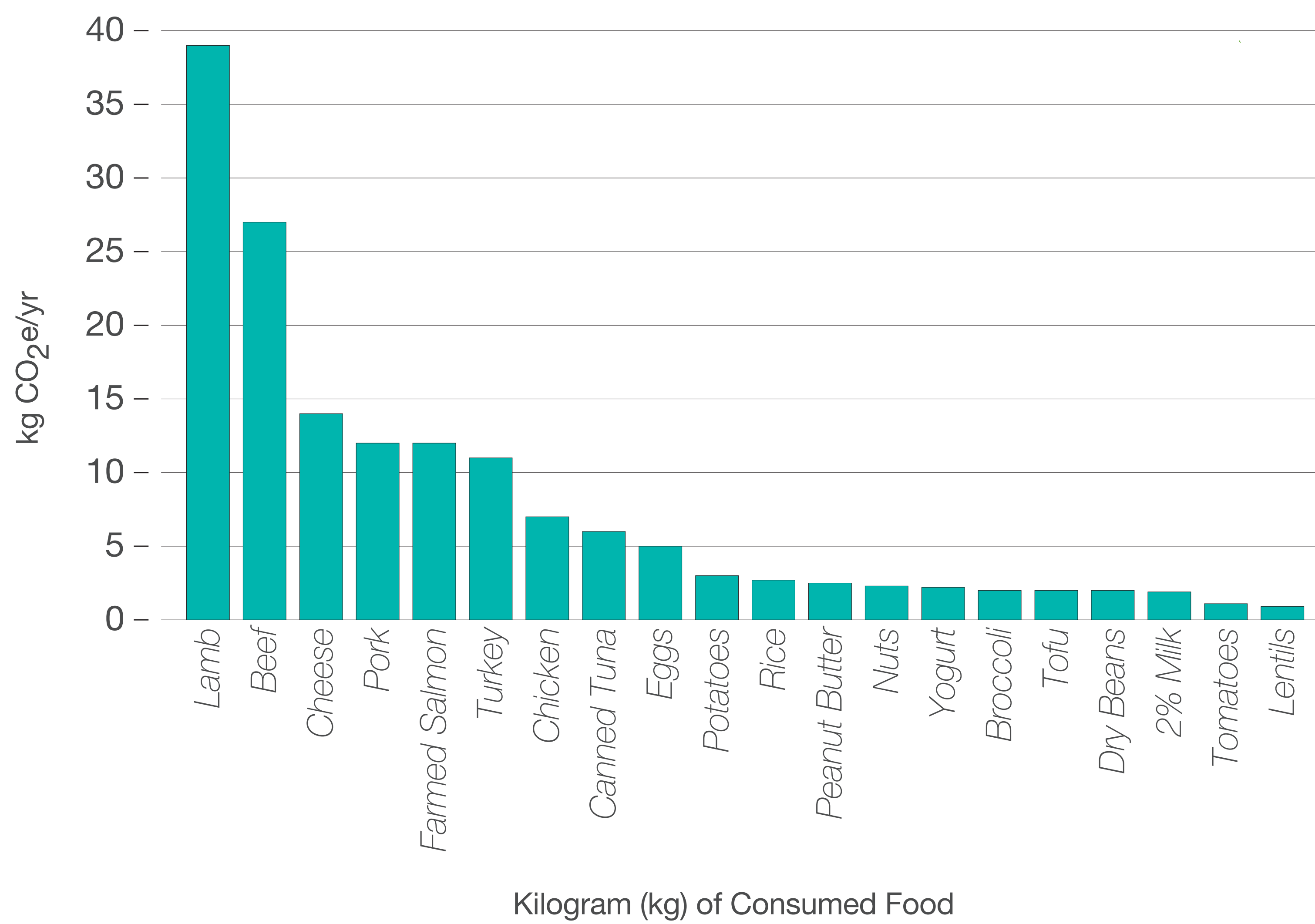
**\$31 Billion**  
wasted per year





# FOOD & AGRICULTURE

## CHOOSE LOW CARBON FOODS



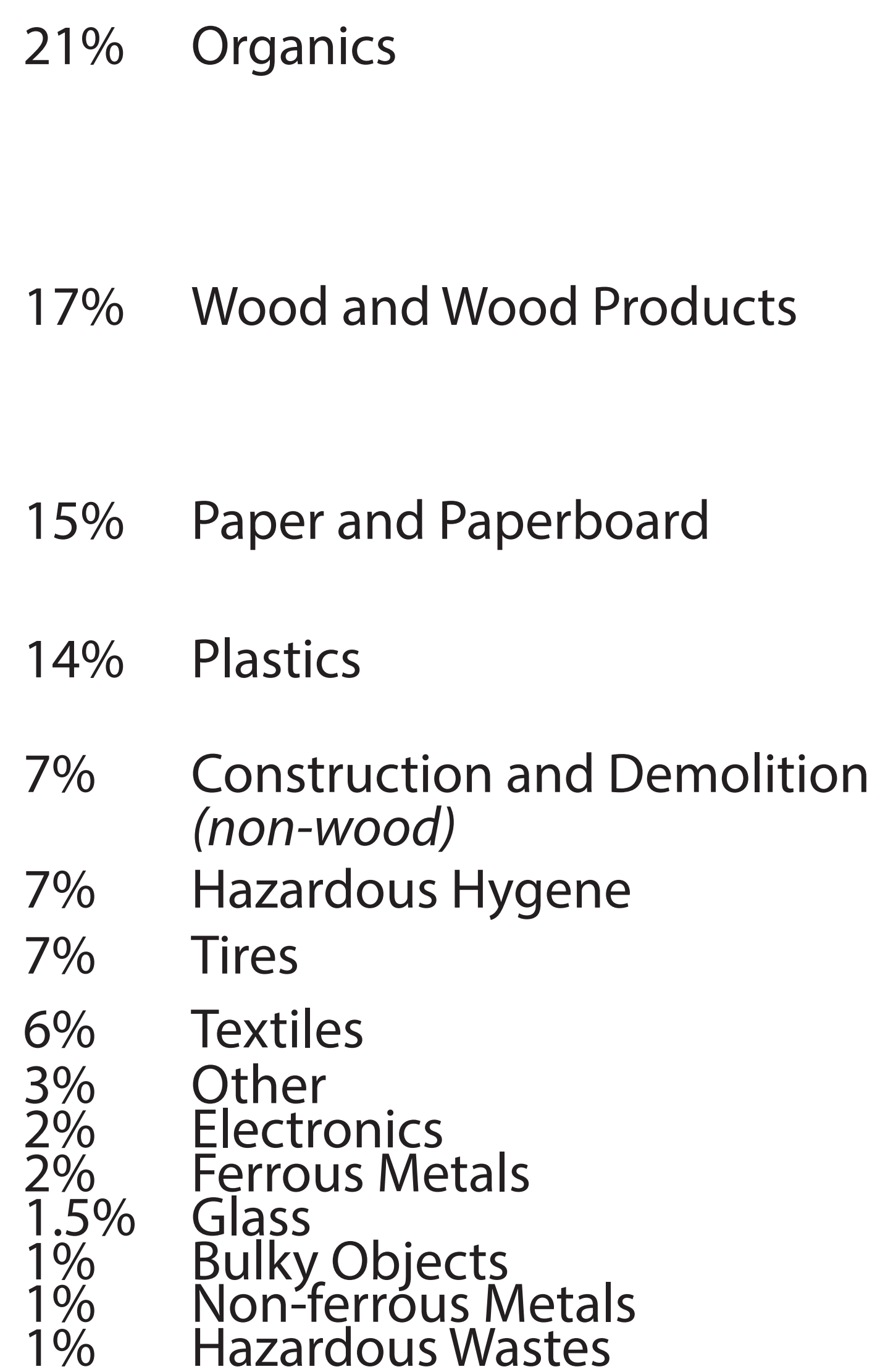
## SHRINK FOOD WASTE

On average 390 kg of food are wasted per Canadian each year. That represents \$31 billion dollars and 21 million tonnes of GHG emissions wasted every year. Avoid food waste by planning your food shop, buying only what will be eaten, storing food properly to keep it fresh, and using it up on time.

## COMPOST, NOT LANDFILL

Did you know that organics are still the biggest single type of material sent to the Hartland Landfill? If we composted more, we'd have many benefits, including extending the life of the landfill.

In the landfill, organics break down anaerobically (without oxygen), creating methane, which is a powerful GHG – 28 to 36 times more powerful than carbon dioxide. By composting food waste aerobically (with oxygen), we can avoid the creation of methane and make compost for building healthy soils to grow food again.



