



A snapshot of the 2020 state of Climate Action in the RDCK

Fall 2021

The pandemic has provided an opportunity to rethink priorities and systems. Here at the Regional District of Central Kootenay (RDCK) it has reaffirmed:

1. the importance of transitioning to a just, inclusive and low carbon lifestyle;
2. the commitment to inclusion, diversity and anti-racism; and,
3. the commitment to identify how we can make positive change for people of color and indigenous people across the region.

HIGHLIGHTS OF 2020:

Regional Energy Efficiency Program 1.0 complete!

The initial 2-year program resulted in 418 people registering their homes and an estimated reduction of 223.9 tCO₂e per year in residential energy emissions. Find out about REEP 2.0 here: rdcksavenow.ca/programs

RDCK adopts Step Code

The Step Code is a new provincial standard that provides an incremental and consistent approach to energy efficient construction. Each step on the BC Energy Step Code means a more efficient building, with the final step being net-zero ready (ie. The building creates as much energy as it consumes). As a result, in 2020, 46 homes were built to Step Code and 87.42 tCO₂e per year were reduced.

Procter Hall Energy Efficiency and Solar Project

Through support of the Province of BC Community Energy Leadership Program (CELP), UBCM Community Works Fund, and Columbia Basin Trust's (CBT) Community Development Grants, the Procter Community Society was able to address major air leakage with improved insulation, and install a solar array to generate electricity at the Procter Community Hall.

- Estimated annual projected energy saved: 15,000kWh per year
- Estimated annual propane usage eliminated: 2571 litres per year
- Estimated annual projected greenhouse gas emissions reduced: 3.9 tonnes of CO₂e per year
- Estimated annual energy savings: \$4,274

Exploring renewable energy by 2050

Through 2019 and 2020, the RDCK joined 8 other local governments to explore their commitments to working towards 100% renewable energy by 2050. This process included accounting for community level of emissions to date:

Community Emissions

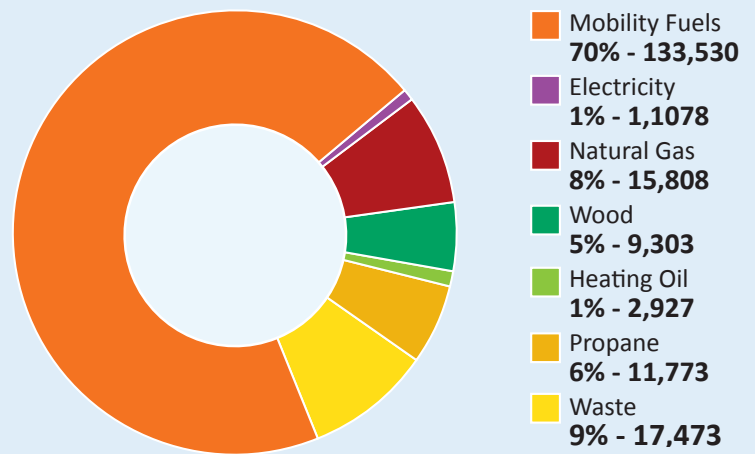


Figure 1: 2018 Emissions Summary for RDCK Unincorporated Areas by Source 191, 892 CO₂e

