



Accelerating Climate Action in the Bow Valley



This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'aouoi financier de :



Environment and
Climate Change Canada

Environ
Change

We acknowledge that we are on territory known as Treaty 7, which is a treaty signed on behalf of Queen Victoria in 1877, with the Stoney Nakoda Nations: Bearspaw, Chiniki, and Goodstoney, Nations of the Blackfoot Confederacy: Kainai, Piikani, and Siksika, and Tsuut'ina Nation, as well as the Métis Nation of Alberta, Region 3.

Canmore and all of the Bow Valley is located on the traditional lands of Indigenous Peoples. Historically, there is a long-standing connection to the Bow Valley around Canmore for many Indigenous nations – Stoney Nakoda, Blackfoot, Tsuut'ina, Ktunaxa, Secwépemc, Dene, Mountain Cree, and Métis.





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Our goals:

- Collective buy-in and greater alignment in our efforts to address climate change in the Bow Valley and beyond
- Climate action is viewed as an investment in thriving, healthy and resilient communities
- Barriers are removed so that diverse perspectives are included
- Citizens and communities have ample resources to take meaningful action.



How will we accelerate climate action across the Bow Valley?

- Build a coordinated and unified approach with aligned actions by partners and citizens
- Build knowledge and capacity across the Bow Valley
- Focus on both mitigation and adaptation
- Focus on climate justice – actions which help but do not harm the most vulnerable
- Focus on policy change



At the end of today we'll reflect on:

- What barriers need to be removed?
- What partnerships or collaborations might be helpful?
- How can I bring more people into solutions?

Today's Agenda

1:00 - 2:15 Presentations

2:15 - 2:30 Break

2:30 - 3:00 Discussion groups

3:00 - 3:15 Engagement opportunities

3:15 - 3:45 Marketplace of Ideas

3:45 - 4:30 Putting this all together



Last year's meeting we asked what projects do you want to see in 5 areas:

Action groups in:

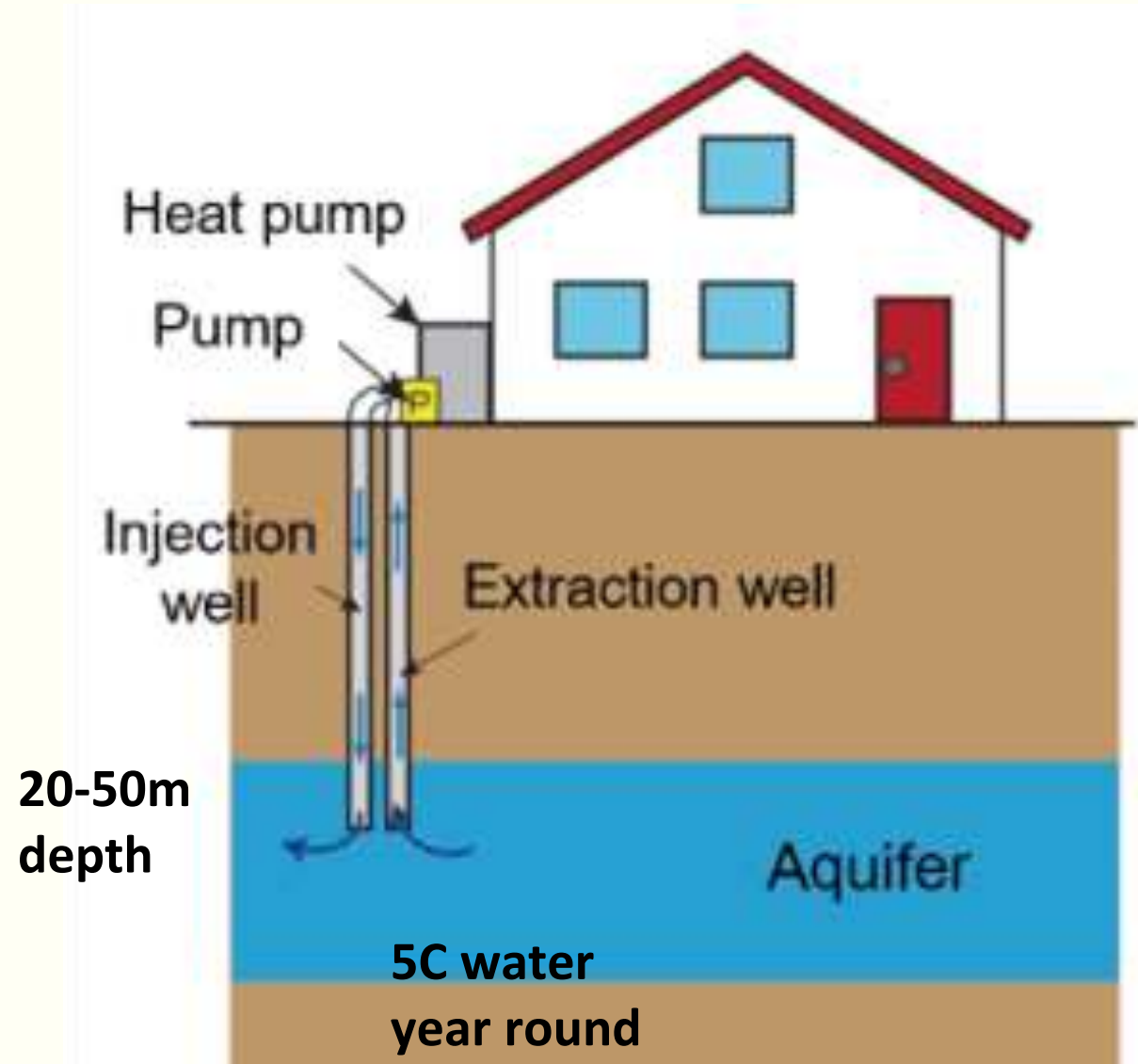
- Buildings
- Waste/Circular Economy
- Nature Based Solutions
- Transportation
- Renewable Energy



Buildings

Buildings make up about **33%** of Canmore's community emissions (2021).

Geoexchange heating and cooling produces 6.5 times less GHG emissions than a gas furnace



Geoexchange Action group

Research questions:

- Map Hydrogeology of Bow Valley to determine suitability
- Model energy requirements of a duplex, apartment building and hotel
- Cost analysis of different heating and cooling options for these buildings



Geoexchange Action group

Partnership with:

- Three Masters Students from University of Calgary's Energy Simulation Centre for Geothermal Systems Research
- Town of Banff
- Town of Canmore
- MD of Bighorn
- Canmore Community Housing



What we found out:

- The Valley bottom is great for geoexchange
- Massive GHG savings - 6.5 times less GHG emissions than gas furnace
- Expensive up front but pays for itself over time
- Air source Heat pumps a great option for existing homes



Next Steps

- Share results of final report
- Full hydrogeology map of the Bow Valley
- How can we encourage uptake of Geoexchange?
- Demonstration projects



Waste/Circular Economy





20,000
tonnes of
Class III
waste
annually



35% or
7,000
tonnes is
Landfilled



Estimated
40-year
lifespan
remaining

Building Better in the Bow Valley



CLEAN SWEEP WASTE REMOVAL

The Solution



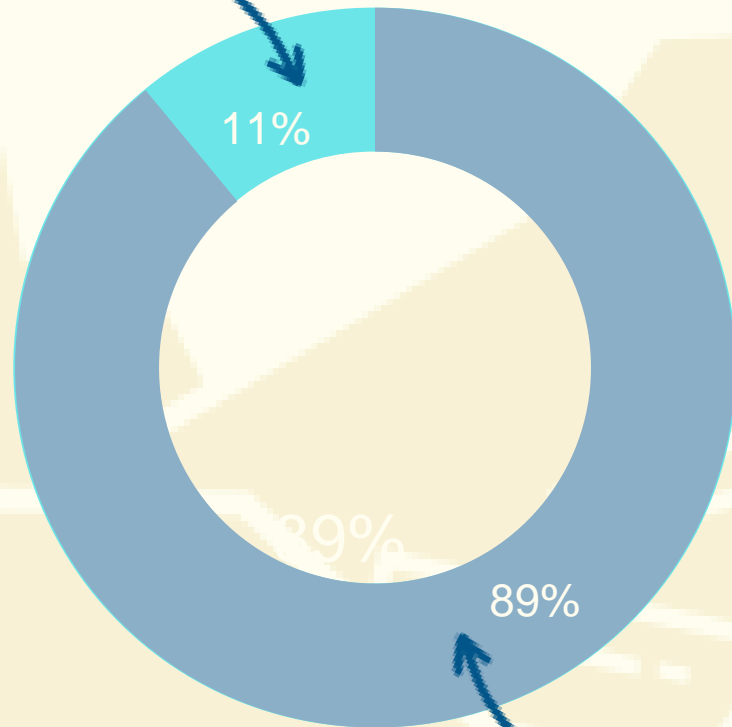
Circular Opportunity
Innovation Launchpad

