

Consultation Guide

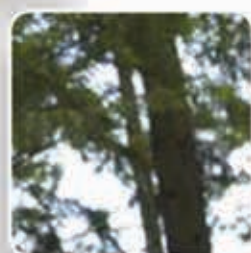
BUILDING B.C.'S
CLIMATE LEADERSHIP PLAN
JANUARY 2016





Table of Contents

MESSAGE FROM THE MINISTER OF ENVIRONMENT	1
NEXT PHASE OF CONSULTATION	3
BUILDING ON B.C.'S STRONG FOUNDATION	5
<i>CLEAN TECH AND CLEAN ENERGY.....</i>	<i>5</i>
<i>EFFICIENCY IMPROVEMENTS.....</i>	<i>6</i>
<i>COMPETITIVE INDUSTRIES.....</i>	<i>6</i>
<i>HEALTHY AND RESILIENT COMMUNITIES</i>	<i>6</i>
<i>STRONG ECOSYSTEMS.....</i>	<i>7</i>
<i>LEADERSHIP AND COLLABORATION.....</i>	<i>7</i>
OUR PATHWAY FORWARD.....	11
<i>SETTING THE STAGE</i>	<i>11</i>
BUILDING OUR CLIMATE LEADERSHIP PLAN	13
<i>WHAT WE VALUE.....</i>	<i>14</i>
<i>THE WAY WE LIVE.....</i>	<i>17</i>
<i>THE WAY WE TRAVEL</i>	<i>20</i>
<i>THE WAY WE WORK</i>	<i>22</i>
SUMMARY	25



Message from the Minister of Environment



Since the introduction of our first Climate Action Plan, British Columbia has been recognized as a world leader in addressing climate change. This is thanks in no small part to previous leaders who had the foresight to recognize the climate

imperative, and begin charting our path to lower greenhouse gas emissions.

Today, the momentum for taking climate action is building globally. The world is clearly moving in a new direction, one marked by a lower carbon future. Nowhere is this more apparent than in the large and growing economies in Asia such as China and India.

British Columbia is perfectly positioned to continue to be at the forefront of this movement. We can strengthen B.C.'s economy and create jobs by becoming a key supplier of cleaner energy solutions like clean tech, innovation and liquefied natural gas, to help Asian economies reduce emissions.

In December 2015, I joined Premier Christy Clark as part of Canada's team at the 21st United Nations Climate Change Conference in Paris, where leaders from around the world signed an historic agreement aimed at holding the increase in global average temperature to "well below" 2°C above pre-industrial levels.

Here in B.C., our approach is not only about reducing emissions. It's designed to benefit both the environment and the economy. It is vitally important that we continue down this path, transforming the way we live, work and travel to create a cleaner planet and strong economy for decades to come.

I sincerely thank the thousands of British Columbians who -- over the past several months -- shared their opinions, which are key to the development of our new Climate Leadership Plan. Now we're asking you to join in this next phase by reviewing this consultation guide for the final Climate Leadership Plan, and participating in the engagement process through the website: engage.gov.bc.ca/climateleadership.

We will review your comments and input, and use them to help finalize the Climate Leadership Plan, which will be released in the spring of 2016.

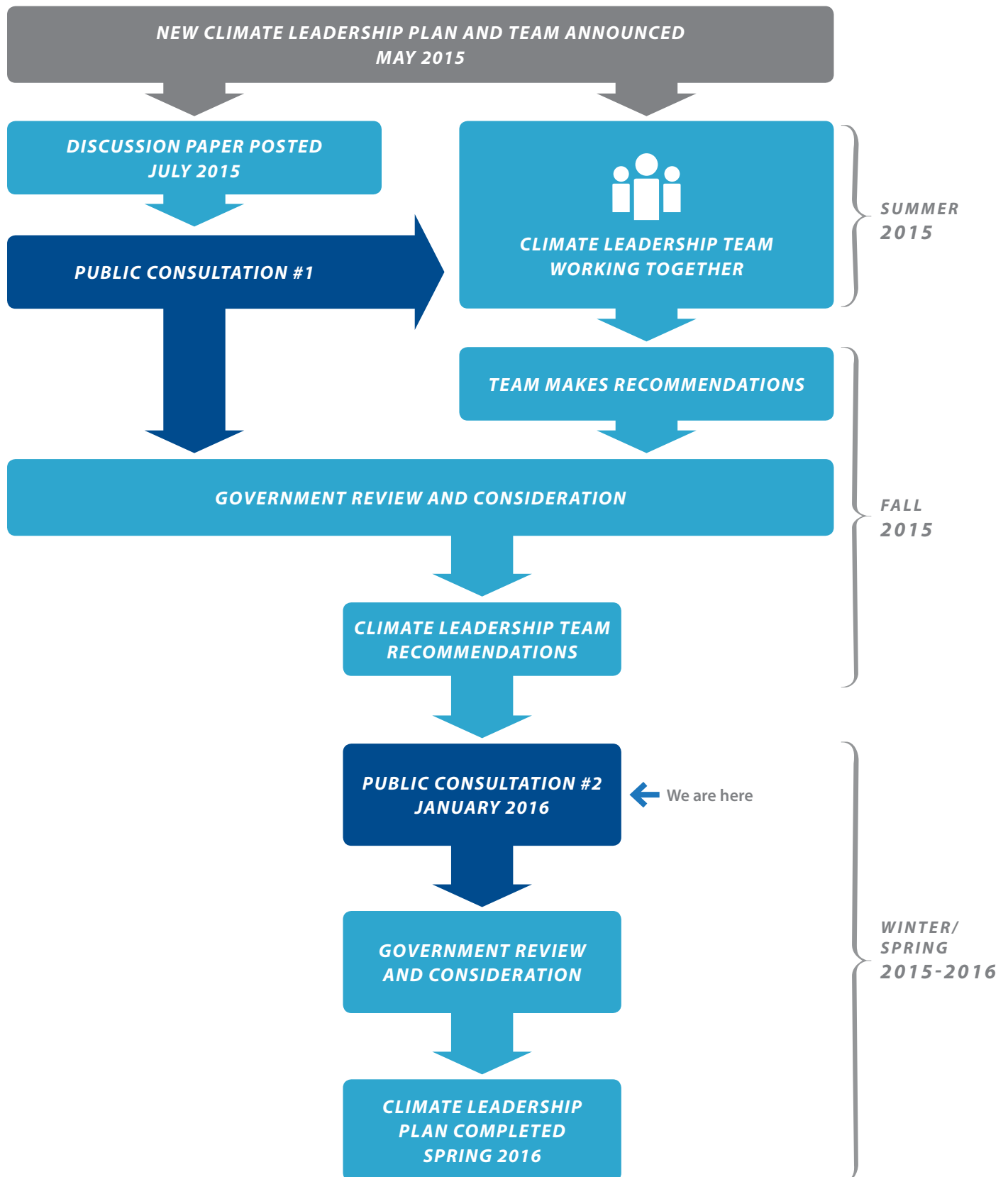
A strong Climate Leadership Plan will help us take advantage of the low-carbon economy of the future, and the thousands of green jobs that goes with it, while keeping us on track to our long term greenhouse gas reduction targets for 2050.

