

Corporate Climate Action Strategy

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FISGARD



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November 2016

This document represents current information as of the time of publication. The Capital Regional District will be periodically updating and revising this plan to reflect changes in direction and other developments. Please view the plan online at www.crd.bc.ca for current information.

This strategy was developed by staff from divisions and departments across the organization, with the support of Pinna Sustainability.

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Executive Summary

This Corporate Climate Action Strategy reflects on what the Capital Regional District (CRD) has accomplished to date and renews corporate climate action efforts by establishing a framework — including long-term goals, policy and short-term actions — to achieve the Board’s strategic priorities to integrate a climate lens into decision-making and to accelerate corporate mitigation and adaptation activities.

A key outcome of this strategy will be the integration of climate action into everyday business across the CRD’s divisions.

This strategy is accompanied by a Regional Climate Action Strategy, which is broader in scope and provides a vision, goals and strategic direction to support climate action across the capital region.

In 2008, the CRD Board set a target to reduce operational GHG emissions

33%

from 2007 levels by **2020**



In 2015, the CRD Board identified

2

strategic priorities relating to

corporate climate action:

- ▶ provide a **climate lens** for Board decision-making
- ▶ **accelerate** corporate mitigation and adaptation activities

Corporate climate action policy statement:

The CRD will demonstrate leadership within operations and the management of CRD-owned facilities, assets and lands to reduce greenhouse gas emissions and adapt to climate change. The CRD will provide a climate lens for Board decision-making. Implementation of this policy and all related sub-policies will be guided by the CRD Corporate Climate Action Strategy and is the responsibility of all divisions and departments.

Seven long-term goals:

These goals, supported by sub-policies and short-term actions, will achieve the Board's strategic priorities and 2020 target. The first three goals address governance and decision-making while the remaining four target service delivery.

1. Use a climate lens for Board decision-making that demonstrates how decisions align with CRD's GHG reduction target, climate action objectives and strategic priorities.
2. Integrate climate change considerations into CRD management and operational decision-making.
3. Monitor, report and communicate metrics to enhance continuous improvement across the organization.
4. Accelerate corporate climate adaptation activities to enhance resilience and prepare for future climate change impacts.
5. Achieve continuous, significant reductions in GHG emissions from the fleet and strive towards zero emissions for new fleet vehicles.
6. Accelerate a reduction in energy use and GHG emissions in existing buildings, facilities and infrastructure.
7. Achieve high-performance standards and strive towards net-zero energy for all new construction.

The CRD is **on track**,
with current GHG emissions at

17%

below 2007 levels

Imperative for Climate Action

Impacts of a changing climate

The CRD has clearly acknowledged and committed to taking action to address climate change within our operations as well as at the regional level to reduce contributions to climate change and to prepare for the uncertainty a changing climate brings.

The impacts of climate change are already being felt globally and locally, and these impacts will continue to intensify and affect the capital region for decades to come.

At a global scale, climate change has already resulted in a warmer atmosphere, warmer and more acidic oceans, reduced amounts of snow and ice and higher sea levels. More locally, *according to the Pacific Climate Impacts Consortium Plan2Adapt Tool*, climate model projections for this region indicate that:

- ▶ year-round temperatures will rise
- ▶ dry spells in the summer will extend
- ▶ storm activity will become more frequent and intense, with higher winds and more precipitation falling during storm events
- ▶ sea levels will rise and will be subject to larger storm surge and wave effects, further increasing the risks of sea level rise

The Pacific Climate Impacts Consortium (PCIC) has produced regionally downscaled climate modelling for our region. The results of this work predict an increase in mean temperature, an increase in annual precipitation, a decrease in snowfall and an increase in frost-free days.

The Georgia Basin Impacts Study (conducted by PCIC in 2012 and updated in 2016) refines these projections and indicates a trend towards reduced precipitation during summer months and towards additional precipitation in winter months. The CRD is currently working with PCIC to update this climate modelling and to identify further impacts relevant to our region. Additionally, the Environmental Protection division has undertaken a study to examine future sea level rise impacts for the capital region.

This knowledge will position the region to ensure all existing and future CRD-owned lands, buildings and infrastructure are able to withstand anticipated climate impacts.



In addition to reducing operational contributions to climate change, the CRD can also enable emissions reductions and climate action on a broader scale through procurement of goods and services and through engagement programs with staff, committees and the public that fall within its operational sphere of influence.

Corporate action on climate

The CRD includes 13 municipalities and three electoral areas that cover the southern tip of Vancouver Island and the nearby Gulf Islands. As a regional district, the CRD provides:

- ▶ region-wide services for all residents (e.g., regional parks, solid waste management)
- ▶ sub-regional services for two or more jurisdictions (e.g., recreation facilities)
- ▶ local decision-making and services for rural electoral areas (e.g., fire protection)

In order to provide these services, the CRD maintains and operates vehicles, equipment, buildings, facilities, infrastructure, landfills, paths and parks.

With respect to corporate climate action, the CRD is seeking to reduce the impacts from providing these services by reducing greenhouse gas (GHG) emissions while also preparing to provide these services in the face of an uncertain and changing climate. These two aspects are called "mitigation" (reducing greenhouse gas emissions) and "adaptation" (preparing for a changing climate).

Residents are accustomed to high levels of service from the CRD and expect facilities and infrastructure to improve over time. Climate action offers the ability to align with industry best practices and meet service levels while reducing GHG emissions.

Climate action activities like preventative maintenance, recommissioning and infrastructure renewal often save costs while reducing energy demand and fossil fuel use when factored over the lifetime of an asset. Accounting for these operational benefits when capital projects are being scoped and budgeted for will be key to realizing these benefits while continuing to meet service levels.

Although the CRD's operations are a small part of the larger community, the CRD plays an important role in demonstrating how to make significant reductions in emissions and prepare operations for potential future impacts while continuing to provide services that meet the needs of the community.

In addition to reducing operational contributions to climate change, the CRD can also enable emissions reductions and climate action on a broader scale through procurement of goods and services and through engagement programs with staff, committees and the public.

This strategy recognizes the important role the CRD has to play to enable climate action in areas that fall within the CRD's operational sphere of influence.

Regional action on climate

Regional action on climate change is addressed through the CRD's Regional Climate Action Strategy (RCAS). The RCAS focuses on actions the CRD's community-based services can undertake to influence the reduction of community greenhouse gas emissions. These reductions can be made through urban land use decisions, low carbon transportation systems, energy-efficient building construction and retrofits, community waste reduction and the transformation of this waste into a resource, and by valuing natural assets for their carbon sequestration potential.

In order to respond to a changing climate, the RCAS also focuses on understanding the region's vulnerabilities, preparing the region's communities and ensuring that natural assets are resilient. The RCAS provides strategic direction to support climate action across the capital region. It presents a vision, goals and a target that recognize the important role the CRD and partners can play in addressing climate change.

Scope of CRD Climate Action Strategies

Corporate Climate Action Strategy	Regional Climate Action Strategy
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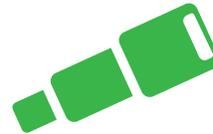
Focus

internal



how we deliver services
how we operate

external



the services we deliver

Areas of decision-making

Actions that the CRD can undertake to reduce operational GHG emissions and adapt to climate change within its:

- ▶ facilities
- ▶ fleet
- ▶ infrastructure
- ▶ operational policies, procedures and guidelines
- ▶ management policies
- ▶ purchasing decisions
- ▶ staff engagement

How CRD governance and decision-making can address corporate climate action through:

- ▶ strategic direction
- ▶ budget allocation
- ▶ service plan approval

Actions that CRD community-based services can undertake, within their mandate, to influence the reduction of community GHG emissions through:

- ▶ urban land use planning
- ▶ low carbon transportation systems
- ▶ energy-efficient building construction and retrofits
- ▶ community waste reduction and the transformation of waste into a resource
- ▶ valuing natural assets for their carbon sequestration potential

How the region can adapt to a changing climate by:

- ▶ understanding the region’s vulnerabilities to climate change
- ▶ preparing the region’s communities for the impacts of climate change
- ▶ ensuring that natural assets are resilient

CRD role

direct



indirect

The Corporate Climate Action Strategy and Regional Climate Action Strategy present goals, policies and short-term actions to address organization-wide approaches to climate change over the coming years. The responsibility for addressing climate change falls across all services, divisions and departments of the CRD, and climate change is additionally addressed within many service plans and service-specific strategies, such as the adaptation strategy for the Regional Water Supply Area.

Climate Action Achievements

Climate action is not new to the CRD, having undertaken numerous initiatives to reduce the impact of its operations over the last decade, following the Board's 2008 directive to reduce GHG emissions by 2020.

The CRD has been an early leader in reducing emissions in local government operations. The following list of key initiatives illustrates the organization's commitment to taking climate action — both to mitigate impact and to prepare for a changing climate in the future.

2006

- ▶ Achieve LEED Gold designation for CRD headquarters Phase 2.

