Cameron, Tara D ENV:EX

From: Dan Baxter <dbaxter@bcchamber.org>

Sent: Monday, January 22, 2018 12:31 PM

To: Don.Wright@gov.bc.ca

Cc: Yuma Morisho, Okenge PREM:EX; Baskerville, Shannon AEST:EX; Shoemaker, Wes

> AGRI:EX; Fyfe, Richard J JAG:EX; Bond, Allison MCF:EX; Kot, Jill CITZ:EX; MacDonald, Scott D EDUC:EX; Nikolejsin, Dave MNGD:EX; Zacharias, Mark ENV:EX; Plecas, Bobbi ENV:EX; Wanamaker, Lori FIN:EX; Galbraith, David J FIN:EX; Sheldan, Tim FLNR:EX; Brown, Stephen R HLTH:EX; Caul, Doug D IRR:EX; Mihlar, Fazil JTT:EX; Hughes, Trevor LBR:EX; Hughes, Doug J MMHA:EX; Dawes, Jacquie MAH:EX; Mark.Sieban@gov.bc.ca; Denlinger, Becky EMBC:EX; Taylor, Sheila A SDPR:EX; Carroll, Sandra TAC:EX; Main, Grant

TRAN:EX; Lloyd, Evan GCPE:EX; Lori.Halls@gov.bc.ca; Zacharuk, Christina PSEC:EX

Subject: BC Chamber of Commerce's 2017-2018 Collective Perspective Survey Report Attachments:

BCCC_DMPremierWright_CPSurveyReport_Jan 2018 - Final.pdf; 2017-2018 Collect

Perspective Survey Final Report - 20171221.pdf

Mr. Wright,

On behalf of Mr. Val Litwin, president and CEO of the BC Chamber of Commerce, please find attach a letter to you - and copied to the Deputy Ministers Council - regarding the 2017-2018 Collective Perspective Survey Report.

Should you or any of your colleagues have any questions about the survey report, please do not hesitate to contact us. Thank you.

Best regards,

Dan Baxter

Director of Policy Development, Government & Stakeholder Relations

604.638.8116 | dbaxter@bcchamber.org | www.bcchamber.org











1201-750 W Pender Street Vancouver, B.C. 604-683-0700 www.bcchamper.org

Know what's on BC's mind.

January 22, 2018

Mr. Don Wright
Deputy Minister to the Premier, Cabinet Secretary and
Head of the Public Service
PO Box 9041, STN PROV GOVT
Victoria, BC V8W 9E1

Via Email: Don.Wright@gov.bc.ca

Dear Mr. Wright,

As an organization with a 65-year track record of productively engaging with government, the BC Chamber of Commerce is excited to share with you – and your colleagues in the Deputy Ministers' Council – what's on B.C.'s mind through the official 2017-2018 Collective Perspective Survey Report.

The BC Chamber of Commerce is in the business of insight. Thanks to our invaluable Collective Perspective survey of our members, insights are more easily shared, which will further plant the seeds of collaboration. The report provides you and your Deputy Ministers an inside view of what opportunities and concerns are driving business in B.C.

The BC Chamber looks forward to working with you and the Deputy Ministers' Council in the years ahead. This report is another tremendous opportunity to build on a successful track record of collaboration between the BC Chamber and the Public Service.

Should you or any of your fellow Deputy Ministers have any questions, please feel free to contact either myself at vlitwin@bcchamber.org or Dan Baxter, Director of Policy Development, Government and Stakeholder Relations at dbaxter@bcchamber.org.

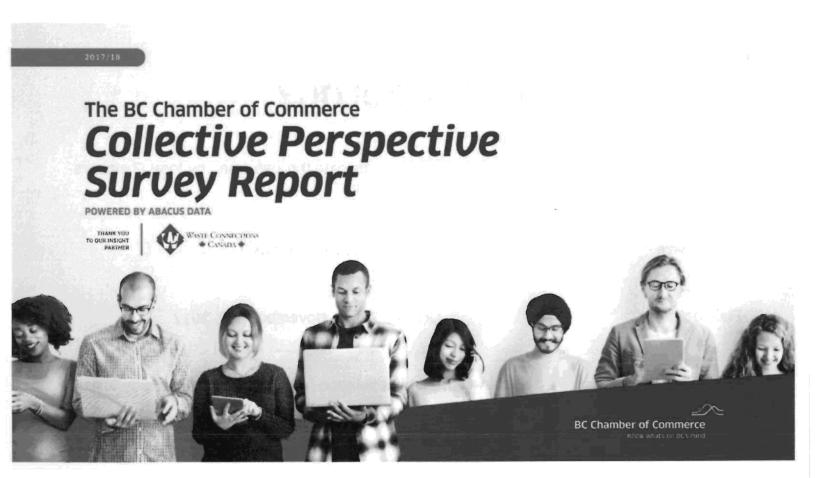
Sincerely,

The British Columbia Chamber of Commerce

Val Litwin

President and CEO

CC: Deputy Ministers' Council of British Columbia





METHODOLOGY

Online survey

Members invited to participate through email by local Chambers

Sample size

877 interviews

Field dates

October 25th to November 24th, 2017

Weighting

Sample weighted to population of BC businesses by region & size.