A stylized, handwritten signature in black ink that reads "Mary Polak".

HONOURABLE MARY POLAK
MINISTER OF ENVIRONMENT

THE CLIMATE LEADERSHIP PLAN PROCESS

This process will help determine the actions needed to reach our climate goals.



NEXT PHASE OF CONSULTATION

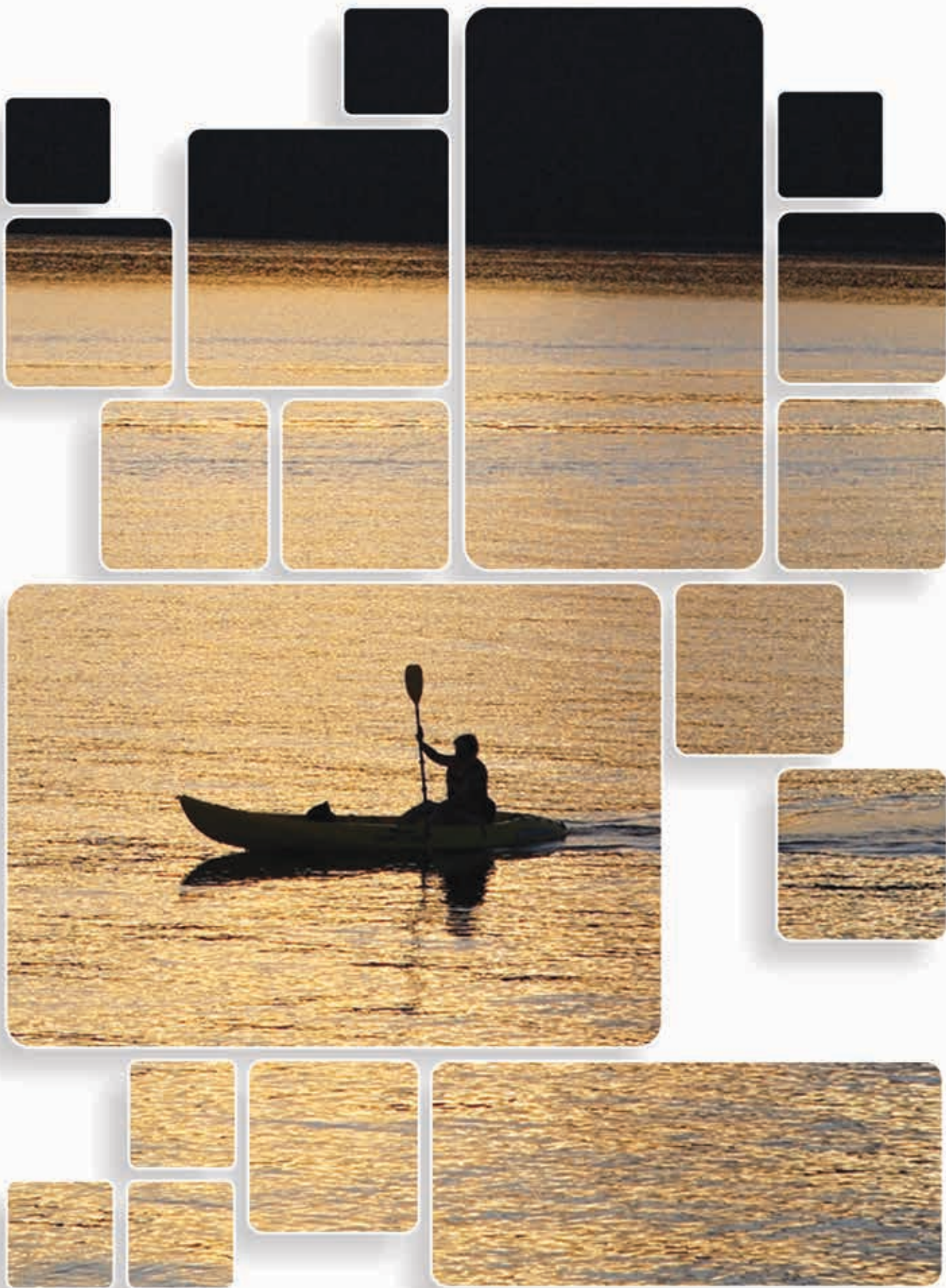
During our first phase of consultation, many British Columbians provided their ideas and priorities for climate action – through nearly 6,000 completed surveys, 300 template letters and over 200 individual submissions. Your input helped inform this consultation guide for the final plan, together with recommendations from the Climate Leadership Team (CLT). You can find the results of the first phase at engage.gov.bc.ca/climateleadership.

The province recently received the Climate Leadership Team Recommendations Report, including 32 recommendations to reduce greenhouse gas emissions while maintaining a focus on economic opportunities. This group of diverse B.C. leaders suggests renewed action beginning in the 2016/17 fiscal year.

The recommendations address:

- » greenhouse gas reduction targets and progress reviews;
- » carbon pricing and fiscal policy;
- » climate action across industry, communities, buildings and transportation sectors; and
- » intergovernmental and First Nations relations.

The wealth of input received to date – from the public survey, the CLT recommendations and ongoing internal government review – will now inform our next round of climate change work. Concurrent review will continue as government conducts sector-specific consultations, does further analysis of options, including the CLT recommendations, and ties all of this activity and information in with developing federal government initiatives.



BUILDING ON B.C.'S STRONG FOUNDATION

Our understanding of climate change continues to improve. Recently, scientists have released predictions of how climate change will affect our ecosystems, infrastructure and livelihoods well into the future. For example, in less than one lifetime, B.C. is projected to lose almost three-quarters of its glaciers. We've witnessed a summer of extreme events with forest fires and water shortages. While some amount of climate change is unavoidable, by acting now the world can limit irreparable harm and prepare for changes already underway.

In B.C. we are doing our part and our experience shows that we can address climate change while still creating a strong economy and vibrant communities.

The actions of other nations also reflect a growing understanding that climate change is a threat to the quality of life of people globally. For example, at the recent Paris conference, for the first time ever, nations acknowledged collective responsibility for addressing the problem. Additionally, for the first time, 195 nations fully agreed on the science of climate change and that we must limit human-caused global warming to no more than 2°C and, preferably, 1.5°C.

Clean Tech and Clean Energy

Globally, the demand for clean energy and climate solutions continues to grow. As countries look for cleaner energy alternatives, particularly in Asia, B.C. is positioned to ensure our liquefied natural gas (LNG) plays an important role in decreasing global emissions.

B.C.'s Clean Economy

- » The province has 68,165 clean economy jobs, a 12.5 per cent increase since 2010.*
- » British Columbia's clean economy GDP rose to \$6.31 billion by 2014, a 19.3 per cent increase from 2010.*

**West Coast Clean Economy 2010-2014
Jobs Update, Delphi Group 2015*

B.C. has over 200 clean tech companies that generate an estimated \$1.7 billion in revenues annually.¹

They are important contributors to B.C.'s growing technology industry. These forward-thinking companies represent incredible opportunities for our province to create new jobs and provide economic benefits for all British Columbians.