2008

- ▶ Sign BC Climate Action Charter.
- ▶ Develop Corporate Climate Change Action Plan to achieve carbon-neutral operations by 2012.
- ▶ Begin fuel switching fleet from gasoline to diesel where possible.
- ▶ Begin right-sizing fleet vehicles to match operational needs.

2009

- ▶ Begin to annually monitor and report on corporate GHG emissions (buildings, infrastructure, fleet) and provide qualitative reporting of actions.

The CRD has been **carbon neutral** in corporate operations since



2012

2011

- ▶ Publicly report GHGs through provincial SMARTTool.
- ▶ Install refrigeration system waste heat recovery at SEAPARC Leisure Centre.
- ▶ Develop Saanich Peninsula Wastewater Treatment Plant (SPWWTP) motor control centre waste heat capture project.
- ▶ Commission wastewater heat recovery system at SPWWTP.
- ▶ Fuel switch Panorama Recreation Centre to use wastewater heat recovery system from SPWWTP, reducing 370 tonnes carbon dioxide equivalent (CO₂e) per year.

2012

- ▶ Complete inventory of fleet vehicles and equipment.
- ▶ Add two hybrid vehicles to the fleet.
- ▶ Install solar panels for hot water heating at Salt Spring Island Library.
- ▶ Build Salt Spring Island Library to LEED Gold equivalent.
- ▶ Become a carbon neutral local government.

The Hartland gas utilization facility.

Case Study: **Becoming carbon-neutral & capturing methane**

In 2008, the CRD signed the British Columbia Climate Action Charter, committing to the goal of being carbon neutral in corporate operations by 2012. Carbon neutrality requires four steps: measure, reduce, offset and report.

Since 2012, the CRD has been carbon neutral within corporate operations through a combination of GHG reduction projects and the purchase of qualified offsets.

Since 2013, the CRD has been achieving its carbon-neutral commitments by using credits generated through capturing and destroying methane at Hartland landfill. Methane is a GHG generated from the anaerobic decomposition of organic waste that has more than 25 times the global warming potential of carbon dioxide. By destroying the methane-based landfill gas through combustion, the CRD reduces the amount of GHG emissions entering the atmosphere.

In 2015, the CRD achieved a landfill gas capture rate of 66%. In 2013 and 2014, about half of the collected gas was captured and destroyed, and the resulting credits were applied to offset the CRD's corporate climate footprint. The other half of the gas was used to fuel an on-site electricity generator.

Staff are currently investigating the best way to use the landfill gas resource and are conducting a landfill gas utilization study. In the future, the CRD hopes to find other ways to use this resource, for example, by fuel switching facilities away from natural gas to renewable natural gas.

Case Study: District Energy System

In 2011, the CRD established a pilot wastewater energy recovery system, called the “district energy system project” (DES).

The DES project extracts waste heat from treated wastewater at the Saanich Peninsula Wastewater Treatment Plant and boosts the heat through a heat pump to heat the swimming pool at the Panorama Recreation Centre. By recovering heat from the wastewater, Panorama is able to use less natural gas to heat the swimming pool.

In 2015, the CRD conducted a review of this system to determine the actual GHG emissions savings from this project. The review found the project had reduced operational GHG emissions by an average of 370 tonnes CO₂e/year, equivalent to approximately 15% of the CRD’s total 2015 operational GHG emissions.

A majority of the funds to develop the DES were provided by the Province through the Gas Tax Agreements Innovation Fund. The DES project is one example of a project that has helped the CRD stay on target to meet the commitment to reduce operational GHG emissions 33% below 2007 levels by 2020.



Above: Dan Robson, Manager of Saanich Peninsula and Gulf Islands Operations for the CRD’s Integrated Water Services department, stands in front of the process pumps, which boost waste heat.

Right, top: Waste heat is extracted from the treatment process at the Saanich Peninsula Wastewater Treatment Plant.

Right, bottom: Waste heat is used to heat the Panorama Recreation Centre’s swimming pool. This reduces the rec centre’s operational GHG emissions by an average of 370 tonnes CO₂e/year.



2013

- ▶ Conduct energy assessment at Panorama (potential to reduce 151 tonnes CO₂e/year).
- ▶ Conduct energy assessment at SEAPARC (potential to reduce 105 tonnes CO₂e/year).
- ▶ Install solar photovoltaic panels at Juan de Fuca administration building.
- ▶ Install rainwater capture system on Juan de Fuca administration building.

2014

- ▶ Initiate sea level rise study.
- ▶ Work with Fraser Basin Council to conduct E3 fleet review.
- ▶ Begin high-efficiency boiler upgrade at Kings Road housing complex (planned to reduce 14 tonnes CO₂e/year).

2015

- ▶ Complete sea level rise study.
- ▶ Increase energy efficiency of Fisgard HVAC system by rebalancing the system and tuning green roof data collection to reduce requirements.
- ▶ Develop Fisgard data centre heat recovery.
- ▶ Conduct lighting retrofit study at Fisgard (potential to reduce 132,000 kWh/year).
- ▶ Add window tinting in CRD-owned and tenanted locations to reduce air conditioning requirements.

- ▶ Replace bathroom aerators at Fisgard, reducing hot water for hand washing by 75%.
- ▶ Install high-efficiency boilers at McPherson Theatre.
- ▶ Conduct lighting retrofits in island water services locations.
- ▶ Continue to reduce inflow and infiltration into sanitary collection system, reducing extra pumping and processing requirements at pump stations and treatment plants.
- ▶ Improve routing of preventative maintenance work to reduce unnecessary trips.
- ▶ Install Skype capability in meeting rooms, where appropriate, to increase use of teleconference technology and reduce travel between CRD offices (biggest impact in relation to Gulf Islands meetings).
- ▶ Emterra, a contracted services provider, converts blue box program recycling collection trucks to compressed natural gas, reducing 2,800 tonnes CO₂e/year.
- ▶ Achieve landfill gas collection efficiency of 66%.
- ▶ Work with CRD tenants to implement energy management program for Island Health leased facilities.



The CRD's headquarters, located at 625 Fisgard Street in Victoria.

Case Study: **Procurement & engagement:** **extending climate action** **beyond operations**

The CRD strategic plan envisions that "The Capital Region will always be: livable and vibrant, stewards of the environment, and supported by a prosperous and sustainable economy."

With this vision, the CRD commissioned Phase 2 of the CRD headquarters building (located at 625 Fisgard Street in downtown Victoria) to be one of the first LEED Gold certified buildings in the capital region. The building includes many sustainable features:

- ▶ a 60,000 litre rainwater storage tank used for flushing toilets that, combined with the use of efficient fixtures such as dual-flush toilets and water-free urinals, resulted in a 76% reduction in potable water consumption
- ▶ extensive green roofs on four roof surfaces
- ▶ an intensive green roof garden on the second floor patio, just off the lunch room
- ▶ natural lighting and automatic light sensors in all work spaces
- ▶ exterior sun shades and UV glazing on all windows

The building's green features are complimented by the way employees engage with the building. The CRD's staff-led wellness committee has led a building-wide campaign to "burn calories not carbon" by taking the stairs instead of the elevator. The staff lunch room has soft and hard plastic recycling, and organic waste collection bins are located on each floor of the building in both phases.

These initiatives provide a strong platform to more deeply engage staff and embed climate action into everyday activities within the CRD operational environment.

2016

- ▶ Begin boiler retrofit at SEAPARC (planned reduction of 62 tonnes CO₂e/year).
- ▶ Conduct lighting retrofit in pool and arena at SEAPARC (planned reduction of 150,000 kWh/year).
- ▶ Install real-time utility monitoring system (Prism) for all electricity, natural gas, oil and water with future potential for fleet capability.
- ▶ Sign the West Coast Electric Fleets Pledge.
- ▶ Begin conducting electric vehicle fleet suitability assessment.
- ▶ Initiate pilot of telematics system by installing it in 40 fleet vehicles through Fleet Champions program.
- ▶ Integrate climate change considerations into Inflow & Infiltration Management Plan update.
- ▶ Develop climate lens for decision-making, to be used for all new capital projects.
- ▶ Commission East Sooke Fire Hall.
- ▶ Purchase first fully electric vehicle, a Kia Soul.
- ▶ Fleet includes four hybrid vehicles and three Smart cars.

Planned

- ▶ Purchase two electric cargo bikes for source control inspection program.
- ▶ Pilot zero emissions vehicles, including fuel cell electric vehicles.
- ▶ Develop future climate change projections for the capital region.
- ▶ Develop climate change adaptation strategy for Regional Water Supply Area.
- ▶ Conduct boiler retrofit at Panorama.
- ▶ Conduct integrated design process for heat recovery at Panorama.
- ▶ Implement the Corporate Climate Action Strategy.



The Craigflower Pump Station, built in 2015, was designed using LEED principles and includes multiple climate-smart features, such as energy-efficient equipment that self-adjusts at variable speeds to minimize electrical demand.

Case Study: **Wastewater treatment**

The CRD is developing a wastewater treatment facility that will come online in 2020.

