Our Clean Future:

2023 Annual Report

Yukon

Acknowledgements

A special thank you to all individuals, businesses, organizations, governments and others who strive to build thriving, resilient and low-carbon communities in the Yukon and beyond. Carrying out Our Clean Future would not be possible without the generous participation and leadership from:

- Yukon First Nations;
- transboundary Indigenous governments and groups;
- Yukon's municipalities;
- advisory groups and relationships including the Yukon Climate Leadership Council, the Yukon Youth Panel on Climate Change, Council of Yukon First Nations, Yukon University and other academic and community-based organizations from across Canada; and
- other governments including First Nations governments, the Government of Nunavut, the Government of the Northwest Territories, the Government of British Columbia and the Government of Canada.

We would like to respectfully acknowledge each of the Yukon First Nations and transboundary Indigenous governments and groups for their stewardship of this land.

We are grateful for the time and energy, passion and expertise many individuals and communities have contributed to this work and acknowledge the feedback that Our Clean Future has more to learn from Yukon First Nations worldviews to engage the root causes of climate change and to help foster a holistic and interconnected approach to climate action.

As we carry out this work, we are committed to continuing dialogues, building and strengthening our relationships and deepening our understanding of what is needed to support all Yukoners.

Contents

2023 Highlights

Reduce the Yukon's greenhouse gas emissions

In 2022, non-mining greenhouse gas (GHGs) emissions were 618 kt, **6 per cent** higher than 2010 levels.

- The Yukon's emissions dipped in 2020 and 2021 due to COVID-19 travel restrictions. Emissions in 2022 increased, reflecting a return to travel as well as a growth in population and economy.

Ensure Yukoners have access to reliable, affordable, and renewable energy

In 2023, **91.1 per cent** of the electricity on Yukon's main grid was generated from renewable sources.

- We continue to invest in new renewable energy capacity through the Independent Power Producer program and community renewable energy projects.

Adapt to the impacts of climate change

In 2023, we began using a Yukon-focused framework to measure and report on adaptation progress across five thematic areas of resilience, including:

- **disaster resilience;**
- **health and well-being;**
- **infrastructure;**
- **environment;** and
- **economy.**

Build a green economy

In 2022, our per capita emissions and our GHG emissions per unit of GDP declined when compared to 2010.

- The average amount of emissions produced per person was **16.7 tonnes,** down from 18.8 tonnes in 2010.
- The Yukon's economy generated **223 tonnes** of carbon dioxide equivalent (CO2e) per unit (millions of inflation adjusted dollars) of real gross domestic product, down from 269 tonnes in 2010.

The Yukon is experiencing growth in both its population and economy, yet GHG emissions are not increasing at the same rate. This encouraging trend demonstrates a critical decoupling of emissions from economic and population growth.

Introduction

Each year, the Government of Yukon reports on the progress of Our Clean Future as part of our commitment to transparency and accountability to Yukoners. The Our Clean Future 2023 annual report is the fourth annual report released since the release of the Our Clean Future strategy in 2020.

Climate change continues to pose unique risks to the North and we are already feeling its impacts. Yukoners continue to experience climate-related emergencies, including significant fire and flooding events. In the North we are more severely impacted by climate change events, which can negatively impact our physical and mental well-being. As we work on climate change mitigation, it is also vital we focus on our climate adaptation efforts such as our emergency preparedness and our efforts to build climate resilience.

This year's annual report highlights the progress we've made in climate adaptation. This includes significant progress to prepare for events like floods, fires and permafrost thaw. Through the work of Our Clean Future, the Government of Yukon is working together with communities to complete Community Wildfire Protection Plans, Hazard Identification and Risk Assessments and update emergency management plans. The Government of Yukon is also developing flood hazard maps for flood-prone communities, and updating geohazard maps to identify permafrost risks through transportation corridors.

This year's annual report also shares our most recent greenhouse gas emissions data from 2022. Greenhouse gas emissions data is reported on a two-year time lag due to federal reporting timelines. In 2020 and 2021, the Yukon saw a dip in emissions due to COVID-19-related travel restrictions. This year's report shows an increase in our non-mining and overall greenhouse gas emissions due to the easing of COVID-19 travel restrictions and population growth.

While the Yukon's non-mining and overall emissions show an increase, we are continuing to see a decoupling of our emissions from GDP and population growth. This shows that while our population and economy is growing, we are not seeing equivalent growth in our emissions. This is a positive trend that shows the actions we are taking to reduce our emissions are starting to have an impact.

Alongside greenhouse gas emissions reporting, this report delivers an update on the 178 actions in Our Clean Future, 42 of which were added in December 2023 in response to new advice, research and adaptive policy development. The first section of this report outlines progress updates on actions that contribute to the four overarching goals of the strategy. The second section provides a snapshot of progress on actions set to be completed in 2023. We are also providing more detailed reporting on progress through a new Our Clean Future website (**our-clean-future.yukon.ca**) where additional reporting data is published to supplement the progress outlined in this report.

The *Clean Energy Act* (2022) commits to reporting annually on the Yukon's total greenhouse gas emissions, excluding mining. The legislation also requires that the Government of Yukon reports on the actions being undertaken or planned to meet these targets. This report fulfills this commitment.

Progress on goals and targets

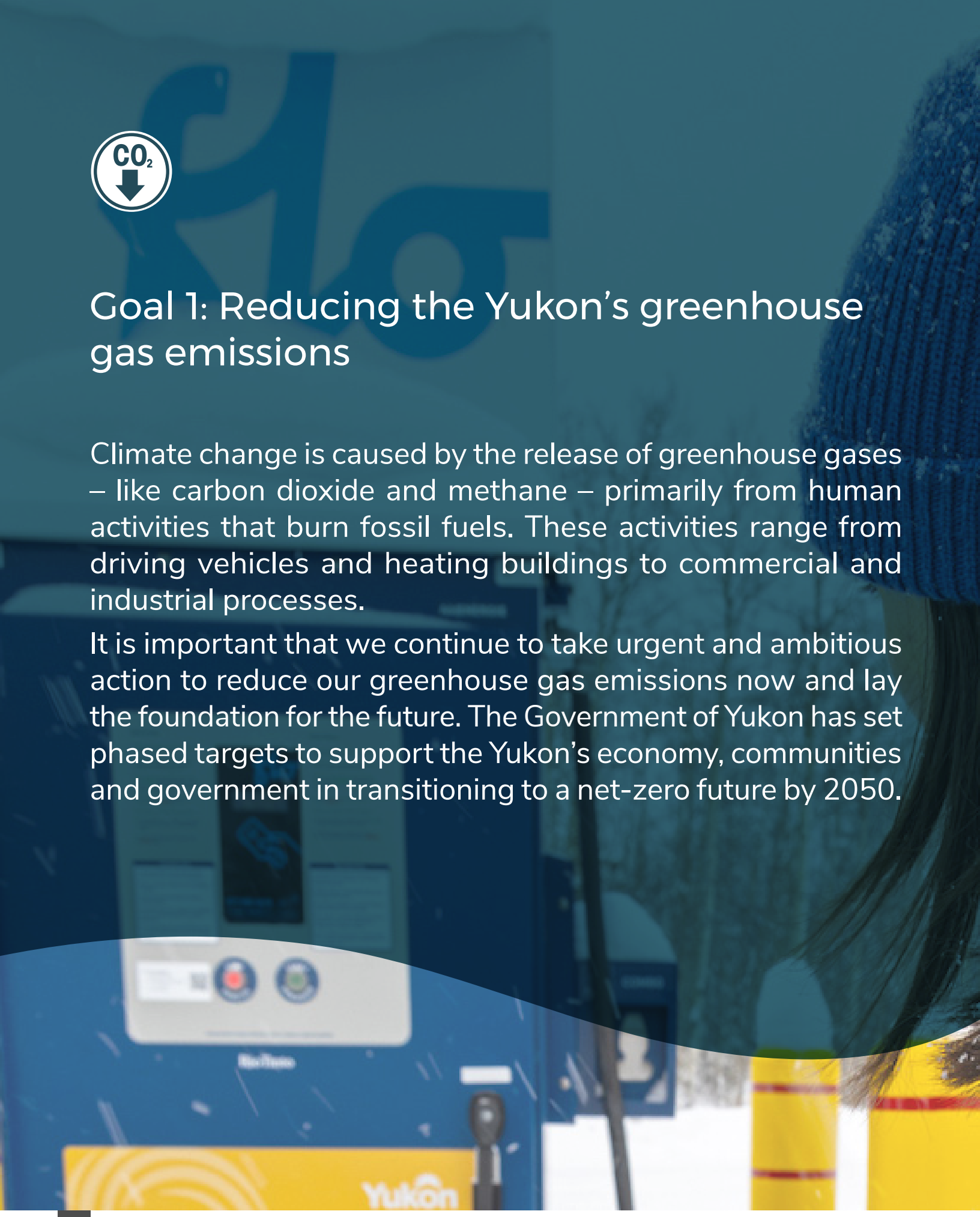
Our Clean Future sets four goals that will help the Yukon achieve our vision for a clean future. We have set ambitious targets for these goals to keep us on track.

This section offers an overview of progress of the four goals and associated targets in Our Clean Future. The Government of Yukon is implementing 178 actions that are designed to meet our goals. Highlights on action progress are detailed below each goal.

Goal 1: Reducing the Yukon's greenhouse gas emissions

Climate change is caused by the release of greenhouse gases – like carbon dioxide and methane – primarily from human activities that burn fossil fuels. These activities range from driving vehicles and heating buildings to commercial and industrial processes.

It is important that we continue to take urgent and ambitious action to reduce our greenhouse gas emissions now and lay the foundation for the future. The Government of Yukon has set phased targets to support the Yukon's economy, communities and government in transitioning to a net-zero future by 2050.



Reducing the Yukon's greenhouse gas emissions

Target	Progress
By 2030, Yukon's greenhouse gas emissions from transportation, heating, electricity and other areas will be 45 per cent lower than they were in 2010.	In 2022, our non-mining greenhouse gas emissions were 618.1 ktCO₂e (Figure 1). This is 6 per cent higher than in 2010.
We will work with industry to set a separate intensity-based target for mining.	In December 2023, the Government of Yukon announced a target to reduce the intensity of the mining sector's greenhouse gas emissions by 45 per cent by 2035, using a baseline of 2023.
Yukon's total greenhouse gas emissions will be net zero by 2050.	In 2022, our total greenhouse gas emissions were 735.4 ktCO₂e. This is 10 per cent higher than in 2010.

In 2010, the Yukon's greenhouse gas emissions, excluding emissions from mining, were 584.8 kilotonnes of carbon dioxide equivalent (ktCO₂e). By 2030, these emissions need to be 321 kilotonnes or less to reach our 45 per cent emissions reduction target (Figure 1).

The Yukon's non-mining greenhouse gas emissions

Figure 1: *The Yukon's non-mining emissions from 2010 to 2022. Modelling provided by Navius Research Inc. has estimated that current Our Clean Future actions are projected to reduce emissions by 29.6 per cent.*

Progress: Key objectives for reducing our greenhouse gas emissions

Our greenhouse gas emissions come from a variety of sources. Over half of emissions come from transportation, while electricity and heating also make up a significant portion of our emissions (Figure 2).