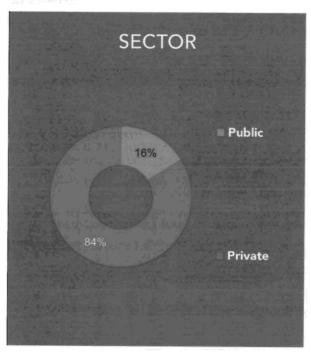
KEY FINDINGS

- 1. Individual business optimism is steady year over year and the outlook over the next five years is still of growth.
- The health of the national, provincial and local economies remains the most important factors affecting the growth prospects for BC businesses.
- 3. The cost of housing and taxes are greatest perceived threats to business growth.
- 4. Businesses are much less likely to consider the provincial government to be supportive towards business this year. Year-over-year, we find an 18-point drop. Perceptions about the federal government are down as well, but the change has been less severe at 6-points while views of local government's orientation towards business have improved.
- One in three businesses felt that their business would be harmed if the NAFTA was scrapped. Those in the wholesale/retail and agriculture sectors were the most anxious about losing the NAFTA.
- Attitudes towards trade with China improved significantly from last year (+10) with 68% of businesses agreeing free trade with China being a good thing for BC. 50% agree free trade with China would be good for their business.
- Housing affordability remains a major concern for businesses in both being able to attract younger people and new business to BC
- A majority of businesses support the Kinder Morgan Trans Mountain pipeline expansion with only one in five businesses being opposed.
- More businesses want the provincial government to focus on taxes with access to labour and public infrastructure rounding out the top three.

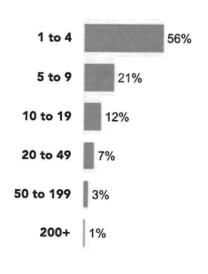
BC CHAMBER OF COMMERCE

3

BC Chamber of Commerce
Know what's on BC's mind.

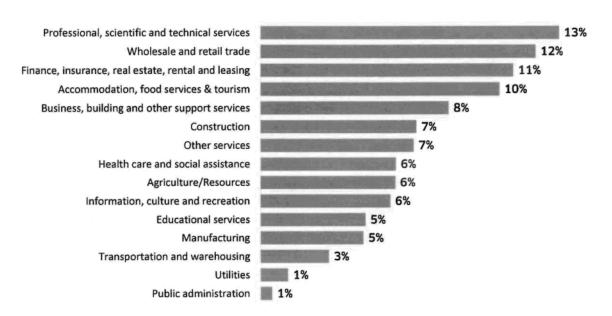


NUMBER OF EMPLOYEES





SECTOR OF RESPONDENTS



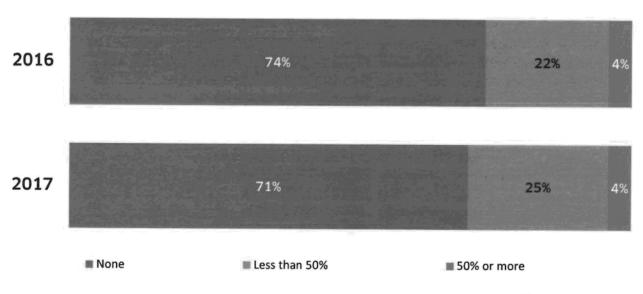
BC CHAMBER OF COMMERCE

Page 7 of 99 MOE-2018-81495



REVENUE FROM OUTSIDE CANADA?

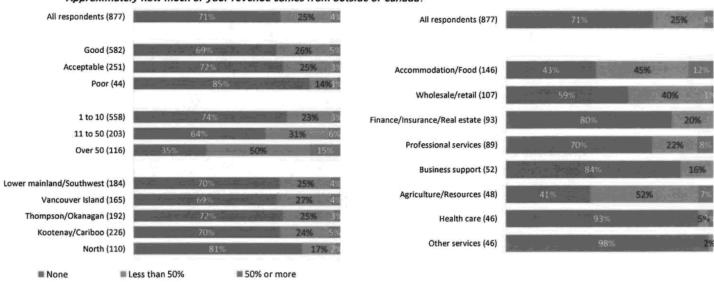
Approximately how much of your revenue comes from outside of Canada?