The Project Board's Terms of Reference include the following key goals:

- ▶ optimizing opportunities to recover resources from waste as part of an integrated waste management approach
- ▶ minimizing GHG emissions (which are considered "*in scope*" for the CRD's GHG reporting)

GHG emissions associated with the operation of this facility will be minimized through the project design and by employing the policies outlined within this strategy. The treatment plant will also be built to consider the future impacts sea level rise could have on the facility.

The Path to 2020

Tracking corporate GHG emissions

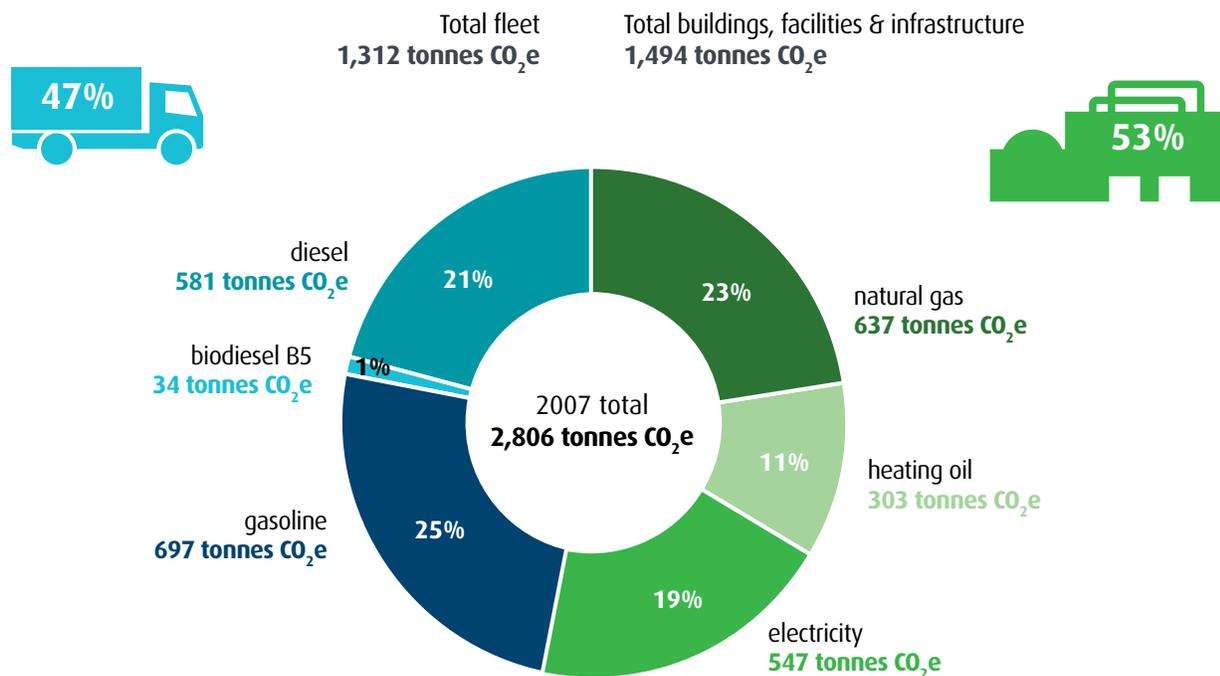
The CRD's operational GHG emissions reduction target aims to reduce emissions by 33% by 2020, relative to a 2007 baseline.

In 2007, CRD operations resulted in approximately 2,806 tonnes of carbon dioxide equivalent (CO₂e) emissions. Of these emissions, 47% resulted from fuels used in fleet vehicles and 53% resulted from energy used in buildings, facilities and infrastructure.

The CRD's GHG inventories are based on the methodology developed by the Province of BC for local governments that defines "traditional services" to be included in the inventory. (See sidebar on [page 18](#) for more details.)

Energy consumption data for buildings, facilities and infrastructure was extracted from historical utility records, and this data provides an accurate representation of the 2007 inventory for all applicable services. However, due to the organizational structure of the CRD, fleet fuel is

2007 operational GHG emissions by source



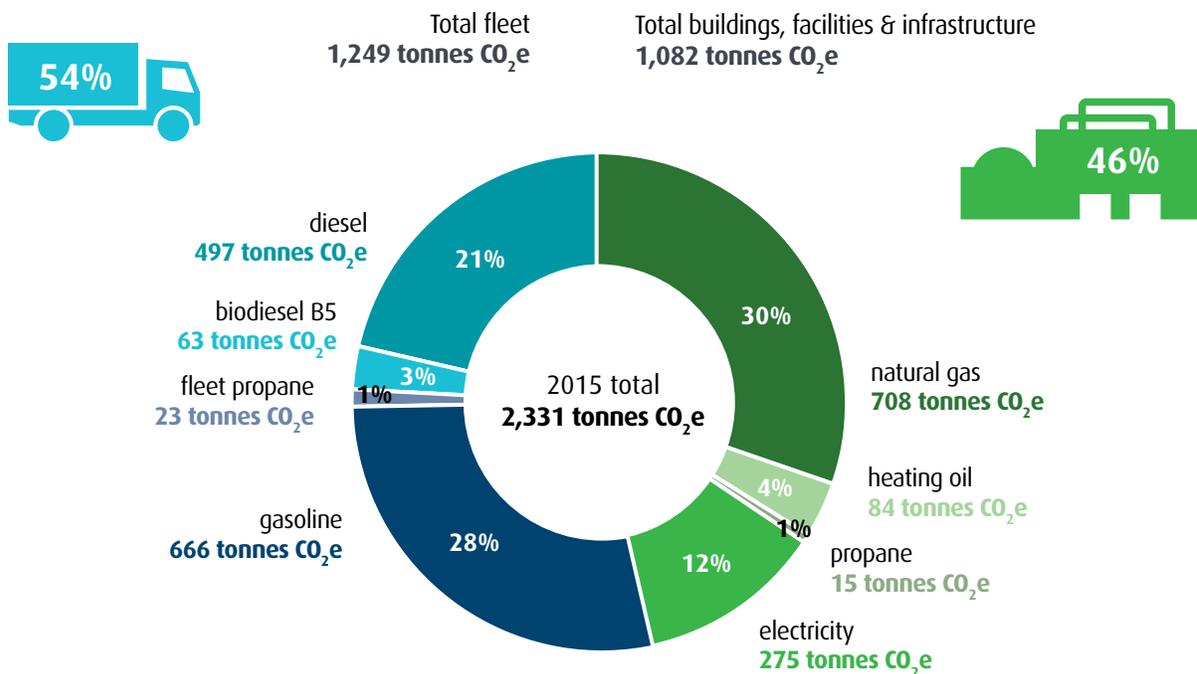
purchased for operations across numerous service areas, making it very challenging to prepare a representative inventory of fuel used in 2007.

After setting the corporate GHG emissions reduction target in 2008, the CRD undertook a multi-year effort to develop a baseline fleet inventory. The first year a comprehensive fleet inventory became available for the CRD fleet is 2011, and thus the 2011 data is used to calculate the 2007 baseline for fleet.

Since 2011, the CRD has continued to annually track the inventory data for fleet and buildings, facilities and infrastructure. The CRD continues to improve its understanding of how energy is used throughout the organization, and adjustments are made annually to improve data tracking.

In 2016, fleet telematics and utility energy monitoring systems in buildings, facilities and infrastructure are being deployed to support a significant improvement in understanding how and where energy is used throughout CRD operations.

2015 operational GHG emissions by source



In 2015, changes to the BC Recycling Regulation led to the exclusion of emissions related to collection of recycling materials from local government inventories. The packaging and paper industry is now responsible for these emissions. As a result, the 2007 inventory, and all other years, in this strategy have been updated to reflect this change, ensuring that a year-to-year comparison is based on a consistent scope. Because of this, the emissions in this strategy are different than those reported in the CRD's historical climate action reports.

Traditional services: What is included in the CRD's corporate GHG emissions inventory?

The emissions that result from energy used to deliver traditional local government services must be captured in local government inventories. "Traditional services" are defined by the Carbon Neutral Working Group (established to advise the Joint Provincial-UBCM Green Communities Committee) in the *Carbon Neutral Workbook* and include:

- ▶ administration and governance
- ▶ drinking water, stormwater and wastewater
- ▶ solid waste collection, transportation and diversion
- ▶ roads and traffic operations
- ▶ arts, recreation and cultural services
- ▶ fire protection

The methodology for calculating the GHG emissions for these services is outlined in the Province's *BC Best Practices Methodology for Quantifying GHG Emissions*.

The CRD owns facilities that fall outside the scope of these traditional service areas and are therefore not captured in the CRD's GHG emissions inventory or reduction target.

However, the CRD continues to undertake initiatives to reduce energy use and GHG emissions in areas such as Capital Region Housing Corporation facilities, buildings that the CRD leases to Island Health and through gas capture at Hartland landfill.

Increasing service levels, decreasing emissions

Since 2007, the CRD has added 21 new services to meet the needs of an expanding population. This has resulted in the addition of several new buildings, facilities, infrastructure and fleet vehicles.

GHG emissions from the fleet have decreased by 5% while on-road fleet vehicles have increased by 13%.