Greenhouse gas emissions (GHGs) by sector, 2022

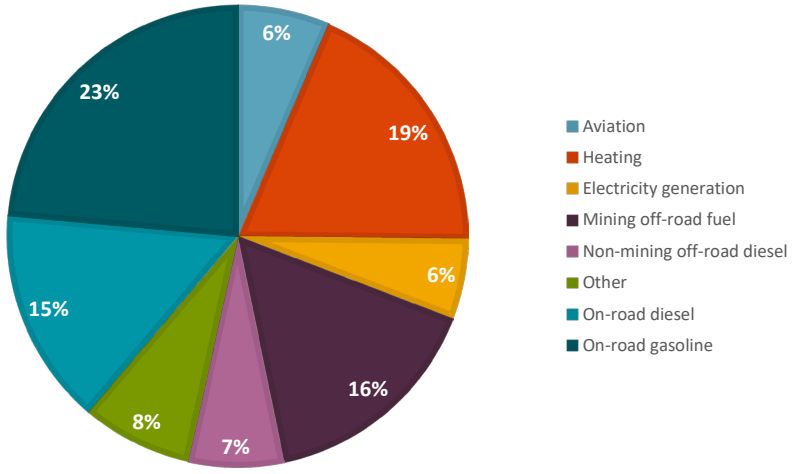


Figure 2: *Greenhouse gas emissions by sector, based on data from the 2022 calendar year.*

Many actions are designed to reduce emissions. These include:

- increasing the number of zero emission vehicles on our roads;
- improving the energy efficiency of homes and buildings;
- increasing the use of renewable energy sources for heating; and
- increasing the supply of electricity generated from renewable sources.
    - ▸ See "Goal 2: Ensure Yukoners have access to reliable, affordable and renewable energy" for more details.

Increasing the number of zero emission vehicles on our roads

Transportation is the largest contributor to greenhouse gas emissions in the Yukon. Transitioning to zero emission transportation options, such as electric vehicles, helps reduce greenhouse gas emissions. Our Clean Future includes several initiatives to support the transition to zero emission vehicles. Through the Government of Yukon's Good Energy program, rebates are available for Yukoners to increase the uptake of electric vehicles. The Government of Yukon is increasing the number of electric vehicles in its fleet of vehicles and is adding fast charging stations across the Yukon to support travel within and to Yukon communities.

By the end of 2023, the Government of Yukon made the following progress:

- **344** zero emission vehicles were registered in the Yukon (action T1 and T3).
- **43** vehicles in the Government of Yukon's fleet were zero emission vehicles (action T2).
- **6.1%** of newly registered vehicles were zero emission vehicles (action T1).
- **19** fast chargers have been installed and are operational. All road-connected communities in the Yukon are equipped with fast chargers (action T4).
- **62** level-two chargers were installed in homes and buildings (action T5) and legislation was passed to enable private businesses and Yukon's public utilities to sell electricity for the purpose of electric vehicle charging (action T7).
- **1,084** rebates for electric bikes have been provided (action T11).

Zero emission vehicles registered in the Yukon

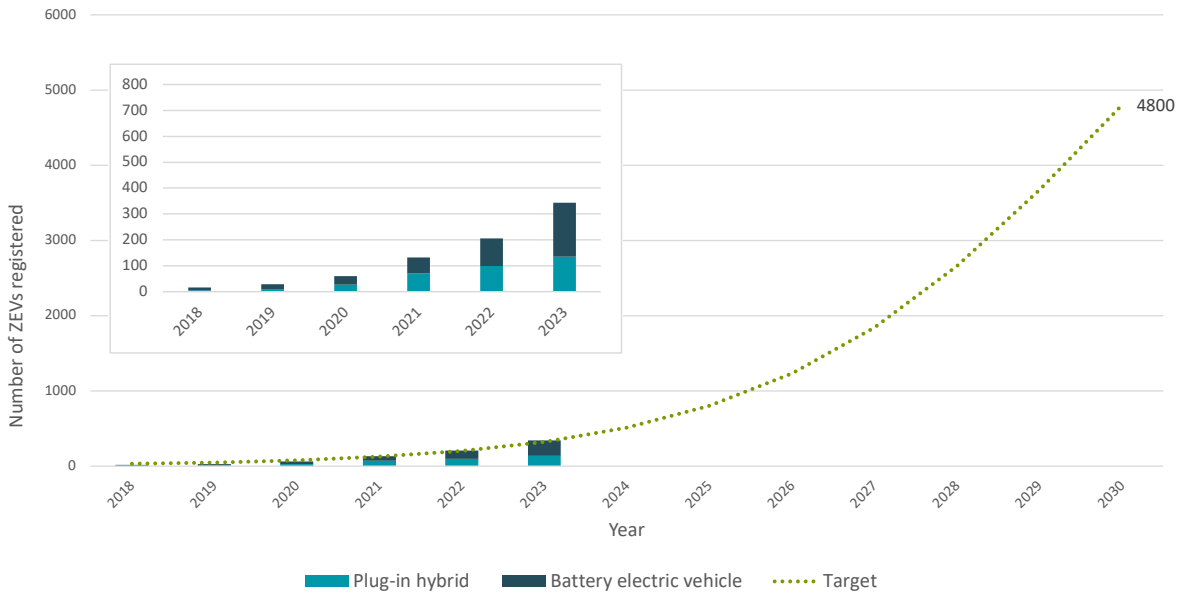
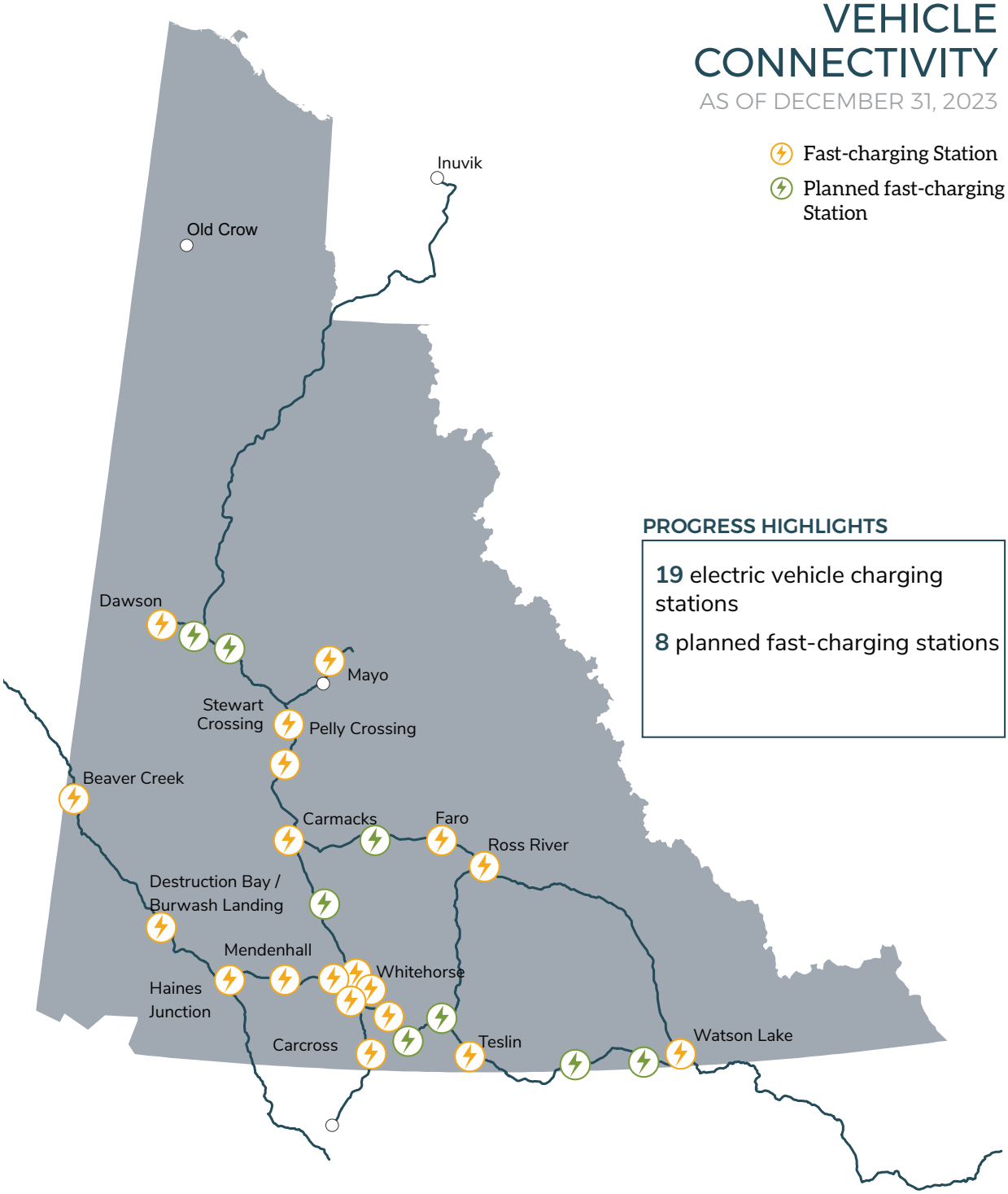


Figure 3: *Number of registered Zero Emission Vehicles (ZEVs) in Yukon broken out into Plug-in Hybrid Electric Vehicles (PHEVs) and Battery Electric Vehicles (BEVs).*

ELECTRIC VEHICLE CONNECTIVITY

AS OF DECEMBER 31, 2023

- Fast-charging Station
- Planned fast-charging Station



PROGRESS HIGHLIGHTS

19 electric vehicle charging stations

8 planned fast-charging stations

Retrofitting homes and buildings supports emissions reductions while also improving indoor air quality, building resilience to climate change, and lowering energy costs. The Government of Yukon offers several programs to make building retrofits, home upgrades, and renewable heating options more accessible and affordable. In turn, this reduces greenhouse gas emissions.

By the end of 2023, the Government of Yukon made the following progress:

- **172** high performance residential retrofits have been completed (Figure 4).
- **40** high performance commercial and institutional building retrofits have been completed (actions H2 and H8).
- **479** rebates were provided to new homes that are built either 50 or 60 per cent more energy efficient than the 2015 National Building Code (action H16).
- **31** retrofits have been completed for Government of Yukon buildings; **12** of these projects were high efficiency retrofits (action H1).

High performance building retrofits

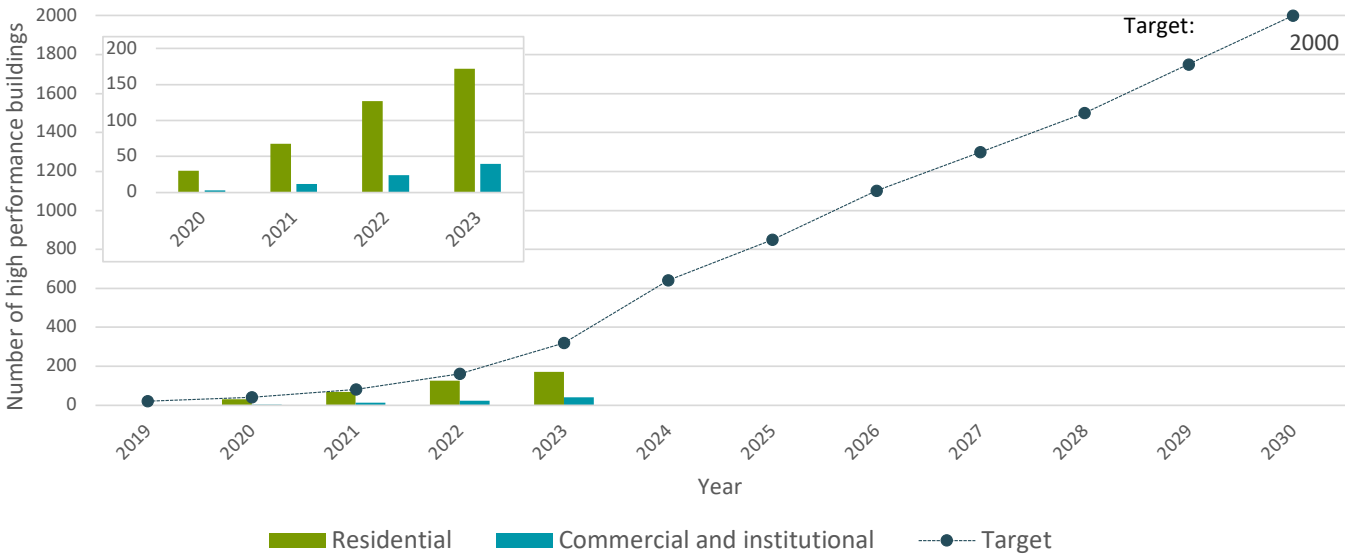


Figure 4: *Number of high performance commercial, institutional and residential building retrofits.*

Increasing the use of renewable energy sources for heating

Heating our homes and buildings with fossil fuels continues to make up about 20 per cent of our annual emissions. Investing in smart electric heating technology, including electric heat pumps and electric thermal storage systems, supports emissions reduction, cost saving and climate resilience.