Remove Barriers to Source Separation



DEMONSTRATION SITE #1

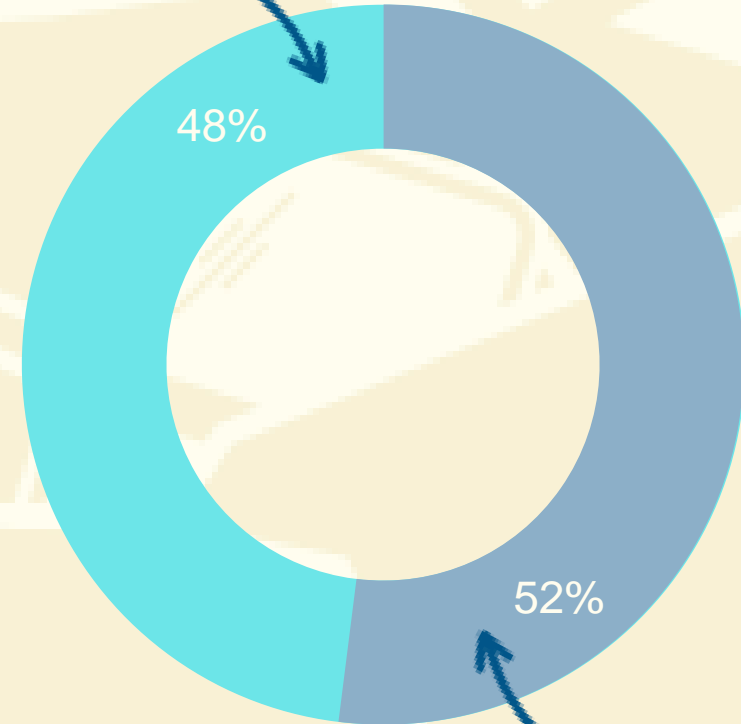
RECYCLED



LANDFILLED

PRE-PILOT RECYCLING
RATE

RECYCLED



LANDFILLED

MID-PILOT RECYCLING
RATE

Circular economy - Moving from single use to Reusable cups and containers

Waste - Soil handling protocol research

Nature based Solutions - Capacity building

Transportation - Coming in 2024





BIOSPHERE
INSTITUTE OF THE BOW VALLEY

Speakers

www.biosphereinstitute.org/accelerating-climate-action



Daryl Kootenay



TOGETHER IS BETTER: COMMUNITY GENERATION

ACCELERATING CLIMATE ACTION



BIOSPHERE
INSTITUTE OF THE BOW VALLEY

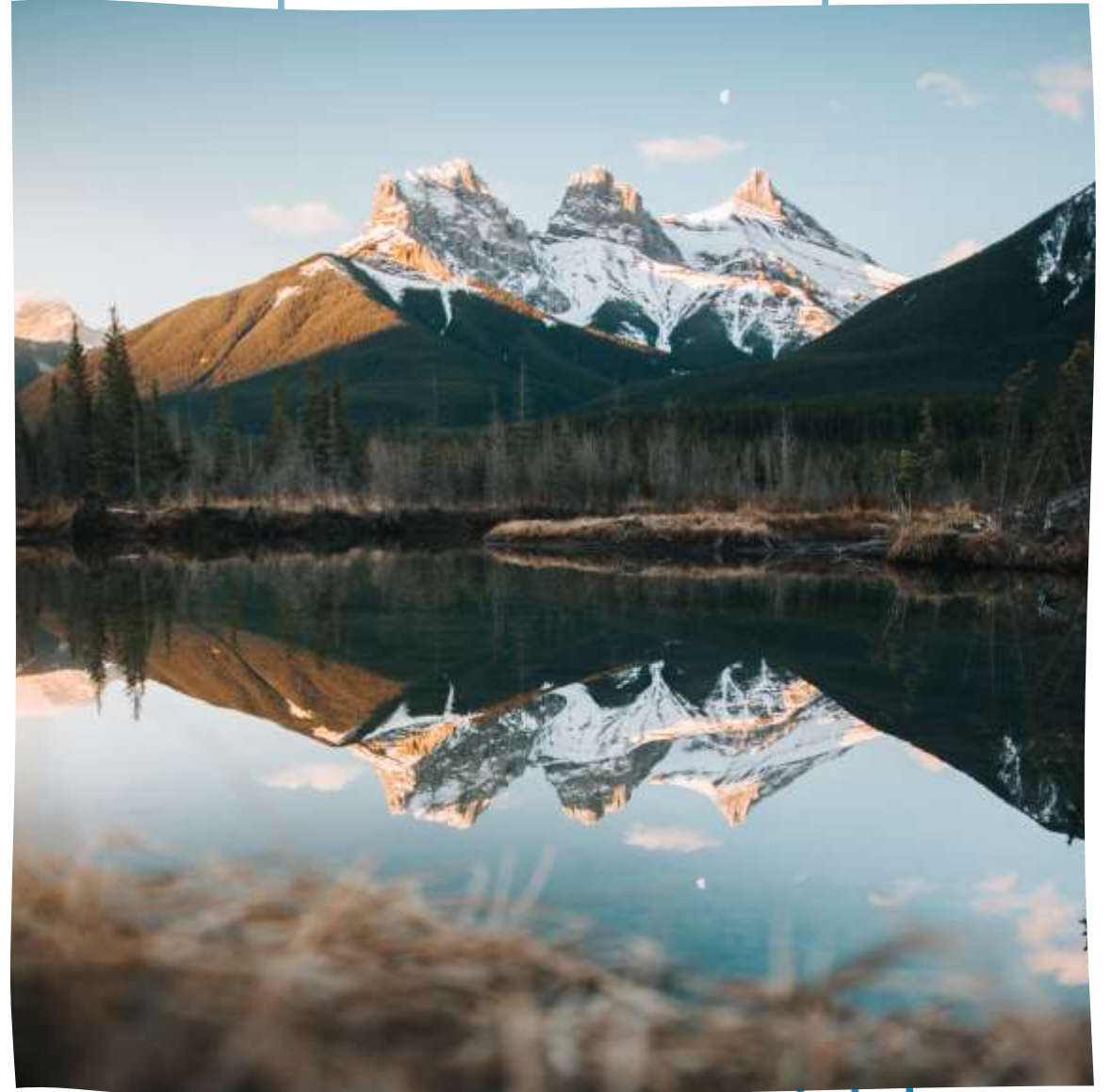


**BOW VALLEY
GREEN ENERGY
COOPERATIVE**

The image features a solid teal rectangular background. Centered on this background is the text "THE PROBLEM" in a white, bold, sans-serif font. The text is arranged in two lines: "THE" on the top line and "PROBLEM" on the bottom line. Surrounding the teal rectangle are several sets of white concentric circles of varying sizes, positioned at the top-left, top-right, and bottom-left corners, creating a modern, geometric aesthetic.