GHG emissions from buildings, facilities and infrastructure have decreased by 28% while six new buildings and two pump stations have been added to the CRD's portfolio for GHG accounting, including:

- ▶ Salt Spring Island Library
- ▶ Galiano Island Library Community Centre
- ▶ Juan de Fuca administration building
- ▶ McPherson Theatre
- ▶ Port Renfrew Fire Hall
- ▶ East Sooke Fire Hall
- ▶ Trent Pump Station
- ▶ Craigflower Pump Station

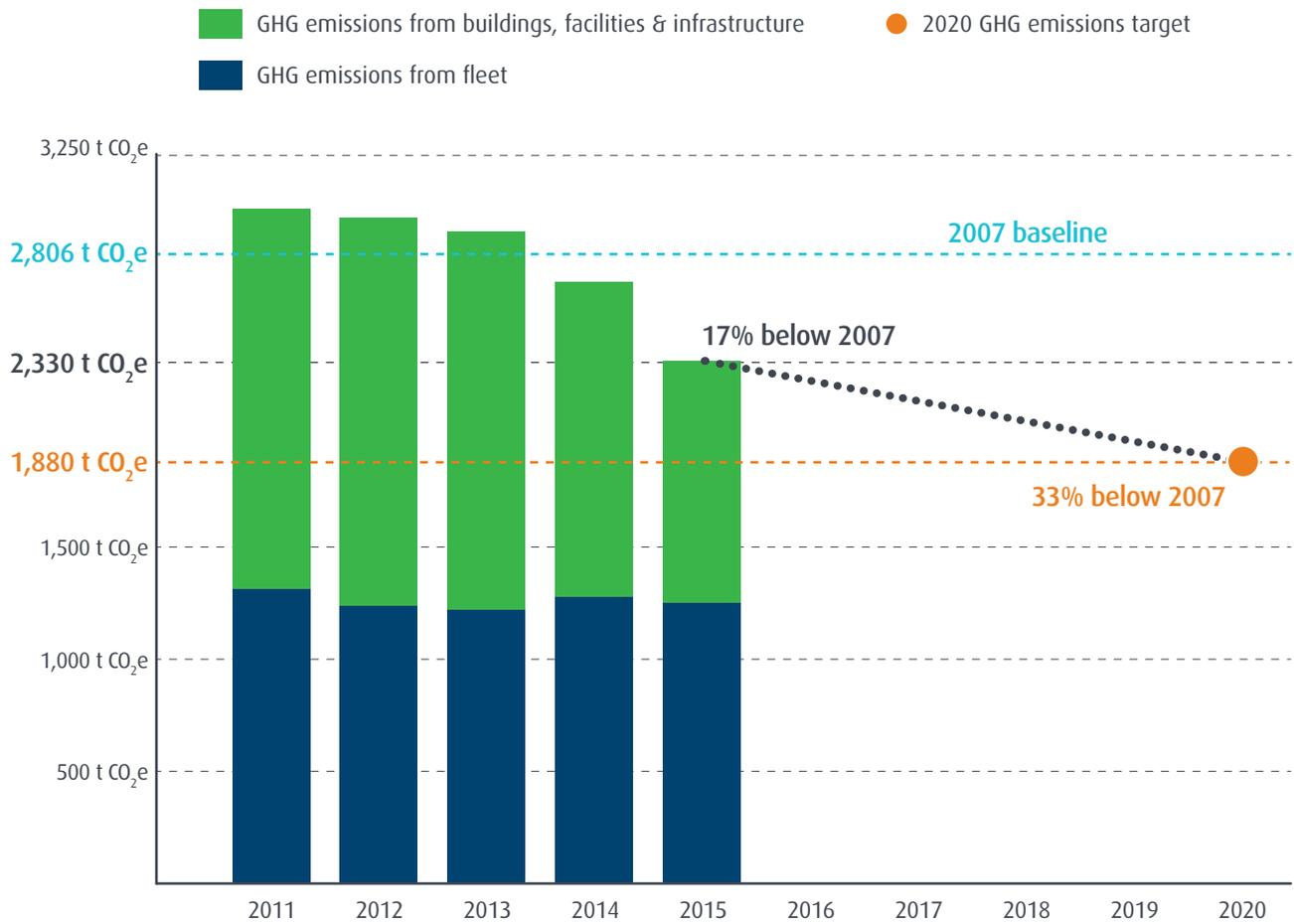
Despite these service level increases, **the overall GHG emissions from corporate operations have gone down by approximately 17% since 2007.**

This reduction is the result of several factors:

- ▶ 74% decrease in the use of fuel oil for heating and hot water due to the CRD's focused efforts to switch to lower carbon fuel sources
- ▶ 15% decrease in electricity consumption in CRD buildings, facilities and infrastructure resulting from the CRD's energy-efficiency initiatives
- ▶ decrease in the GHG intensity of electricity supplied by BC Hydro

- ▶ decrease in the GHG intensity of natural gas supplied by Fortis, due to provincial regulations for renewable and low carbon fuels
- ▶ improvements in fuel efficiency when replacing fleet vehicles with similar models, due to fleet right-sizing and federal regulations for fuel efficiency in light duty vehicles

Operational GHG emissions, relative to 2020 target



Achieving the 2020 target

In order to achieve the CRD's target to reduce operational emissions 33% by 2020, emissions **need to decrease a further 450 tonnes CO₂e** from 2015 over the next four years.

This poses a challenge, given that the CRD is continuing to expand its assets over this time period and given that the CRD has already implemented significant projects to reduce operational emissions. Meeting the reduction target will require continuous effort to minimize emissions for expanding services and making further reductions in existing services.

However, the CRD has learned from early projects and, through this strategy, is establishing a strong policy and process framework to ensure staff, committees and the Board are making decisions using a climate lens.

This section outlines one potential path to how the CRD can achieve the target. Although this is not the only path, it is useful to provide perspective on what it will take over the next few years to be successful.

Estimated GHG reductions from initiatives currently planned or in process are approximately 83 tonnes CO₂e/year by the end of 2020, broken down as follows (percentage of the 450 tonnes of CO₂e reduction needed to hit the target is shown at end of each line):

- ▶ replace SEAPARC oil boilers with high efficiency gas = 62 tonnes CO₂e (14%)
- ▶ replace Panorama boilers with high efficiency gas = 15 tonnes CO₂e (3%)
- ▶ reduce gasoline use in new fleet vehicles by 10% due to federal regulations that result in higher fuel efficiency in similar replacement vehicles = 6 tonnes CO₂e (1%)

The CRD has identified potential new initiatives that could generate GHG reductions. Estimated GHG reductions from these initiatives are estimated as follows (annual GHG emissions reductions shown):

- ▶ energy-efficiency retrofits in buildings using fossil fuels (estimate 5% reduction in fossil fuels at largest buildings and facilities, not including recreation centres) = 16 tonnes CO₂e (4%)
- ▶ SEAPARC ice plant heat recovery = 40 tonnes CO₂e (9%)
- ▶ replacing 24 vehicles with electric vehicles by end of 2020 (six vehicles per year 2017+) = 101 tonnes CO₂e (22%)
- ▶ Panorama waste heat recovery integrated design = 399 tonnes CO₂e (89%)
- ▶ switching to renewable natural gas for remaining natural gas use = 550 tonnes CO₂e (122%)

Precisely which initiatives will be implemented will be identified through further analysis by the respective service areas and approved through the annual service planning cycle. If all potential initiatives identified above were implemented, the CRD would reduce GHG emissions by 1,190 tonnes, which equates to a 59% reduction in GHG emissions relative to 2007.

If all identified potential new initiatives were implemented, the CRD would reduce GHG emissions by 1,190 tonnes, which equates to a 59% reduction in GHG emissions relative to 2007.

In 2016, the SEAPARC Leisure Complex undertook an extensive energy and GHG savings retrofit. New LED lights are expected to reduce electricity consumption by 150,792 kWh/year, and a condensing, high-efficiency, natural gas boiler system is expected to reduce GHG emissions by 61 tonnes CO₂e/year.



policy



The CRD will demonstrate leadership within operations and the management of CRD-owned facilities, assets and lands to reduce greenhouse gas emissions and adapt to climate change. The CRD will provide a climate lens for Board decision-making. Implementation of this policy and all related sub-policies will be guided by the CRD Corporate Climate Action Strategy and is the responsibility of all divisions and departments.

Policy Framework & Action Plan

Building on success

As 2020 approaches, the time frame for implementing projects to achieve the CRD's ambitious GHG emissions reduction target is closing.

Fortunately, the CRD has demonstrated success in completing complex projects, has the organizational knowledge to identify and implement these projects and has set the groundwork for this task with inventories, energy assessments and monitoring systems in place. Additionally, there are opportunities to build off of and learn from region-wide work and partnerships with various municipalities.

Together, these assets position the CRD to build from previous experience and success to implement the actions outlined in this section.

Changing processes

The CRD is in a time of change; many internal processes are being updated to improve the organization's management systems and decision-making processes. These changes create an opportunity to align the CRD's corporate operations with the climate action priorities of the CRD Board, as outlined in the *Capital Regional District Corporate Plan 2015-2018*.