By the end of 2023, the Government of Yukon made the following progress:

- **165** smart heating devices were installed in homes and buildings. This includes heat pumps and electric thermal storage systems.

Reducing the Yukon's greenhouse gas emissions

- **28** heat pumps were installed through the Heat Pump Pilot project, with 22 actively being monitored as part of our Heat Pump Pilot Project (actions H18, H21 and H22).
- **2** schools now have operating biomass systems. This includes the Elijah Smith Elementary School in Whitehorse, and the Khàtìnas.àxh Community School in Teslin, which has a biomass system built by Teslin Tlingit Council. These upgrades are expected to lead to a combined reduction of greenhouse gas emissions of **259** tonnes per year.

Goal 2: Ensure Yukoners have access to reliable, affordable and renewable energy

Increasing our supply of reliable and affordable renewable energy, especially in the winter months, is essential to meeting our greenhouse gas emissions targets and building a more resilient Yukon.

Through Our Clean Future, we are working with others to increase the amount of renewable energy produced. These efforts, combined with electricity grid investments, will ensure our electricity infrastructure is climate-resilient and suited to new patterns of electricity generation and use.

Photo credit: Erik Pinkerton

Target	Progress
93 per cent of electricity on the Yukon's main electricity grid will come from renewable sources, with an aspirational target of 97 per cent by 2030.	In 2023, 91.1 per cent of the electricity on Yukon's main grid was generated from renewable sources, while the 25-year rolling average is 95.6 per cent (Figure 5).
By 2030, we will use 30 per cent less diesel for electricity generation in off-grid communities, compared to 2010.	In 2023, 5.8 million litres of diesel were burned to generate electricity in the Yukon's four off grid communities. In order to reach this target, we need to be using under 3.6 million litres of diesel in the communities each year.
By 2030, 50 per cent of the energy we use for heating will come from renewable sources.	In 2023, an estimated 32 per cent of energy used for residential heating came from renewable sources.

Renewable generation on the Yukon's main grid is detailed in Figure 5 below.

Renewable electricity generation on the Yukon's main grid

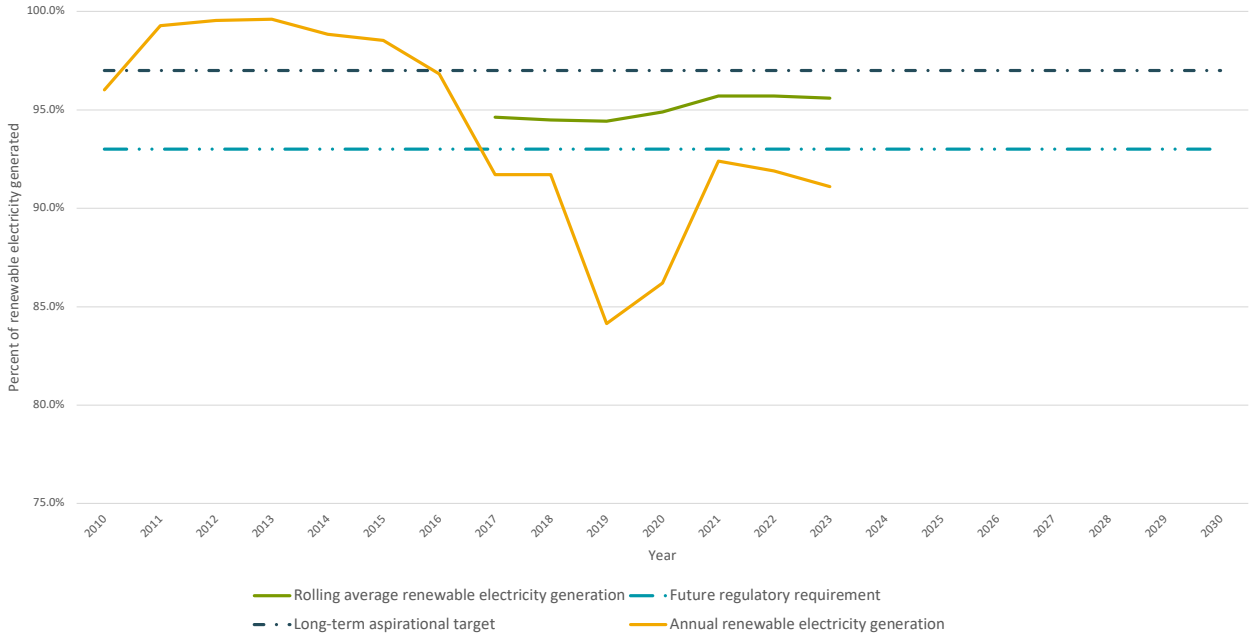


Figure 5: *Renewable electricity generated on the Yukon's main grid from 2010 to 2023 (data from the Yukon Energy Corporation).*

Progress: Key objectives for ensuring Yukoners have access to reliable, affordable and renewable energy

As we continue to electrify aspects of our daily lives, from heating to transportation, it is important that we continue to increase our renewable electricity supply through investment in efficiency measures and renewable energy capacity. Community-based renewable electricity generation also builds our renewable energy supply, while contributing to climate resilience by enhancing local-sufficiency and reducing our reliance on southern fuel imports. Our Clean Future objectives that support this include:

- increasing the supply of electricity generated from renewable sources;
- supporting local and community-based renewable energy projects; and
- ensuring electricity infrastructure is resilient to the impacts of climate change.

Increasing the supply of electricity generated from renewable sources

To increase our supply of renewable electricity, a combination of tools is applied. For example, we are developing new policies and are updating existing legislation to better support the renewable electricity sector (actions E1 and E3). We are also undertaking research and development to understand what new renewable energy opportunities exist (actions E16 and E17).

By the end of 2023, the Government of Yukon made the following progress:

- **476.4 GWh** of energy was generated through renewable resources.
- **97.946 MW** of renewable energy capacity has been installed.
- **13.09 MW** of energy capacity has been installed through the Independent Power Producer program. Within the program, six First Nations governments have signed Independent Power Producer agreements, while two are currently generating energy (action E7).

Supporting local and community-based renewable energy projects

In the Yukon, we gather energy from a variety of sources. The main grid, which is operated by Yukon Energy Corporation and ATCO Electric Yukon, supplies renewable energy to 11 communities throughout the territory, while four communities use diesel and are supported by ATCO Electric Yukon. The Government of Yukon supports renewable electricity generation by entities other than the Yukon's public utilities – primarily Yukoners and Yukon businesses and institutions – through the Micro-Generation Program and the Independent Power Producer Program.

By the end of 2023, the Government of Yukon made the following progress:

- **29** community renewable energy projects have been initiated, including wind, solar, hydro-electric, waste heat, biomass and renewable energy infrastructure projects across 15 communities throughout the Yukon (action E6).
- **9.5 MW** of renewable electricity has been installed through the Micro-Generation Program (action E10). This goal was achieved 7 years ahead of schedule; Figure 6 shows the growth of the program. This program is currently paused in certain areas while we study the impact of distributed renewable energy sources.

COMMUNITY RENEWABLE ENERGY PROJECTS

AS OF DECEMBER 31, 2023

Wind

Solar

Other

All projects listed have been funded through the Innovative Renewable Energy Initiative and the Arctic Energy Fund. This is not an exhaustive list of renewable energy projects in the territory.

Micro-Generation Program capacity

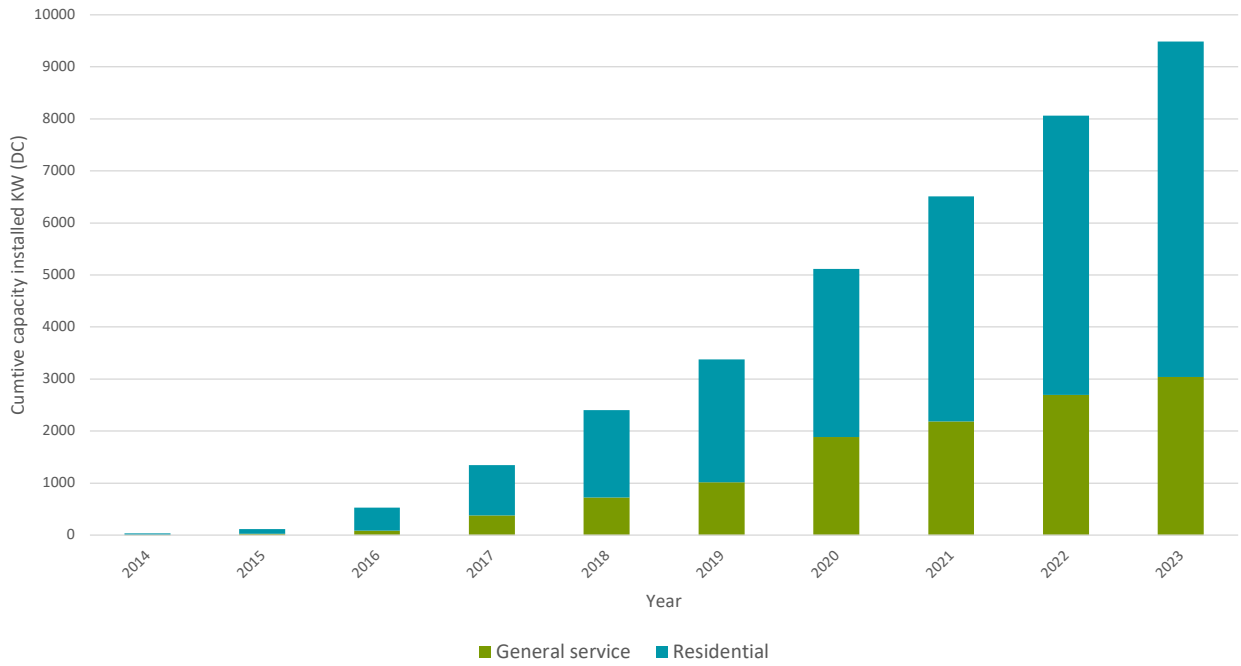
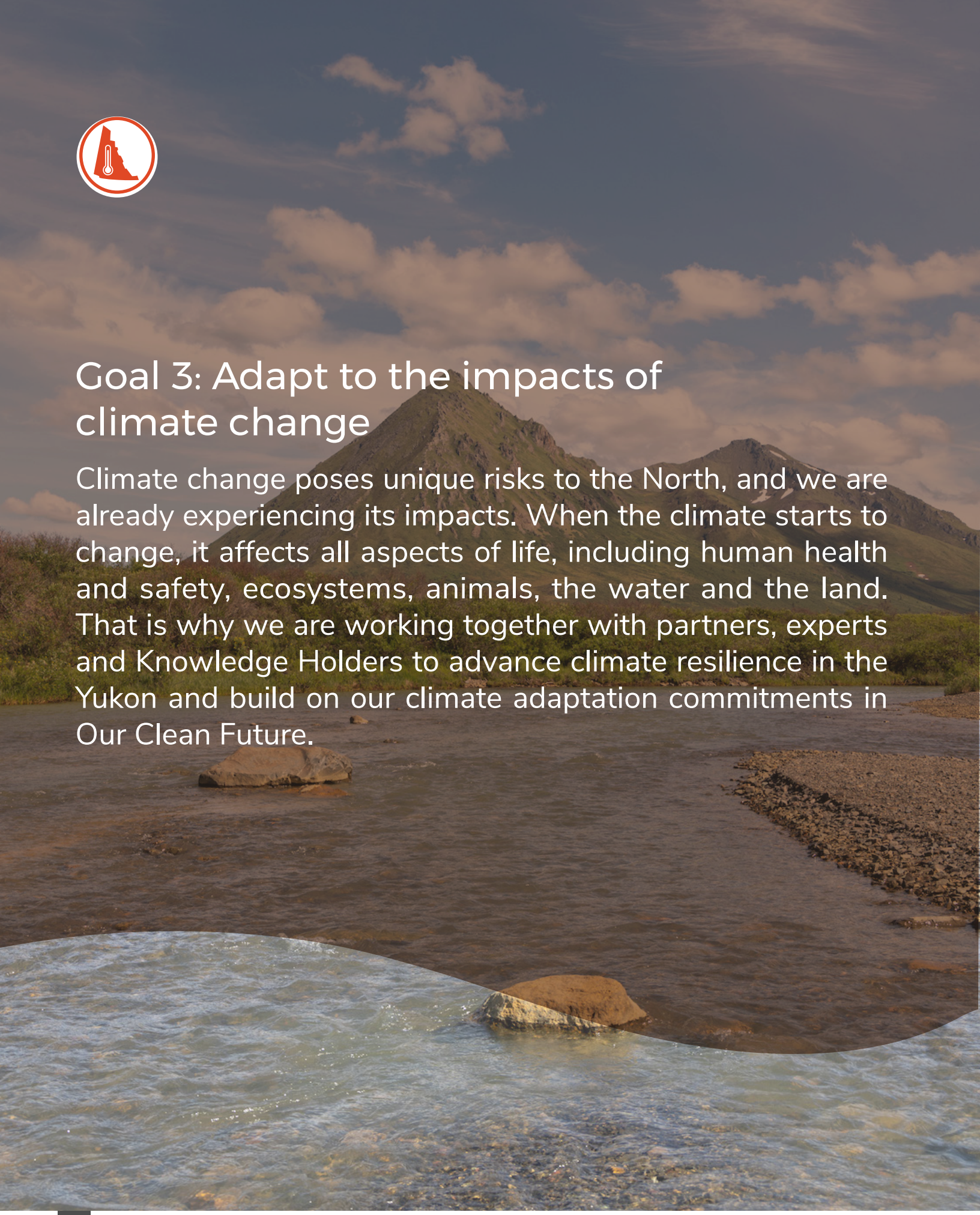