RDCK tCO₂e Emissions by Sector

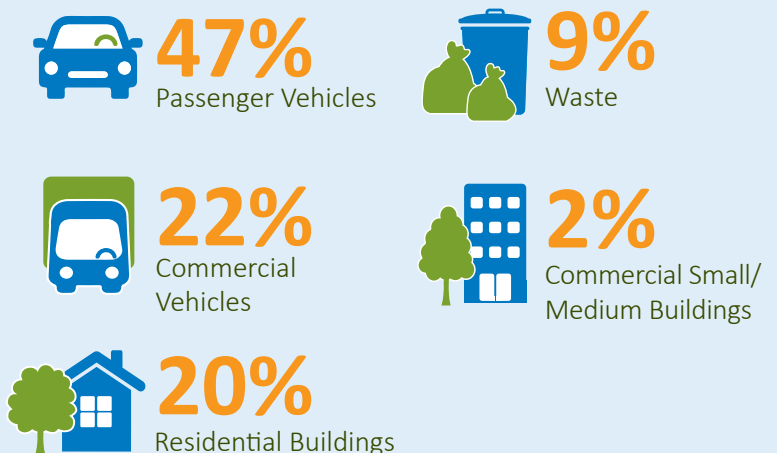


Figure 2: 2018 tCO₂e Emissions split by sector for RDCK Unincorporated Areas. Source: westkootenayrenewableenergy.ca

Take a look inside to learn more about where we are today, where we are going and how you can take action.

RDCK Climate Action Strategy

The RDCK Climate Action Strategy (CAS) is organized into 2 categories: risk reduction and community resilience, and guided by the 3 core goals which represent RDCK elected officials and staff ambitions to build upon the social, economic, and environmental sustainability of the RDCK.

For monitoring and accountability, a series of Climate Action Indicators will be tracked for each goal using key indicators to measure progress of the CAS objectives and targets. Indicator baselines were established in 2019, then developed in 2020. Although the COVID pandemic shifted actions slightly, this document provides highlights of what has been accomplished in 2020. The 2021 SoCA will provide a more robust framework for reporting and sharing the RDCK Climate Action information.

Historic data and other relevant information is available at rdck.ca/sustainability.

Risk Reduction

GOAL 1

100% Renewable Energy¹ and Carbon Neutrality² by 2050, Mid Point - 50% reduction in GHG by 2030

GOAL 2

Develop sustainable land use patterns through robust planning policy and regulation to mitigate flood, geohazard and wildfire risks and preserve the landscape.



PATHWAY: LAND USE & PLANNING

GOAL

- Achieving a sustainable land use pattern that supports the RDCK's goals while preserving the integrity of the landscape done through land use/planning policy and regulation to better prepare for and reduce flood, geohazard and wildfire risk

OBJECTIVES/TARGET

- Update planning policies and bylaws to decrease urban sprawl while supporting active transportation and complete communities
- Integration of the Community Wildfire Protection Plan (CWPP) and floodplain mapping into Official Community Plans (OCP)
- Guide future development to create sustainable and complete communities where the risk threshold is reduced

2020 HIGHLIGHTS

- Mapping has been updated through RDCK WebMap, zoning bylaw and Official Community Plan updates underway
- See notes in Flood and Geohazards for update on risk reduction strategies development, likewise for fuel treatments

¹ net energy from renewable sources (like water, hydro, wind, and biofuel power)

² the amount of emissions we produce is the same as the amount of emissions we sequester



PATHWAY: MOBILITY

GOAL

- A seamless regional transportation network to connect communities throughout the region through:
 - active transport lanes
 - zero emission vehicles
 - low carbon personal transportation
 - low carbon public transportation

2020 HIGHLIGHTS

- Update of RDCK Fleet and Vehicle Policy and procedures
- COVID significantly impacted public transit operations, new plans underway in 2020

OBJECTIVES/TARGET

- By 2040, plan to shift all new cars to be zero emission vehicles, which aligns with the provincial CleanBC goal, while making the transition from diesel large sized vehicles to run on low-carbon fuels
- Monitor transportation GHG emissions and transportation GHG emissions/capita (tCO₂e every 2 years)
- Promote and support mobility for residents with a focus on vulnerable communities



PATHWAY: ENERGY

GOAL

- Transition from a high carbon energy dependency region to reach a low carbon dependency future through 100% renewable and clean energy technologies and strategies by 2050

OBJECTIVES/TARGET

- Lower total workplace GHG emissions and energy consumption in both corporate and community building structures/facilities
- Encourage the shift of energy source from carbon based systems to renewable energy systems including electricity generation, solar energy, micro-hydro power systems, biofuels and geothermal energy
- Support regional implementation of The West Kootenay 100% Renewable Energy Plan