The following policy framework and action plan will align service delivery and programming with these governing directives, enabling climate action to be embedded into the culture of the organization.

Integrating goals

The CRD's governance structure reflects the diversity of the community to ensure decision-making represents community interests. Committees and commissions, composed of community members appointed by the Board, provide advice and recommendations to a number of CRD services and initiatives and typically bring business to the Board.

In this community-based governance model, the CRD requires clear decision tools to elevate climate change, strong policy to communicate priorities, and transparent data, metrics, reporting and communication practices to ensure multiple audiences are informed on the key climate action issues facing the community.

To this end, the policy framework in this section contains governance-oriented goals to integrate climate action into CRD decision-making and communications processes and service-oriented goals to embed climate action into service delivery.



A key outcome of this strategy will be to integrate climate action into everyday business across the CRD's departments, divisions and services.

GOVERNANCE-ORIENTED GOALS



1: Climate lens

Policy statement:

The CRD will integrate a climate lens into decision-making to ensure that operational decisions align with the CRD's targets and strategic priorities by implementing all policies outlined in this strategy. Specifically for capital projects, this will be achieved by conducting a climate lens review on:

- ▶ all capital projects over \$100,000 in value
- ▶ all studies, reports and feasibility analyses undertaken in support of future capital projects over \$100,000 in value
- ▶ all contracts over \$100,000 in value, and contracts less than \$100,000, that are *"in scope"* for GHG reporting purposes

Goal: Use a climate lens for Board decision-making that demonstrates how decisions align with CRD's GHG reduction target, climate action objectives and strategic priorities.

The CRD Board has made climate change a priority and has requested a climate lens be provided for Board decision-making.

The climate lens template is intended to be a tool that provides the Board with the information needed to understand the climate-related implications at the time that significant capital investments are being made. This tool will help ensure the CRD's projects align with corporate climate action policy while also providing a useful tool for analysis and communications. The lens will address both mitigation and adaptation and will consider possible climate impacts of projects and how these can be addressed.

See [Appendix A: Climate lens review template](#).

Action	Associated Division(s) & Department(s)	Resources	Timing
1-1. Implement the climate lens template to provide a climate lens review on capital projects (see page 44).	▶ All divisions and departments	▶ Within existing	<i>Ongoing</i>
1-2. Provide membership of all committees and commissions an orientation to the CRD's corporate climate policy at the start of each new session.	▶ Risk, Insurance & Facility Management division	▶ Within existing	<i>Ongoing</i>
1-3. Include climate lens considerations within staff reports to the CRD Board and committees.	▶ All divisions and departments	▶ Within existing	<i>Ongoing</i>

GOVERNANCE-ORIENTED GOALS



Policy Statement:

The CRD will integrate climate change considerations into management and operational decision-making through budget planning, service planning, project management, enterprise risk management, asset management, energy management and procurement decisions.

2: Management & operational decision-making

Goal: Integrate climate change considerations into CRD management and operational decision-making.

Across the CRD's service areas are numerous corporate processes that support efficient and effective delivery of services on an ongoing basis.

The most effective manner of incorporating climate action into management and operational decision-making will be to identify the key points in these existing processes where climate change should be considered (e.g., when designing a new building, when purchasing a new fleet vehicle, when allocating budget for facility maintenance activities, etc.).

The CRD has recently engaged in several organizational changes, providing a direct opportunity to embed climate action considerations during this time of renewal. As a result, some processes have been recently updated and some are planned to be updated during the next one to two years.

Eight organizational processes have been identified that will be updated to consider climate change:

- ▶ budget planning (see [page 45](#))
- ▶ capital project initiation (see [page 46](#))
- ▶ fleet vehicle and equipment purchasing (see [page 47](#))
- ▶ project management
- ▶ strategic asset management planning (Integrated Water Services department)
- ▶ asset management planning
- ▶ procurement policy
- ▶ enterprise risk management

Action	Associated Division(s) & Department(s)	Resources	Timing
2-1. Incorporate climate change considerations into budget planning cycle (see page 45).	▶ All divisions and departments	▶ Within existing	<i>Annually, in conjunction with service planning</i>
2-2. Prepare an annual summary across divisions to present to senior management prior to service plan reviews.	▶ Risk, Insurance & Facility Management division	▶ Within existing	<i>Annually, in conjunction with service planning</i>
2-3. Update the project management process to incorporate climate action policy into project requirements documents and project-level decision making.	▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division	▶ Within existing	<i>Immediately</i>
2-4. Update the asset management process to incorporate evaluation of most energy-efficient and/or low-carbon technologies at time of renewal.	▶ Financial Services division	▶ Within existing	<i>2017</i>
2-5. Include climate change policy and target considerations during capital project initiation process (see page 46).	▶ All divisions and departments	▶ Within existing	<i>Immediately and ongoing</i>
2-6. Develop a mechanism to provide financing (seed funding) for studies or components of capital projects that support the CRD's corporate climate action policy.	▶ Risk, Insurance & Facility Management division ▶ Financial Services division	▶ New	<i>2017</i>
2-7. Integrate a requirement to document alignment with the CRD's corporate climate action policy into strategic asset management plans for new and retrofit facilities and infrastructure.	▶ Financial Services division	▶ Within existing	<i>2017</i>
2-8. Establish a staff climate action engagement program that includes a climate action recognition program that acknowledges climate leadership among CRD employees.	▶ Human Resources division ▶ Risk, Insurance & Facility Management division	▶ Within existing	<i>2018</i>
2-9. Establish an ongoing staff climate action working group to share knowledge across the organization and continually evaluate best opportunities for accelerating climate action.	▶ Risk, Insurance & Facility Management division	▶ Within existing	<i>2017</i>
2-10. Update the procurement policy to align procurement and vendor selection with the CRD's corporate climate policy, and develop supporting decision criteria and matrix.	▶ Legislative & Information Services division ▶ Risk, Insurance & Facility Management division	▶ Within existing	<i>2017</i>

See also [Action 4-4](#) to consider climate change within the enterprise risk management process.

GOVERNANCE-ORIENTED GOALS



Policy Statement:

The CRD will monitor and report on progress towards the GHG emissions reduction target and climate action goals and will communicate progress to staff, stakeholders and the public.

3: Metrics & reporting

Goal: Monitor, report and communicate metrics to enhance continuous improvement across the organization.

Addressing the service-oriented goals in this strategy will require a coordinated effort to collect targeted data, report on progress and communicate performance to various internal and external audiences.

Mechanized data collection allows managers to set a data collection program in place and understand the year-over-year cost and climate change implications of their decisions. Reporting and communicating enables informed decision-making and demonstrates the impact of investments made to leadership and across the organization.

The CRD has implemented a utility data tracking and monitoring tool and is planning to pilot a fleet data logger telematics tool.

Action	Associated Division(s) & Department(s)	Resources	Timing
<p>3-1. Establish a corporate energy management process for buildings, facilities and infrastructure that includes:</p> <ul style="list-style-type: none"> ▶ monitoring and reporting of facility energy consumption and energy management in existing buildings using the real-time utility data ▶ metrics that communicate progress towards the CRD GHG target ▶ contextual information on changes in level of service, e.g.: <ul style="list-style-type: none"> ▶ total corporate GHG emissions ▶ GHG emissions/square foot of buildings operated by CRD 	<ul style="list-style-type: none"> ▶ Financial Services division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Within existing ▶ New 	2017
<p>3-2. Establish a process to collect the GHG emissions for all contracted services considered "in scope" for GHG reporting (see sidebar on page 18 for more details).</p>	<ul style="list-style-type: none"> ▶ Financial Services division ▶ Risk, Insurance & Facility Management division 		2017
<p>3-3. Establish a fleet management system that includes:</p> <ul style="list-style-type: none"> ▶ GHG footprint calculations ▶ installing/engaging a monitoring system to improve fleet performance ▶ evaluating and expanding a telematics system to the whole fleet as appropriate ▶ issuing an annual report of total vehicles, utilization, volume of fuel consumed, GHGs emitted and costs of ownership and maintenance ▶ reviewing data collected to inform fleet policy and asset management and procurement processes 	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ 40 telematics provided through Fleet Champions program ▶ New resources required for additional telematics devices 	2017-2019
<p>3-4. Incorporate outcomes of energy management monitoring into an adaptive management process to ensure continuous improvement.</p>	<ul style="list-style-type: none"> ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Within existing 	2018
<p>3-5. Develop a communications plan to share corporate progress on climate action with staff and public.</p>	<ul style="list-style-type: none"> ▶ Corporate Communications division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ New 	2017

SERVICE-ORIENTED GOALS



4: Adaptation

Policy Statement:

The CRD will accelerate corporate adaptation activities to improve resilience and prepare CRD-owned buildings, facilities, infrastructure, assets, and lands, including regional parks and the regional watershed, to withstand the impacts of climate change through developing and implementing a corporate climate change adaptation plan.

Goal: Accelerate corporate climate adaptation activities to enhance resilience and prepare for future climate change impacts.

Projected climate changes in our region may pose challenges and opportunities to CRD operations. Understanding these projections in detail will allow CRD divisions to anticipate future impacts and prepare for the changes ahead.