REVENUE FROM OUTSIDE CANADA?

Approximately how much of your revenue comes from outside of Canada?



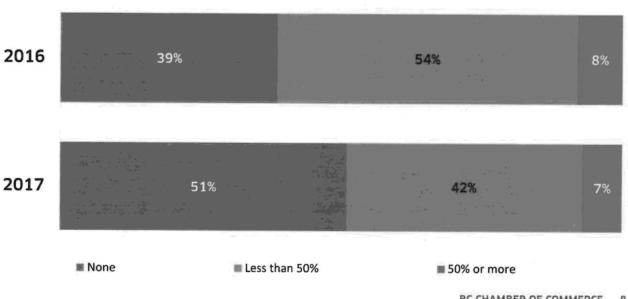
BC CHAMBER OF COMMERCE

7



REVENUE FROM OTHER PROVINCES?

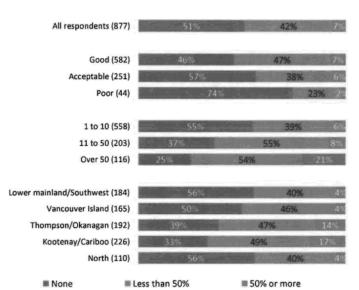
Approximately how much of your revenue comes from outside of British Columbia?

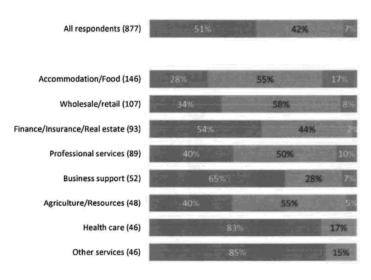




REVENUE FROM OTHER PROVINCES?

Approximately how much of your revenue comes from outside of British Columbia?





BC CHAMBER OF COMMERCE

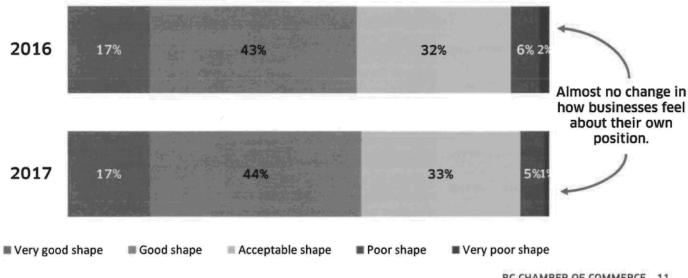
9





HOW IS YOUR BUSINESS TODAY?

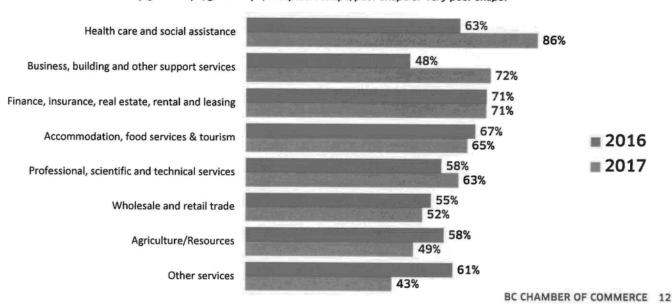
Thinking about your business, how do you feel about how things are going at the present time Would you say your business is in very good shape, good shape, acceptable shape, poor shape or very poor shape?





HOW IS YOUR BUSINESS TODAY (BY SECTOR)?

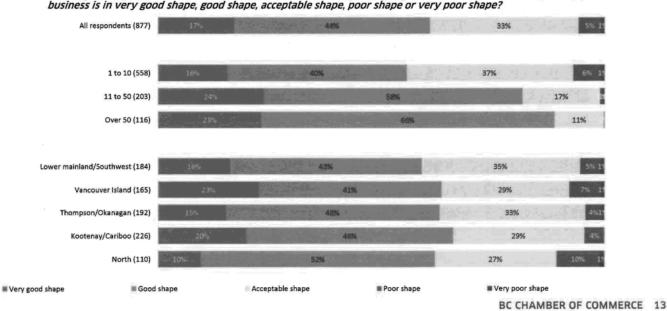
Thinking about your business, how do you feel about how things are going at the present time Would you say your business is in very good shape, good shape, acceptable shape, poor shape or very poor shape?





HOW IS YOUR BUSINESS TODAY (BY REGION)?