While Canada's clean tech industry grew last year, it currently captures just one per cent of the \$1 trillion clean tech global market.² By encouraging local development of technology to address our own challenges, government can ensure B.C. companies are positioned to take advantage of emerging export opportunities. The U.S. has significant growth opportunities for companies in renewable energy, wastewater management, clean transportation and green building.³ In fast-growing economies like China and India, clean technology and cleaner fuels are in higher demand than ever.

As our buildings, facilities and vehicles transition to clean tech and fuels, our abundant natural resources, including hydro-electricity, biomass and wind, will provide a stable supply of clean, renewable energy.

¹ B.C. Technology Report Card for B.C., KPMG, 2014

² Canadian Clean Technology Industry Report, Analytica Advisors, 2015

³ <https://www.britishcolumbia.ca/export/key-markets/united-states/>

Efficiency Improvements

Improved energy efficiency in our buildings and vehicles is saving British Columbians energy and carbon costs. Case studies from Climate Smart businesses show total annual operating cost savings of over \$2.2 million and 13,500 tonnes of greenhouse gas emissions reduced.⁴ Another study found that high energy efficiency standards in the residential, commercial/institutional and industrial sectors will return about \$3 in savings for every program \$1 invested, increase Canada's annual GDP by over \$47 billion and create over 300,000 jobs per year.⁵

Competitive Industries

Using the best new technologies here in B.C. means our foundational industries are gaining a competitive edge, while continuing to export their innovations to help businesses save money and reduce their impact on the environment.

Many of our lumber mills have improved thermal efficiency through boiler upgrades, and reduced their energy and carbon costs by switching to biomass as a fuel source. Natural gas facilities' emission reduction strategies are also reducing carbon costs. These strategies include electrification, eliminating routine flaring and preventing methane venting and leaks.

Our abundant natural resources position B.C. well in the new low carbon economy. Our forests present us with enormous carbon sequestration opportunities. Collaboration with First Nations, industry and other governments has led to several hallmark carbon projects in B.C.'s Great Bear rainforest. These projects not only protect existing carbon stocks but also support the area's distinctive biodiversity and economic opportunities for local communities, including First Nations.

Strong Climate Action Offers Many Benefits

- » A healthier environment with lower air pollution and resilient ecosystems
- » A place for B.C. as a global innovator in business solutions to environmental problems
- » Improved human health and safety
- » Reduced exposure to risks and costs of climate impacts
- » Improved choices for families and businesses taking action, reducing emissions and saving energy costs
- » Compact and efficient communities that encourage social interconnection

Healthy and Resilient Communities

More attention is being turned to the critical role of climate action in building healthy and resilient communities. Strategies to reduce emissions and invest in resilient infrastructure are also helping to prevent adverse health impacts and promote active lifestyles.

Increased risk of asthma, respiratory ailments, and injuries are examples of potential health impacts from climate events such as heat stress, extreme flooding, storms or ongoing city congestion.

Diverse approaches are important, for example ensuring buildings and roads are designed and built with evolving climate risks in mind. Integrating natural systems into infrastructure to reduce the impacts of extreme events, such as heat or heavy rainfall, is another example. Additionally, designing cities that are more walkable and liveable reduces energy use and costs, improves air quality, saves commuting time and helps instil active lifestyles.

⁴ Are Small to Mid-Sized Businesses the Catalyst to a Low Carbon Economy in B.C.? Pacific Institute for Climate Solutions, 2013

⁵ Energy Efficiency: Engine of Economic Growth in Canada, Acadia Centre, 2014

Strong Ecosystems

As the climate changes, the best way to maintain resilience and the related ecosystem services is to allow organisms to adapt, evolve and move as necessary. A healthy core protected area network that is connected and representative of the ecosystems in the province will allow this adaptation.

Mitigating climate risks to the natural resources that sustain us – fishing, agriculture, forestry and water systems – is critical for improving long-term outcomes and preventing future costs. B.C.'s natural resource economy has already been hard hit by impacts of climate change. Climate change will significantly increase producer-business risk and management complexity, while bringing some opportunities for the agriculture, fisheries and aquaculture sectors. To reduce the risks and to take advantage of the opportunities, each industry will need support to adapt and build resilience.

Leadership and Collaboration

Tackling climate change requires countries and communities around the world to collaborate. Organizations such as the World Bank and the United Nations have identified B.C.'s revenue-neutral carbon tax as a model to follow. The carbon tax is a "text-book" example of how to get carbon pricing right, says the Organization for Economic Cooperation and Development.

B.C.'s public sector is also leading by example, and in 2015, it achieved carbon neutrality for the fifth year in a row. Government buildings showcase examples of clean energy solutions for hundreds of thousands of British Columbians when they access government services, go to work or attend school.