THE PROBLEM

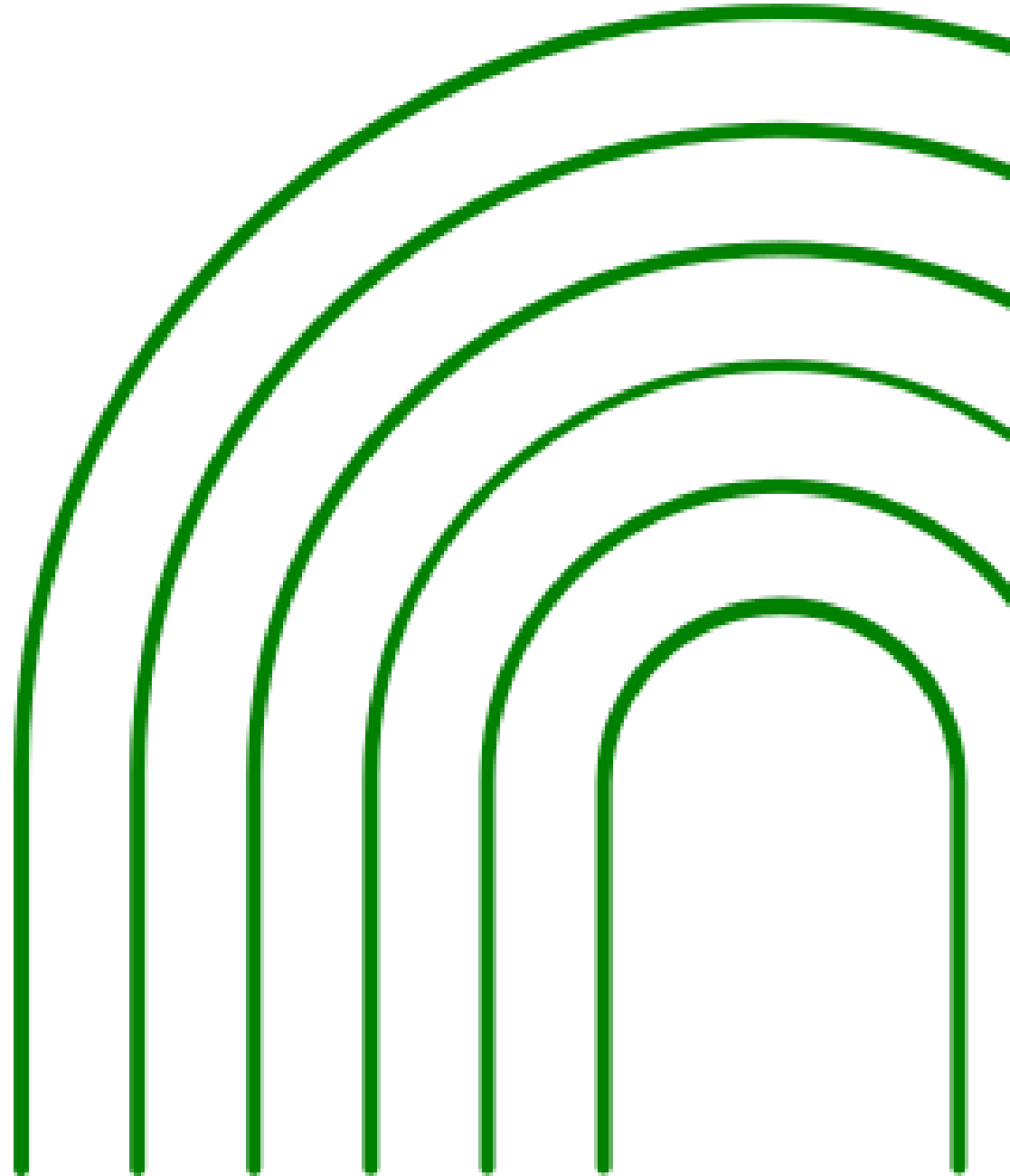
MOUNTAIN
ENVIRONMENTS ARE
ALREADY FEELING
THE EFFECTS



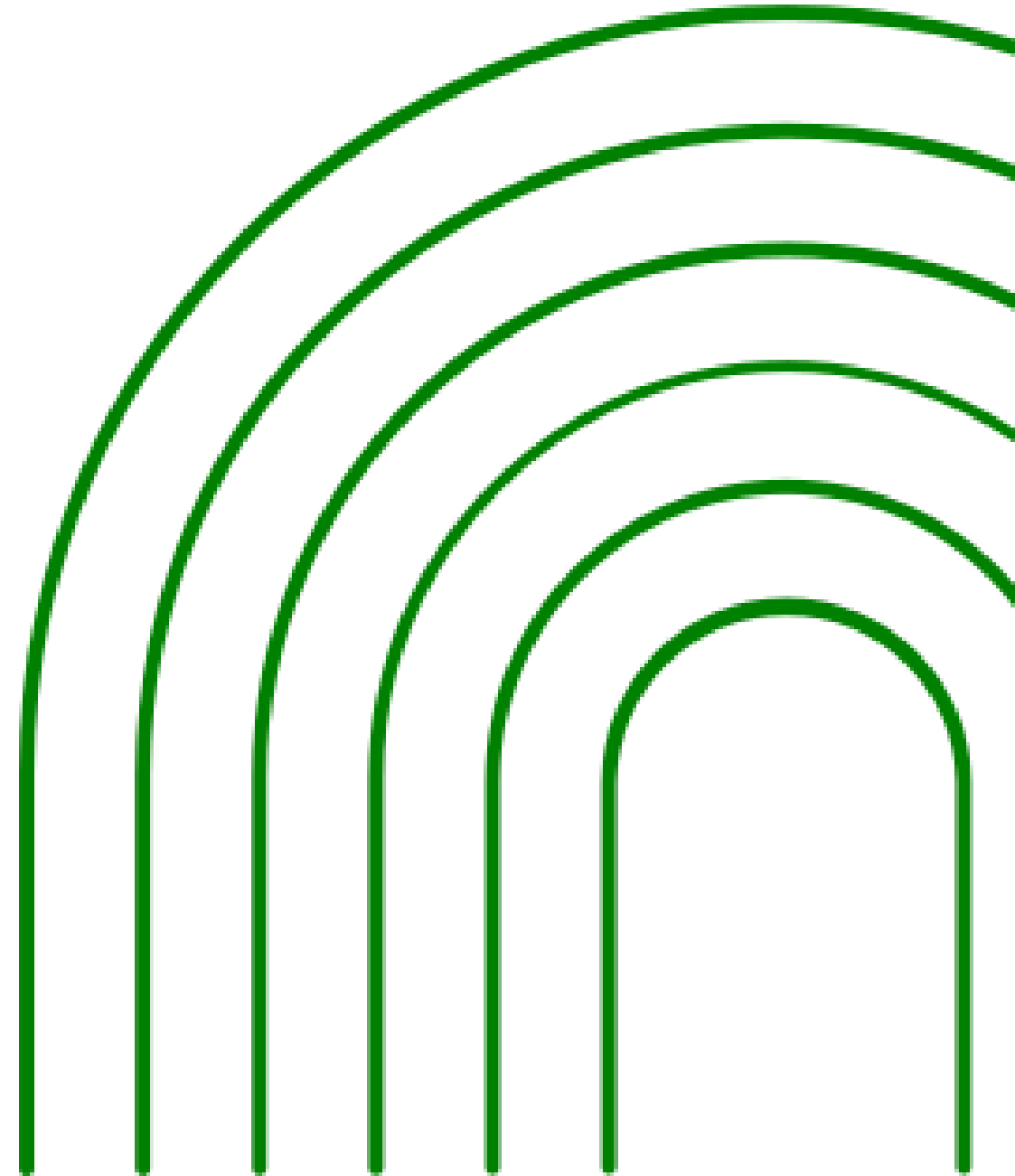
The image features a solid teal rectangular background. In the center, the words "A SOLUTION" are written in a clean, white, sans-serif font. The letter "A" is positioned above the word "SOLUTION". The text is centered horizontally. Surrounding the teal rectangle are several sets of white concentric circles of varying sizes, located in the corners and along the edges of the frame, creating a modern, geometric aesthetic.

A SOLUTION

THE SOLUTIONS SPACE



THE SOLUTIONS SPACE



THE SOLUTIONS SPACE



THE SOLUTIONS SPACE



THE SOLUTIONS SPACE

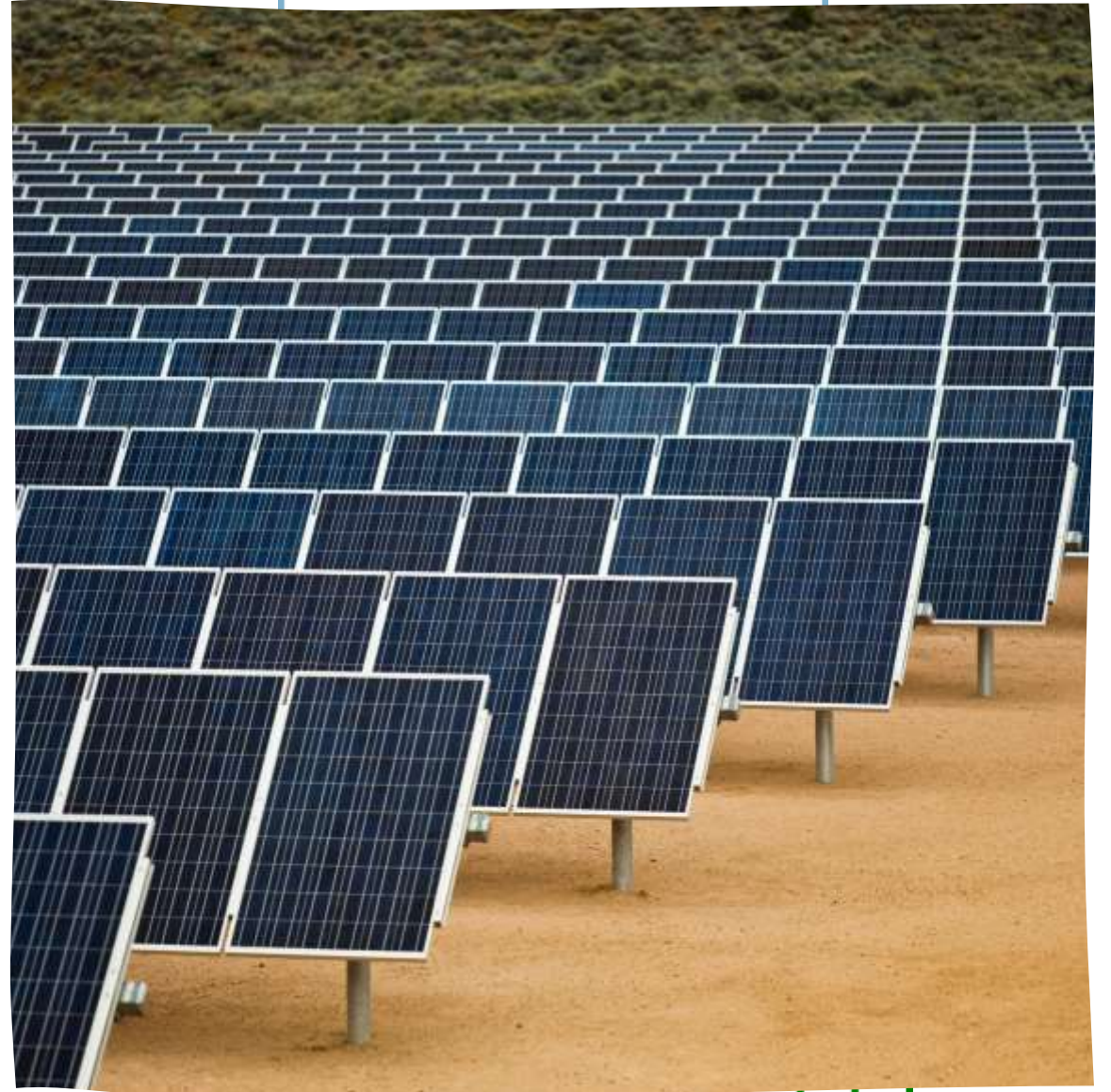


THE ENERGY TRANSITION

- ➔ Access to ownership
- ➔ Inadequate infrastructure
- ➔ Cost prohibitive

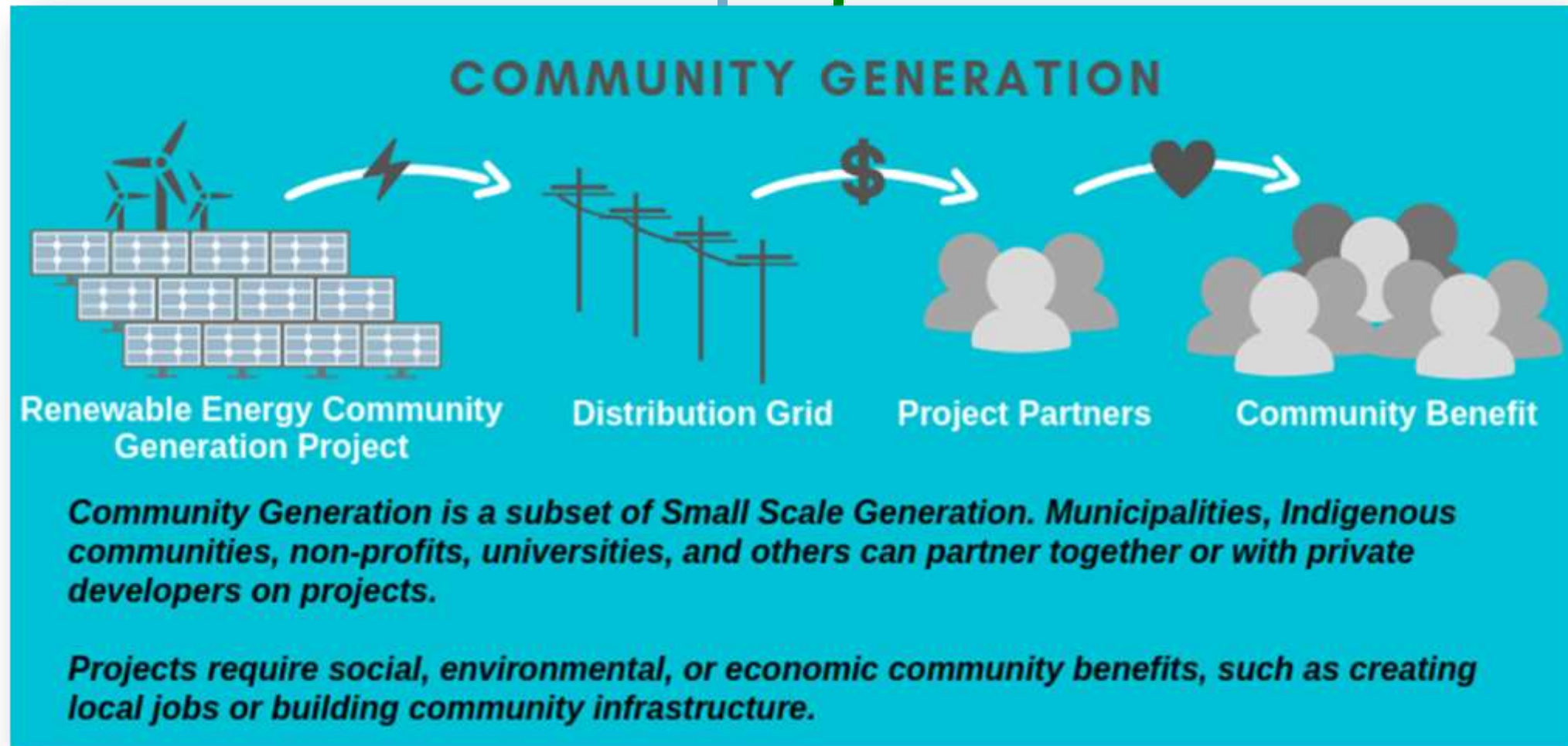


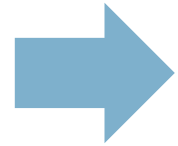
COMMUNITY GENERATION



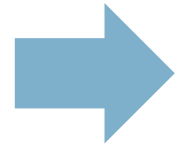
COMMUNITY GENERATION 101

The Municipal Climate Change Action Centre

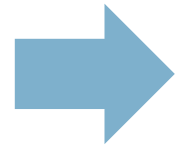




Everyone can participate



Local Economic, Environmental and Social benefits



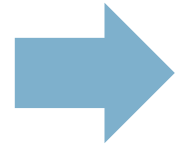
Support community focused initiatives



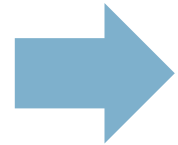
WHY
COMMUNITY
GENERATION?