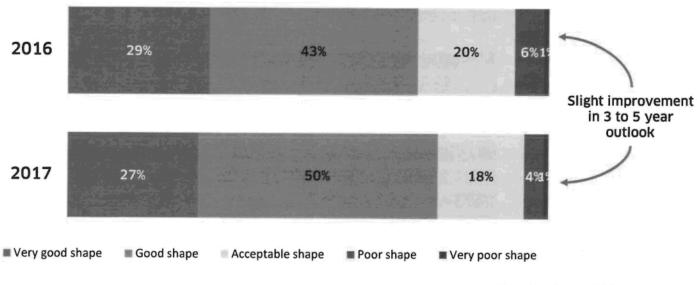
Thinking about your business, how do you feel about how things are going at the present time Would you say your business is in very good shape, good shape, acceptable shape, poor shape or very poor shape?





OUTLOOK FOR 3 TO 5 YEARS

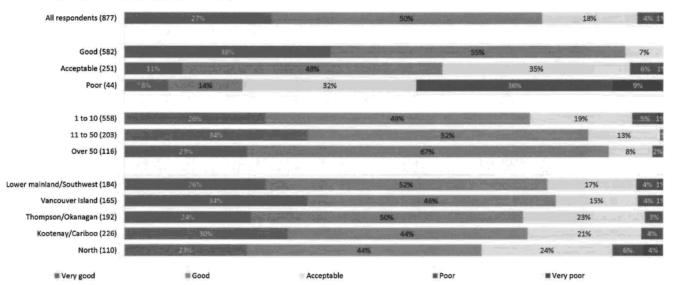
How would you describe the prospects for your business over the coming 3-5 years would you say things look very good, good, acceptable, poor or very poor?





OUTLOOK FOR 3 TO 5 YEARS (BY REGION)

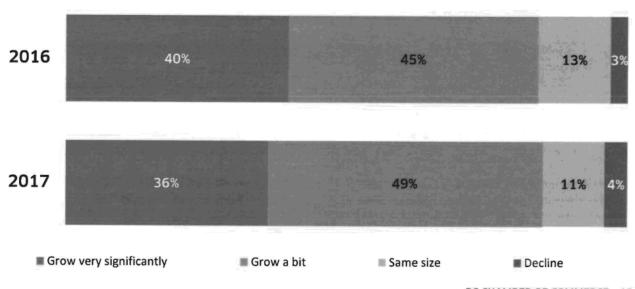
How would you describe the prospects for your business over the coming 3-5 years would you say things look very good, good, acceptable, poor or very poor?





GROWTH GOALS FOR THE NEXT 5 YEARS

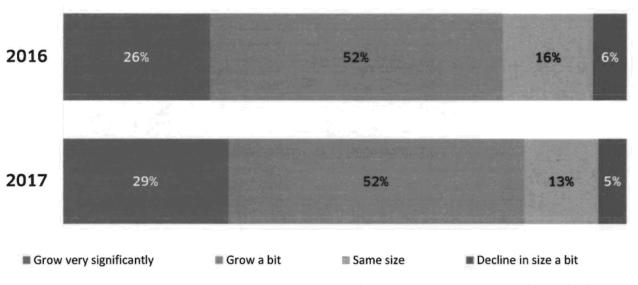
What is your goal for the next five years, grow your business very significantly, grow it a bit, hold it at about the same size, or see it decline in size a bit, or significantly?





WHAT WILL HAPPEN IN THE NEXT 5 YEARS?

What do you think is most likely to happen in the next five years to the size of your business, will it grow very significantly, grow a bit, hold at about the same size, or decline in size a bit, or significantly?

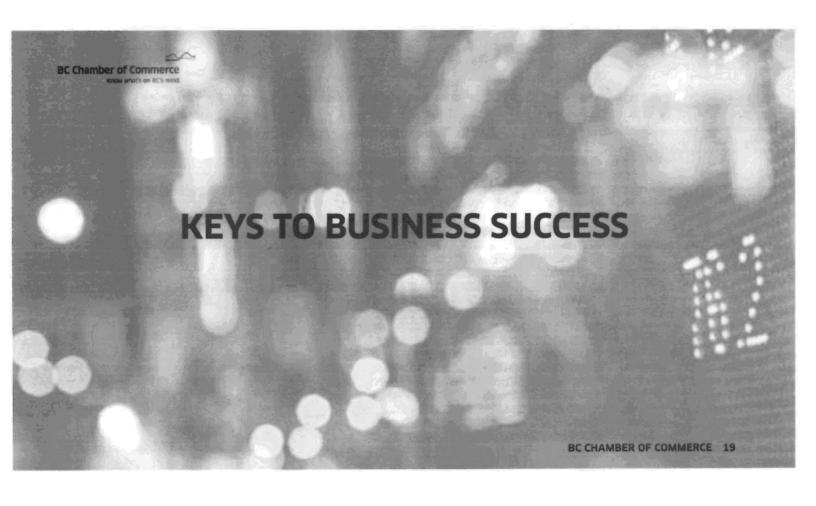




MY GOALS

	Grow very significantly	Grow a bit	Same size
Grow very significantly	74%	5%	0%
Grow it a bit	25%	82%	30%
Hold it at about the same size	1%	10%	62%