As noted in the ***Imperative for Climate Action on page 4***, climate model projections by the Pacific Climate Impacts Consortium for this region indicate that:

- ▶ year-round temperatures will rise
- ▶ dry spells in the summer will extend
- ▶ storm activity will become more frequent and intense, with higher winds and more precipitation falling during storm events
- ▶ sea levels will rise, and will be subject to larger storm surge and wave effects further increasing the risks of sea level rise

Addressing identified issues and opportunities in the short term will allow time to adapt buildings, facilities, infrastructure and fleets to withstand and prosper under these future predicted conditions.

Action	Associated Division(s) & Department(s)	Resources	Timing
4-1. Complete downscaled climate projections report and identify potential impacts of climate change for the region.	<ul style="list-style-type: none"> ▶ Environmental Protection division ▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division ▶ Integrated Water Services department 	▶ Within existing	2017
4-2. Identify potential impacts of sea level rise on CRD assets.	<ul style="list-style-type: none"> ▶ Environmental Planning & Engineering division ▶ Integrated Water Services department 	▶ Within existing	2018
4-3. Develop a corporate climate adaptation plan for the CRD.	<ul style="list-style-type: none"> ▶ Risk, Insurance & Facility Management division ▶ Integrated Water Services department ▶ Parks & Environmental Services department ▶ Planning & Protective Services department 	▶ New	2018
4-4. Consider identified climate impacts within risk registers in the enterprise risk management process.	▶ Risk, Insurance & Facility Management division	▶ Within existing	Ongoing
4-5. Consider climate adaptation in all new capital projects through the climate lens review template (see page 44).	▶ Risk, Insurance & Facility Management division	▶ Within existing	Ongoing
4-6. Identify opportunities for greater regional resilience in the CRD fleet (emergency preparedness) by: <ul style="list-style-type: none"> ▶ researching possibilities to use electric vehicles as a power source during outages ▶ incorporating strategies to enhance emergency preparedness and resiliency through the use of electric vehicles into corporate plans, where appropriate 	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Protective Services division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Green Municipal Fund grant (proposed) ▶ Within existing 	2017-2019

SERVICE-ORIENTED GOALS



5: Fleet management

Policy Statement:

The CRD will reduce fuel use from CRD-owned vehicles and equipment through fuel conservation, vehicle right-sizing, driving behaviour and procurement of fuel-/carbon-efficient vehicles and equipment to ensure most efficient vehicles by end use.

Goal: Achieve continuous, significant reductions in GHG emissions from the fleet and strive towards zero emissions for new fleet vehicles.

The CRD owns and operates approximately 350 vehicles and pieces of equipment to support service delivery throughout the region. Fleet vehicles are distributed at operational hubs throughout the region and offer publicly visible opportunities to demonstrate leadership.

Within the current fleet, about 100 units have been identified by the fleet manager as having potential to be replaced with electric vehicles or lower emissions units. This potential needs to be further examined to determine if operational needs for the identified units could be met within lower emissions vehicles currently on the market.

In a distributed region, with services offered on islands and across long distances, there are opportunities to enhance the efficiency of the fleet while maintaining a distributed operational approach. The opportunity of centrally managing decisions related to procurement, replacement, preventative maintenance, fuel management and

driver training — while maintaining distributed fleet operations — would position the CRD to take action to reduce GHG emissions and costs.

Since 2007, the CRD has been identifying opportunities and taking action to improve the efficiency and utilization of fleet assets and has been testing best available technology to meet the operational demands of the fleet. As technology improves to meet service delivery demands, the ability to renew the fleet with more efficient and zero emissions vehicles will also improve.

Action	Associated Division(s) & Department(s)	Resources	Timing
5-1. Continue to replace end-of-life gas and diesel vehicles with zero emissions vehicles when possible, including adding more battery electric vehicles to the fleet.	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Risk, Insurance & Facility Management division 	▶ Within existing	<i>Ongoing</i>
5-2. Identify, develop or procure a tool to support selection of new vehicles based on utilization, operational needs, potential for electric vehicles and right-sizing.	▶ Customer & Technical Services division	▶ To be determined	<i>2017</i>
5-3. Review and identify path to meeting highest level of the West Coast Electric Fleet Pledge (striving towards purchasing at least 10% zero emissions vehicles for all new light-duty fleet purchases).	▶ Customer & Technical Services division	▶ Within existing	<i>2017</i>
5-4. Better utilize SAP asset management system to support preventative maintenance program and track all costs (including purchase-card purchases) associated with each fleet unit.	<ul style="list-style-type: none"> ▶ Financial Services division ▶ Information Technology & GIS division 	▶ To be determined	<i>2017</i>
5-5. Conduct an in-depth analysis of the entire CRD fleet to identify ways to optimize fleet utilization and efficiency and to reduce emissions and cut costs.	▶ Customer & Technical Services division	▶ To be determined	<i>2017-2019</i>
5-6. Identify, develop or procure a tool to support preparation of high-level business cases that demonstrate life cycle costs and payback (fuel and maintenance) for investing in efficient vehicles.	▶ Customer & Technical Services division	▶ Within existing	<i>2017-2019</i>
5-7. Institute fleet management best practices by: <ul style="list-style-type: none"> ▶ engaging all fleet vehicle operators in energy-efficient driver training program ▶ recognizing staff that demonstrate efficient driving practices as part of the climate action recognition program 	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Human Resources division ▶ Risk, Insurance & Facility Management division 	▶ Efficient driver training program requires a fleet safety supervisor and better fleet management system	<i>2017</i>
5-8. Renew the draft corporate fleet policy (2007) and develop or identify tools to support implementation of the policy, including: <ul style="list-style-type: none"> ▶ guidelines and/or a tool to evaluate operational needs in advance of vehicle purchase based on industry best practices ▶ a tool to incorporate life cycle costs and GHG emissions impacts as priorities during fleet purchasing process 	▶ Customer & Technical Services division	▶ Within existing	<i>2017-2019</i>

Action table continues on [page 37](#).

This electric car reduces greenhouse gas emissions over 95% compared to an equivalent gas-powered vehicle.



Action	Associated Division(s) & Department(s)	Resources	Timing
5-9. Add two additional battery electric vehicles to the CRD fleet to be available for staff to test out and determine the locations and uses where a battery electric vehicle is a good fit to replace gas or diesel vehicles.	<ul style="list-style-type: none"> ▶ Customer & Technical Services division 	<ul style="list-style-type: none"> ▶ Green Municipal Fund grant (proposed) 	2017- 2019
5-10. Test the use of electric bikes for the Source Control program inspections to replace existing gas powered vehicle use, and evaluate opportunities for other downtown or short trip applications.	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Environmental Partnerships division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Green Municipal Fund grant (proposed) 	2017- 2019
5-11. Test hydrogen fuel cell electric vehicles to replace existing gas-/diesel-powered vehicles that are used for longer trips and heavier-duty applications.	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Green Municipal Fund grant (proposed) 	2017-2019
5-12. Move towards centralized responsibilities for fleet vehicle acquisition, use and maintenance while maintaining a distributed approach to day-to-day operational activities (scheduling, fueling, determining local needs and performing maintenance and repairs), based on a renewed corporate fleet policy.	<ul style="list-style-type: none"> ▶ Customer & Technical Services division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Within existing 	Short term

See also **Action 3-3** to establish a fleet management metrics, reporting and review process.

Since 2007, the CRD has increased the number of on-road fleet vehicles by



13%

However, GHG emissions from the fleet have gone down by

5%

SERVICE-ORIENTED GOALS



Policy Statement:

The CRD will reduce energy use and GHG emissions within existing buildings, facilities and infrastructure through demand management, recommissioning, fuel switching, life cycle costing and efficiency measures.

6: Existing buildings, facilities & infrastructure

Goal: Accelerate a reduction in energy use and GHG emissions in existing buildings, facilities and infrastructure.

In 2015, operation of the CRD's buildings, facilities and infrastructure resulted in approximately 46% of the CRD's emissions, presenting a significant opportunity for reductions.

The CRD has identified opportunities to reduce energy use in existing assets and has completed some noteworthy upgrades to date. This has resulted in an overall reduction of GHG emissions from these assets of 28% between 2007 and 2015.

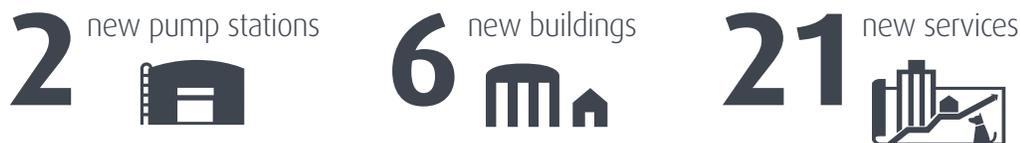
The CRD aims to continue upgrading existing buildings, facilities and infrastructure to reduce energy use and GHG emissions over the coming years. Using life cycle costing approaches to make decisions on major renovations and conducting energy-efficiency retrofits in existing assets will reduce the energy use and climate change impacts of service delivery while reducing costs and often enhancing user experiences.