WHAT WE HEARD FROM YOU

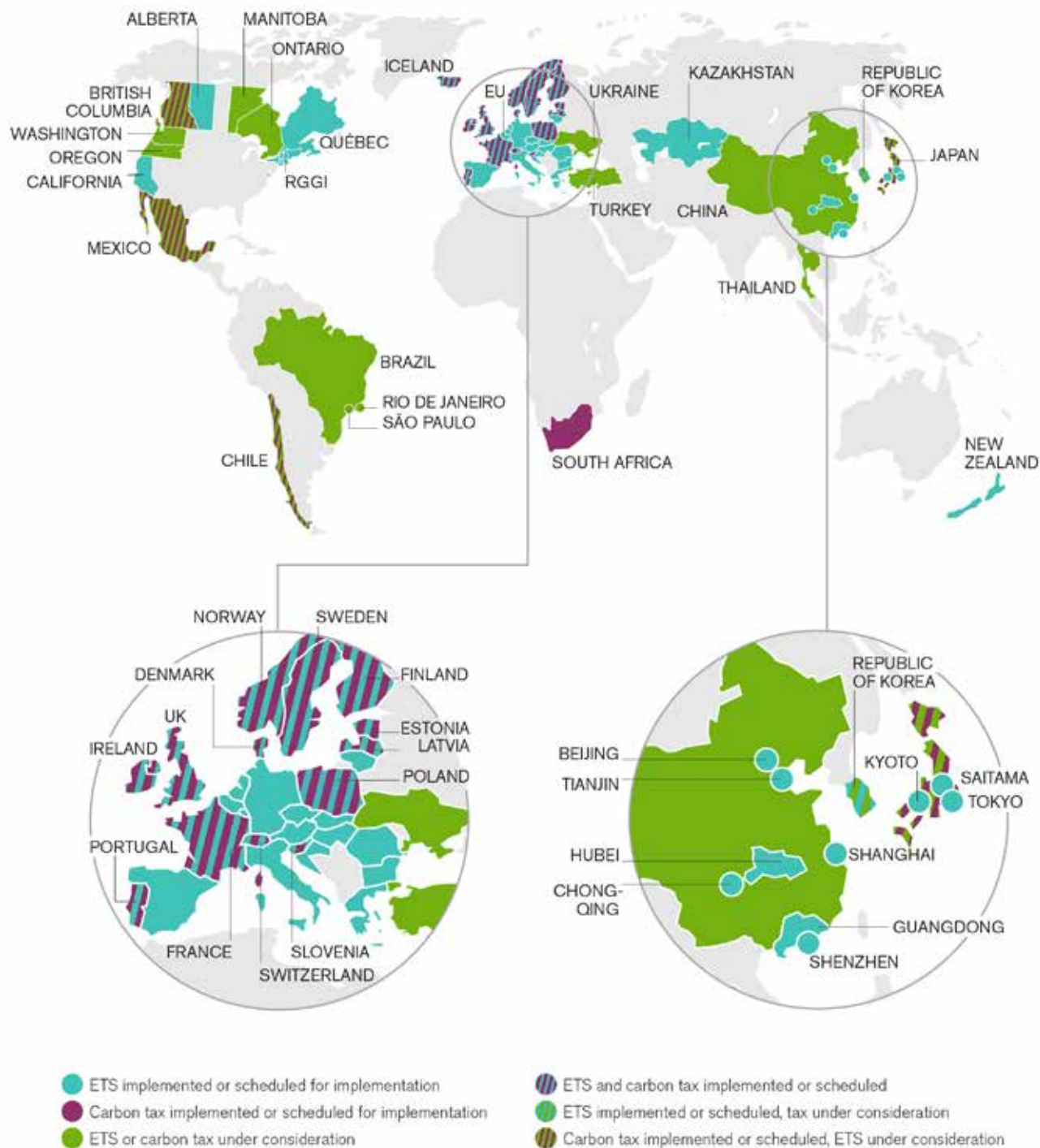
"WHAT WE VALUE" IS TOP PRIORITY FOR SURVEY RESPONDENTS

Public survey respondents to the B.C.'s government's 2015 Climate Leadership Discussion Paper clearly identified "What We Value" as the top priority for cutting emissions – both in the short and long term. The goal was described as "the cost of climate change for society is considered whenever British Columbians make important decisions," for example, through carbon pricing or adapting to climate change.

Priority actions under this topic led with *affordability of solutions for business and consumers* (32 per cent of respondents' preference), followed close behind by *expanding carbon pricing, driving organizations and people to consider costs of adaptation in their decisions, and setting targets for types of emissions* (about 23 per cent preference for each).

Over 90 per cent of survey respondents feel that climate change is a serious issue.

Results from the first consultation activities in the development of B.C.'s Climate Leadership Plan can be viewed at engage.gov.bc.ca/climateleadership



B.C. A WORLD LEADER ON CARBON PRICING

B.C. established a revenue-neutral carbon tax in 2008 to encourage individuals and organizations to reduce fossil fuel use. The policy has been successful and continues to be a world-leading example of how to build a strong economy in a carbon-constrained world. In 2015, about 40 national and over 20 subnational jurisdictions, representing almost a quarter of global greenhouse gas emissions, are putting a price on carbon, as illustrated in the map.* This includes carbon taxes, emissions trading systems or other levies.

ETS – Emissions Trading System

*Carbon Pricing Watch 2015; developed by World Bank and Ecofys.

Source: © 2015 International Bank for Reconstruction and Development/ The World Bank

The following principles, first introduced in our July 2015 discussion paper, guide development of the Climate Leadership Plan.

Our Principles

1

GOVERNMENT TAKES ACTIONS NOW THAT WILL RESULT IN BOTH SHORT- AND LONG-TERM EMISSION REDUCTIONS.

2

ACTIONS BALANCE OUTCOMES ACROSS ECONOMIC, ENVIRONMENTAL, AND SOCIAL OBJECTIVES.

3

THE APPROACH RECOGNIZES WE ALL HAVE RESPONSIBILITY — IN B.C. AND GLOBALLY.

4

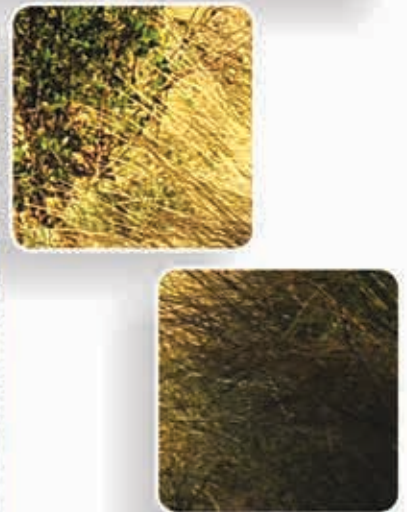
DECISION MAKING AND REPORTING ON PROGRESS ARE TRANSPARENT.

5

THE APPROACH ADDRESSES THE NEEDS OF THOSE INDIVIDUALS AND FAMILIES LEAST ABLE TO RESPOND.

6

COLLABORATION AND PARTNERSHIPS ARE CRITICAL TO LONG-TERM SUCCESS.



Our Pathway Forward

Setting the Stage

EMISSIONS AND THE ECONOMY

B.C. has a diverse economy including natural resources, clean technology, renewable energy, tourism, forestry and agriculture, service sector, and creative and high-tech industries. Our economy has grown, even as B.C. reduced emissions from 2007-2012.

"The example of British Columbia is one of the most powerful. Its carbon price mechanism is neutral to the tax payer – it's not an increase in tax."

*World Bank President,
Jim Yong Kim, Dec 2014*

We have done this with a strong foundation of climate action – a revenue-neutral carbon tax, clean energy requirements, a low carbon fuel standard, local government leadership and a carbon neutral public sector.

Independent research at the University of Ottawa has found that since the implementation of the carbon tax, per capita petroleum fuel use in B.C. has dropped, while it rose in the rest of Canada. At the same time, its economy has kept pace with the rest of Canada.⁶ This success is built upon the principle of balancing economic prosperity and environmental sustainability so both can advance.

Our carbon tax is resulting in meaningful climate action progress, while allowing our business sector to pay among the lowest corporate income tax

rates in the country. The revenue-neutral carbon tax is designed to maintain this balance, as the rate changes. Every dollar raised through the carbon tax is given back to people and business through tax reductions.

Achieving economic and environmental outcomes is important and requires ongoing attention. Recently, emissions began to rise again, and B.C. is revitalizing its plan to address these challenges.

B.C.'s Carbon Tax

The carbon tax, introduced in 2008 at \$10 per tonne of CO₂e, was increased gradually by \$5/tonne annually until it reached \$30/tonne in 2012. B.C. has committed to keep the rate at \$30/tonne until 2018.

A 'revenue-neutral carbon tax' means that all carbon tax revenues collected by government are returned to British Columbians in the form of personal and business tax measures:

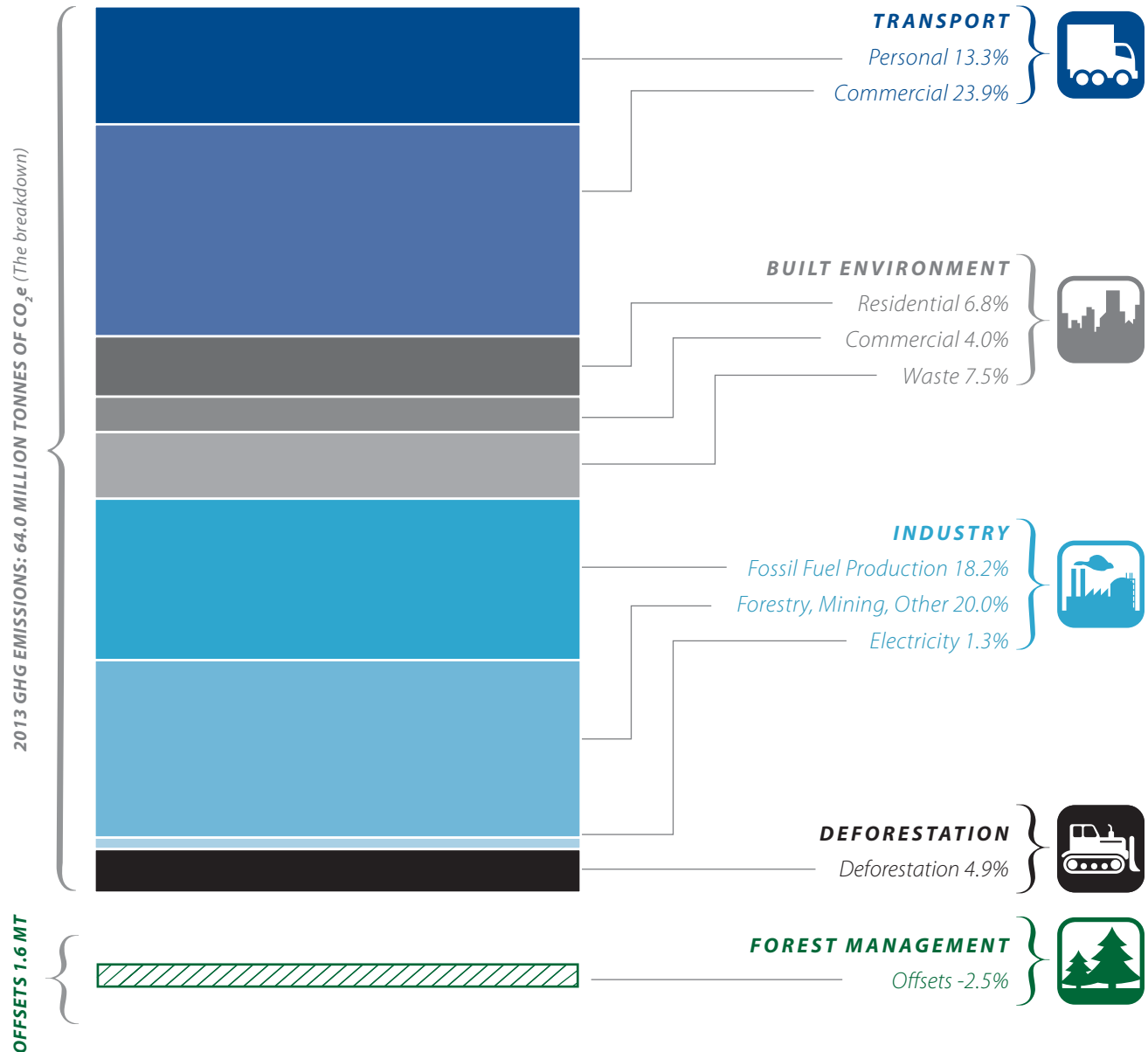
- » Low income climate action tax credit
- » Five per cent reduction in first two personal income tax rates
- » Northern and rural home owner benefit of \$200
- » General corporate income tax rate reduction
- » Small business corporate income tax rate reduction
- » Industrial property tax credit

⁶ Elgie, Stewart, and Jessica McClay. 2013. "BC's Carbon Tax Shift Is Working Well after Four Years (Attention Ottawa)." *Canadian Public Policy* 39(2):1–10.







B.C.'S GREENHOUSE GAS EMISSIONS

In 2013, British Columbia's emissions were 62 million tonnes (mt) of CO₂e net after offsets. Most emissions fall into three categories: transportation, the built environment and industry. Each offers opportunities for reductions. B.C. can also store or sequester carbon, for example, in forests or underground.



Building Our Climate Leadership Plan

All of B.C.'s greenhouse gas emission sources fall into one of the following areas of action. This document outlines measures in each of these areas to reduce emissions or adapt to changes underway and set us on a confident path forward towards our 2050 goals.

AREA OF ACTION	THE FOCUS	THE GOAL
 What We Value	How we consider the cost of climate change to society when making decisions.	The cost of climate change for society is considered whenever British Columbians make important decisions.
 The Way We Live	Buildings, community design, and waste.	Communities are thriving and resilient in the face of climate change.
 The Way We Travel	Movement of people and goods.	People and goods move efficiently and reliably, using clean transportation.
 The Way We Work	Business, industry, products and services.	B.C.'s economy remains strong, and jobs continue to be created, while greenhouse gas emissions fall.

For more information on current climate action, please visit <http://www2.gov.bc.ca/gov/content/environment/climate-change>



WHAT WE VALUE

Goal: The cost of climate change for society is considered whenever British Columbians make important decisions.

Current State

PUTTING A PRICE ON CARBON

In 2008, British Columbia introduced its broad-based carbon tax to encourage people to reduce fossil fuel use. The current carbon tax rate is \$30 per tonne of carbon dioxide equivalent (CO₂e) emissions. Because the tax is revenue neutral, all revenues are returned to British Columbians through personal and business tax reductions.

At the same time, B.C. implemented further carbon pricing through its Carbon Neutral Government leadership commitment. This was achieved through measuring, reducing and reporting on public sector emissions, and through the purchase of carbon offsets that fund provincial climate action projects to achieve carbon neutrality.

British Columbia met its first interim target of reducing emissions by six per cent below 2007 levels by 2012, while the economy grew, proving that the environment and economy can advance together.

Climate Action Highlights:

- » B.C.'s carbon tax is serving as an example worldwide for carbon pricing. It applies to combustion of fossil fuels and is the most comprehensive of its kind, covering over 70 per cent of provincial emissions. The tax revenue is used for low-income tax credits and broad-based tax cuts.
- » B.C. was the first jurisdiction in North America to commit to carbon neutrality in its public sector operations, providing leadership for clean technology and emission reduction.

ENVIRONMENTAL CHANGE IN BRITISH COLUMBIA



TEMPERATURE: Average temperature has increased over all of B.C. since 1900 (1.4°C per century).



PRECIPITATION: Average precipitation increased over most of southern B.C. (1900–2013).



GLACIERS: All glaciers in B.C. retreated from 1985 to 2005.



SEA LEVEL: Average sea level has risen along most of the B.C. coast over the past 95 years.

MANAGING CLIMATE RISKS

In 2010, we released our first adaptation strategy – identifying high-level priorities for action. Since then, across the province we have been taking action to identify risks, monitor changes and develop adaptation strategies.

Climate Action Highlights:

- » B.C. has assessed risks in several key sectors including agriculture, forestry, mining, oil and gas, transportation, flood protection and hydroelectricity.
- » Government has developed guidance on sea dike design and coastal development, enabling local governments and qualified professionals to better protect people, buildings and infrastructure from sea-level rise.

- » We have created a suite of tools to help local governments manage climate-related risk in water and watershed planning, land use planning, infrastructure development and urban forests.

Adaptation to reduce risks from changing conditions and extreme events is most effective when it involves a portfolio of actions, mechanisms and strategies. In many cases, we already see the impacts of climate change and know what we need to do. We also need to explore further the potential risks across the province and implement plans that will reduce these risks and improve our resilience.