Figure 6: *Cumulative direct current capacity of residential and commercial systems installed each year through the Micro-Generation Program.*



Goal 3: Adapt to the impacts of climate change

Climate change poses unique risks to the North, and we are already experiencing its impacts. When the climate starts to change, it affects all aspects of life, including human health and safety, ecosystems, animals, the water and the land. That is why we are working together with partners, experts and Knowledge Holders to advance climate resilience in the Yukon and build on our climate adaptation commitments in Our Clean Future.

Target	Progress
The Yukon will be highly resilient to the impacts of climate change by 2030.	We've begun using a Yukon-focused framework to measure and report on adaptation progress across five thematic areas of resilience. As we review progress on addressing the findings of our climate risk and resilience assessment and implement more adaptation actions through Our Clean Future, we will be able to provide more detailed analysis on climate resilience progress.

Measuring resilience is complex and dependent on a variety of factors. Based on the Assessing Climate Change Risk and Resilience in the Yukon report, published in 2022, the Yukon is and will continue to be impacted by changes to snow, ice and water, permafrost thaw, wildfire, changes to vegetation and wildlife and extreme weather.

Progress: Key objectives for adapting to the impacts of climate change

The following thematic areas have been identified as priorities for adapting to climate change through the work of the Assessing Climate Change Risk and Resilience in the Yukon report and ongoing work on climate adaptation in the Yukon:

- Disaster resilience: Preparing for emergencies that are becoming more likely due to climate change to reduce impacts in the Yukon.
- Infrastructure: Ensuring our infrastructure, including critical and transportation infrastructure, is more resilient to the impacts of climate change.
- Health and well-being: Ensuring that human health and well-being are protected and enhanced in a changing climate, including safe access to the land due to changing conditions.
- Environment: Monitoring and responding to the impacts of climate change on our ecosystems.
- Economy: Working towards a climate resilient economy in the Yukon enabling Yukoners to pursue reliable, sustainable livelihoods in a changing climate. See goal 4: "Build a green economy" for more details on this progress.

Disaster resilience: Preparing for emergencies that are becoming more likely due to climate change

Yukoners have experienced climate-related emergencies over the last several years, including large-scale flooding and severe wildfire events. In summer 2023, we witnessed several Yukon communities and neighbouring provinces and territories experience the most destructive

wildfire season to date. Strengthening our emergency management and preparedness is a key priority to keep Yukoners safe as part of adapting to climate change. We have made significant progress in working with communities to identify risks and develop plans to prepare for the impacts of climate-related emergencies.

By the end of 2023, the Government of Yukon made the following progress:

- 3 Community Wildfire Protection Plans have been endorsed by communities, including for Teslin (endorsed by Teslin Tlingit Council and Village of Teslin), Haines Junction (endorsed by Champagne and Aishihik First Nations and Village of Haines Junction) and Whitehorse. 5 more Community Wildfire Protection Plans are underway for Dawson City, Mayo, Beaver Creek, Faro, and the Kluane Lake Region.
- 5 draft community flood hazard maps were developed for Carcross, Tagish, Marsh Lake, Lake Laberge and Carmacks to plan for community engagement in 2024. One flood hazard map for Teslin was also in development. (action C2).
- 3 integrated asset management plans have been completed. Integrated asset management plans inform where governments can make investments to improve the climate resiliency of local infrastructure (action C7).
- 7 communities completed Hazard Identification and Risk Assessments. These assessments were completed for the First Nation of Nacho Nyak Dun and the Village of Mayo, Tr'ondek Hwech'in and the City of Dawson, Carcross Tagish First Nation, the City of Whitehorse and the Hamlet of Mt. Lorne.
- 12 emergency management plans have been completed (action C12).

PROGRESS ON DISASTER RESILIENCE INITIATIVES

AS OF DECEMBER 31, 2023

- Geohazard maps complete
- Flood Hazard Maps in progress
- Hazard Identification and Risk Assessments complete
- Emergency Management Plans complete
- Community Wildfire Protection Plan complete
- Community Wildfire Protection Plan in progress

Infrastructure: Ensuring our infrastructure is resilient to climate change impacts

It is a priority to make our infrastructure more resilient to climate change impacts, such as from thawing permafrost, fires, and floods. For example, Yukon's transportation network is critical for Yukoners: when those networks are disrupted, it can affect supply chains, affect the flow of essential goods and services and disrupt connections between communities. Ensuring our existing and new infrastructure is resilient to climate impacts has cascading benefits for our communities and well-being.

Currently there is ongoing work on mapping climate-related hazards through geohazard mapping and flood mapping, maintenance of key infrastructure, and building monitoring and risk assessments. Together, these initiatives help ensure climate considerations are integrated into infrastructure-related decisions.

By the end of 2023, the Government of Yukon made the following progress:

- **854** kilometres of road has undergone geohazard mapping to identify the risk of permafrost thaw on critical transportation corridors (action T26).
- **12** communities in Yukon have geohazard mapping completed (action C1).
- **100%** of community infrastructure projects over $10 million built or funded by the Government of Yukon in 2023 underwent climate risk assessments (action C5).
- **All** transportation corridors in the Yukon have been analyzed for flood risk (action T27).

Health and well-being: Ensuring that human health and well-being are protected and enhanced in a changing climate

Climate change can affect health and well-being. It can have both physical and mental impacts. Physical health impacts include the exposure to wildfire smoke and flood damage to homes and buildings, which can lead to mold and other issues. Mental health impacts can come from the stress caused by climate-related events like floods and fires. Ecosystem changes, impacts to cultural and heritage sites, and changes to snow and ice lead to unreliable access to land and culture, which is important for our mental well-being.

The Government of Yukon is supporting actions that strengthen resiliency to the physical and mental impacts of climate change.

By the end of 2023, the Government of Yukon made the following progress:

- **14** Yukon communities have air quality monitoring devices to track air quality changes due to wildfire and biomass use (action P11).
- **14** safety on the land courses have been delivered, reaching an estimated 200 people. These courses offer learning related to safe hunting, fishing and wilderness survival. With a changing climate, accessing the land safely is becoming more important due to unpredictable changes in snow, ice and weather events (action P17).

Environment: Monitoring and responding to the impacts of climate change on our ecosystems

Changing climate conditions are affecting land, water, animals and plants. The Government of Yukon leads a variety of initiatives that protect, restore and monitor changes to the land and water. For example, the Canada-Yukon Nature Agreement took effect in April 2023. Under this agreement, the Government of Canada is supporting the Government of Yukon to increase its protected areas, support Indigenous-led conservation, advance efforts to address cumulative effects on the environment and monitor and protect species at risk.

By the end of 2023, the Government of Yukon made the following progress:

- **80%** of surface and groundwater monitoring stations have climate change indicators identified and analyzed (action P2).
- **23%** of the recommendations from a surface and groundwater monitoring network evaluation have been implemented (action P2).
- **8** climate indicator species are being monitored, including porcupine caribou, polar bear, pika, bats, snowshoe hare, lynx, winter ticks and lake trout (action P4).
- **21.1%** of the Yukon's lands and waters are reported as protected under the Canadian Protected and Conserved Areas Database (action P5).

Goal 4: Build a green economy

We are building a climate resilient and low carbon economy in the Yukon, so that Yukoners have opportunities to pursue reliable, sustainable livelihoods now and for future generations.

The Government of Yukon continues to offer rebates, training programs and information to advance the growth of new green industries, as well as support sustainable innovation in existing sectors, such as tourism and mining.

Actions in Our Clean Future are designed to support our green economy targets. As our population and economy grow, our target is to see our greenhouse gas (GHG) emissions per capita and our greenhouse gas emissions per unit of gross domestic product (GDP) continue to decline.

Target	Progress
By 2030, we will see a reduction in greenhouse gas emissions per capita.	In 2022, each Yukoner produced 16.7 tonnes of emissions on average per person, down from 18.8 tonnes in 2010 (Figure 7). This is based on the Yukon's total greenhouse gas emissions and the number of people living in the territory.
By 2030, we will see a reduction in greenhouse gas emissions per unit of GDP.	In 2022, the Yukon's economy generated 223 tonnes of carbon dioxide equivalent (CO_2e) per unit (millions chained dollars) of real GDP, down from 269 tonnes in 2010. This measure tracks the amount of greenhouse gas emissions (measured in CO_2e) produced for each unit of economic output, which is measured in millions of dollars adjusted for inflation (Figure 8).

Territory-wide demographic and economic factors such as population change and GDP impact the Yukon's greenhouse gas emissions and our resilience to the impacts of climate change. For example, the Yukon's population increased 26 per cent between 2010 and 2022. This increase has been consistent from year to year, growing from approximately 35,000 people in 2010 to 44,000 people in 2022. Although we saw an increase in greenhouse gas emissions in 2022, we continue to see our greenhouse gas emissions per person trend downwards from 2010 levels.