2020 HIGHLIGHTS

- Corporate monitoring of carbon emissions impacted by COVID.
- RDCK Better Building Policy has been drafted
- Fleet Policy to encourage switch from fossil fuels and maximize efficiency
- Procter Community Hall underwent major renovation and fuel switching upgrade
- Study carried out on full fiber utilization to understand possibilities in the region



PATHWAY: RESOURCE RECOVERY

GOAL

- Improve the health of our natural ecosystem through reducing the RDCK's environmental impact by assessing and diverting waste from landfills while simultaneously advancing the recovery of waste through improved waste management and new technologies

OBJECTIVES/TARGET

- Align with CleanBC and aim to divert 95% of organic waste (food waste only) from landfills
- Achieve the provincial target of a disposal rate of 350 kg per person per year
- Transition landfills to capture or treat methane
- Complete a waste composition study to create a baseline for the RDCK and to measure the effectiveness of the Resource Recovery Plan and Organic Waste Diversion Strategy

2020 HIGHLIGHTS

- Most of the Resource Recovery work includes long term items with no measurable progress in 2020 or even the next few years
- Progress made on the Resource Recovery Plan
- The transition period for organics diversion will continue into 2024/25



PATHWAY: CORPORATE BUILDINGS

GOAL

- Accelerate improvements to existing buildings towards improved energy efficiency, therefore reducing greenhouse gas emissions
- New buildings built with lifetime efficiency in mind, focussing on whole-system design and low energy use will reduce energy use and greenhouse gases over the life of our buildings

OBJECTIVES/TARGET

- Align with the provincial government's Step Code
- Corporate structures will adhere to the Better Building Policy for RDCK Facilities (DRAFT) to ensure that all existing buildings continue to improve its energy efficiency
- Monitor energy efficiency for the new builds as well as the existing buildings

2020 HIGHLIGHTS

- The development of the new Castlegar Daycare Centre is a test case for the RDCK Better Building Policy - Aiming for Step 3 or 4
- Lakeside improvements using draft Better Building policy for guidance
- 3 Recreation Centres using Recommissioning Studies to improve performance



PATHWAY: COMMUNITY BUILDINGS

GOAL

- Support building community, residents, communities and businesses to build, maintain and renovate buildings with improved energy efficiency and reduced green house gas emissions in line with provincial targets.

OBJECTIVES/TARGET

- Align with provincial Step Code timeline for Part 3 buildings, encouraging community organizations to push for Net Zero Ready for all new builds by 2030
- Encourage residents and businesses to retrofit existing buildings to meet 20-30% energy efficiency improvements

2020 HIGHLIGHTS

- Progress in REEP slowed due to COVID to achieve targets
- REEP 1.0 Now complete
- Step 1 adopted in all but Creston within the RDCK as of Q1 2021
- REEP 2.0 is in development

Climate Resilient Communities

GOAL 1

Develop climate adaptation strategies and programs which inform and empower residents, business owners and local governments to create climate resilient communities.



PATHWAY: AGRICULTURE & FOOD SECURITY

GOAL

- Empower communities with climate adapted agricultural strategies that are productive and resilient towards increased food security and sustainable food systems

OBJECTIVES/TARGET

- Establish adapted water management techniques that respond to climate variability – flood and drought conditions and support consistent production
- Support producers in their farm practices as shifting temperature and precipitation patterns result in food systems variability and overall resilience
- Maintain the agricultural extension service through the KBFA in the RDCK

2020 HIGHLIGHTS

- Central Kootenay Food Security Action Plan commissioned by RDCK Board to respond to pandemic impact on local food systems. Staff participated in Evidence Based Policy Development project
- Funding for Kootenay Boundary Farm Advisors (KBFA) renewed by the Board