## SUPPORT LOCAL FOOD AND FARMERS

While the majority of GHG emissions from food are due to the food type, transportation of food for Saanich residents still represents about 7% of food's total GHG emissions. Buying food locally can reduce the GHGs from transportation, and also supports local farmers and provides great tasting, fresh food. Saanich is home to many food producing farms as well as community gardens, community kitchens, a farmers market, and backyard chickens. To learn more about supporting local food production and food security in Saanich, visit [saanich.ca/food](http://saanich.ca/food)





# LEADING BY EXAMPLE

## SAANICH'S OPERATIONS EMIT GHGs

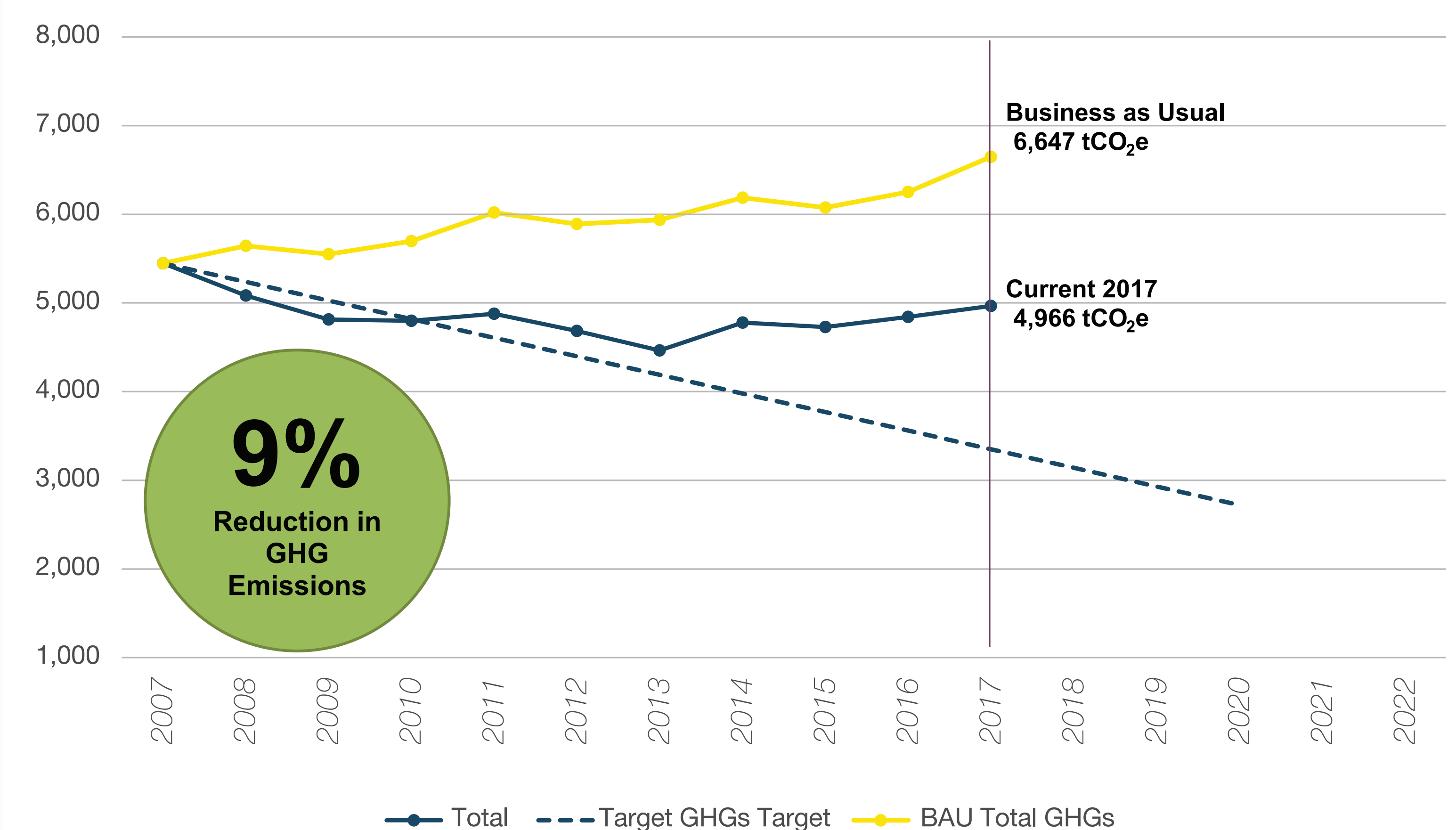
The District of Saanich provides an extensive range of services, infrastructure and key facilities for residents, including everything from greener garbage collection to the provision of recreation programs; from the maintenance of sewer and stormwater drains to front line emergency police and fire services; and from the installation of bike lanes and traffic signals to the conservation of natural areas and management of our valuable parks.