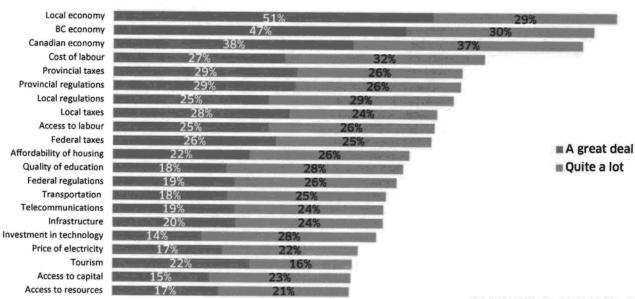
Most businesses are confident they will be able to achieve the goals they have set for themselves.





WHAT IMPACTS YOUR BUSINESS?

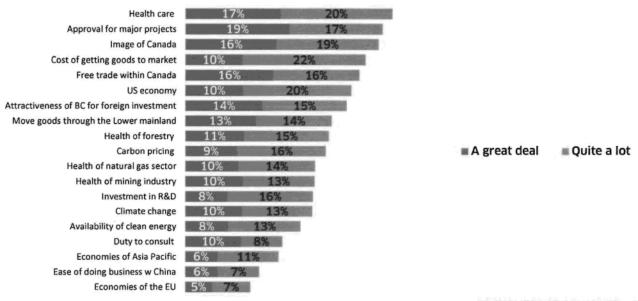
How much do each of the following affect the health and prospects of your business





WHAT IMPACTS YOUR BUSINESS?

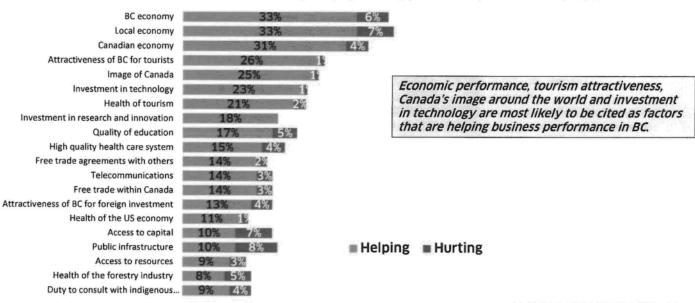
How much do each of the following affect the health and prospects of your business





WHAT'S HELPING & WHAT'S HURTING?

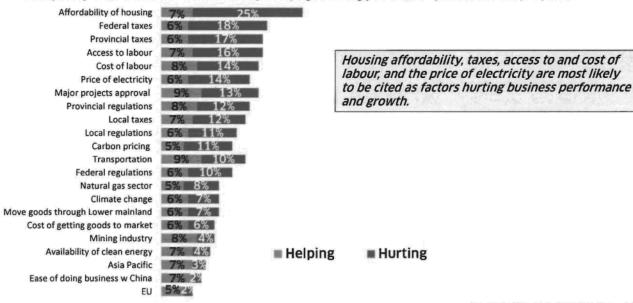
Would you say that each of these factors currently is helping or hurting your business performance and prospects?