The CRD has on-the-ground experience identifying innovative opportunities to reduce GHG emissions from existing buildings and taking action to deliver projects that realize these savings. This experience within the organization will be helpful when working with other service areas to reduce emissions in existing buildings, facilities and infrastructure.

Action	Associated Division(s) & Department(s)	Resources	Timing
6-1. Incorporate energy efficiency into all regional water supply infrastructure renewal projects through strategic asset management plans.	▶ Infrastructure Engineering division	▶ To be determined	Ongoing
6-2. Complete recommendations from the Panorama and SEAPARC energy assessments that minimize GHG emissions and energy use, including upgrading to high-efficiency natural gas boilers, implementing ice plant heat recovery at SEAPARC and investigating the waste heat recovery opportunity at Panorama.	▶ Risk, Insurance & Facility Management division ▶ Parks & Environmental Services department division	▶ Within capital plans ▶ New	2016-2019
6-3. Reduce GHG emissions through fuel switching to renewable natural gas (RNG), and conduct business case analysis to produce RNG.	▶ Environmental Resources Management division ▶ Risk, Insurance & Facility Management division	▶ To be determined	2016-ongoing
6-4. Develop conservation demand management program for staff to raise awareness about energy-saving habits and behaviours.	▶ Human Resources division ▶ Risk, Insurance & Facility Management division	▶ Some new resources required	2018
6-5. Complete a review of the 15 largest energy-consuming buildings and facilities every four years to develop a list of priority opportunities for energy and GHG emissions reductions and incorporate opportunities into service plans (see page 45).	▶ Risk, Insurance & Facility Management division	▶ Within existing	2018

See also [Action 3-1](#) to establish an energy management metrics, reporting and review process.

Since 2007, the CRD has added to its portfolio:



However, GHG emissions from buildings, facilities and infrastructure have gone down by

28%



SERVICE-ORIENTED GOALS



Policy Statement:

The CRD will strive towards net-zero energy for all new buildings and facilities and ultra-efficient infrastructure through design, life cycle costing, commissioning, material use and energy supply.

7: New buildings, facilities & infrastructure

Goal: Achieve high-performance standards and strive towards net-zero energy for all new construction.

Over time, the CRD will need to build and commission new buildings, facilities and infrastructure to meet new service demands. This provides an opportunity to create high-performance assets that use less energy, result in fewer GHG emissions, require less maintenance and save money over time.

While projects that minimize energy consumption may come with a higher capital cost, this is often offset through reduced energy costs throughout the project's lifetime, in addition to significant reductions in GHG emissions. Life cycle costing is an important approach to ensure these benefits are considered at the outset of all significant capital projects.

This commitment can require an investment of staff resources at the outset of the project to ensure the costs are quantified appropriately, and thus life cycle costing is typically most effective for larger capital investments.

Action	Associated Division(s) & Department(s)	Resources	Timing
<p>7-1. Establish technical standards for new construction to ensure high-energy performance and low-carbon criteria are incorporated into design of new facilities, including:</p> <ul style="list-style-type: none"> ▶ aligning standards with new provincial Energy Step Code (e.g., Passive House Standard) ▶ ensuring standards are incorporated in requests for proposals as baseline 	<ul style="list-style-type: none"> ▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Within existing 	2017
<p>7-2. Design heating, ventilation and air conditioning systems that minimize the use of fossil fuels (heating oil and natural gas) and consider renewable energy sources.</p>	<ul style="list-style-type: none"> ▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division 	<ul style="list-style-type: none"> ▶ Built into total project costs 	<i>Ongoing</i>
<p>7-3. Incorporate life cycle costing to calculate the business case for all capital projects over \$100,000 in value.</p>	<ul style="list-style-type: none"> ▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division ▶ Integrated Water Services department 	<ul style="list-style-type: none"> ▶ Built into total project costs 	2019
<p>7-4. Update the project management process to require commissioning of all new buildings to ensure they are operating at maximum efficiency.</p>	<ul style="list-style-type: none"> ▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division ▶ Integrated Water Services department 	<ul style="list-style-type: none"> ▶ Built into operating costs 	2019
<p>7-5. Include climate action considerations in the capital project initiation process (see page 46):</p> <ul style="list-style-type: none"> ▶ require established technical standards ▶ use building materials that sequester carbon (e.g., choose wood over concrete) ▶ consider renewable energy options 	<ul style="list-style-type: none"> ▶ Environmental Planning & Engineering division ▶ Risk, Insurance & Facility Management division ▶ Integrated Water Services department 	<ul style="list-style-type: none"> ▶ Built into total project costs 	2019

Implementation & Monitoring

Process

The CRD takes an adaptive management approach to its initiatives by using four stages of planning: prepare the plan, execute the plan, monitor and report on the plan and adjust it as necessary based on gathered information.

This strategy adopts this approach, and this is demonstrated through the goals and initiatives outlined in the document. In particular, **Goal 3: Metrics & reporting** provides a framework for implementing stronger metrics, monitoring, reporting and reviewing/adjusting implemented initiatives within each applicable division.

Implementation responsibilities

As identified in the action tables, implementation of this strategy — including planning, executing, monitoring, reporting and adjusting climate action initiatives within a division — is the responsibility of many divisions across the CRD.

The Corporate Climate Action Analyst within the Risk, Insurance & Facility Management division is available to assist all divisions with these steps. The Corporate Climate Action Analyst is also responsible for implementing certain actions, coordinating among departments where needed, collecting implementation metrics and stories and reporting back to the Board.

Monitoring & reporting

Annually, the Corporate Climate Action Analyst will prepare a report for the Board that includes

the CRD's progress towards achieving the 2020 reduction target in addition to the following four metrics identified in the **Capital Regional District Corporate Plan 2015-2018**:

- ▶ number and impact of projects and partnerships demonstrating support for reductions in GHG emissions and for increased climate resiliency
- ▶ completion of corporate climate adaptation plan
- ▶ annual GHG emissions of corporate fleet
- ▶ annual GHG emissions of corporate buildings and infrastructure

The Financial Services division and the Corporate Climate Action Analyst will continue to coordinate to develop annual corporate inventory and progress reports to meet the CRD's commitments under the Climate Action Charter and maintain eligibility for carbon tax grants from the Province.

Review

After five years of implementation, this strategy will need to be reviewed and updated. This will provide the CRD with the opportunity to consider whether to set a new GHG emissions reduction target, to review the continued relevance of the long-term goals and policy statements and to identify a new set of actions for the next five years.



Case Study:
**Recovering waste heat from the
motor control centre**

In 2009, the CRD's Environmental Planning & Engineering division identified an opportunity to recover waste heat from the motor control centre at the Saanich Peninsula Wastewater Treatment Plant and use it as supplementary heat for treatment process hot water.

A heat recovery system was installed and commissioned in February of 2011.

The system has proven to be very effective in solving many operational problems and has also avoided the need for a new gas-fired process hot water boiler. Based on the operation records, the system has avoided approximately 55 tonnes CO₂e/year.

The Saanich Peninsula Wastewater Treatment Plant.

Appendices

Appendix A: Climate lens review template

The climate lens review template provides information needed to understand the climate-related implications of CRD projects, studies and contracts to support decision-making.

Climate lens review templates must be completed on:

- ▶ all capital projects over \$100,000 (new construction and retrofits)
- ▶ all studies, reports and feasibility analyses undertaken in support of future capital projects expected to be over \$100,000
- ▶ all contracts over \$100,000, and all contracts less than \$100,000, that are considered “in scope” for GHG reporting purposes (see sidebar on [page 18](#) for more details)

Mitigation

The climate lens review template requires completion of the following questions related to GHG mitigation, i.e., efforts undertaken to reduce GHG emissions associated with the project:

- ▶ total expected operating emissions
- ▶ are these emissions “in scope” for the corporate GHG emissions inventory?
- ▶ does this project comply with corporate climate action policy and strategy?
- ▶ has the CRD’s climate policy been added to the project requirements documentation?
- ▶ what steps have been taken to minimize GHG emissions from the project?

Projects that do not comply with corporate climate action policy will require General Manager approval to proceed.

Adaptation

The template also requires a description of how the project’s design has considered future climate impact, i.e., how the project has improved the resiliency of assets and infrastructure to the impacts of climate change.

Note

In 2018, the CRD will be developing a corporate climate adaptation plan ([Action 4-3](#)). The climate lens review template will be updated to align with that plan. The Climate Action Analyst will ensure the most up-to-date version of the climate lens review template is available to staff.