The image features a teal rectangular background with the text 'COMMUNITY GENERATION IN ACTION' centered in white. The text is arranged in three lines. Surrounding the teal rectangle are several sets of concentric white circles of varying sizes, positioned at the top right, left side, and bottom center, creating a sense of depth and movement.

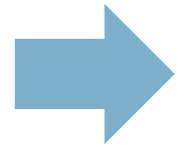
COMMUNITY GENERATION IN ACTION



Community Generation Capacity Building Program



“Solar on every rooftop”



Financial and Technical feasibility of community generation

CANMORE COMMUNITY SOLAR





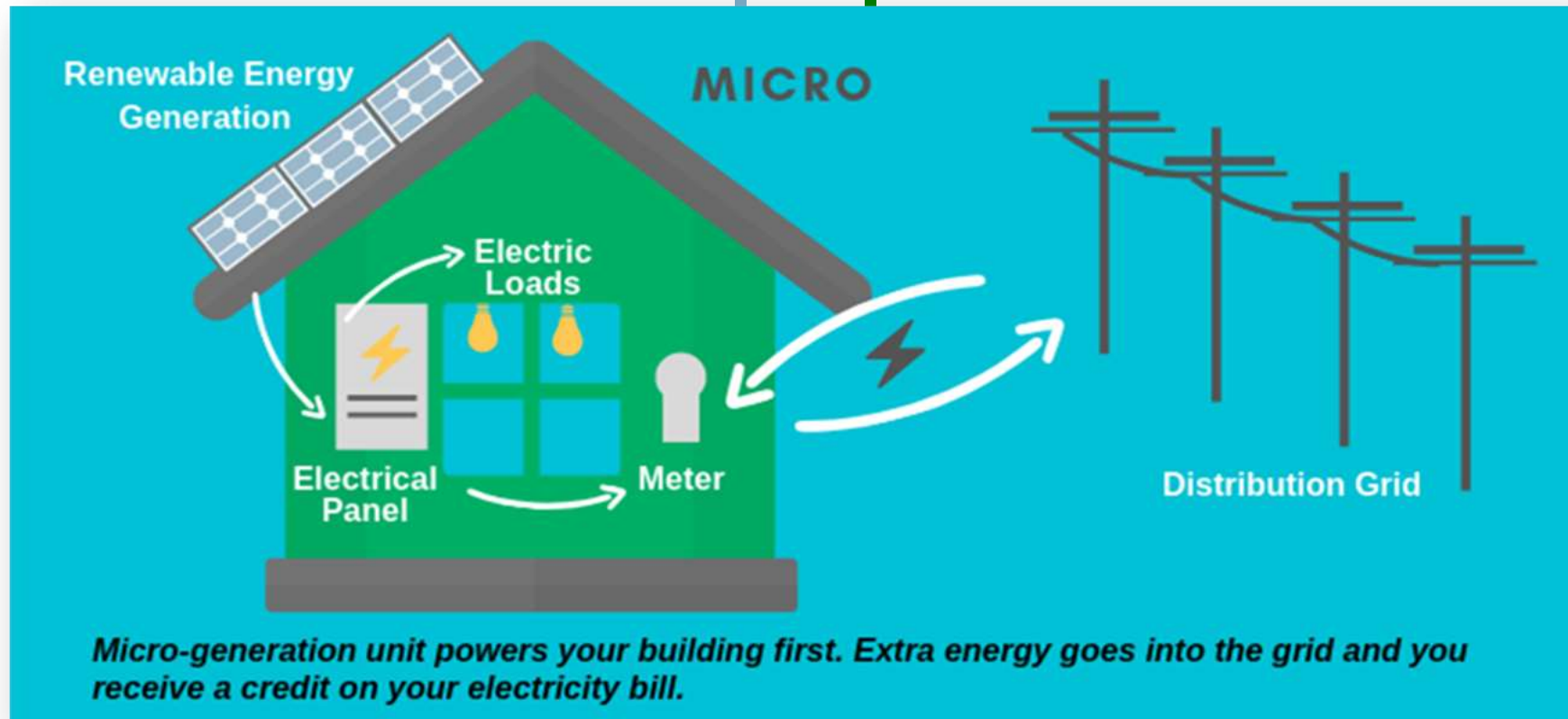
- ➔ High levels of community engagement in the concept
- ➔ Small Scale Distribution Connected Installations – cost prohibitive
- ➔ Aggregating multiple systems – cost prohibitive

LESSONS LEARNED



MICROGENERATION

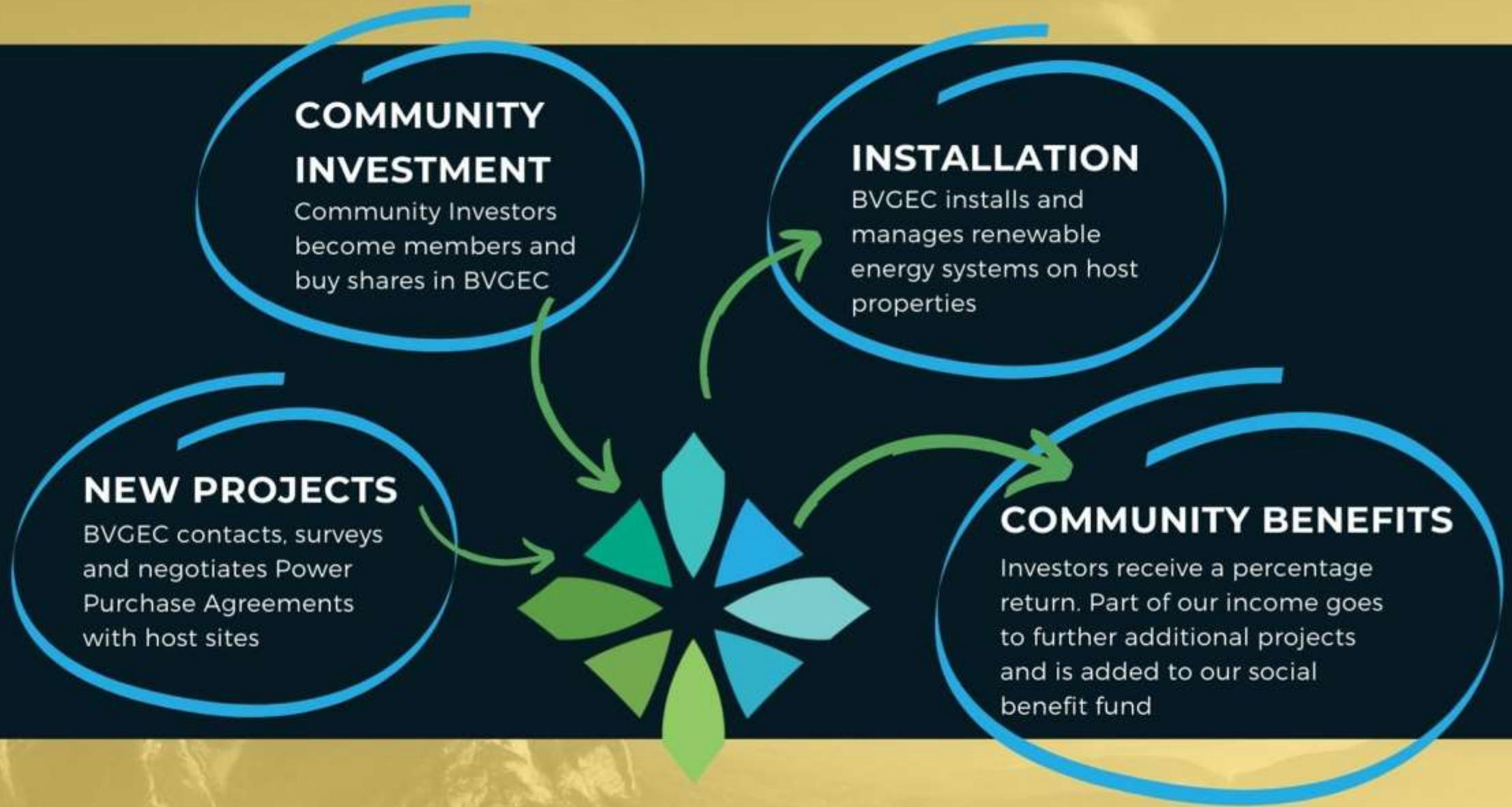
'Behind the Meter'