Providing these services requires energy use, primarily in buildings and transportation. These are called corporate GHG emissions.



Saanich has four recreational centres, a golf course, three fire halls, a municipal complex and a public works site, and a fleet of 264 vehicles, including 20 garbage trucks and 4 fire engines.

### Saanich GHG Inventory for Municipal Operations 2007-2017



Saanich first measured our corporate (GHG) emissions in 2007. We emitted 5,446 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) per year. A target was established as part of the 2010 Climate Action Plan to reduce our emissions by 50% by 2020.

Saanich has made significant progress in reducing GHGs since that time. However, as services have expanded and facilities aged, this progress has been reduced. In 2017, corporate emissions were approximately 4,850 tonnes of carbon equivalent, which is 9% below 2007 levels. Half of these emissions were from fuel use in vehicles and half from fuel use in buildings. Several projects recently updated or planned for the next few years aim to bring us back on track close to reaching our targets in the 2020 time frame.



# LEADING BY EXAMPLE

## WE ARE REDUCING ENERGY USE

**Electric Vehicles** – In 2014 the EV pool fleet program was established. Saanich now has 9 EVs, including an electric zamboni and aims to electrify all non-police, light-duty cars by 2020.

**Ice Rink Improvements** – introduction of a REALice system at Pearkes Arena in 2016, saved 45 tonnes of carbon per year, equivalent to taking 10 cars off the road! A REALice system is planned for the green rink in 2019.

**Efficient Streetlights** - In 2016, Saanich began a five year program to convert 6,000 of its 9,000 street lights to energy efficient Light Emitting Diodes (LEDs). The program will result in a 51% reduction in overall electricity use, an annual savings of \$214,000 and 26 tonnes of carbon once fully complete.

**Building Upgrades** – to the most energy efficient options available. In 2017 and 2018 Saanich Municipal Hall mechanical and lighting systems were upgraded, including controls, heating coils, a high efficiency boiler and LEDs, saving 60 tonnes of carbon per year.



## REDUCING WASTE

**Greener Garbage Program** – introduced in 2015 diverts approximate 3,650 tonnes of organics from the landfill each year.

**Recycling** – has been integral to our own facilities for many years but is getting an upgrade to significantly reduce waste diversion with a goal to becoming zero waste by 2050.

## CHOOSING RENEWABLES

**Gordon Head Recreation Centre** – had a new high efficiency Air Source Heat Pump and condensing boiler installed in 2016/17 and commissioned into 2018. This is expected to reduce GHG emissions by approximately 400 tonnes of carbon annually.

**Saanich Commonwealth Place** – will be designed to replace the current fossil fuel boilers with a renewable biomass heating system, expected to reduce the building's GHG emissions by 90%. The purchase of Renewable Natural Gas is being considered to offset the remaining natural gas use to become a 100% renewable energy facility.