WHAT WE HEARD FROM YOU

Climate Leadership Discussion Paper survey respondents identified “What We Value” as the top priority in the short- and long-term. The goal envisions that *the cost of climate change for society is considered whenever British Columbians make important decisions*.

In particular, respondents supported:

- » Improving the affordability of solutions for consumers and businesses to address climate change
- » Expanding the use of carbon pricing to stimulate decisions that reduce emissions
- » Using regulations and incentives to encourage considering the cost of climate risks in important decisions
- » Setting targets by emission types (e.g. industry, transportation)

CLT RECOMMENDATIONS SNAPSHOT: TARGETS, REVIEWS, INTERGOVERNMENTAL RELATIONS

- » Re-affirm 2050 GHG reduction target of 80 per cent below 2007 levels **(#1)**
- » Set new 2030 target of 40 per cent below 2007 levels **(#2)**
- » Set 2030 sectoral targets for transportation, industry and the built environment **(#3)**
- » Review the Climate Leadership Plan and policies at least every 5 years **(#32)**
- » Review integration of carbon tax with a cap and trade framework for the B.C. context if majority of provinces opt for carbon pricing via emissions trading **(#29)**
- » Work with federal, provincial and other North American governments to achieve parity with B.C.'s climate policies **(#30)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership

CLT RECOMMENDATIONS SNAPSHOT: FISCAL POLICY

- » Lower PST and eliminate PST on electricity, supported by incremental carbon tax **(#4 and #7a)**
- » Increase the carbon tax in 2018 by \$10/yr, maintain certain current tax reductions, and target tax credits and other mechanisms to emissions-intensive, trade exposed sectors and vulnerable groups **(#5)**
- » Expand carbon tax coverage to all GHG emission sources in B.C. after 5 years **(#6)**
- » Use incremental tax revenue for technology and innovation and local government projects resulting in reductions **(#7b and #7c)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership

CLT RECOMMENDATIONS SNAPSHOT: ADAPTATION

- » Amend the *Environmental Assessment Act* to include the social cost of carbon **(#11)**
- » Update forest and agriculture policy, regulation and protected areas strategies to account for climate change impacts **(#16)**
- » Update by 2020 hazard maps for all climate related hazards **(#24a)**
- » Invest in sufficient monitoring systems to ensure the change in climate can be managed effectively **(#24b)**
- » Develop a policy framework to guide government's management of the risks associated with a changing climate **(#24c)**
- » Increase communications to public **(#24d)**
- » Use First Nations traditional knowledge when appropriate as part of hazard mapping information **(#25a)**
- » Resource the research of climate change impacts on the inherent and treaty rights of indigenous people **(#25b)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership



THE WAY WE LIVE

Goal: Communities are thriving and resilient in the face of climate change.

Current State

Emissions from the built environment (buildings, deforestation and waste) represent 23 per cent of total emissions, down 8.5 per cent since 2007. Deforestation is the permanent change from forest to non-forest land, often the result of urban sprawl.

COMMUNITY PLANNING

Eighty-eight per cent of British Columbians live in urban settings and 12 per cent live in rural areas and communities. We often face similar issues, yet solutions have differed by region. Regardless of where we live, decisions made at the community level play a critical role in keeping the province on track to meet its targets.

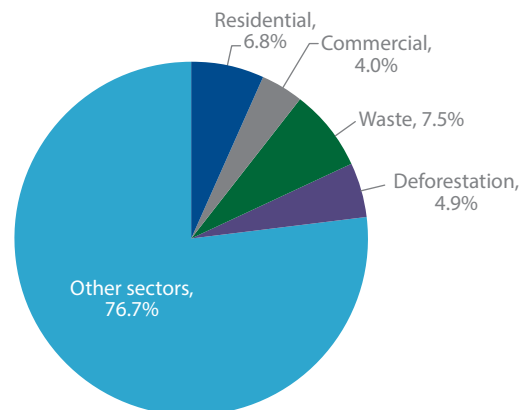
Climate Action Highlights:

Three provincial policies are helping to support climate action innovation at the community level:

- » the requirement for greenhouse gas reduction targets in local government Official Community Plans and Regional Growth Strategies
- » the commitments made under the voluntary Climate Action Charter to work towards carbon neutral operations, measure community-wide emissions, and create complete compact, energy-efficient communities
- » the Climate Action Revenue Incentive Program, which returns carbon tax to communities for greenhouse gas reduction projects.

2013 BUILDINGS, DEFORESTATION, AND WASTE EMISSIONS

- COMPRISE 23.3 PER CENT OF B.C.'S EMISSIONS
- DECREASED BY 8.5 PER CENT SINCE 2007



With these policies in place in B.C. since 2008, we have seen the development of more energy-efficient buildings, district energy systems, improved forestry and landfill management practices, and organic waste diversion. Communities have made good progress and are demonstrating the possibilities of what is achievable.

New efforts need to accelerate the transition to compact communities, zero emission buildings, improved waste diversion and conversion of waste to biogas. The CLT recommends reinvigorating the relationship between the B.C. government and municipalities to make further progress on shared goals.

BUILDINGS

In 2013, greenhouse gas emissions from buildings totalled 6.9 million tonnes (10.8 per cent of B.C.'s total).

Climate Action Highlights:

- » The *Building Code* and *Energy Efficiency Act* are improving standards for residential and commercial buildings, and for equipment such as heating systems, water heaters, boilers and appliances.
- » Energy efficiency programs like LiveSmart and the Home Energy Retrofit Offer encourage efficiency upgrades.
- » Government, through its carbon neutral commitment and LEED Gold standards for new buildings, helps drive energy conservation, innovation and leadership across government, schools, hospitals, universities and colleges.

Accelerating the uptake of district energy systems and technologies to support energy efficiency and increased use of renewables will transform this sector.

WASTE

British Columbians produced 4.8 million tonnes of greenhouse gas from waste in 2013 (7.5 per cent of B.C.'s total).

Climate Action Highlights:

- » The Landfill Gas Management Regulation requires large landfill operators to increase the amount of landfill gas capture (methane) by 2016. Relevant operators are on pace to install systems that meet the requirement and reduce methane emissions.
- » About 60 per cent of communities have implemented curbside organic diversion programs.

We need to reduce organic waste across the entire value chain – from less food waste to more diversion of organics to more efficient landfills to the conversion of waste into renewable fuels.

WHAT WE HEARD FROM YOU

Climate Leadership Discussion Paper survey respondents identified “The Way We Live” as a key priority for our 2050 target. This goal envisions *thriving and resilient communities in the face of climate change*.

In particular, respondents supported:

- » Regulations and incentives for greener buildings
- » Support for local food production and low carbon businesses
- » Less travel and energy use to be a priority in community planning

CLT RECOMMENDATIONS SNAPSHOT: COMMUNITIES

- » Update the Climate Action Charter to align provincial and community goals **(#21)**
- » Create a waste-to-resource strategy that reduces GHG emissions from organic waste and landfills **(#22)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership

CLT RECOMMENDATIONS SNAPSHOT: BUILDINGS

- » Require new public sector buildings to use more materials that sequester carbon and meet most of its annual energy needs by on-site renewable energy starting in 2016 **(#20a)**
- » Require new buildings to use more materials that sequester carbon and meet most of their annual energy needs by on-site renewable energy, through the building code **(#20b)**
- » Encourage retrofits that reduce GHG emissions in existing buildings through programs (e.g. on-bill financing) **(#20c)**
- » Implement standards that support high-efficiency building equipment and appliances **(#20d)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership



THE WAY WE TRAVEL

Goal: People and goods move efficiently and reliably, using clean transportation.