**BOW VALLEY
GREEN ENERGY
COOPERATIVE**

HOW IT WORKS



PROJECT # 1 - RCMUC



Ralph Conner Memorial United Church



August 2021



Community Funded



11.25 kW System



7.4 Tonnes per year



22.6MW Generated



PROJECT # 2 - I-PLACE



I-Place - Phase 1 1 Industrial Place



Canmore, AB



November 2022



Community Funded



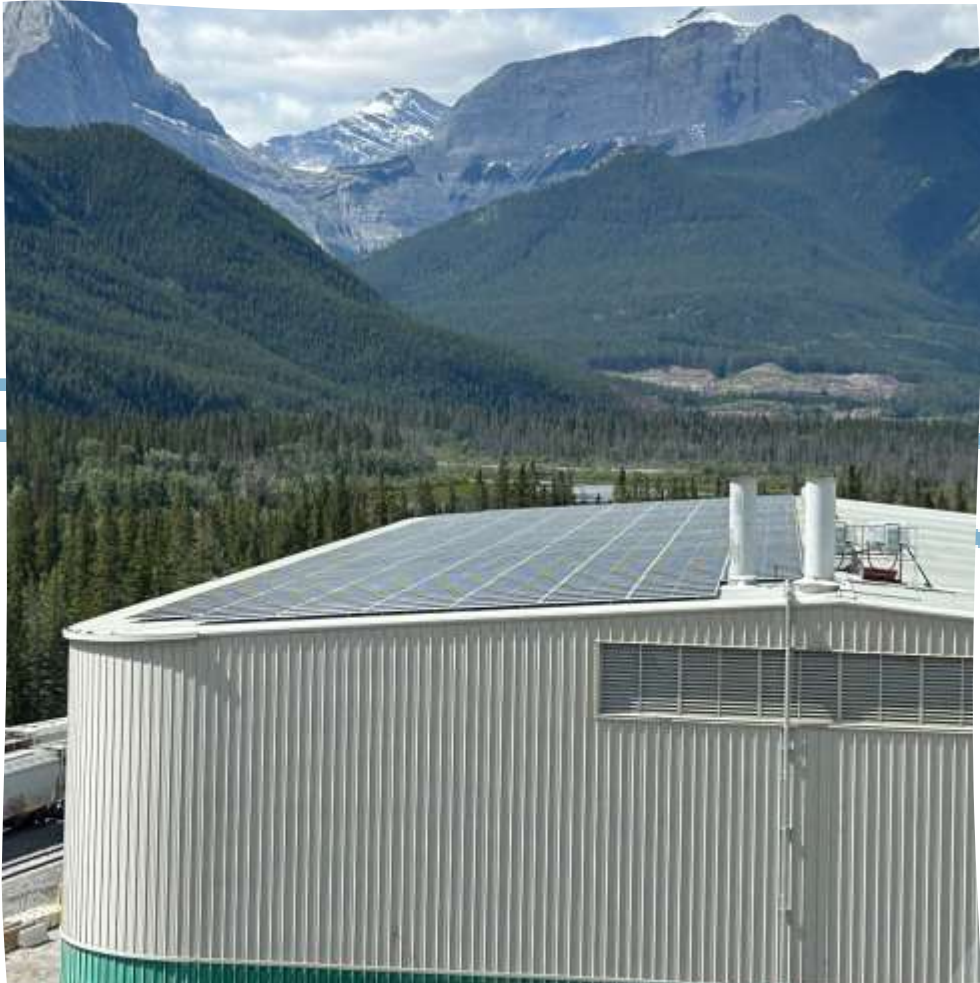
127 kW



88 Tonnes per year



PROJECT # 3 - BAYMAG



BAYMAG Exshaw



MD of Bighorn



June 2023



Community &
Grant Funded



291 kW



240 Tonnes per year





321.1 MEGAWATT HOURS OF ENERGY GENERATED



\$178K INVESTED BY OUR COMMUNITY



429 KW INSTALLED COSTING \$748K



266.5 TONNES OF CARBON DIOXIDE OFFSET



BOW VALLEY GREEN ENERGY COOPERATIVE



SUCCESS TO DATE

COMING SOON!



Temple B'nai Tikvah



Calgary, AB



Fall 2023



Community &
Grant Funded



26 kW

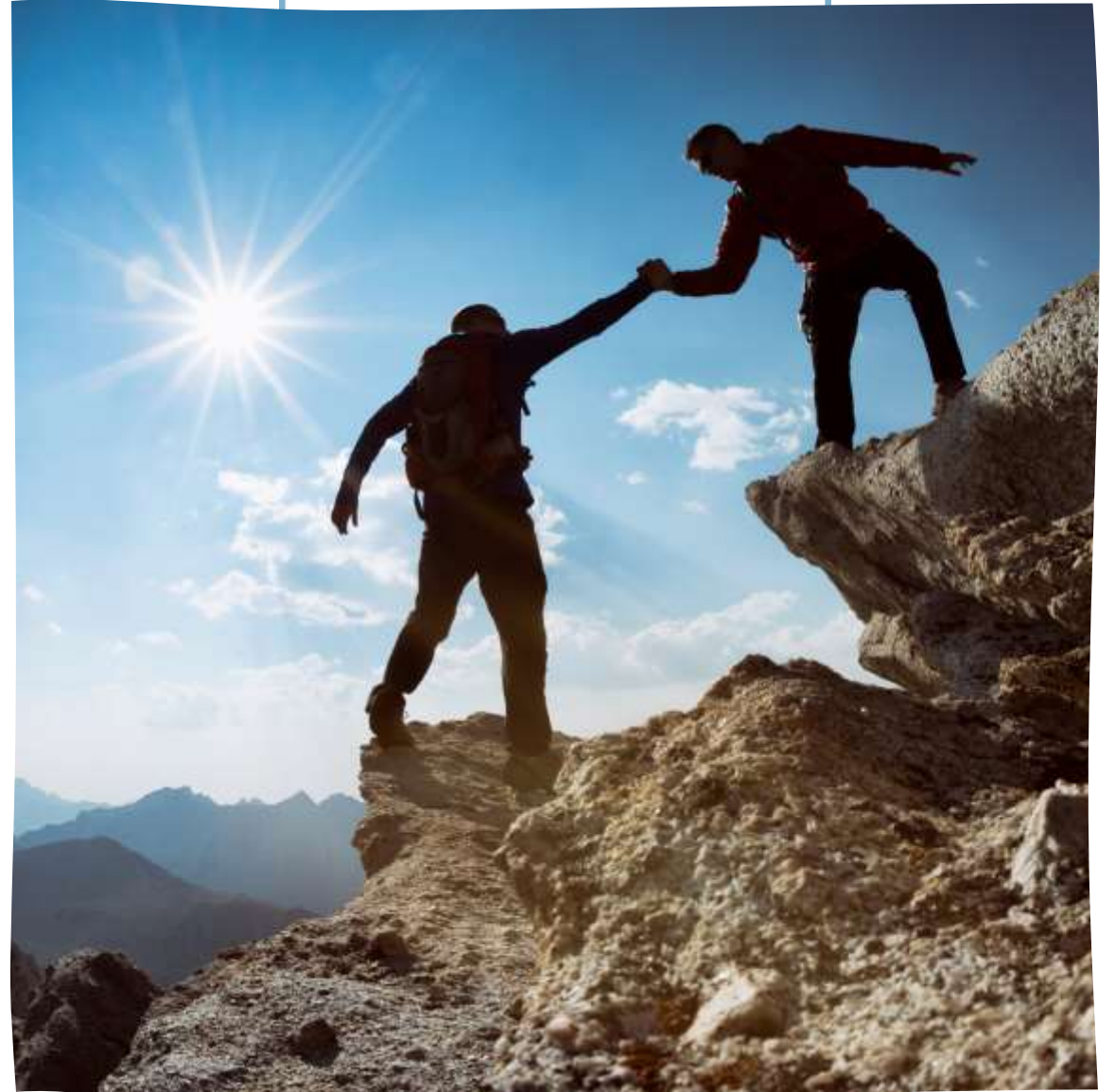


20 Tonnes per year



SUPPORT BOW VALLEY GREEN ENERGY COOPERATIVE

- ➔ Volunteer
- ➔ Membership
- ➔ Investment
- ➔ Host a System



THANKS FOR LISTENING!

I LOOK FORWARD TO CONNECTING
During the breakouts...



The “Greenfoot” Project



**Our Lady
of the Snows**

Nami Dwyer and Miriam Purnhauser

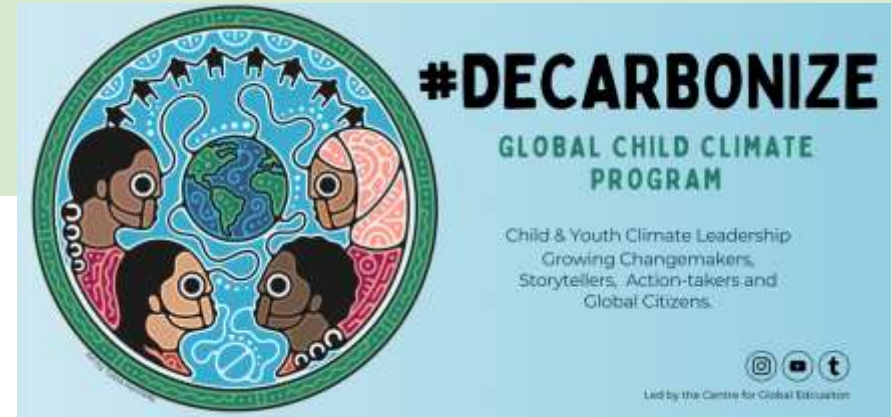
Accelerating Climate Action

October,
2022



Support:

- Rotary
- Canadian Rockies Youth Network
- Biosphere Institute
- The Earth Prize
- Our Lady of the Snows
- New - #decarbonize!



BIOSPHERE
INSTITUTE OF THE BOW VALLEY
WILDLIFE · CLIMATE · COMMUNITY



**Our Lady
of the Snows**

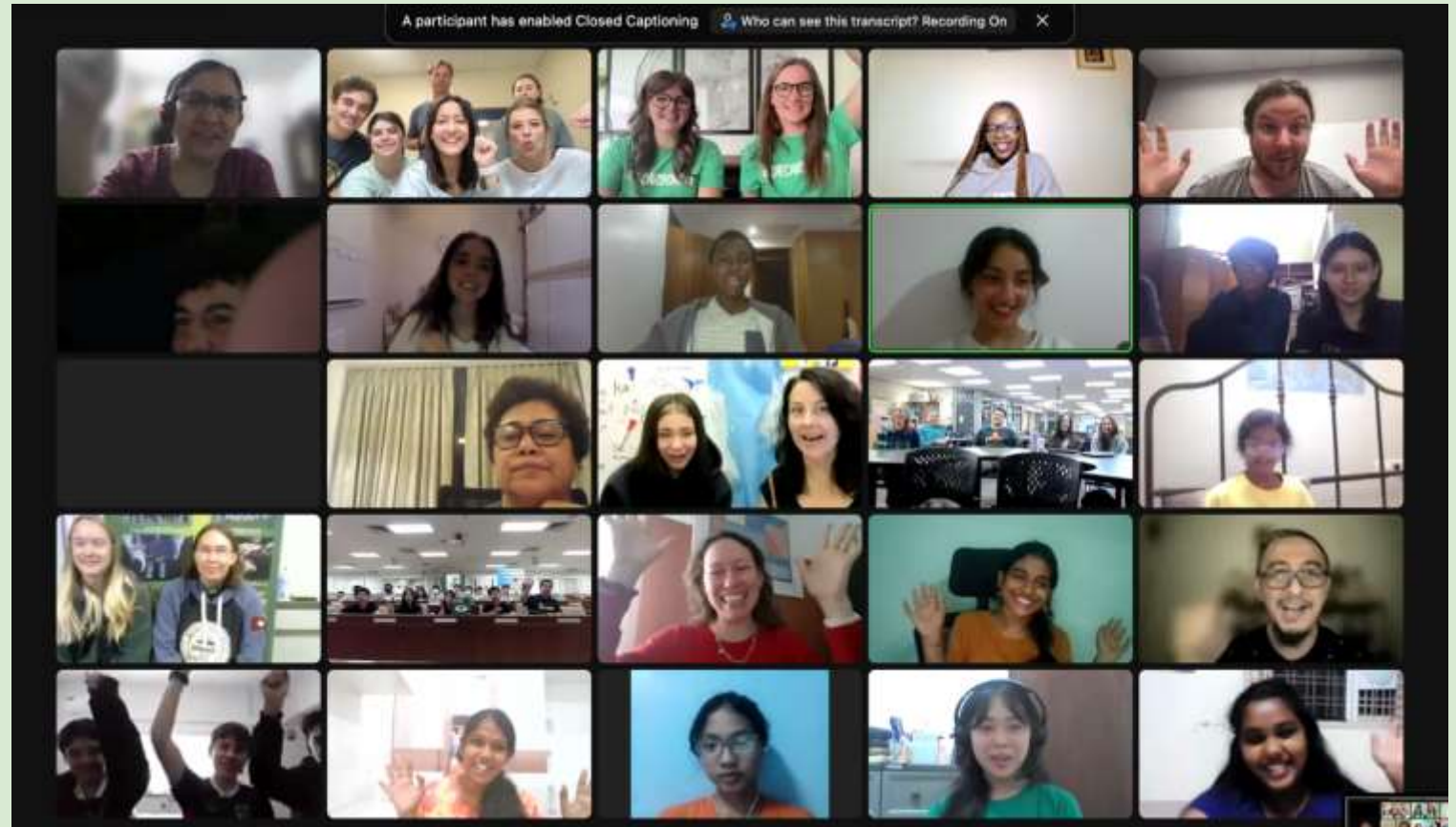
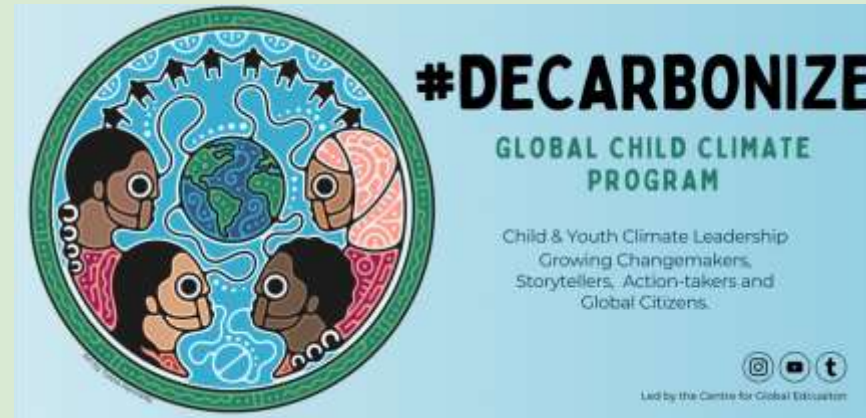
Future Leaders Youth Council:

- Touring the local waste treatment facility
- Meeting other like-minded youth
- Going on the local radio (Mountain Fm)



New - #decarbonize

- Starting last month
- Global Child Climate Program



If you want to participate please google:

XTREME HANGOUT, CANMORE



CO-ORGANISED WITH
#DECARBONIZE



#DECARBONIZE

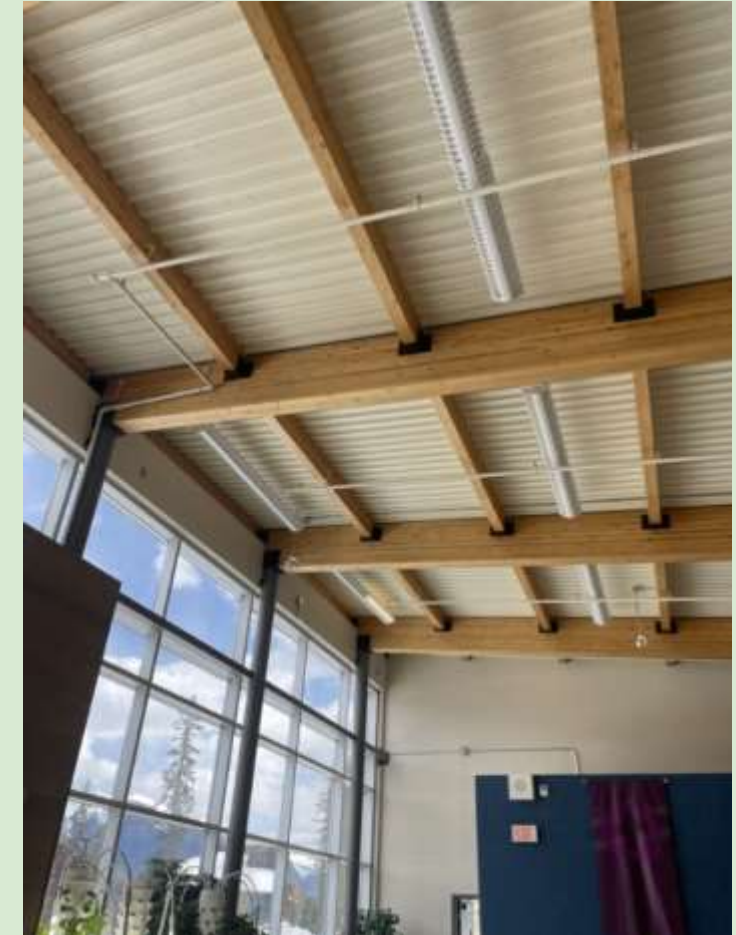
GLOBAL CHILD CLIMATE
PROGRAM

Child & Youth Climate Leadership
Growing Changemakers,
Storytellers, Action-takers and
Global Citizens.



Led by the Centre for Global Educaiton

Sustainability Overnight Audit Event



- With other sustainability clubs from OLS
- “Sleepover”
- A very educational experience



Support From REDE



Rede

BUILDING
ENERGY
EFFICIENCY

Pronounced (Re-dē). As in, we're *ready* to save you headaches.

Rede

BUILDING
ENERGY
EFFICIENCY

Pronounced (Re-dē). As in, we're ready to save you headaches.

[CONTACT](#) [CLIENT LOGIN](#)

[About](#) [Solutions](#) [Clients](#) [Resources](#)

Why pay for needless energy waste?

Since 2008, Rede Energy Solutions has helped over 150 schools and organizations reduce costs, meet their budgets, and to save money and energy.

If you want to save hundreds of thousands of dollars while protecting our planet then contact us about our robust energy management programs. **Your colleagues have benefited. Why not you?**

Contact us to know more about how you can reduce your costs and then redirect those saving towards the people who matter - your staff, your community, your students, your teachers.

[DISCOVER HOW YOU CAN BENEFIT FROM REDE](#)

Here's what your colleagues are saying.

For people like myself money talks.

"If we can engage someone like Rede to find inefficiencies within our facilities, then we are able to address them."

Norman Buhler, Secretary Treasurer
Fort Vermilion School District, Alberta

Sustainability Overnight Audit Event

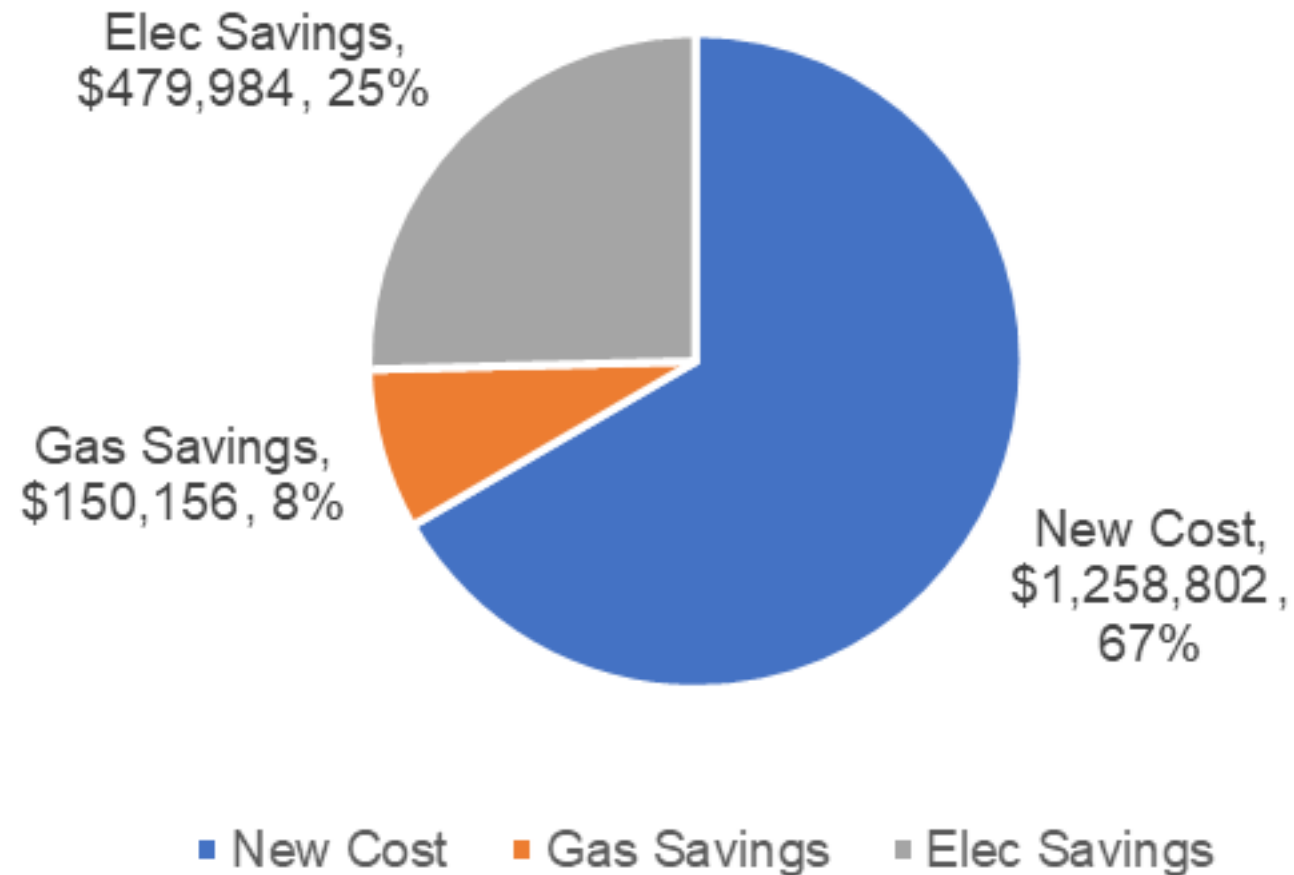
- Support from Matthew
- Access to boiler room

Rede BUILDING
ENERGY
EFFICIENCY

Pronounced (Re-dē). As in, we're ready to save you headaches.