Emissions per person, 2010 to 2022

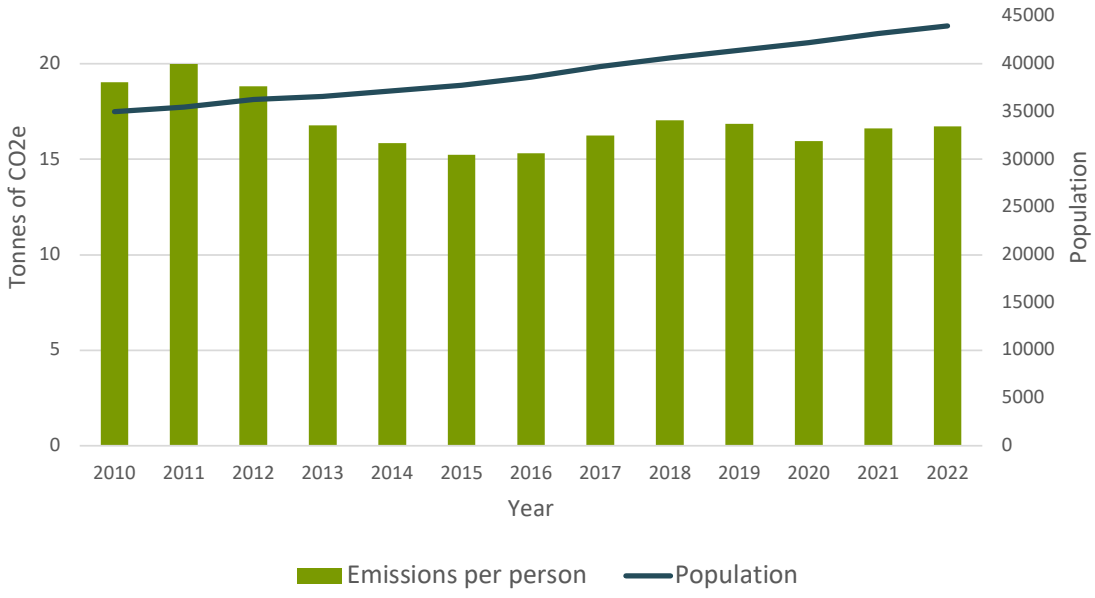


Figure 7: *Greenhouse gas emissions per person.*

While emissions increased slightly in 2022 compared to 2010, emissions per unit of GDP decreased by 17 per cent compared to 2010 (Figure 8).

Emissions per unit of GDP, 2010 to 2022

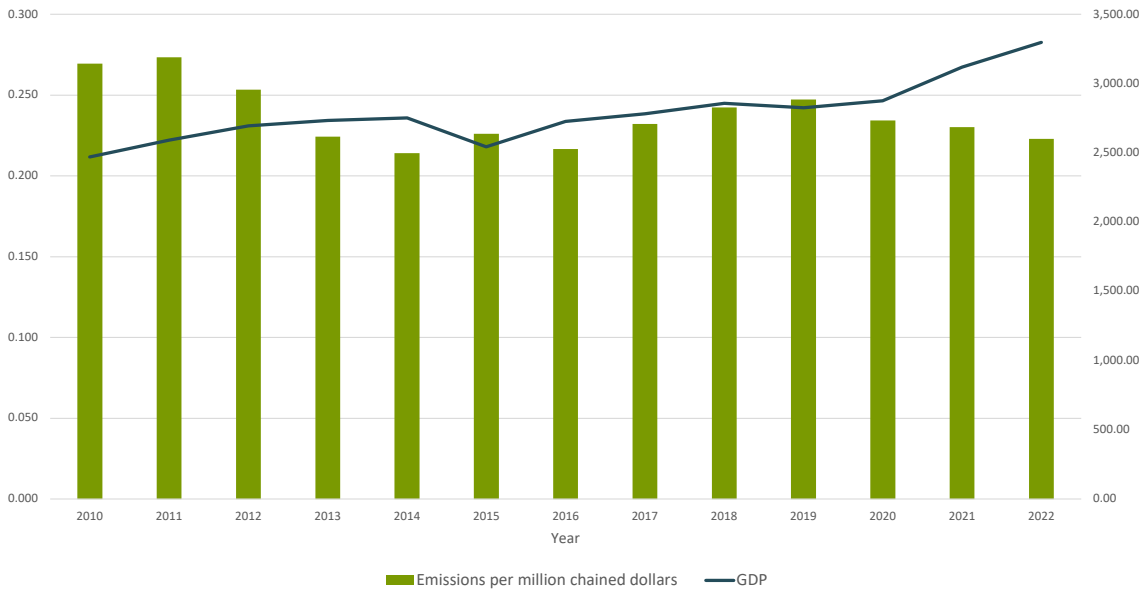


Figure 8: *Greenhouse gas emissions per unit of GDP.*

Progress: Key objectives for building a green economy

To ensure we are building a climate resilient and low carbon economy in the Yukon, we are tracking actions in the following areas:

- Innovation and green business practices.
- Reducing the carbon intensity of mining and ensuring mining projects are prepared for the impacts of climate change.
- Educating and empowering youth as the next generation of leaders.

Innovation and green business practices

Ensuring that Yukoners and their businesses are supported in transitioning to a clean future is key to building a green economy. The Government of Yukon leads several initiatives that provide funding, training and innovation opportunities to businesses that operate in the territory.

By the end of 2023, the Government of Yukon made the following progress:

- **103** Yukoners have participated in green economy professional development opportunities since 2020, with **10** people trained in 2023 (action I4).
- **5** out of 11 Sustainable Tourism indicators are actively being monitored to support the Government of Yukon's sustainable tourism measurement framework (action I10).

- **17** First Nations and municipal agricultural and animal husbandry projects have been supported since 2020, with **6** being completed in 2023 (action C16).
- **6** projects that help agricultural producers adapt to the impacts of climate change, adopt low-carbon practices, and use surface and groundwater efficiently have been funded since 2020, with **2** projects supported since 2023 (action C18).

Reducing the carbon intensity of mining and ensuring mining projects are prepared for the impacts of climate change

Mining intersects with climate change in various ways. Mining activities contribute to greenhouse gas emissions, while some mining products support the transition to a green economy. Mines are also impacted by various climate change hazards, including floods, fires and permafrost thaw. Through Our Clean Future, actions are designed to respond to these factors.

By the end of 2023, the Government of Yukon made the following progress:

- **100%** of quartz mines now need to follow new requirements to ensure they are planned, designed and built to withstand current and projected impacts of climate change, and to ensure that mines report their greenhouse gas emissions annually (action I6; action I7).
- **45%** reduction of greenhouse gas emissions per unit of production by 2035, from 2023 levels has been established as a new mining intensity target for the territory (action I9).

2023 actions

The 26 actions detailed below all have a 2023 timeline. Of these, 21 are complete and 5 are in progress.

Government of Yukon departments and agencies

CS:	Community Services	HPW:	Highways and Public Works
EcDev:	Economic Development	JUS:	Justice
EDU:	Education	PSC:	Public Service Commission
EMR:	Energy, Mines and Resources	TC:	Tourism and Culture
ENV:	Environment	YDC:	Yukon Development Corporation
ECO:	Executive Council Office	YEC:	Yukon Energy Corporation
HSS:	Health and Social Services	YHC:	Yukon Housing Corporation

Transportation

#	Action Name	Lead Dept.	Status
T20	Develop and implement a system by 2023 to coordinate carpooling for Government of Yukon staff travelling by vehicle for work within the Yukon.	HPW	Complete
T21	Develop and implement guidelines for Government of Yukon's fleet by 2023 to ensure appropriate vehicles are used for the task at hand, including prioritizing zero emission vehicles and other low-carbon transportation options.	HPW	Complete
T23	Expand virtual health care services by 2023 to improve access to healthcare while reducing greenhouse gas emissions.	HSS	Complete
T25	Complete a climate change vulnerability study of the road transportation network by 2023 to inform the prioritization of improvements to existing infrastructure being impacted by climate change.	HPW	Complete
T27	Analyze flood risk along critical transportation corridors at risk of flooding by 2023.	ENV	Complete

Homes and buildings

#	Action Name	Lead Dept.	Status
H2	Develop and implement an ongoing energy assessment program by 2023 and continue to assess all high-emitting Government of Yukon buildings every 10 years.	HPW	Complete
H9	Assess ways to ensure Yukoners can access adequate insurance for fires, floods, and permafrost thaw by 2023.	CS	Complete
H11	Assess options to provide financial support for actions to improve the climate resiliency of homes and buildings by 2023.	ENV	Complete

#	Action Name	Lead Dept.	Status
H22	Work with local industry to install and test 25 electric heat pumps with backup fossil fuel heating systems or utility-controlled electric thermal storage from 2020 to 2023.	EMR	Complete
H32	By 2023, incentivise fuel switching for buildings regardless of other retrofit upgrades.	EMR	Complete

Energy

#	Action Name	Lead Dept.	Status
E1	While aiming for an aspirational target of 97 per cent by 2030, develop legislation by 2023 that will require at least 93 per cent of the electricity generated on the Yukon Integrated System to come from renewable sources, calculated as a long-term rolling average.	EMR	In progress
E11	Develop legislation by 2023 to regulate geothermal energy development in Yukon.	EMR	In progress

Communities

#	Action Name	Lead Dept.	Status
C2	Develop flood probability maps for all Yukon communities at risk of flooding by 2023 that incorporate climate change projections.	ENV	In progress

People and the Environment

#	Action Name	Lead Dept.	Status
P7	Work with Yukon First Nations to develop a tailored hunter education program by 2023 that can be adapted and delivered by Yukon First Nations for First Nations citizens.	ENV	Complete
P9	Provide training to healthcare providers beginning in 2023 to be better able to identify and treat the physical and mental health impacts of climate change.	HSS	Complete
P10	Develop a system to enable tracking of climate-related illnesses such as heat stroke, respiratory illness, and vector-borne diseases in the Yukon by 2023.	HSS	Complete
P11	Expand monitoring of concentrations of particulate matter in the air from biomass burning and forest fires to all Yukon communities by 2023.	ENV	Complete

#	Action Name	Lead Dept.	Status
P12	Identify existing buildings in communities that can be used as clean air spaces to protect public health during wildfire smoke events and if necessary, improve existing air filtration systems by December 2023.	HSS	In progress
P13	Provide financial support to vulnerable Yukoners to install cleaner air spaces in their homes and buildings beginning in 2023 to provide protection from wildfire smoke.	YHC	Complete
P14	Analyze existing information on food insecurity in Yukon by 2023 to inform the development of a system to gather food insecurity data into the future.	HSS	Complete

Innovation

#	Action Name	Lead Dept.	Status
I15	Develop and implement a system by 2023 to promote the reuse of government assets throughout the Government of Yukon.	HPW	Complete
I3	Identify and develop options to address potential regulatory and policy barriers to the growth of green businesses in Yukon by 2023.	EcDev	In progress
I4	Expand the range of relevant professional development offerings by 2023 to enable more Yukoners to participate in the green economy.	EMR	Complete

Leadership

#	Action Name	Lead Dept.	Status
L1	Create a Clean Energy Act by 2023 that legislates our greenhouse gas reduction targets and our commitments to energy efficiency and demand-side management to hold the Government of Yukon accountable.	EMR	Complete

#	Action Name	Lead Dept.	Status
L4	Incorporate greenhouse gas emissions and energy efficiency into the process for identifying and prioritizing Government of Yukon building retrofits and new construction projects by 2023.	HPW	Complete
L7	Provide mentorship opportunities for Yukon youth to participate in major international climate change and energy events with Government of Yukon staff beginning in 2023.	ENV	Complete

Appendix A: Status of all Government of Yukon Actions

The table on the following pages lists the status of all of the Government of Yukon's actions in *Our Clean Future* as of the time of preparing this report in spring 2024. Actions with deadlines are classified as "not started," "in progress" or "complete" while actions without deadlines are considered "ongoing."

