



cleanBC

our nature. our power. **our future.**

**CleanBC for Local Governments and Economic
Developers: A Clear Path to a Cleaner Future**



- 1 Outlines B.C.'s plan to reach our 2030 climate targets
- 2 Lays out actions that credibly reduce our emissions, with sector-by-sector approach to transportation, buildings, and industry
- 3 It creates more opportunities for people and businesses as we make things more efficient and use more clean energy

WHAT'S IN CLEANBC



Government is committed to:

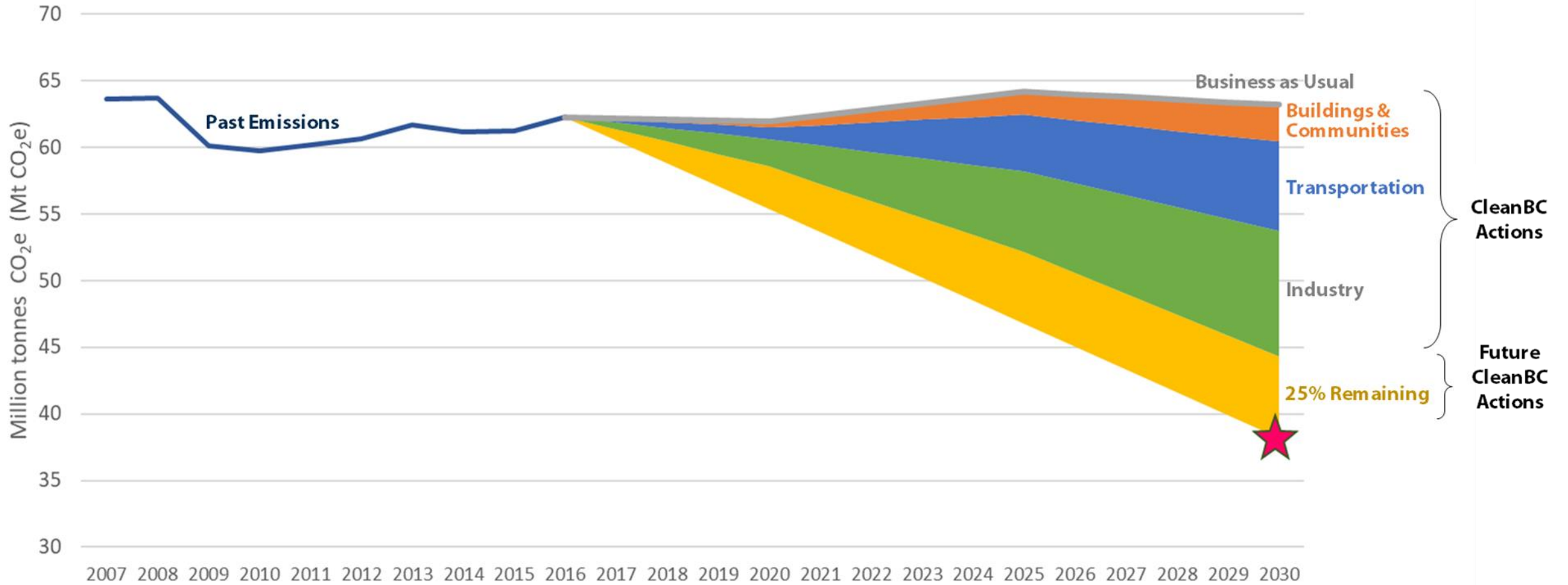
- Meeting our GHG reduction targets
- Growing a prosperous low-carbon economy
- Making sure cleaner options are affordable
- Working towards reconciliation with Indigenous peoples
- Creating more opportunities for businesses
- Helping workers get the skills they need