PATHWAY: COMMUNITY WATER SUPPLY

GOAL

- Strengthen watershed governance and implement adaptive strategies to protect drinking water
- Provide tangible opportunities for residents to reduce water consumption
- Capital infrastructure upgrades

OBJECTIVES/TARGET

- Advocate and empower communities in managing their water systems
- Focus on water protection as well as watershed landscape planning
- Educate residents on ways they can substantially reduce outdoor water consumption
- Undertake and complete capital infrastructure upgrades to address system leakage, storage capacity, or water quality concerns

2020 HIGHLIGHTS

- RDCK Regional Watershed Governance Initiative (WGI) Project - Final Report complete
- Balfour universal metering and mainline replacement project completed; Edgewood reservoir construction and new well source project completed
- 30 irrigation assessments were completed
- 4 well attended Garden Days with tours were hosted in 2020



PATHWAY: CORPORATE WATER SUPPLY

GOAL

- Development, approval and implementation of a Leak Detection Strategy (LDS)
- Development, approval and implementation of a Metering Implementation Strategy (MIS)
- Strengthen watershed governance and implement adaptive strategies to protect drinking water

OBJECTIVES/TARGET

- High level guidance and evaluative tool for water managers to utilize in their efforts to prioritize which systems to meter
- Continue management of our own systems
- Deliver quality water, through the systems that the RDCK manages, at rates consistent with other systems
- Implement recommendations of the Watershed Governance Initiative Scoping Study

2020 HIGHLIGHTS

- Implementation of Leak Detection System (LDS) - a planning tool to ensure due diligence in cost-effective allocation of resources in determining which systems are the best candidates for investing in leak detection interventions and potential capital upgrades
- In 2020, brought forward to strategy Board in March 2021



PATHWAY: WILDFIRE

GOAL

- Reduce fire risk around the wildland - urban interface of communities and within each community of the region while adapting to more frequent and intense fires

OBJECTIVES/TARGET

- Increase the number of FireSmart Neighbourhoods
- Increase the number of FireSmart Home Partners Home Assessments
- Increase the number of FireSmart Home Partners certifications given
- Incorporate wildfire adaptation measures through building and land planning management to reduce wildfire risk

2020 HIGHLIGHTS

- 5 FireSmart Communities - Woodbury, Queens Bay, Middle Road, Loki Logs, Kaslo Backroad
- 233 FireSmart Home Assessments conducted
- 6 FireSmart Home Partners Certifications issued.



PATHWAY: FLOODING & GEOHAZARDS

GOAL

- Reduce community vulnerability through flood risk assessments and assess infrastructure opportunities for adaptation against increased flooding and geohazard events

OBJECTIVES/TARGET

- Consider flood and geohazard risk when making land use decisions
- Develop the flood risk maps for high risk areas and continue to pursue funding for maps of other high risk areas
- Support communities to develop resilience to flood and geohazard risk
- Establish acceptable risk tolerance threshold for all RDCK areas
- Increase preparedness and resilience of neighbourhoods for emergencies

2020 HIGHLIGHTS

- Completed a Flood and Geohazard Risk Review and the Non-Standard and Erosion Areas
- Updated the highest priority clear water flood hazards and steep creek hazard areas
- Continuing to define risk tolerance levels in the RDCK



PATHWAY: CORPORATE ADMINISTRATION

GOAL

- Incorporate a climate lens for all decision making and policies through the Board, to demonstrate that the RDCK prioritizes integrating climate action and adaptation into corporate actions and assets

OBJECTIVES/TARGET

- Align decision making with the RDCK's GHG reduction targets in all areas
- Develop an asset management plan for climate adaptation
- Integrate climate action lens into fleet management, procurement and operational decision making

2020 HIGHLIGHTS

- Development of Anti-Racial Discrimination and Anti-Racism Policy
- Participated in natural asset management training and reporting

Get Involved

The average BC resident produces 13.7 tonnes of CO₂ equivalent each year. Around the world, we are being called to reduce our emissions by 50% by 2030.