Appendix B: Organizational processes

Budget planning process

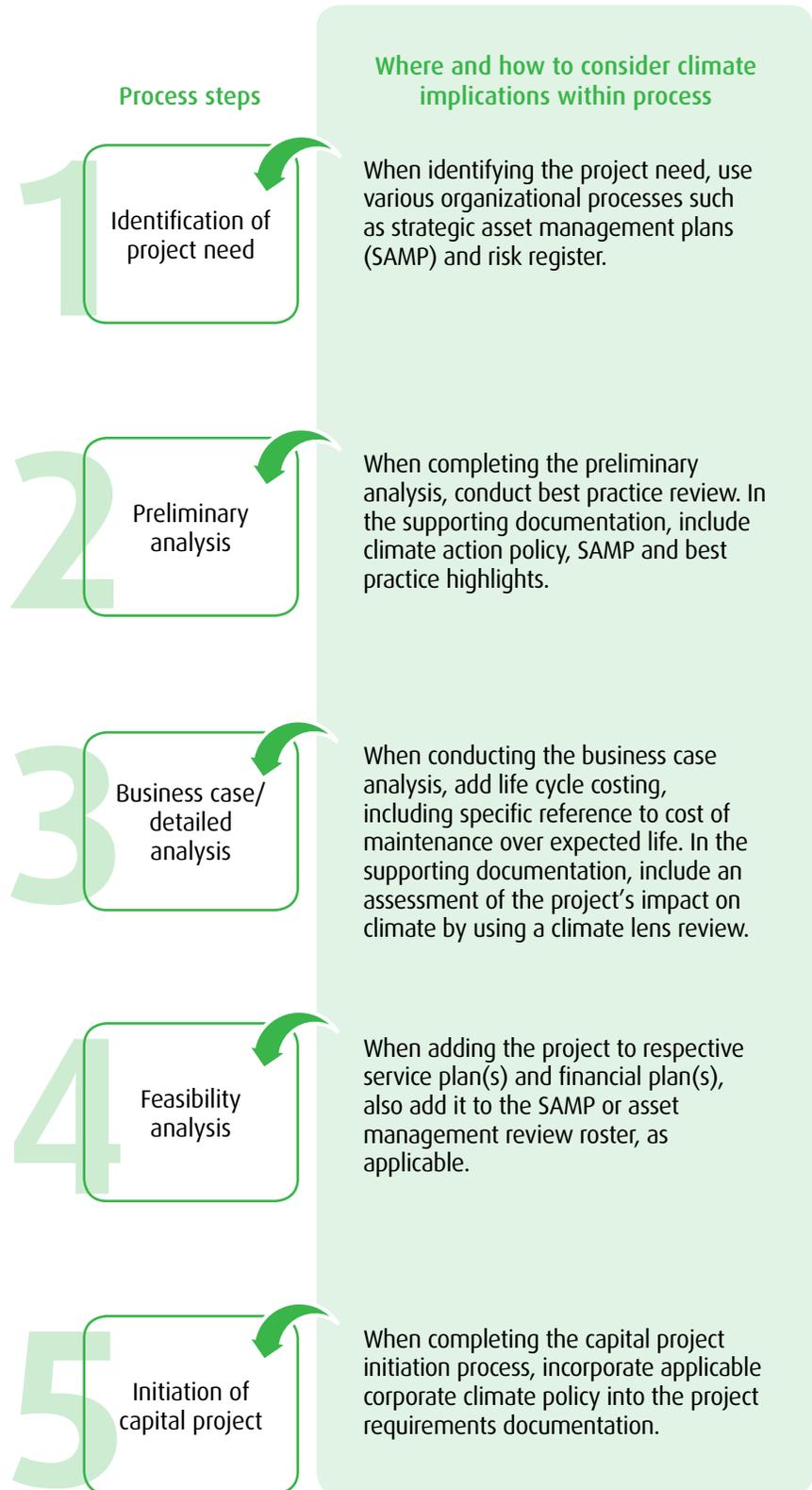
The graphic below outlines three key points where climate change will be considered in the current budget planning process.



Capital project initiation process

Capital projects result from both internal drivers (e.g., asset management plans, failing facilities) and external drivers (e.g., strategic opportunities, a request from the public, request from the Board).

Staff then follow a capital project initiation and approval process. This graphic details where and how staff will incorporate climate considerations into that process.

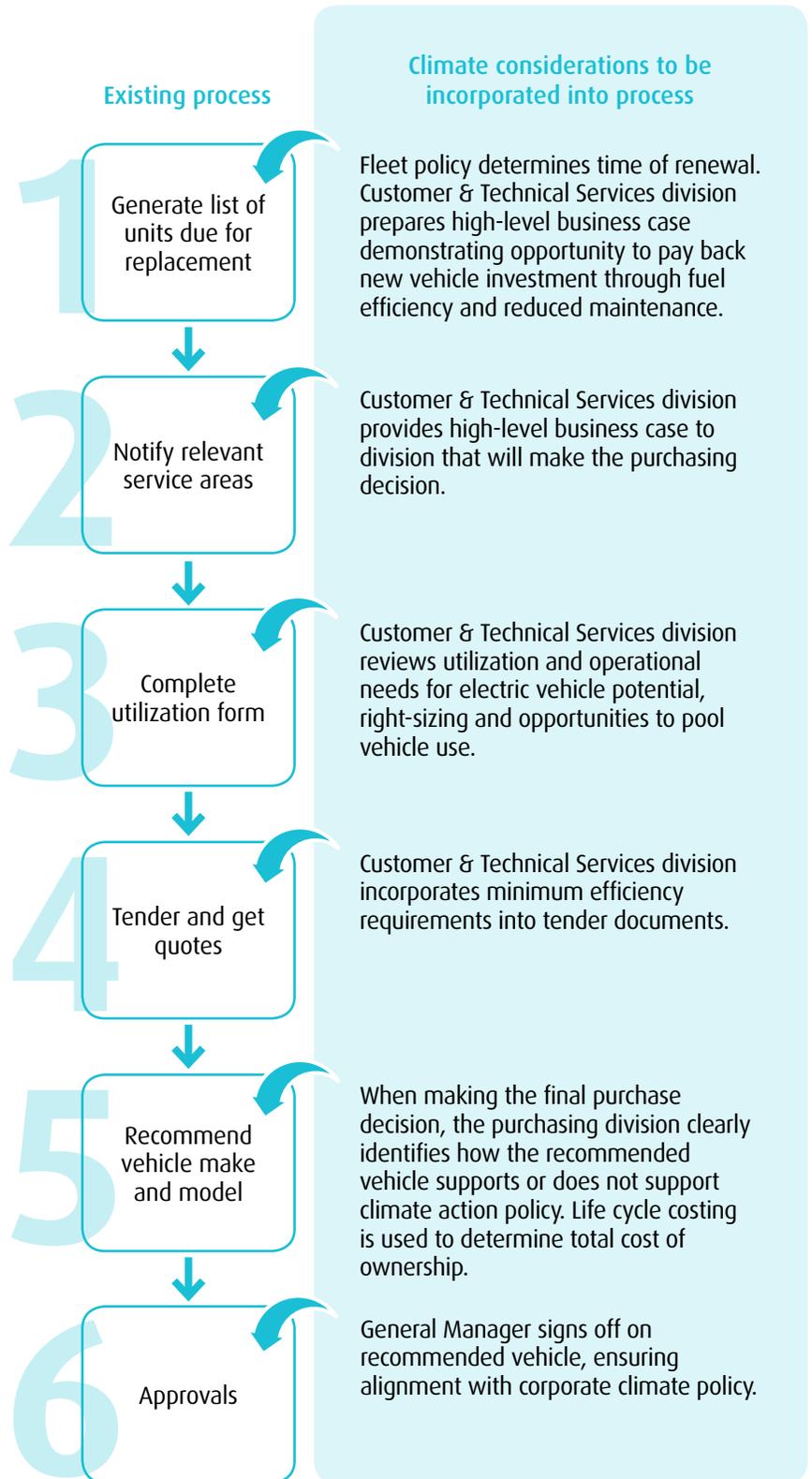


Fleet vehicle and equipment purchasing process

The Customer & Technical Services division leads the fleet vehicle and equipment purchasing process, which is guided by fleet policies developed in 2007 and earlier.

In the CRD's current organizational structure, vehicles and equipment are owned and operated by individual divisions, while management of the fleet is more centralized, meaning that while the centralized team identifies when to replace units, and recommends preferred replacement units to match operational needs, the ultimate purchasing decisions rest within individual divisions.

There are several opportunities to further embed a climate lens into fleet purchase decisions, and these include using tools to evaluate appropriate options, using life cycle considerations to inform purchase decisions and raising awareness among all staff involved in the procurement process and decisions.



Case Study: The Summit

The Summit at Quadra Village is a residential and dementia care facility that will be owned by the CRD and operated by Island Health. Groundbreaking for the Summit took place in June 2016. When completed, the facility will provide 320 new residences.

The project team has worked hard to minimize the project's GHG emissions. The Summit has been registered with the BC Hydro New Construction program and has undergone extensive energy modelling to review options for energy-efficiency measures through improved building envelope, lighting and mechanical systems.

After analysis of over 19 energy conservation measures, including high performance heat recovery, exhaust air heat pump, LED lighting and optimized glazing, the project architects were able to reduce annual GHG emissions by 395 tonnes CO₂e over the original design and drop the estimated energy-use intensity by 38%, from 450 kWh/m² to 279 kWh/m².

Although this facility will not be in the scope of the CRD's GHG reporting, the CRD is still committed to ensuring that new facilities within its sphere of influence are built with climate action as a key priority.

The Summit is located at 955 Hillside Avenue in Victoria.



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