Division Energy Cost Savings Potential (2018 total was \$1,889,000)



“Low Hanging Fruit”

Recommendation	Impact	Cost
Change lights	★	\$\$\$
Optimize lighting controls	★★★	\$
Optimize Exhaust fan controls	★★	\$
Optimize Cabinet Heater usage	★★★	\$
Staff education – Window Etiquette and behaviour	★★★★	\$
Zone control – Address hot/coldspots	★★★★	\$\$
Optimize building pressure	★★	\$
Re-activation of sensor controls	★★★	\$

Next Steps

- Continuing to increase energy efficiency
- Alberta Conference of Superintendents
- Continue engagement with REDE (Matthew)

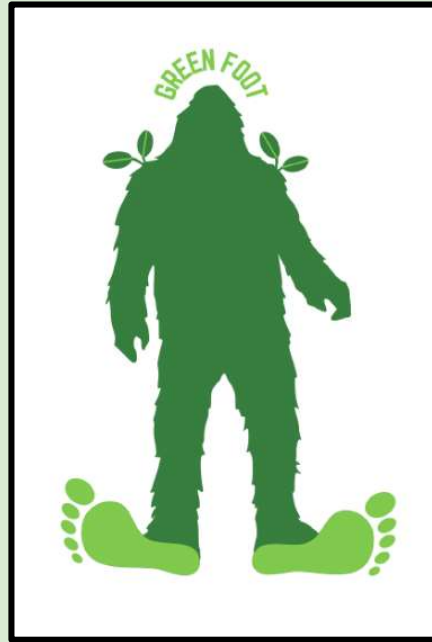


Final Words + What We Learned

- We made a huge impact
- 3 presentations so far
- You can do it too!
- Gained leadership skills
- Learned to take initiative



Thank you! Questions?





BIOSPHERE
INSTITUTE OF THE BOW VALLEY



HEIDI

WIDMER she/her

B.A., M.A., Environmental Education and
Communication



THE WORK THAT RECONNECTS

Practices for connection to
help us in a time of ecological
and climate-related anxiety



“All humans evolved within complex, land-based cultures over deep time to develop a brain with the capacity for over one hundred trillion neural connections, of which we now use only a tiny fraction.

Most of us have been displaced from those cultures of origin, a global diaspora of refugees severed not only from the land but from the sheer genius that comes from belonging in symbiotic relation to it.”

-- Tyson Yunkaporta (he/him)

Sand talk: How Indigenous thinking can save the world





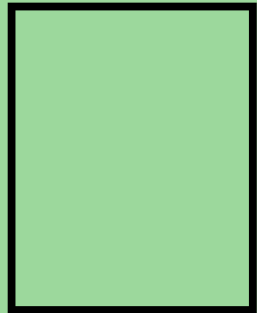
The Breath is Life's Teacher

Donna Martin (2020)



THREE STORIES OF OUR TIME

BUSINESS AS
USUAL



GREAT
UNRAVELLING



GREAT
TURNING



THREE STORIES OF OUR TIME

BUSINESS AS
USUAL



GREAT
UNRAVELLING



GREAT
TURNING



Slide provided by: Dr. Hilary Leighton, Professor, Registered Clinical Counselor
School of Environment & Sustainability, Royal Roads University

“The crisis of global warming is a crisis of the mind, a crisis of thought, a crisis in our ability to think another way to be.”

-- James Bridle (they/them)

Ways of Being: Animals, Plants, Machines and the Search for a
Planetary Intelligence

JOANNA MACY
MOLLY BROWN

THE UPDATED GUIDE TO *THE WORK THAT RECONNECTS*

— FOREWORD BY MATTHEW FOX —

COMING
BACK TO
LIFE





"If the world is to be healed through human efforts, I am convinced it will be by ordinary people, people whose love for this life is even greater than their fear. People who can open to the web of life that called us into being"

- Joanna Macy (2012) Active Hope



For Joana

with gratitude from Dori

Illustration: Dori Midnight

“The sorrow, grief, and rage you feel is a measure of your humanity and your evolutionary maturity.

As your heart breaks open there will be room for the world to heal.”

-- Joanna Macy, “Greening of Self”



“There is a crack, a crack in everything
That's how the light gets in”

-- Leonard Cohen



For Joana

with gratitude from Dori

Illustration: Dori Midnight

“And, while expressing gratitude seems innocent enough, it is a revolutionary idea. In a consumer society, contentment is a radical proposition. Recognizing abundance rather than scarcity undermines an economy that thrives by creating unmet desires.

Gratitude cultivates an ethic of fullness, but the economy needs emptiness.”

-- Robin Wall Kimmerer, Braiding Sweetgrass



References

Bridle, J. (2022). *Ways of Being: Animals, Plants, Machines and the Search for Planetary Intelligence*. Farrar, Straus and Giroux

Chelan, H. (2020). "Wild Order". *Susceptible to light: poetry by Chelan Harkin*. Chelan Harkin.

Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions.

Martin, D. (2020). "The Breath is Life's Teacher". Donnamartin.net/poetry.html

Macy, J., Johnstone, C. (2012). *Active Hope: How to face the mess we're in without going crazy*. New World Library.

Macy, J., & Brown, M. Y. (2014). *Coming back to life: The guide to the work that reconnects*. New Society Publishers.

Yunkaporta, T. (2019). *Sand talk: How Indigenous thinking can save the world*. Text Publishing.

Molli Bennett - Alberta Talks



Take a seat with a presenter

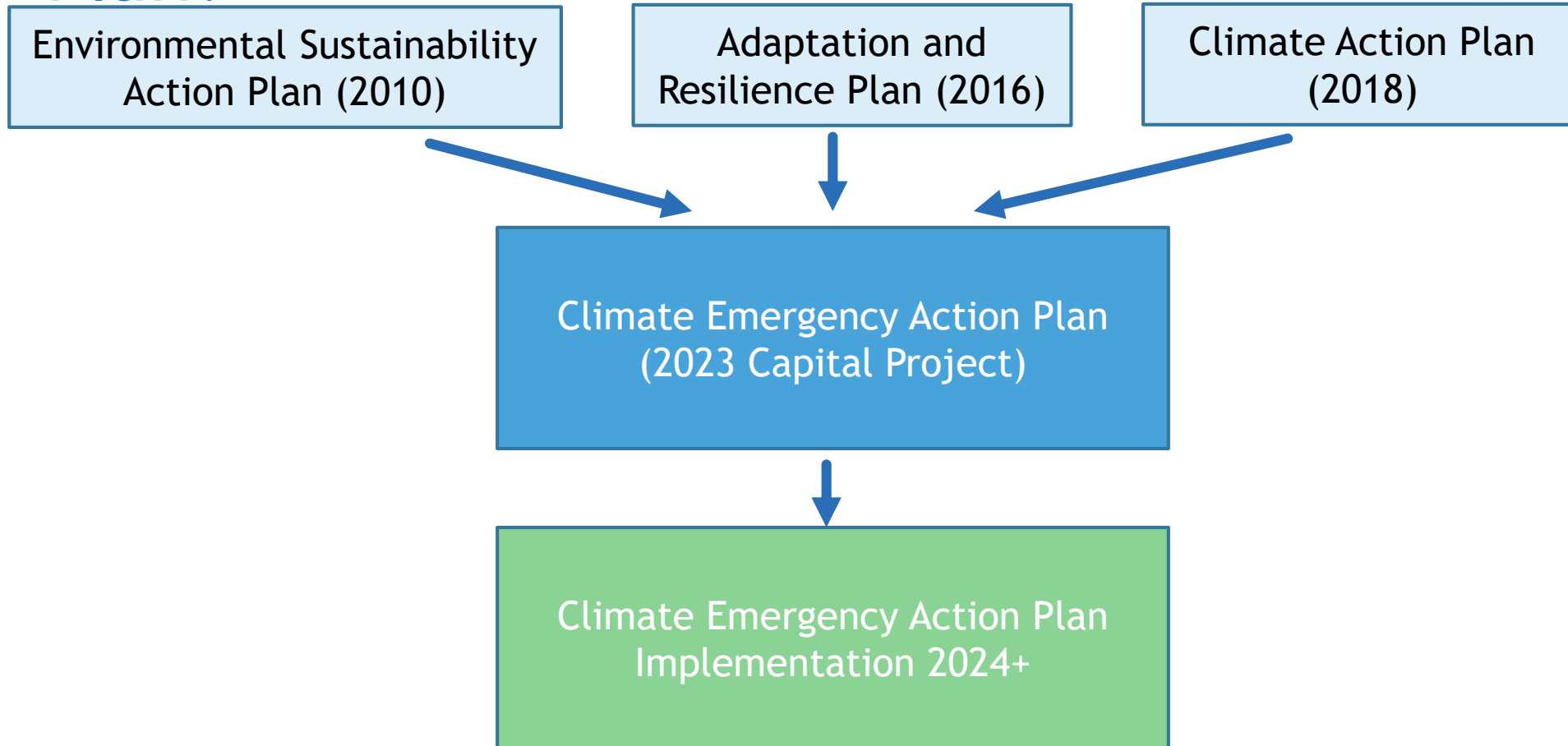
- Introduce yourselves
- Questions or comments for the presenter
- Presenter responds
- Chance to change tables in 15 mins



Town of Canmore Climate Emergency Action Plan

October 11, 2023

What is a Climate Emergency Action Plan?