Emission Factors in RDCK in Tonnes CO₂-equivalent per Gigawatt-hour (tCO₂e/GWh)

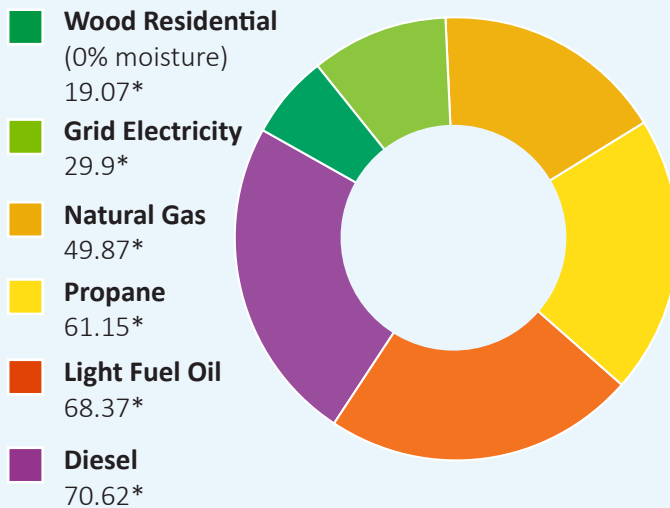


Figure 3: Emission factors for common fuels used in homes and offices in the RDCK

Carbon intensity (or emissions intensity) is a measure of the greenhouse gas (GHG) emissions associated with the consumption of a unit of fuel. Carbon intensities vary widely and are most often represented by emission factors which express the associated greenhouse gas emissions as kilograms or metric tonnes of CO₂-equivalent per Gigawatt-hour. (British Columbia – Ministry of the Environment and Climate Change Strategy, 2019).

Hours for a 10 Year Old Tree to Absorb Various Carbon emissions

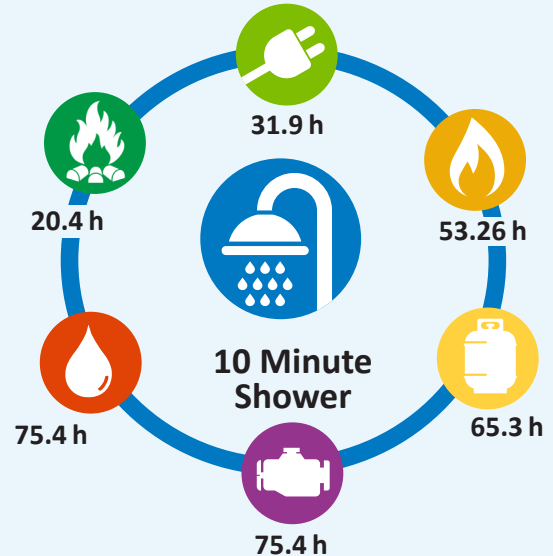


Figure 4: Carbon emission for various fuel types for a 10 minute shower

Figure 4 aims to provide some real-life context for the values listed in Figure 3. Calculation assumptions:

- A 10-minute shower with a 9 litre per minute shower head and the water heated from ambient temperature to 40 degrees (90 litres total) requires 2.67 kwh of energy to heat the water
- A 10 year old tree absorbs carbon dioxide at a rate of 2.5 grams per hour
- There are 1,000,000 grams in one metric tonne

RDCK Climate Actions to Date



2019

- Declared a Climate Action Imperative
- Created climate action indicators to monitor and track progress within the RDCK



2020

- Regional adoption of Step Code
- Winner of 2020 Sustainable Communities Award



2021 Stay Tuned!

Next steps for the RDCK State of Climate Action reporting are currently being reviewed by staff and at the time of the 2020 SoCA publication, it is anticipated that SoCA reporting will be moving to a different format to provide increased accessibility and transparency for residents, elected officials and staff.