#	Action	Lead Department	Completion Date	Status
TRANSPORTATION				
T1	Work with local vehicle dealerships and manufacturers to establish a system by 2024 to ensure zero emission vehicles are 10 per cent of light duty vehicle sales by 2025 and 60 per cent by 2030.	EMR	2023	Complete
T2	Continue the electrification of Government of Yukon's vehicle fleet and by 2025 develop vehicle lifecycle management practices that incorporate emissions or greenhouse gas emissions reductions into vehicle replacement decision-making.	HPW	2025	In progress
T3	Provide a rebate to Yukon businesses and individuals who purchase eligible zero emission vehicles beginning in 2020.	EMR	2020	Complete
T4	Continue to install fast-charging stations across Yukon to make it possible to travel between all road-accessible Yukon communities by 2027 and work with neighbouring governments and organizations to explore options to connect Yukon with BC.	EMR	2027	In progress
T5	Provide rebates to support the installation of smart electric vehicle charging stations at residential, commercial and institutional buildings in collaboration with Yukon's public utilities beginning in 2020.	EMR	2020	Complete
T6	Require new residential buildings to be built with the electrical infrastructure to support Level 2 electric vehicle charging beginning on April 1, 2021.	CS	2021	Complete

#	Action	Lead Department	Completion Date	Status
T7	Draft legislation by 2024 that will enable private businesses and Yukon's public utilities to sell electricity for the purpose of electric vehicle charging.	EMR	2024	In progress
T8	Continue to run public education events and campaigns to raise awareness of the benefits of electric vehicles and how they function in cold climates.	EMR	Ongoing	Ongoing
T9	Require all diesel fuel sold in Yukon for transportation to align with the percentage of biodiesel and renewable diesel by volume in leading Canadian jurisdictions beginning in 2025.	EMR	2025	In progress
T10	Require all gasoline sold in Yukon for transportation to align with the percentage of ethanol by volume in leading Canadian jurisdictions beginning in 2025.	EMR	2025	In progress
T11	Provide rebates to encourage the purchase of electric bicycles for personal and business commuting beginning in 2020.	EMR	2020	Complete
T12	Continue to support municipalities and First Nations to make investments in public and active transportation infrastructure.	CS	Ongoing	Ongoing
T13	Develop Yukon-specific design guidance and a plan for active transportation facilities by 2024 to guide investments in active transportation infrastructure into corridors near communities.	HPW	2024	In progress
T14	Update the Government of Yukon's heavy-duty vehicle fleet by 2030 to reduce greenhouse gas emissions and fuel costs.	HPW	2030	In progress
T15	Begin a pilot project in 2021 to test the use of short-haul medium and heavy-duty electric vehicles for commercial and institutional applications within Yukon.	EMR	2021	Complete

#	Action	Lead Department	Completion Date	Status
T16	Starting in 2022 and continuing on an annual basis, ensure that YG staff have efficient driving training to reduce emissions from ongoing operations.	HPW	2022	Complete
T17	Expand the Government of Yukon's video and teleconferencing systems and require employees to consider these options when requesting permission for work travel by 2022.	HPW	2022	Complete
T18	Implement new policies to enable Government of Yukon employees in suitable positions to work from home for the longer term by 2022.	PSC	2022	Complete
T19	Develop and implement requirements by 2024 to guide efficient space use allocation with a goal to reduce underutilized space in Government of Yukon buildings and leases.	HPW	2024	In progress
T20	Develop and implement a system by 2023 to coordinate carpooling for Government of Yukon staff travelling by vehicle for work within the Yukon.	HPW	2023	Complete
T21	Develop and implement guidelines for Government of Yukon's fleet by 2023 to ensure appropriate vehicles are used for the task at hand, including prioritizing zero emission vehicles and other low-carbon transportation options.	HPW	2023	Complete
T22	Incorporate fuel efficiency into purchasing decisions for Government of Yukon fleet vehicles beginning in 2020 to reduce greenhouse gas emissions and fuel costs.	HPW	2020	Complete
T23	Expand virtual health care services by 2023 with a focus on equitable access in order to improve access to healthcare while reducing greenhouse gas emissions.	HSS	2023	Complete

#	Action	Lead Department	Completion Date	Status
T24	Continue to operate the Yukon Rideshare program to make carpooling and other shared travel easier.	ENV	Ongoing	Ongoing
T25	Complete a climate change vulnerability study of the road transportation network by 2023 to inform the prioritization of improvements to existing infrastructure being impacted by climate change.	HPW	2023	Complete
T26	Establish a geohazard mapping program for major transportation corridors by 2022, and continue to monitor prioritized sections to enable geohazard prediction and support maintenance planning.	EMR	2022	Complete
T27	Analyze flood risk along critical transportation corridors at risk of flooding by 2023.	ENV	2023	Complete
T28	Continue to conduct climate risk assessments of all major transportation infrastructure projects above $10 million, such as through the federal Climate Lens assessment.	HPW	Ongoing	Ongoing
T29	By 2025, review the electric vehicle regulatory regime and create a regulatory roadmap for Yukon zero emissions vehicle legislation.	EMR	2025	In progress
T30	Introduce additional rebates for low-speed electric vehicles and electric vehicles that support access to the land by 2025.	EMR	2025	In progress
T31	Initiate a set of pilot projects by 2025 to test the use of renewable fuels for transportation, electricity generation, and heating in private and Government of Yukon assets.	EMR	2025	In progress
T32	Reduce the life cycle carbon intensity of on-road transportation fuel sold in Yukon, aiming for 30% by 2030 and align emissions intensity with BC's Low Carbon Fuel Standard.	EMR	2030	In progress

#	Action	Lead Department	Completion Date	Status
T33	Begin providing a rebate for medium-duty electric vehicles by 2024.	EMR	2023	Complete
T34	By 2025, undertake a climate adaptation study to understand the risks imposed on the Yukon's aviation infrastructure, operations, and maintenance from climate change.	HPW	2025	In progress
T35	By 2025, develop a 20-year transportation network plan that incorporates emissions reductions and resilience in planning for future changes in transportation demand.	HPW	2025	Not started
ENERGY				
E1	While aiming for an aspirational target of 97 per cent by 2030, develop legislation by 2023 that will require at least 93 per cent of the electricity generated on the Yukon Integrated System to come from renewable sources, calculated as a long-term rolling average.	EMR	2023	In progress
E2	Require some of the diesel used to generate electricity on the Yukon Integrated System and in off-grid communities to be substituted with clean diesel alternatives like biodiesel and renewable diesel beginning in 2025, aiming for around 20 per cent.	EMR	2025	In progress
E3	Update the Public Utilities Act by 2025 to ensure an effective and efficient process for regulating electricity in Yukon.	JUS	2025	In progress
E4	Install renewable electricity generation systems in 5 Government of Yukon buildings in off-grid locations by 2025 to reduce reliance on diesel-generated electricity.	HPW	2025	In progress

#	Action	Lead Department	Completion Date	Status
E5	Evaluate the potential to generate renewable electricity at remote historic sites co-managed by the Government of Yukon and Yukon First Nations by 2022.	TC	2022	Complete
E6	Continue to provide financial and technical support for Yukon First Nations, municipalities and community organizations to undertake community-led renewable energy projects.	YDC	Ongoing	Ongoing
E7	Work with Yukon's public utilities to continue to implement the Independent Power Production Policy that enables independent power producers, including Yukon First Nations and communities, to generate and sell electricity to the grid.	YDC	Ongoing	Ongoing
E8	Increase the limit of the Standing Offer Program under the Independent Power Production Policy from 20 gigawatt hours (GWh) to 40 GWh by 2021 to support additional community-based renewable energy projects on Yukon's main electrical grid.	EMR	2021	Complete
E9	Develop a framework by 2022 for First Nations to economically participate in renewable electricity projects developed by Yukon's public utilities.	YDC	2022	In progress
E10	Continue to deliver the Micro-generation Program in collaboration with Yukon's public utilities, targeting 7 megawatts (MW) of installed renewable electricity capacity by 2030.	EMR	2030	Complete
E11	Develop legislation by 2023 to regulate geothermal energy development in Yukon.	EMR	2023	In progress
E12	Research the potential to use of geothermal energy for heating and electricity, with a focus along Yukon fault systems, by 2025.	ENV	2025	In progress

#	Action	Lead Department	Completion Date	Status
E13	Improve modelling of the impacts of climate change on hydroelectricity reservoirs by 2021 and incorporate this information into short, medium and long-term forecasts for renewable hydroelectricity generation.	YEC	2021	Complete
E14	Develop a climate change adaptation plan for the Yukon Energy Corporation by 2022 that will identify risks and appropriate responses to ensure Yukon's main electrical grid is resilient to the impacts of climate change.	YEC	2022	Complete
E15	Implement a glacier monitoring program in 2020 and continue to work with academic partners to improve our ability to track the impacts of glacier melt on hydrological systems and hydroelectricity generation.	EMR	2020	Complete
E16	By the end of 2025, an updated development plan and alternatives analysis for the Yukon-British Columbia grid connect project will be completed.	EMR	2025	In progress
E17	Research a green hydrogen fuel demonstration project with a construction start of 2027 and operating timeframe of 2029.	EMR	2029	In progress
E18	Continue to support development of micro-generation capacity in collaboration with Yukon's public utilities.	EMR	Ongoing	Ongoing
E19	In collaboration with Yukon Energy Corporation, by 2027, undertake a study to improve understanding of groundwater in the Upper Yukon River Basin to inform decision-making related to hydro-electric generation.	EMR	2027	In progress

#	Action	Lead Department	Completion Date	Status
HOMES AND BUILDINGS				
H1	Conduct retrofits to Government of Yukon buildings to reduce energy use and contribute to a 30 per cent reduction in greenhouse gas emissions by 2030.	HPW	2030	In progress
H2	Develop and implement an ongoing energy assessment program by 2023 and continue to assess all high-emitting Government of Yukon buildings every 10 years.	HPW	2030	Complete
H3	Provide low-interest financing to support energy efficiency retrofits to homes and buildings beginning in 2021.	CS	2021	Complete
H4	Continue to provide financial support to assist First Nations and municipalities to complete major energy retrofits to institutional buildings across Yukon, aiming for 30 retrofits by 2030.	EMR	2030	Ongoing
H5	Continue to provide financial support for municipal and First Nations energy efficiency projects.	CS	Ongoing	Ongoing
H6	Continue to work with Yukon First Nations to retrofit First Nations housing to be more energy efficient.	YHC	Ongoing	Ongoing
H7	Continue to retrofit Government of Yukon community housing to reduce greenhouse gas emissions in each building by 30 per cent.	YHC	Ongoing	Ongoing
H8	Continue to provide rebates for thermal enclosure upgrades and energy efficient equipment to reduce energy use in homes and commercial buildings.	EMR	Ongoing	Ongoing
H9	Assess ways to ensure Yukoners can access adequate insurance for fires, floods and permafrost thaw by 2023.	CS	2023	Complete

#	Action	Lead Department	Completion Date	Status
H10	Develop and implement a plan by 2024 to conduct routine monitoring of the structural condition of Government of Yukon buildings located on permafrost.	HPW	2024	In progress
H11	Assess options to provide financial support for actions to improve the climate resiliency of homes and buildings by 2023.	ENV	2023	Complete
H12	Work with the Government of Canada to develop and implement building codes suitable to northern Canada that will aspire to see all new residential and commercial buildings be net zero energy ready by 2032.	CS	2032	In progress
H13	Continue to require all new Government of Yukon buildings to be designed to use 35 per cent less energy than the targets in the National Energy Code 2017 for Buildings, in accordance with the Government of Yukon's Design Requirements and Building Standards Manual.	HPW	Ongoing	Ongoing
H14	Adopt and enforce relevant building standards by 2030 that will require new buildings to be constructed to be more resilient to climate change impacts like permafrost thaw, flooding and forest fires.	CS	2030	Not started
H15	Continue to conduct climate risk assessments of all major building projects over $10 million that are built or funded by the Government of Yukon.	CS	Ongoing	Ongoing
H16	Continue to provide rebates for new homes that are net zero energy ready, aiming for 500 homes by 2030.	EMR	2030	In progress
H17	Install renewable heat sources such as biomass energy in Government of Yukon buildings by 2030 to create long-term demand for renewable heating and contribute to a 30 per cent reduction in greenhouse gas emissions.	HPW	2030	In progress