REACHING OUR 2030 TARGETS



Pathway to meeting our climate goals



ELECTRIFYING KEY SECTORS

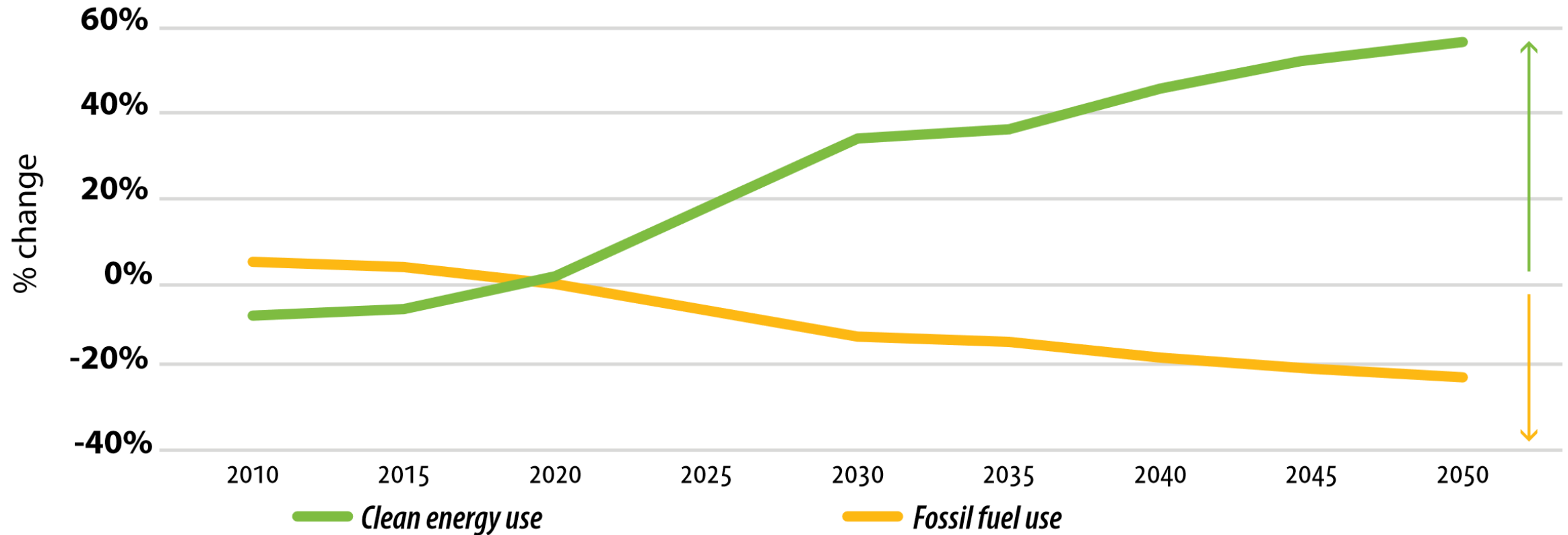
- Meeting our GHG targets may be achieved by electrifying key sectors
 - Including housing, transportation, industry
- By 2030, CleanBC policies will require an additional 4,000 gigawatt-hours of electricity
 - This demand is over and above projected BC Hydro demand growth
 - It is equivalent to an 8% increase, and roughly the same as the electricity demand for the City of Vancouver
 - Existing and planned projects that harness B.C.'s vast wealth of clean, renewable power can meet this growth
- Meeting our 2040 and 2050 targets will require substantial additional volumes of new clean electricity



ACCELERATING THE SWITCH



Changing how we use energy



CLEANER TRANSPORTATION



Bring down the price of clean vehicles

Just over 20 years from now, every new car will be a zero-emission vehicle (ZEV) with phased-in increases to the ZEV standard

Help people to afford cleaner cars and save money on gasoline bills with ZEV incentives

Make it easier to charge or fuel a ZEV

Speed up the switch to cleaner fuels

Make our fuel cleaner by increasing the low carbon fuel standard to 20% by 2030 and increasing the production of renewable transportation fuels

Make vehicles run cleaner by increasing tailpipe emissions standards for vehicles sold after 2025

IMPROVE WHERE WE LIVE AND WORK



Better buildings	Make every building more efficient by improving the Building Code and increasing efficiency standards
Support for better buildings	Incentives to make homes more energy-efficient and heat pumps more affordable
	Upgrade public housing to make it more comfortable and energy-efficient
	Make residential natural gas consumption cleaner by putting in place a minimum requirement of 15% to come from renewable gas
Support for communities	Help remote communities reduce dependence on diesel and support public infrastructure efficiency upgrades and fuel switching to biofuels with the CleanBC communities fund

CLEANER INDUSTRY



Ramp up the CleanBC program for industry	Direct a portion of B.C.'s carbon tax paid by industry into incentives for cleaner operations
Improve air quality by cutting air pollution	Clean up air pollution in the lower mainland with a pilot project to test options to switch 1,700 heavy-duty freight trucks to cleaner or zero-emission fuel
Reduce methane emissions from natural gas development	Reduce methane emissions from upstream oil and gas operations by 45%
Industrial electrification	Provide clean electricity to planned natural gas production in the Peace region Increase access to clean electricity for large operations with new transmission lines and interconnectivity to existing lines
Carbon capture and storage	Ensure a regulatory framework for safe and effective underground CO ₂ storage and direct air capture
Cleaner fuels for industry	Make industrial natural gas consumption cleaner with a minimum 15% to come from renewable gas