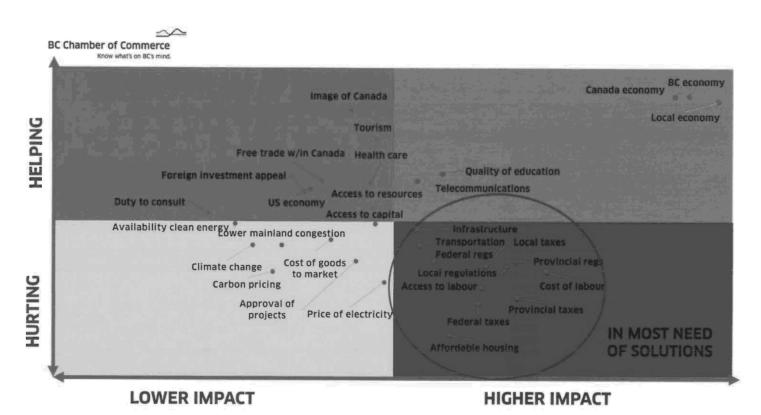


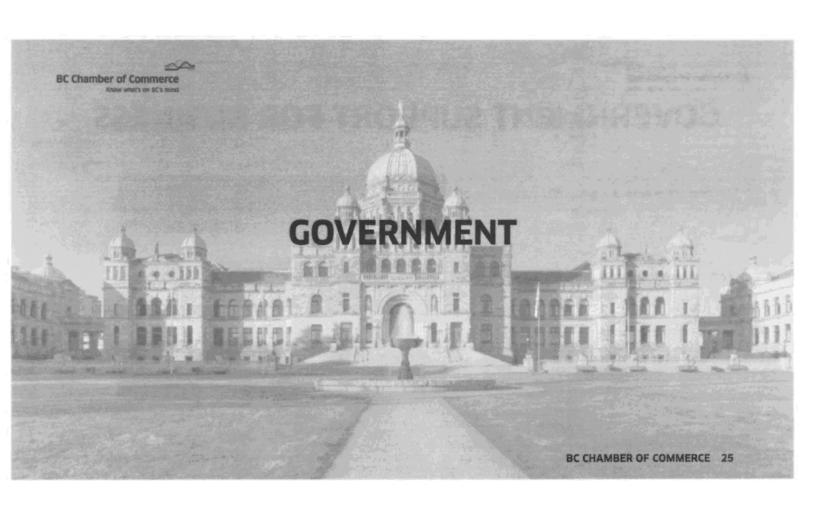


WHAT'S HELPING & WHAT'S HURTING?

Would you say that each of these factors currently is helping or hurting your business performance and prospects?