Current State

Transportation contributes 37 per cent of B.C.'s emissions, down 1.5 per cent since 2007.

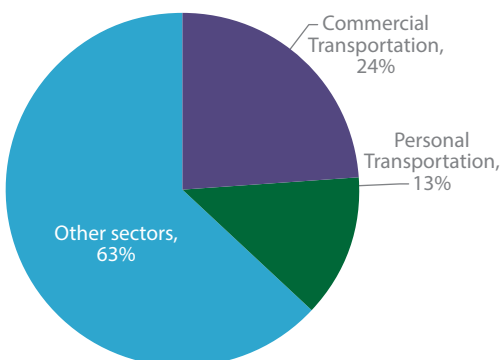
Climate Action Highlights:

- » The low carbon fuel requirement mandates a 10 per cent reduction in the carbon content of fuels by 2020, and 5 per cent renewable content in gasoline (4 per cent in diesel). This encourages innovation and a growing diversity of commercially available low carbon fuels. In 2012, this led to nearly 1 million tonnes of greenhouse gas emissions reductions.
- » Partnerships such as the Pacific Coast Collaborative can address competitiveness across jurisdictions while accelerating adoption of clean technologies through zero emission vehicle commitments and low carbon fuel standards.

Almost all vehicles will eventually need to run on clean fuels to reduce transportation emissions to near zero by 2050.

2013 TRANSPORTATIONS EMISSIONS

- COMPRISE 37.2 PER CENT OF B.C.'S EMISSIONS
- DECREASED BY 1.5 PER CENT SINCE 2007



PERSONAL TRANSPORTATION

Personal transportation makes up 13 per cent of B.C.'s emissions.

Climate Action Highlights:

- » An incentive program for clean energy vehicles (CEV) fuelled by electricity, natural gas or hydrogen was introduced in 2011. Renewed in 2015, the CEV program has been highly successful, keeping B.C. among leading provinces in clean energy vehicle sales per capita.
- » The BC SCRAP-IT program removes thousands of polluting vehicles from the road through incentives for transit, car sharing, bikes, and most recently, the purchase of zero emission electric vehicles.
- » Through a cost-sharing program with local governments, over 100 cycling infrastructure projects have been completed. Between 2015 and 2017, the B.C. government has committed \$18 million to the BikeBC program.
- » As part of the expansion of transit infrastructure in the Lower Mainland, the Canada Line opened in 2009 and the Evergreen Line is due to open in fall 2016.

For personal vehicles, reducing per capita vehicle kilometres traveled, improving vehicle fuel efficiency and lowering the carbon intensity of transportation fuels are critical.

COMMERCIAL AND HEAVY DUTY TRANSPORTATION

Twenty-four per cent of B.C.'s emissions come from this sector. On-road heavy duty vehicles are among the largest and fastest growing sources of greenhouse gas, comprising about 11 per cent of B.C.'s total. These emissions are expected to increase as freight and new industrial projects grow. Other commercial transportation emission sources include domestic aviation, marine and railways.

Climate Action Highlights:

- » B.C.'s low carbon fuel standard is driving down emissions in this sector.
- » Conversion of heavy duty vehicles and buses to compressed natural gas (CNG) and liquefied natural gas (LNG) have decreased emissions in commercial fleets.

- » BC Ferries is building three new vessels that will have dual fuel propulsion systems (LNG and diesel), and is retrofitting its two Spirit Class ferries to have dual fuel propulsion.
- » Clean electric shore power reduces greenhouse gas emissions at the ports of Prince Rupert and Vancouver.

As our economy grows, so too will our transportation needs. It will be important to maximize the efficiency of the entire goods movement chain and support this sector to move quickly to low carbon fuels.

WHAT WE HEARD FROM YOU

Climate Leadership Discussion Paper survey respondents identified "The Way We Travel" as an important priority in the near term. This goal envisions *people and goods moving efficiently and reliably, using clean transportation*.

In particular, respondents supported:

- » More clean, coordinated transportation such as public transit and shared travel
- » Expanded regulations and incentives to encourage use of cleaner vehicles and fuels

CLT RECOMMENDATIONS SNAPSHOT: TRANSPORTATION

- » Establish Zero Emission Vehicle targets for the sale of new light duty vehicles for 2020, 2025 and 2030 **(#19a)**
- » Increase the Low Carbon Fuel Standard (LCFS) to 20 per cent by 2030 **(#19b)**
- » Broaden the LCFS coverage to include all vehicle fuel use with the exception of aviation fuel **(#19c)**
- » Support increased commercial transport efficiency (size of vehicles) and natural gas/propane conversions **(#19d)**
- » Establish revenue neutral PST for all vehicles based on grams of CO₂ per km **(#19e)**
- » Support increased use of public transit and other mobility options that reduce GHG emissions **(#23)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership



THE WAY WE WORK

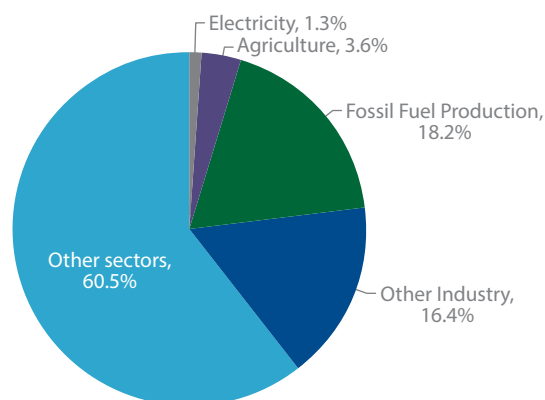
Goal: B.C.'s economy remains strong and jobs continue to be created, while greenhouse gas emissions fall.

Current State

Almost 40 per cent of B.C.'s greenhouse gas emissions come from the way we work. Since 2007, B.C. has been successful in stabilizing emissions in the industrial sector. Government has also encouraged increased sequestration of carbon in our forests. The challenge is to reduce emissions even further as we look to meet our emission reduction targets, while developing the LNG industry and maintaining B.C.'s competitiveness.

2013 INDUSTRY, FORESTRY AND AGRICULTURAL EMISSIONS

- COMPRISE 39.5 PER CENT OF B.C.'S EMISSIONS
- DECREASED BY 0.4 PER CENT SINCE 2007



FOSSIL FUEL PRODUCTION

Emissions from fossil fuel production make up about 18.2 per cent of B.C.'s total. Natural gas dominates the sector. Emissions depend on production levels, the source of the natural gas, fuel choice for processing, energy efficiency and level of fugitive emissions.

Since 2008, B.C.'s natural gas production has grown by about 40 per cent. Over the same period, global competition has increased and government has introduced strong climate policies. B.C.'s experience continues to demonstrate that climate leadership can be upheld without compromising competitiveness and economic growth.