REDUCE EMISSIONS FROM WASTE



Reduce waste and turn it into a clean resource

Help communities to achieve 95% organic waste diversion for agricultural, industrial, and municipal waste -- including systems in place to capture 75% of landfill gas

Waste less and make better use of it across all sectors of our economy, like forestry, agriculture, and residential areas, including renewing the B.C. Bioenergy Strategy and building out the bioenergy and biofuels cluster

WHAT THIS MEANS --

- By 2040, every new car will be a Zero-Emission Vehicle:
 - That means building out ZEV charging stations in homes, workplaces, and public sites
 - Service, R&D marketing and design in ZEV sector will expand
- Helping people make home energy efficiency improvements to cut their energy use and costs
 - Will include tens of thousands of new heat pumps installed every year, insulation improvements, and appliance upgrades.
 - New construction will adapt as Building Code is updated
 - CleanBC Better Homes and Better Buildings

WHAT THIS MEANS --

- Technical innovation across industrial sectors
 - R&D work, efficiency improvements, monitoring and evaluation
 - Developing and refining cleaner fuels
- Increasing recycling and waste management infrastructure
 - Industrial innovation to move to a “circular economy” where waste is eliminated
 - Meeting demand for consumer options for better recycling and waste reduction
- Keeping our communities healthy and strong
 - Adapting and preparing for a changing climate – work needed to assess risks and make infrastructure improvements

And more...

CREATING NEW OPPORTUNITIES



CleanBC training and retraining for new and mid-career workers

- Trades training for the construction industry
- ZEV training for mechanics and electricians
- Ongoing labour market analysis will support further initiatives

CleanBC Workforce Readiness Plan

- Will examine future career opportunities in the low carbon economy - where jobs may be located, supports needed, and opportunities for mid-career workers to develop new skills



CONSULTATION WITH COMMUNITIES

In 2018, nearly 30 communities were consulted on CleanBC through:

- UBCM Special Committee on Climate Action
- Intentions papers: Clean Transportation, Clean, Efficient Buildings, and a Clean Growth Program for Industry
- Email submissions
- Online discussions
- Telephone townhalls

INPUT INCLUDED



Feedback from B.C.'s communities was included in CleanBC and work is well underway.

- Zero-Emission Vehicle (ZEV) mandate, incentives, and improved charging infrastructure
- An active transportation strategy, including transit funding and improvements
- Energy Step Code
- Home energy incentives
- Upgrading public housing
- Establishing CleanBC Communities Fund
- Low Carbon Buildings Innovation Program

UPCOMING WORK

- Transportation fuel standards and renewable supply, including tailpipe emissions standards
- Clean trade corridors and ports
- 15% renewable natural gas
- Clean Communities Fund - \$63M investment in infrastructure with a GHG reduction component
- Lower mainland ZEV freight trucks
- Building energy labelling and reporting
- 95% organics diversion, 75% landfill gas capture
- Electrifying remote communities

SUMMARY OF PROGRESS



We're Taking Action



45
Actions
underway

We're Delivering



3
Actions complete:

- ZEV legislation
- Dawson Creek - new transmission lines/ connect to existing lines
- Climate Risk Assessment