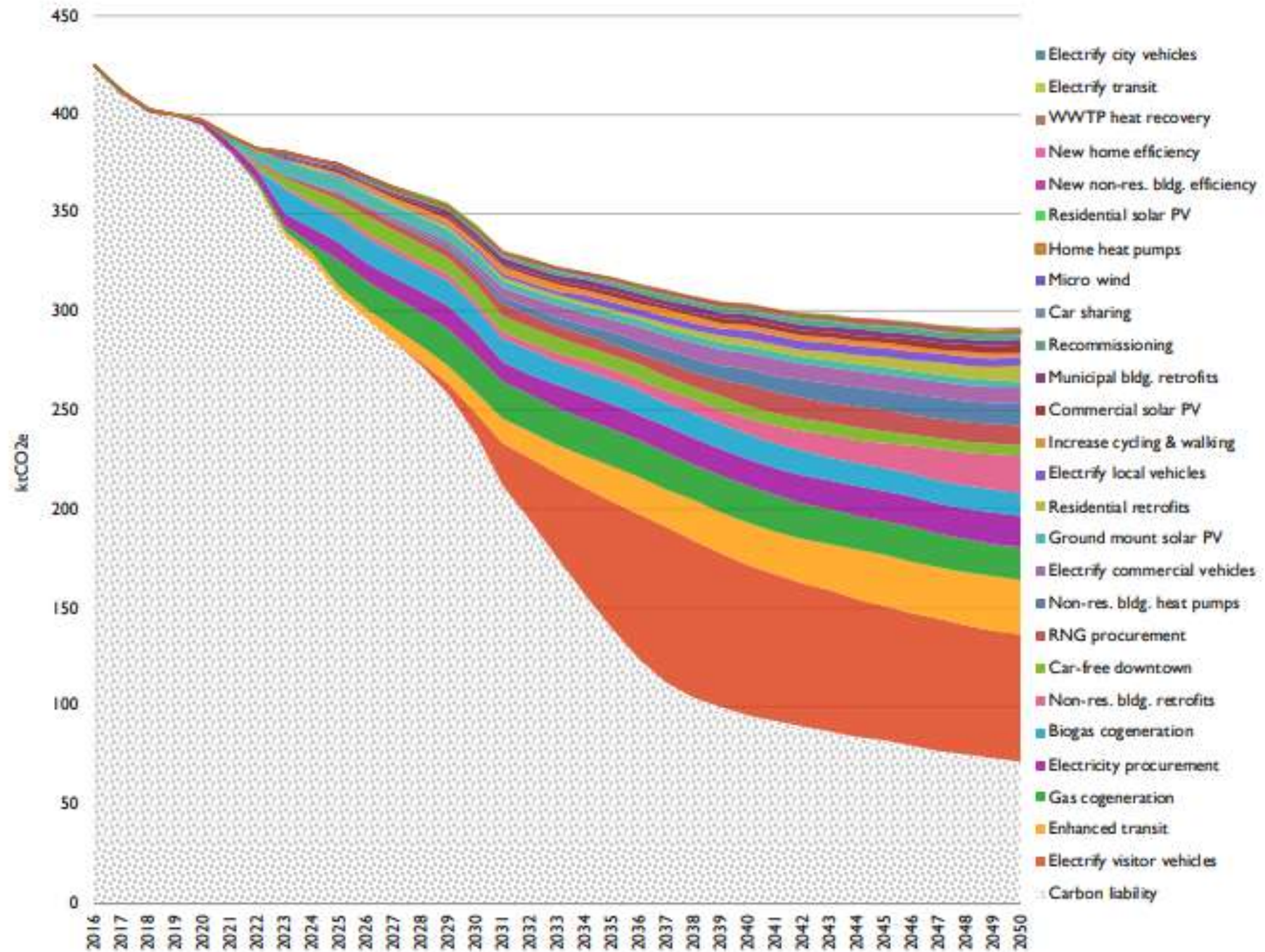


What is the Climate Emergency Action Plan?

- ▶ 2023 Capital Project approved by Council in the 2023-24 Municipal Budget
- ▶ Addresses Council's Declaration of a Climate Emergency – 2019
 - ▶ Will update our emission reduction targets to align with the most recent science (federal and international targets)
 - ▶ Will update climate change projections and risks for the area
- ▶ Addresses Council's Strategic Priorities around environment and climate

Anticipated Project Deliverables

Wedge graph example showing emission reduction potential – Town of Banff



Anticipated Project Deliverables

Carbon Budget Example – City of Edmonton and City of Spruce Grove

Corporate Carbon Budgeting 2023-2026 (Proposed Requests Only)

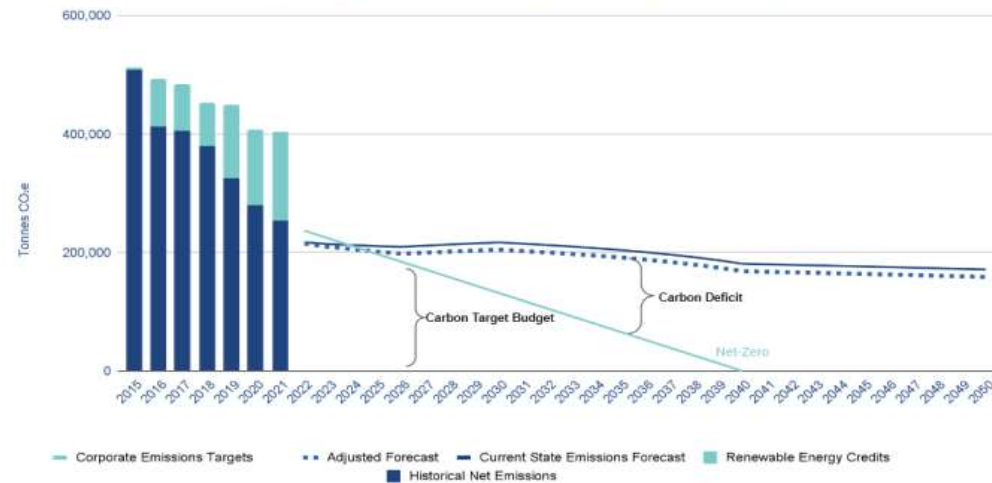


Table 7: Corporate Carbon Budget

Corporate Carbon Budget	Carbon Budget 2022-2040 (Available GHG Emissions)	Year Carbon Budget is Depleted (Based on Adjusted Forecasts)
Corporate Carbon Budget	2.25 million tonnes CO2e	2032

Figure 21: Steep decline +1.5°C scenario: first three carbon budgets included in the CCAP

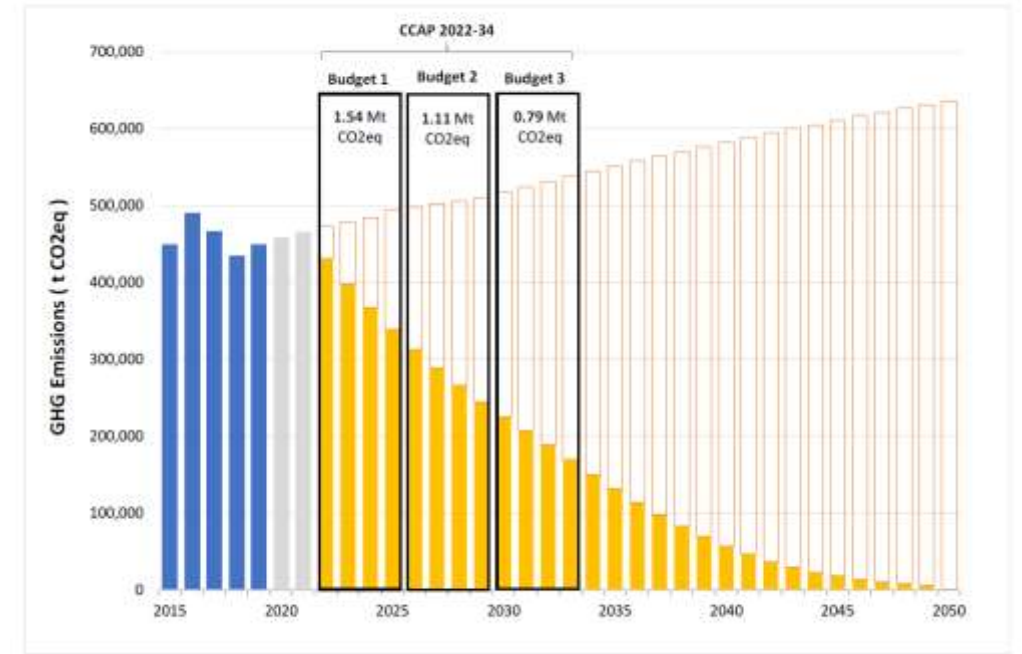
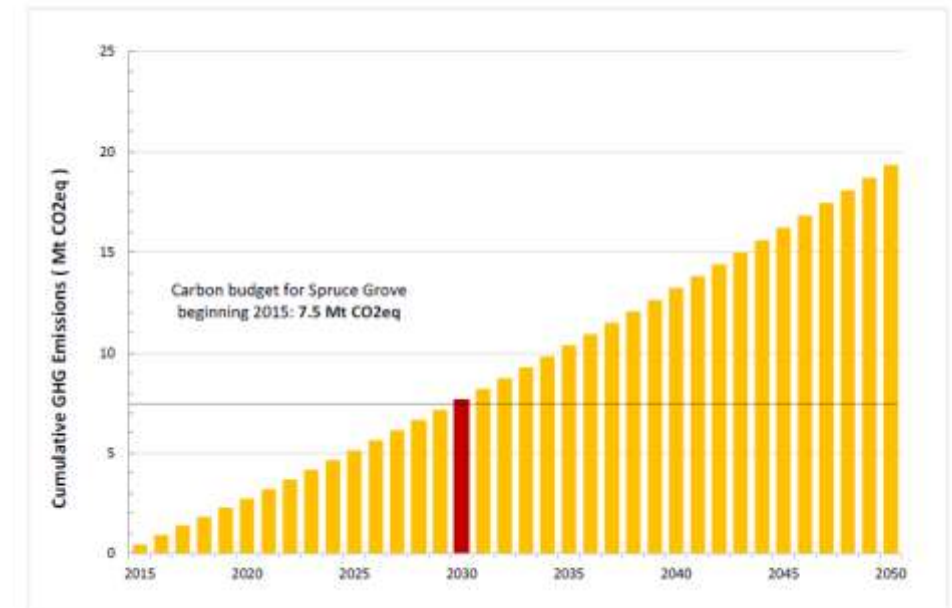


Figure 19: Steep decline +1.5°C scenario: year carbon budget is exceeded under the Reference Case



We need your help!

Taking Local Action on Climate Change

**We are developing a Climate
Emergency Change Action Plan to
prepare our community for a
sustainable future, and we need
your input.**

**Participate at
mycanmore.ca/climateaction**



Upcoming Engagement Opportunities

- Two online presentations with Q&A s (Oct. 18 and Nov. 8)
- Online Ideas board – Launches Oct. 10
- Online Questionnaire available Nov. 8 – Dec. 2
- Community Roundtable Discussions (application process to select diverse voices)
 - Mitigation Focus Group – Nov. 21
 - Adaptation Focus Group – Nov. 23
- Equity Focus Groups (invite only)
 - Mitigation Focus Group – Nov. 14
 - Adaptation Focus Group – Nov. 28

Thank you!

mycanmore.ca/climateaction

Caitlin Van Gaal

Supervisor of Environment and Sustainability

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Amy Fournier

Energy and Climate Action Coordinator

amy.fournier@canmore.ca

CANMORE
KANANASKIS

October 11, 2023

Accelerating Climate Action in the Bow Valley



Astonishing adventures that will transform the way you live in the world

The path to sustainable tourism development in Canmore and Kananaskis

By 2029, TCK will be seen as leaders in sustainable tourism development



Triple Bottom Line Approach

Pledge to the Peaks

Peaks Academy

Destination Sustainability Assessment & Strategy

October 19, 2023



GLOBAL
**DESTINATION
SUSTAINABILITY**
INDEX

Marketplace of Ideas

1 minute each

- Name
- What you do
- An ask or an offer for the community



Barriers and Partnerships

1. What barriers need to be removed so that I can accelerate or take more climate action?
2. What opportunities for partnership and collaboration have I noticed during the day? For me or for others
3. What is a commitment that you can make to making progress towards these? Add it to the Communitree





BIOSPHERE
INSTITUTE OF THE BOW VALLEY

Thank you!
Please complete a brief
Survey



This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'aouoi financier de :



Environment and
Climate Change Canada

Environ
Change