#	Action	Lead Department	Completion Date	Status
H18	Provide low-interest financing to install smart electric heating devices in residential, commercial and institutional buildings in collaboration with Yukon's public utilities beginning in 2021.	CS	2021	Complete
H19	Provide low-interest financing to install biomass heating systems in commercial and institutional buildings beginning in 2021.	CS	2021	Complete
H20	Continue to assist First Nations to complete feasibility studies for the installation and operation of biomass heating systems.	EMR	Ongoing	Ongoing
H21	Continue to provide rebates for residential, commercial and institutional biomass heating systems and smart electric heating devices and increase the current rebate for smart electric heating devices beginning in 2020.	EMR	2020	Complete
H22	Work with local industry to install and test 25 electric heat pumps with backup fossil fuel heating systems or utility-controlled electric thermal storage from 2020 to 2023.	EMR	2023	Complete
H23	Identify regulatory improvements that could support the growth of Yukon's biomass energy industry during the review of the Forest Resources Act by 2022.	EMR	2022	In progress
H24	Amend the Air Emissions Regulations by 2025 in order to regulate air emissions from commercial and institutional biomass burning systems to minimize the release of harmful air pollutants.	ENV	2025	In progress
H25	Analyze and compare the climate benefits of different types of biomass harvesting and use in Yukon by 2021 in order to identify recommended forest management practices to guide sustainable and low-carbon biomass use.	ENV	2021	Complete

#	Action	Lead Department	Completion Date	Status
H26	Provide direction to the Yukon Utilities Board in 2020 to allow Yukon's public utilities to partner with the Government of Yukon to pursue cost-effective demand-side management measures.	YDC	2020	Complete
H27	Establish a partnership between the Government of Yukon, Yukon Energy Corporation and ATCO Electric Yukon by 2021 that will collaborate on the delivery of energy and capacity demand-side management programs.	EMR	2021	Complete
H28	Complete the Peak Smart pilot project by 2022 to evaluate the use of smart devices to shift energy demand to off-peak hours.	YEC	2022	Complete
H29	Implement an education campaign for Government of Yukon building occupants and visitors by 2026 to encourage more energy efficient behaviours.	HPW	2026	In progress
H30	Work with partners to contribute to net 30 per cent greenhouse gas reductions from the Government of Yukon's building portfolio by 2030.	HPW	2030	In progress
H31	Develop and implement a recommissioning program by 2025 that focuses on energy efficiency and staff education for lasting performance improvements in Government of Yukon buildings.	HPW	2025	In progress
H32	By 2023, incentivise fuel switching for buildings regardless of other retrofit upgrades.	EMR	2023	Complete
H33	Create a funding program by 2025 for low-income Yukoners to switch from fossil fuels to smart electric heating systems.	EMR	2025	In progress

#	Action	Lead Department	Completion Date	Status
H34	Ensure that legislative barriers are removed so that buildings constructed after 2025 and 2027 are required to meet Tier 3 and Tier 4, respectively of the National Building Code of Canada 2020.	CS	2027	In progress
H35	Reduce the life cycle carbon intensity of heating oil sold in Yukon, aiming for 30% by 2030 and align emissions intensity with BC's Low Carbon Fuel Standard.	EMR	2030	In progress
PEOPLE AND THE ENVIRONMENT				
P1	Establish a standardized method to determine the health status of wetland ecosystems and complete a pilot study to measure the baseline conditions of various reference wetlands by 2022 to better understand future changes.	ENV	2022	Complete
P2	Adapt existing surface and groundwater monitoring networks by 2026 to be able to track long-term trends in water quality and quantity in a changing climate.	ENV	2026	In progress
P3	Continue to lead and participate in projects that improve our understanding of how climate change is affecting ecosystems, wild species and their habitats.	ENV	Ongoing	Ongoing
P4	Report annually on monitoring of key species that will provide an indication of the impacts of climate change on Yukon ecosystems and expand monitoring to more taxonomic groups.	ENV	Ongoing	Ongoing
P5	Establish a network of protected and managed areas that is ecologically representative and well connected using landscapes conservation science and Indigenous knowledge in order to allow native species, assemblages and ecosystems, to move adapt and survive in the face of climate change.	ENV	Ongoing	Ongoing

#	Action	Lead Department	Completion Date	Status
P6	Conduct a climate vulnerability assessment to inform an invasive species management strategy for the Yukon, and develop a centralized data repository to track new and invasive species to Yukon by 2027.	ENV	2027	In progress
P7	Work with Yukon First Nations to develop a tailored hunter education program by 2023 that can be adapted and delivered by Yukon First Nations for First Nations citizens.	ENV	2023	Complete
P8	Work collaboratively with First Nations and the Inuvialuit to document information from historic sites and culturally important places on the North Slope that are at risk due to climate change by 2024.	TC	2023	Complete
P9	Provide training to healthcare providers beginning in 2023 to be better able to identify and treat the physical and mental health impacts of climate change.	HSS	2023	Complete
P10	Develop a system to enable tracking of climate-related illnesses such as heat stroke, respiratory illness, and vector-borne diseases in the Yukon by 2023.	HSS	2023	Complete
P11	Expand monitoring of concentrations of particulate matter in the air from biomass burning and forest fires to all Yukon communities by 2023.	ENV	2023	Complete
P12	Identify existing buildings in communities that can be used as clean air spaces to protect public health during wildfire smoke events and if necessary improve existing air filtration systems by December 2023.	HSS	2023	In progress
P13	Provide financial support to vulnerable Yukoners to install cleaner air spaces in their homes and buildings beginning in 2023 to provide protection from wildfire smoke.	YHC	2023	Complete

#	Action	Lead Department	Completion Date	Status
P14	Analyze existing information on food insecurity in Yukon by 2023 to inform the development of a system to gather food insecurity data into the future.	HSS	2023	Complete
P15	By 2027, design remote sensing methods and conduct at least two remote sensing pilot projects for improved forest resources inventory and for forest health monitoring.	EMR	2027	In progress
P16	By 2026, work with First Nations and communities to address a gap in lake-monitoring to capture changes in water in order to support fish habitat protection and community safety.	ENV	2026	In progress
P17	Starting 2024, deliver a series of safety on the land and hunter safety course in communities on an annual basis.	ENV	2024	In progress
P18	Undertake geohazard and/or flood risk hazard assessments for Yukon campgrounds and other key public infrastructure in territorial parks by 2030.	ENV	2030	In progress
P19	Analyze the contribution of health and social services to Yukon's greenhouse gas emissions, including medical travel by 2027, to inform the basis of decarbonizing or reducing Yukon's health sector carbon footprint.	HSS	2027	In progress
P20	Provision of portable clean air shelters for use in remote locations by 2026 to reduce negative health impacts to firefighters.	CS	2026	Not started

#	Action	Lead Department	Completion Date	Status
COMMUNITIES				
C1	Expand geohazard map coverage to all Yukon communities with a high risk of permafrost thaw by 2025, in order to monitor community geohazards to better predict events, support adaptation and emergency response.	EMR	2025	In progress
C2	Develop flood probability maps for all Yukon communities at risk of flooding by 2023 that incorporate climate change projections.	ENV	2023	In progress
C3	Develop detailed guidelines by 2025 that can be used by the Government of Yukon and partners to develop walkable, bike-friendly and transit-oriented communities.	ENV	2025	In progress
C4	Continue to develop, encourage and apply applicable climate resiliency standards to community design and infrastructure development projects built by or receiving capital funding from the Government of Yukon.	CS	Ongoing	Ongoing
C5	Continue to conduct detailed climate change risk assessments of all major community infrastructure projects over $10 million that are built or funded by the Government of Yukon.	CS	Ongoing	Ongoing
C6	Upon review and updating of Land Use Plans, ensure that the climate change-related information is up-to-date and if consensus reached with First Nations partners incorporated into the plans.	EMR	Ongoing	Ongoing
C7	Continue to provide technical and administrative support to Yukon First Nations and municipalities to prepare integrated asset management plans that inform climate resilient infrastructure investments.	CS	Ongoing	Ongoing

#	Action	Lead Department	Completion Date	Status
C8	Expand monitoring networks and improve modelling tools to generate reliable daily flood forecasts and relevant warnings for all at-risk Yukon communities by 2024.	ENV	2024	In progress
C9	Work with First Nations and municipalities to develop Wildfire Protection Plans for all Yukon communities by 2026 and to complete the forest fuel management activities outlined in the plans by 2030.	CS	2030	In progress
C10	Increase the capacity in Yukon Wildland Fire to prevent wildfires and respond to extended fire seasons by investing in staffing in 2020.	CS	2020	Complete
C11	Complete hazard identification and risk assessments (HIRAs) for all Yukon communities by 2022 that include climate change risks.	CS	2022	In progress
C12	Work with First Nations and municipalities to complete emergency management plans for all Yukon communities by 2022 informed by community hazard identification and risk assessments (HIRAs).	CS	2022	In progress
C13	Develop a territorial disaster financial assistance policy by 2022 to support recovery from natural disasters that result in extensive property damage or disruption to the delivery of essential goods and services.	CS	2022	Complete
C14	Incorporate support, where possible, for local food producers into Government of Yukon procurement processes beginning in 2020.	HPW	2020	Complete
C15	Continue to provide funding for community gardens and greenhouses, especially in rural communities.	EMR	Ongoing	Ongoing

#	Action	Lead Department	Completion Date	Status
C16	Continue to provide technical advice to assist First Nations and municipal governments with their agricultural and animal husbandry projects.	EMR	Ongoing	Ongoing
C17	Continue to conduct and provide access to funding for research on how climate change could affect local agriculture.	EMR	Ongoing	Ongoing
C18	Continue to support agricultural producers to adapt to the impacts of climate change, adopt low-carbon practices and use surface water and groundwater efficiently.	EMR	Ongoing	Ongoing
C19	By 2027, establish a geohazard monitoring program for priority hazards identified through Our Clean Future around communities and along critical transportation corridors.	EMR	2027	In progress
C20	Identify and implement best practices and guidelines by 2027 to ensure community infrastructure is resilient to the impacts of climate change.	CS	2027	In progress
C21	Plant 300,000 deciduous seedlings in high-priority forest fuel management areas throughout Yukon to transition landscapes to deciduous forest and reduce wildfire hazard by 2027.	CS	2027	In progress
C22	By 2025, develop terms and conditions for business support programs, as well as departmental operating procedures, ready to be used in the event of a climate change driven natural disaster in the Yukon.	EcDev	2025	In progress
C23	By 2027, increase forecasting capacity by hiring a meteorologist and data scientist to improve available systems, digital tools and reporting structures for emergency preparedness and response in recognition of the increasing frequency, severity and impacts of fires, floods and weather.	CS	2027	In progress

#	Action	Lead Department	Completion Date	Status
C24	Develop flood information platform(s) to inform emergency planning, response and other community needs, incorporating relevant data, advisories and local observations as needed, by 2028.	CS	2028	In progress
C25	Review and update emergency preparedness communications that support household resilience to climate-related hazards including flooding, fires, landslides and power outages by 2025.	CS	2025	In progress
C26	In partnership with the governments of Northwest Territories and Canada, complete a research project between 2023 and 2028 to understand the different impacts land clearing methods have on greenhouse gas emissions and soil health.	EMR	2028	In progress
C27	Complete a research project by 2025 that evaluates low carbon livestock management approaches such as agroforestry.	EMR	2025	In progress
C28	Between 2023 and 2027, work with Yukon farmers and producers to complete at least three new or renewed Environmental Farm Plans per year.	EMR	2027	In progress
INNOVATION				
I1	Incorporate greenhouse gas emissions into the decision-making process for Department of Economic Development funding programs by 2022.	EcDev	2022	Complete
I2	Develop procurement guidance, operational requirements, and a collection of evaluation criteria to better support sustainable and local procurement, by 2024.	HPW	2024	In progress