We're Connecting

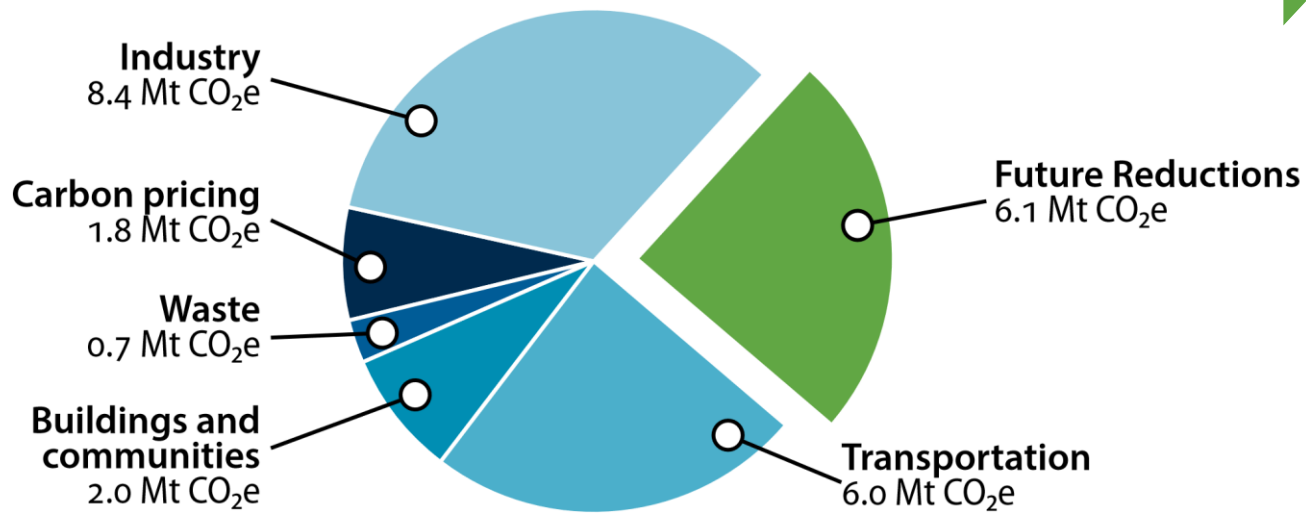


Engagements underway and
upcoming:

- Indigenous engagement
- Climate Ready BC
- Job Readiness

WORK WILL CONTINUE IN 2020

Reductions to achieve 2030 target



The remaining 6.1 Mt in reductions achieved through initiatives such as:

- cleaner freight and heavy-duty vehicles
- significantly increasing industrial electrification
- improving community planning, active transportation, and transit
- continuing to invest in technology and innovation.

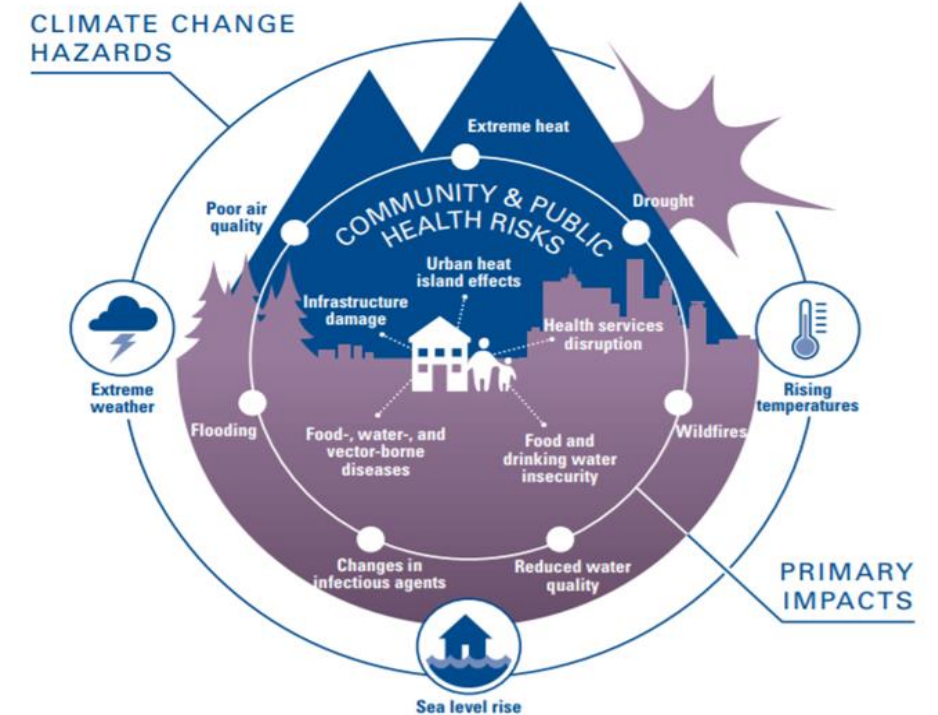
WORK WILL CONTINUE IN 2020



By 2020, province will develop a new strategy to prepare for climate change

- Early work underway in partnership with local governments and Indigenous communities to address impacts of climate change
- B.C. released a preliminary provincial strategic climate risk assessment to lay foundation for future efforts – to inform priorities areas and new strategy
- Climate Ready BC: Preparing Together – Online public engagement site
engage.gov.bc.ca/climatereadybc

Adaptation







2019/2020 INDIGENOUS ENGAGEMENT PLAN



Spring/Summer 2019

Fall/Winter 2019/2020

Spring/Summer 2019		Fall/Winter 2019/2020
<ul style="list-style-type: none"> • 10 regional sessions in 9 locations • Ongoing one-on-one meetings 	Communities & Nations 	<ul style="list-style-type: none"> • 2 day Forum for all Nations • Ongoing one-on-one meetings
<ul style="list-style-type: none"> • Workshop at Métis Nation BC's Annual Youth Forum 	Youth 	<ul style="list-style-type: none"> • Proposed presentation at Gathering Our Voice • Presentations at Climate Connect
<ul style="list-style-type: none"> • 2 day workshop at Annual BC Elders Gathering in Vancouver 	Elders 	<ul style="list-style-type: none"> • TBD
<ul style="list-style-type: none"> • One-on-one meetings 	Organizations 	<ul style="list-style-type: none"> • Launch of Technical Working Group on Climate Change with the First Nations Leadership Council • Launch of Indigenous Climate Adaptation Technical Working Group

We recognize that meaningful engagement takes time and resources.