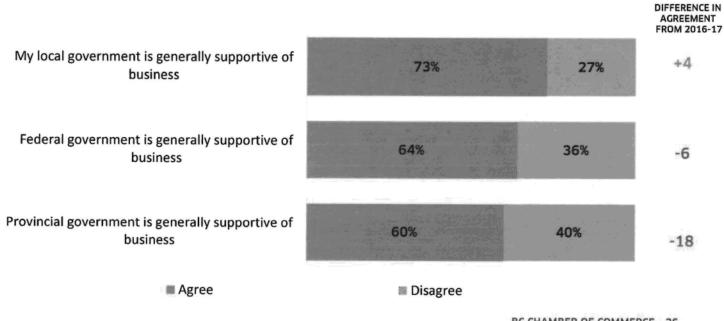






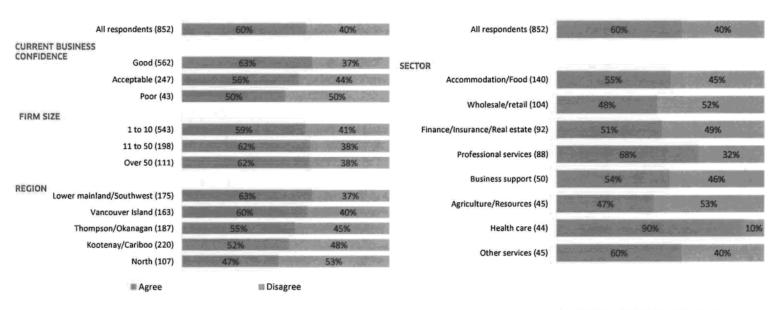


GOVERNMENT SUPPORT FOR BUSINESS



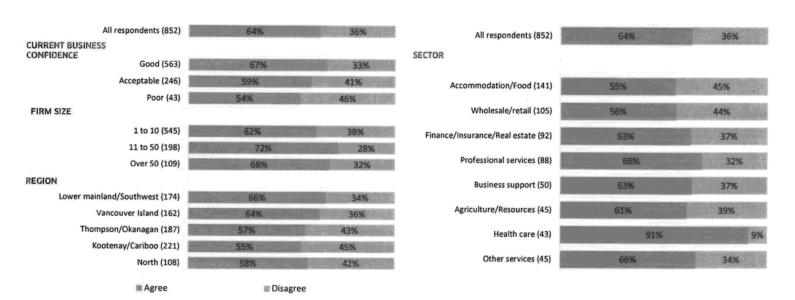


PROVINCIAL GOVERNMENT SUPPORT FOR BUSINESS



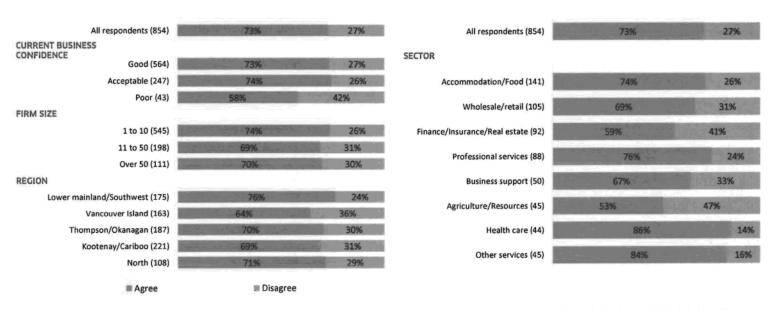


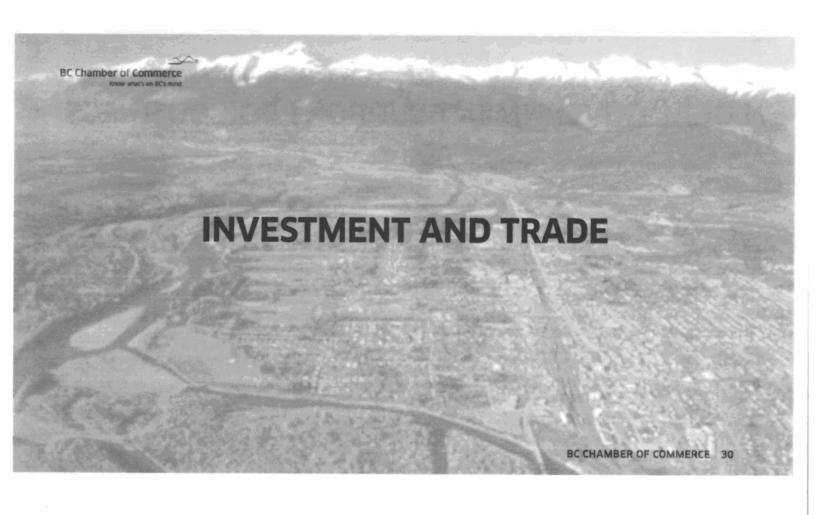
FEDERAL GOVERNMENT SUPPORT FOR BUSINESS





LOCAL GOVERNMENT SUPPORT FOR BUSINESS

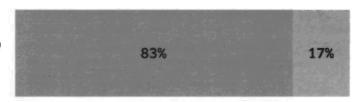




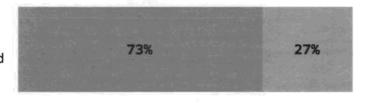


ATTRACTING INVESTMENT TO BC

BC is an appealing place for foreign companies to invest in



I want governments to put a big priority on attracting investment in BC from around the world



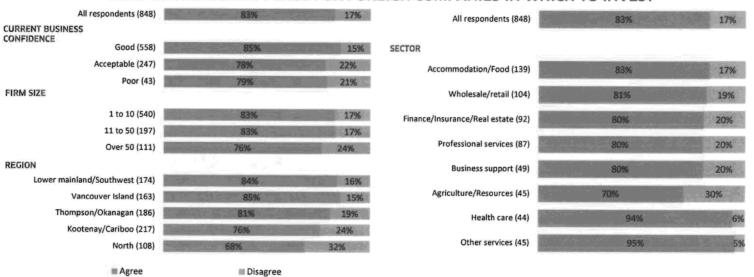
Agree

Disagree



ATTRACTING INVESTMENT TO BC

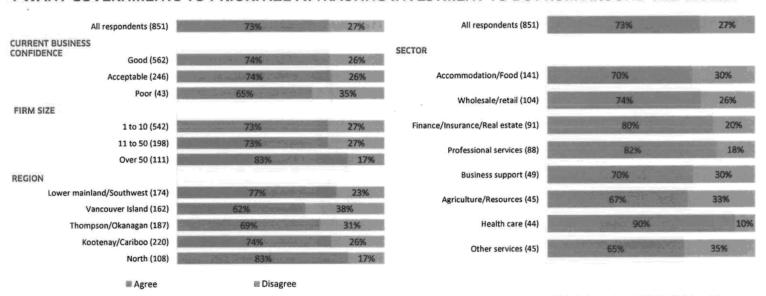
BC IS AN APPEALING PLACE FOR FOREIGN COMPANIES IN WHICH TO INVEST





ATTRACTING INVESTMENT TO BC

I WANT GOVERNMENTS TO PRIORITIZE ATTRACTING INVESTMENT TO BC FROM AROUND THE WORLD





2%

WHAT IF NAFTA ENDED?

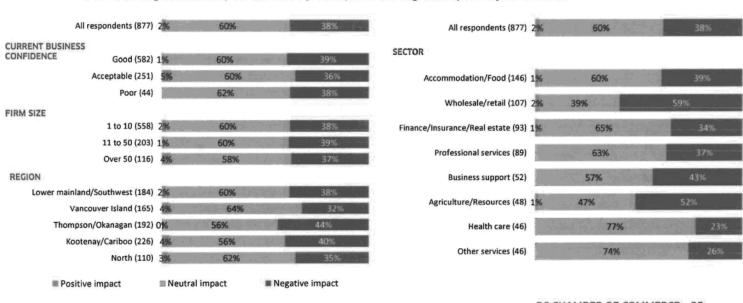
If the NAFTA agreement ends, will this have a positive, neutral or negative impact on your business?