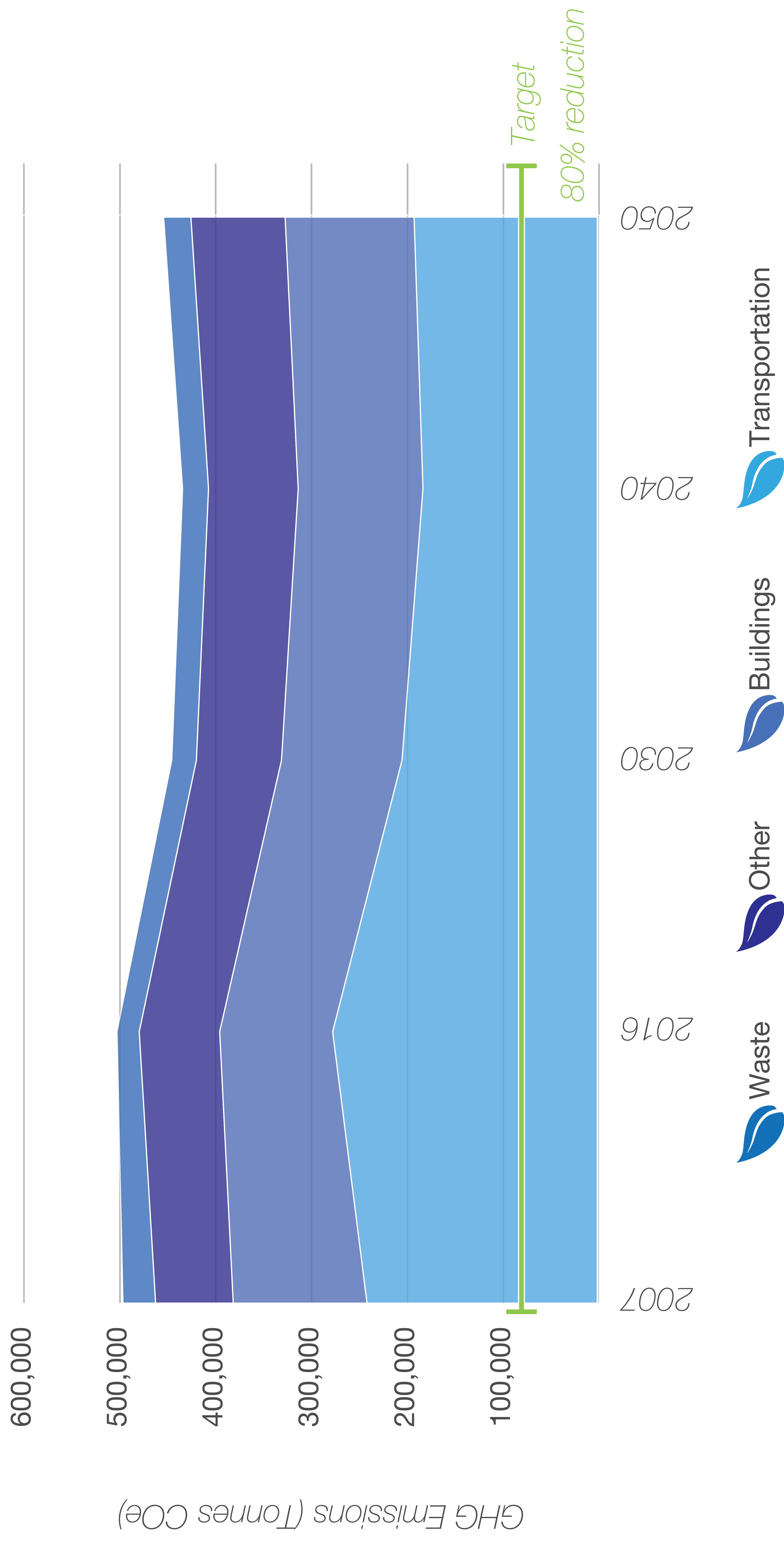




# GHG MODELLING

## WHERE WILL WE BE IF IT'S BUSINESS AS USUAL?

Based upon our current lifestyles, approved policies, plans, legislation and actions we expect our emissions to decrease by 9% by 2050. This is considerably lower than our 80% target and demonstrates the need for greater action and progress. Help us to develop those actions needed to reach our targets by updating our plan!





# BE A PART OF THE ENERGY!

## HOW TO GET INVOLVED! **We'd like to hear from you!**

Welcome to the Saanich Climate Plan  
Public Workshops and Open House

- 🍃 READ THE BOARDS, SPEAK WITH STAFF AND LEAVE COMMENTS
- 🍃 COMPLETE THE SURVEY [HERE!](#)
- 🍃 SIGN UP FOR A WORKSHOP SESSION AS PART OF THIS PUBLIC OPEN HOUSE ON GHG MODELLING OR ADAPTATION (*SEE WELCOME DESK*)
- 🍃 READ THE BACKGROUNDER
- 🍃 SIGN UP FOR THE CLIMATE PLAN EMAIL ALERTS



# BE A PART OF THE ENERGY!

## HAVE YOUR SAY!

HOW DO YOU FEEL ABOUT CLIMATE CHANGE AND CLIMATE ACTION?

WHAT ARE YOUR FEARS ABOUT CLIMATE CHANGE?

WHAT MAKES YOU ANGRY ABOUT CLIMATE CHANGE?

WHAT ARE YOUR HOPES ABOUT CLIMATE CHANGE?

WHAT DO YOU LOVE THAT YOU WANT TO PROTECT FROM CLIMATE CHANGE?

OTHER FEELINGS?