How can we work together in a good way going forward?

OPPORTUNITIES FOR COLLABORATION

Getting Around

- Ensuring a greater portion of personal and commercial vehicle fleet is powered by clean B.C. electricity and cleaner fuels is one of the most important steps we can take to reduce our carbon footprint.
- As part of the Province's CleanBC plan, an active transportation strategy aims to double the percentage of trips taken with active transportation by 2030 by cost-sharing cycling infrastructure projects with local government through the BikeBC program.

Improving Where We Live and Work

- The CleanBC Better Homes and Better Building programs were created to help households, businesses and communities reduce climate pollution, save energy, and make buildings healthier and more comfortable.

OPPORTUNITIES FOR COLLABORATION

Reducing Waste and Turning it into a Resource

- Waste is an issue for all communities and can be a challenge to manage. Preventing waste in the first place remains key to emission reductions, however in some cases organic waste can be used to generate cleaner sources of energy for use in homes and transportation. As a result, many local governments in B.C. have organics prevention and/or diversion programs that avoid yard and food waste going to landfills.

Preparing for a Changing Climate

- The Province is looking for public input to help develop a new strategy that will better prepare B.C. communities for the impacts of climate change.
- Online questionnaire , discussion forum and written submissions until January 2020

OPPORTUNITIES FOR COLLABORATION

Remaining 25%

Over the next 15 months, the Province will look to develop other initiatives and innovative approaches to close the gap on the remaining 25%, including new technology breakthroughs, and systems-based approaches.



A NEW RESOURCE FOR LOCAL GOVERNMENT

- **CleanBC Better Buildings/Better Homes**
betterhomesbc.ca or betterbuildingsbc.ca
- **Innovative Clean Energy (ICE) Fund**

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CleanBC for Local Government

Local governments around our province are taking action to address climate change and better prepare for the future. Those actions and ongoing planning are supported by CleanBC, the Province's plan to reduce emissions, expand new economic opportunities and protect the places we call home.

GETTING AROUND

A key commitment in the CleanBC plan requires all new light-duty cars and trucks sold in B.C. be zero-emission vehicles by the year 2040. To ensure a greater portion of personal and commercial vehicles are powered by clean energy, the Province has invested \$30 million to expand B.C.'s zero-emission vehicle charging infrastructure network.

As part of CleanBC, an active transportation strategy, Move.Commute.Connect, is now in place. This strategy aims to double the percentage of trips taken with active transportation by 2030 and includes cost-sharing multi-use infrastructure projects with local government through a grant program.

PROTECTING THE PLACES WE LIVE AND WORK

Our homes, schools, workplaces and other buildings play a big role in a cleaner province and a stronger economy. The CleanBC Better Homes and Better Building programs reduce climate pollution in our communities, save energy and make buildings healthier and more comfortable.

REDUCING WASTE AND TURNING IT INTO A RESOURCE

Organic waste makes up 40% of municipal landfills, which results in the generation of methane. Preventing waste in the first place remains key to reducing emissions. However, in some cases organic waste can be used to generate cleaner sources of energy for homes and transportation. CleanBC is working to help communities divert 95% of organic municipal waste and capture 75% of landfill gas.

PREPARING FOR A CHANGING CLIMATE

The Province has completed a *Preliminary Strategic Climate Risk Assessment* for B.C. This assessment is the first phase of better understanding climate-related risks in B.C. and how government can develop measures to address those risks. As a next step, a provincial climate preparedness strategy will help B.C. prepare for the impacts of climate change. The strategy will be released in 2020. Input into the strategy from local governments, Indigenous communities and other sectors will ensure their priorities and concerns are well understood.

UBCM SPECIAL COMMITTEE ON CLIMATE ACTION

This committee will generate new ideas, explore opportunities and barriers to local government action, and identify avenues for further partnership to mitigate, and adapt to, the effects of climate change. The committee is comprised of elected officials and senior staff from local government, as well as representatives from the Province, environmental non-governmental organizations, Crown corporations and academia.

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DISCUSSION

- **What economic opportunities do you see in CleanBC?**
- **What areas could we explore further for clean economic growth?**



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