#	Action	Lead Department	Completion Date	Status
I3	Identify and develop options to address potential regulatory and policy barriers to the growth of green businesses in Yukon by 2023.	EcDev	2023	In progress
I4	Expand the range of relevant professional development offerings by 2023 to enable more Yukoners to participate in the green economy.	EMR	2023	Complete
I5	Create an award program by 2022 to recognize the achievements of local green businesses and organizations.	EcDev	2022	Complete
I6	Include new provisions in quartz mine licenses by 2022 that will ensure critical mine infrastructure is planned, designed and built to withstand current and projected impacts of climate change.	EMR	2022	Complete
I7	Require quartz mines to project their anticipated greenhouse gas emissions, identify measures to reduce emissions, and annually report greenhouse gas emissions through the quartz mine licensing process beginning in 2022.	EMR	2022	Complete
I8	Increase the Government of Yukon's participation in intergovernmental initiatives related to mine resiliency, low-carbon mining and innovation by 2021.	EMR	2021	Complete
I9	Establish an intensity-based greenhouse gas reduction target for Yukon's mining industry and additional actions needed to reach the target by 2022.	EMR	2022	Complete
I10	Establish and implement a framework to measure the sustainability of tourism development in Yukon by 2021.	TC	2021	Complete
I11	Develop and implement a system to track greenhouse gas emissions from Yukon's tourism industry by 2021.	TC	2021	Complete

#	Action	Lead Department	Completion Date	Status
I12	Assess options for establishing a comprehensive waste diversion system in Government of Yukon buildings, including reuse, recycling, compost and e-waste collection by 2030.	HPW	2030	In progress
I13	Develop legislation that will enable the Government of Yukon to restrict or prohibit the production, supply or distribution of appropriate single use bags by 2021.	ENV	2021	Complete
I14	Design and implement a system for Extended Producer Responsibility by 2025 that will make producers responsible for managing materials through the lifecycle of a product.	ENV	2025	In progress
I15	Develop and implement a system by 2023 to promote the reuse of government assets throughout the Government of Yukon.	HPW	2023	Complete
I16	By 2025, establish a business incentive program that reallocates 100 per cent of proceeds from the federal Output-Based Pricing System to support industrial facilities in reducing their greenhouse gas emissions intensity.	EMR	2025	In progress
I17	By 2025, undertake a needs assessment and related analysis to include the green labour market in the Yukon Labour Market Development Strategy.	EMR	2025	In progress
I18	Conduct research by 2026 evaluating possibilities for supporting and incentivizing use of lower embodied-carbon materials and locally produced materials in Yukon homes and buildings.	EMR	2026	In progress

#	Action	Lead Department	Completion Date	Status
LEADERSHIP				
L1	Create a Clean Energy Act by 2023 that legislates our greenhouse gas reduction targets and our commitments to energy efficiency and demand-side management to hold the Government of Yukon accountable.	EMR	2023	Complete
L2	Incorporate a climate change lens into the decision-making process for major Government of Yukon policies, programs and projects by 2021.	ENV	2021	Complete
L3	Incorporate climate change risks into Government of Yukon departmental planning processes by 2022.	ENV	2022	Complete
L4	Incorporate greenhouse gas emissions, energy efficiency into the process for identifying and prioritizing Government of Yukon infrastructure retrofits projects by 2023, with additional considerations for climate adaptation starting in 2025.	HPW	2023	Complete
L5	Launch a suite of climate change training to offer to Government of Yukon employees, including decision makers, by 2025.	ENV	2025	Complete
L6	Create a Youth Panel on Climate Change in 2020 that will provide advice and perspectives to the Government of Yukon on climate change, energy and green economy matters that reflects the diversity of Yukon youth.	ECO	2020	Complete
L7	Provide mentorship and engagement opportunities for Yukon youth, including participating in territorial and major international climate change and energy events with Government of Yukon staff beginning in 2023.	ENV	2023	Complete
L8	Continue to support land-based programs in the Yukon school curriculum that teach First Nations ways of knowing and doing to youth.	EDU	Ongoing	Ongoing

#	Action	Lead Department	Completion Date	Status
L9	Assess climate hazards and vulnerabilities to those hazards across Yukon every three to four years between 2020 and 2030 to prioritize climate change adaptation actions.	ENV	2030	In progress
L10	Support the Government of Canada's work to develop a pan-territorial climate hub by 2030 that will support access to climate data and projections for the North.	ENV	2030	In progress
L11	Begin participating in the National Forest Inventory monitoring program in 2022 to gather information about forest carbon stocks, potential biomass energy supply, pest and forest fire risks, and climate impacts on Yukon's forests.	EMR	2022	In progress
L12	Create easy access to technical information and lessons learned about climate change, energy and green economy for governments and stakeholders by 2021.	ENV	2021	Complete
L13	Launch a Yukon-wide information or social marketing campaign in 2021 that will educate Yukoners on greenhouse gas emissions, renewable energy, climate change adaptation, and other topics and highlight what Yukoners can do to support climate change initiatives.	ENV	2021	Complete
L14	Develop and implement new guidelines for addressing climate change hazard, including opportunities for safe community centres, in all major Government of Yukon infrastructure projects in the Yukon by 2024.	HPW	2024	In progress
L15	Develop and implement a framework to incorporate greenhouse gas emissions and climate risk into government infrastructure investments in 2024.	HPW	2024	In progress
L16	Align the Government of Yukon's energy management program with an internationally standardized energy management system by 2025.	HPW	2023	Complete
L17	By 2030, finalize a net-zero and just transition plan in collaboration with Indigenous and municipal and industry partners.	ENV	2030	In progress

#	Action	Lead Department	Completion Date	Status
L18	Incorporate climate change considerations throughout Government of Yukon's asset management process for buildings by 2025.	HPW	2025	In progress
L19	Integrate climate change into the current Yukon curriculum, and support educators in developing Yukon specific climate change courses by 2027.	EDU	2027	Not started
L20	Implement a First Nations Credit Policy by 2024 to allow students to gain course credits for traditional and on-the-land activities to support connection to the land and the changing climate.	EDU	2024	In progress
L21	Complete an assessment of wetland soil carbon reserves within priority watersheds by 2027.	ENV	2027	Not started
L22	By 2027, establish at least 75 new forestry research plots to support research, planning and reporting on forest carbon stocks, potential biomass energy supply, forest health and forest fire risks.	EMR	2027	In progress
L23	By 2024, work with various levels of Government to develop guidance on greenhouse gas emissions accounting practices that support consistent, simple and transparent reporting of emission reductions.	ENV	2024	In progress

Appendix B: Status of all Partner Actions

Action	Led by	Progress update
The Beaver Creek Solar project.	White River First Nation	The Beaver Creek Solar project continues to advance. The project will soon supply renewable energy to Beaver Creek and White River First Nation.
Construction and heating of a Solid Waste Diversion Centre.	City of Dawson	Completed in 2022. In 2023, a new groundwater sourced heat pump was installed at the new solid waste diversion center.
Investigate replacing the Bylaw vehicle with a Plug-in-Hybrid Electric Vehicle (PHEV) rather than an EV to negate winter range anxiety.	City of Dawson	Budgeted for 2026.
Switch from oil to propane heat for the City Hall/Fire Hall building and install a heat pump.	City of Dawson	In progress: Substantial progress achieved, final inspections and project close expected in July 2024.
Implementing a modern Building Management System for the City Hall/Fire Hall to increase the efficiency of all HVAC components.	City of Dawson	Complete
Investigating energy mapping of the Dawson area in a possible collaboration with the Tr'ondëk Hwëch'in.	City of Dawson	Complete
Investigation into partnership with other government entities to tie in existing City of Dawson buildings into a district biomass heat plant.	City of Dawson	In progress
Develop new waste management program to incentivize waste reduction, recycling, and composting.	City of Dawson	In progress
Explore and implement a comprehensive composting program to encourage and/or incentivize increased diversion of food waste.	City of Dawson	In progress: Compost transfer stations are active. Curbside compost collection is a City Council priority. Waste Management plan proposals and policy changes are ongoing and are a community priority.
Implement challenge-based campaigns to encourage behavioral shifts on walking and active transportation, as well as on topics such as vehicle use, energy use, and waste.	City of Dawson	In progress: A subsidized composting unit pilot project will be implemented in winter 2024. Waste management changes are ongoing, including the use of tipping fees

Action	Led by	Progress update
Implement a water metering and bleeder reduction program.	City of Dawson	In progress: Water metering program installations are complete, and mock billing is set to take place in the fall or winter of 2024.
Develop a policy for municipal operations and events, including with respect to resource use, waste, and energy efficiency.	City of Dawson	In progress: Energy consumption tracking for every building takes place on a daily basis.
Quantifying the effects of placer mining and reclamation activities on peatland greenhouse gas emissions and removals in Yukon.	Wildlife Conservation Society (WCS) Canada	In progress: Wildlife Conservation Society (WCS) Canada is leading a new 4-year project to better understand the impacts of placer mining on peatland carbon storage and greenhouse gas (GHG) emissions and removals in Yukon. Peatlands across the Yukon store a large amount of irrecoverable carbon (~500 million tonnes) that is important for the global climate. If disturbed, this stored carbon is released as climate warming GHGs (mainly carbon dioxide and methane). Our research with our partners will help inform methods and approaches for placer mining and reclamation in peatland areas.

Appendix C: Reporting on the *Clean Energy Act*

Photo credit: Erik Pinkerton

The *Clean Energy Act* (2022) commits to reporting annually on the Yukon's total greenhouse gas emissions and greenhouse gas emissions, excluding mining. The legislation also requires that the Government of Yukon reports on the actions being undertaken or planned to meet:

- The 45 per cent and net-zero greenhouse gas reduction targets:
  - The target for total greenhouse gas emissions in Yukon, including mining sector emissions, for 2050 and subsequent years is net-zero emissions.
  - The reduction target for total greenhouse gas emissions in Yukon, not including mining sector emissions, for 2030 and subsequent years is a reduction of 45 per cent from the total greenhouse gas emissions in Yukon in 2010.
- Renewable heating sources target: The target for the amount of energy used to heat buildings in Yukon that is sourced from renewable energy sources for 2030 and subsequent years is 50 per cent.
- Zero-emission vehicles targets: The following are the targets for new light duty motor vehicles sold or leased in Yukon in a year that are to be zero-emission vehicles: a) from 2025 to 2029, at least 10 per cent; (b) in 2030 and each subsequent year, at least 30 per cent.

Commitment	Status	How it connects to the target
Greenhouse gas emissions targets		
Greenhouse gas emissions in Yukon, including mining sector emissions	735.4 kilotonnes of carbon dioxide equivalent (in calendar year 2022)	Total emissions are currently ten per cent higher than in 2010. All emissions will need to be eliminated or otherwise offset by 2050.
Greenhouse gas emissions in Yukon, not including mining sector emissions	618.1 kilotonnes of carbon dioxide equivalent (in calendar year 2022)	Non-mining emissions are currently six per cent higher than in 2010. Emissions will need to be reduced to 321 kilotonnes by 2030.
Renewable heating sources target		
The amount of energy used to heat buildings in Yukon that is sourced from renewable energy sources for 2030 and subsequent years is 50 per cent	32 per cent of the energy used to heat Yukoners homes in 2023 came from renewable sources.	This represents an increase of six percentage points compared to 2009, when 26 per cent of energy for heating came from renewable sources.

Commitment	Status	How it connects to the target
Zero-emission vehicles targets		
Percentage of light-duty zero emission vehicle sales relative to total light-duty vehicle sales during the reporting year.	6.1 per cent	114 battery electric or plug-in hybrid vehicles were newly registered in the Yukon in 2023. 1882 total light-duty vehicles were registered in 2023.