Climate Action Highlights:

- » B.C. has eliminated all routine flaring at oil and gas wells and production facilities.
- » The carbon tax covers about 64 per cent of oil and gas sector emissions, encouraging industry to pursue emission reduction opportunities. Several new gas plants have already opted to electrify with clean grid electricity.
- » To meet the commitment to have the cleanest LNG facilities in the world, B.C. has legislated that LNG operations meet a world-leading greenhouse gas emissions intensity benchmark of 0.16 metric tonnes of CO₂e per metric tonne of LNG produced.

The challenge is to deliver fuels to growing markets while meeting B.C.'s emission reduction targets. The Venting and Flaring Guideline, improved energy efficiency processes such as waste heat recovery, methane leak reductions, and electrification of natural gas facilities are all helping to curb emissions as the industry grows. Further work in these areas, together with innovations such as carbon capture and storage, will be needed to make deeper emission cuts.

OTHER INDUSTRY

Cement production, mining, smelting, forestry and manufacturing are responsible for 16.4 per cent of B.C.'s emissions. B.C. has historically strived to ensure B.C. remains competitive as the province pursues its climate goals.

Climate Action Highlights:

- » In 2015, government announced a five-year incentive program that enables B.C. cement manufacturers to further displace coal with low carbon fuels, and strive for a 2019 emissions intensity benchmark that will make B.C.'s cement among the cleanest in the world. Currently, two of B.C.'s three plants are in the top quartile Canada-wide for energy efficiency.
- » Developing offset projects to meet B.C.'s carbon neutral government commitment has stimulated investments in greener industrial processes, such as fuel switching from coal to waste products and biomass, and equipment efficiency upgrades in the production of lumber, pulp and paper, and cement.
- » In 2013, forestry offset projects removed over 1.5 million tonnes of CO₂e from the atmosphere, creating jobs and unlocking new revenue streams for government, First Nations, communities, forest companies and private land owners.
- » Roughly half of the total emissions from these sectors are covered by the carbon tax.

B.C. wants to pursue policies that both achieve reduction goals and lead to companies' cost savings through improved efficiencies and technology adoption.

AGRICULTURE

Agriculture emissions account for almost 4 per cent of provincial emissions, arising from manure management, agricultural soils, and enteric fermentation (methane from normal digestion in animals such as cattle and sheep).

Climate Action Highlights:

- » Many of B.C.'s greenhouses have taken steps to reduce their use of fossil fuels (e.g. through biomass boilers, thermal curtains and heat storage systems), supported by provincial offset standards and carbon pricing.
- » Numerous farmers in B.C. are reducing emissions through implementation of nutrient and manure management plans and conservation tillage.
- » Many emission reduction opportunities in agriculture also result in additional new business opportunities, including the development and implementation of innovative systems to recover nutrients and maximize the value of agricultural byproducts.

ELECTRICITY

Only 1.3 per cent of our emissions come from electricity generation because of B.C.'s abundant clean power resources. Electricity sector emissions come mainly from co-generation plants, remote communities' diesel generators, and thermal power used mainly for peak demand periods.

Climate Action Highlights:

- » The portion of BC Hydro's power generation portfolio that comes from clean or renewable resources currently exceeds 96 per cent, above the 93 per cent requirement in the *Clean Energy Act*. The Act also requires that, by 2020, at least 66 per cent of BC Hydro's incremental power demand be met through conservation and efficiency improvements.
- » The Innovative Clean Energy (ICE) Fund supports new sources of clean energy and technologies.

B.C.'s abundant supply of low-carbon electricity ensures that clean and renewable resources will continue to provide the vast majority of B.C.'s future electricity needs and support the electrification of energy intensive industries.

WHAT WE HEARD FROM YOU

Climate Leadership Discussion Paper survey respondents identified “The Way We Work” as an important priority over both the short and long term. This goal focuses on business, industry, products and services, and envisions *a strong economy creating jobs while greenhouse gas emissions fall*.

In particular, respondents supported:

- » Regulations and incentives to drive innovation and cut emissions
- » Aligning new sources of emissions with the climate plan
- » Accelerating development of a workforce that excels in a low carbon economy

CLT RECOMMENDATIONS SNAPSHOT: INDUSTRY, ELECTRICITY, LOW CARBON ECONOMY

Natural gas and LNG

- » Instruct BC Hydro to develop a strategy to supply clean electricity required for electrification of upstream natural gas, LNG, and associated infrastructure **(#14)**
- » Set a goal to reduce fugitive and vented methane emissions by 40% within five years, through regulating best practice leak reduction and repair practices and developing methane reduction and reporting best practices. After five years, determine if more ambitious action is necessary **(#15)**

Forestry and Agriculture

- » Update forest policy to use more forest residue for energy and increase carbon sequestration **(#17)**
- » Create a task force to review and update carbon management best practices for the agriculture sector **(#18)**

Electricity

- » Change the target for clean energy on the integrated grid to 100% by 2025 **(#12)**
- » Establish a strategy to replace diesel generation in remote communities with reliable, low GHG electricity **(#13)**
- » Work with First Nations communities and federal agencies to ensure transition to reliable, low GHG electricity service in communities currently dependent on diesel generation **(#26)**

Low-Carbon Economy

- » Create a task force with expertise to research growth potential in low carbon economy **(#10)**
- » Ensure the First Nations clean energy business fund effectively enables new business opportunities **(#27)**
- » Review current offset policy to determine if changes are required to support the Climate Leadership Plan **(#28)**

For the CLT's report with the full text of each recommendation, go to: engage.gov.bc.ca/climateleadership

Summary

Now it's your chance to provide input once again. Our decisions today affect how we will live tomorrow. That's why it is very important that we all have a voice in shaping that future. This document is posted for a two-month consultation period, ending March 25, 2016. Please read it and provide your say.

A final Climate Leadership Plan will be released in Spring 2016.

How to Participate

To share your views by March 25, 2016:

- » Go to engage.gov.bc.ca/climateleadership to participate.
- » Individuals and organizations who wish to send additional information can email: climateleadershipplan@gov.bc.ca. If possible, please use the following headings to organize your feedback comments:
 - » What We Value
 - Carbon pricing and general financial mechanisms
 - Climate risk management and adaptation
 - » The Way We Live – Community and built environment
 - » The Way We Travel – Transportation
 - » The Way We Work – Industry, business and natural resources
- » Respond by post to: Climate Leadership Consultation, Ministry of Environment Climate Action Secretariat
P.O. Box 9486, Stn Prov Govt, Victoria, B.C. V8W 9W6

Please note that all separate attachments submitted will be posted publicly on the government website.

GOVERNMENT WELCOMES YOUR FEEDBACK ON THIS DOCUMENT "BUILDING B.C.'S CLIMATE LEADERSHIP PLAN" FOR A TWO-MONTH CONSULTATION PERIOD, ENDING MARCH 25, 2016 AT NOON.

To share your views please submit your feedback by email to:
climateleadershipplan@gov.bc.ca

Also, visit engage.gov.bc.ca/climateleadership for more ways to participate online.

FOR MORE INFORMATION VISIT THE WEBSITE:
[ENGAGE.GOV.BC.CA/CLIMATELEADERSHIP/](https://engage.gov.bc.ca/climateleadership/)