60% 38% Positive impact Neutral impact Negative impact BC CHAMBER OF COMMERCE 34



WHAT IF NAFTA ENDED?

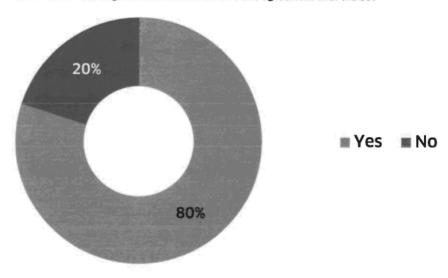
If the NAFTA agreement ends, will this have a positive, neutral or negative impact on your business?





SHOULD CANADA PURSUE A STAND ALONE FREE TRADE AGREEMENT WITH THE US?

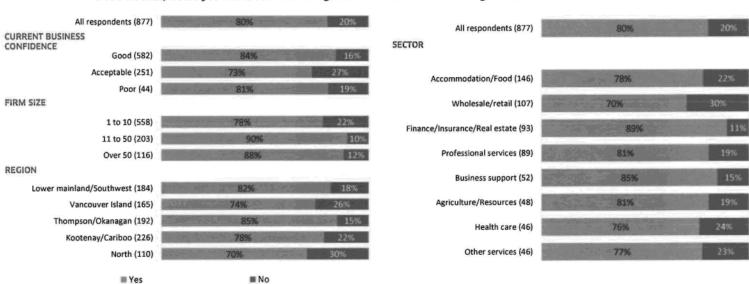
If NAFTA ends, would you like to see Canada negotiate a standalone free trade agreement with the US?





SHOULD CANADA PURSUE A STAND-ALONE FREE TRADE AGREEMENT WITH THE US?

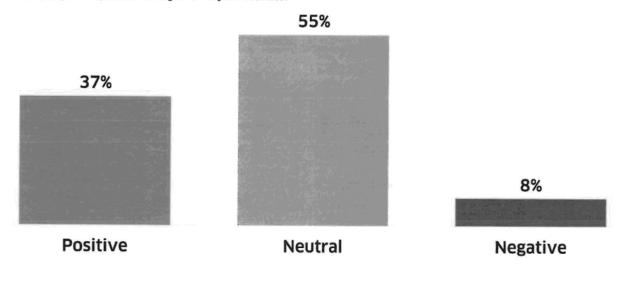
If NAFTA ends, would you like to see Canada negotiate a standalone free trade agreement with the US?





IMPACT OF TPP ON YOUR BUSINESS?

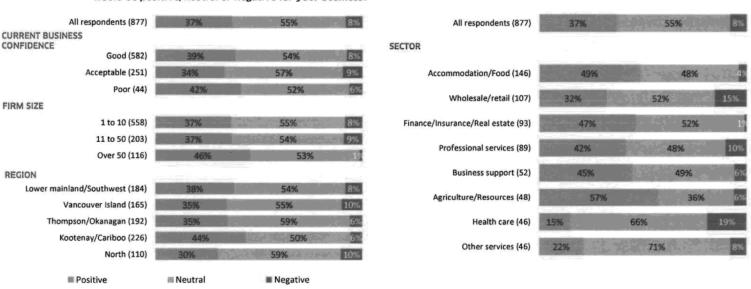
Is the idea of a Trans Pacific Partnership - i.e.: another multilateral free trade agreement - agreement an idea that would be positive, neutral or negative for your business?





IMPACT OF TPP ON YOUR BUSINESS?

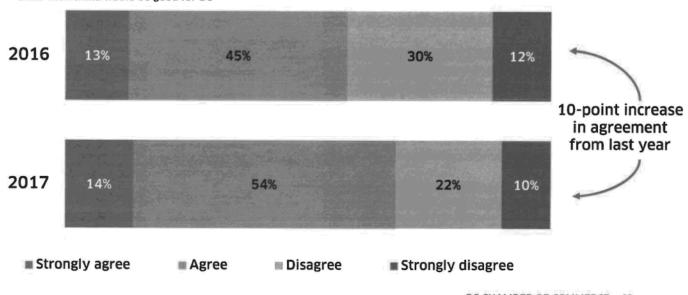
Is the idea of a Trans Pacific Partnership - i.e.: another multilateral free trade agreement - agreement an idea that would be positive, neutral or negative for your business?





FREE TRADE WITH CHINA IS GOOD FOR BC

Please indicate if you strongly agree, agree, disagree or strongly disagree with each of the following statement: I think free trade with China would be good for BC





FREE TRADE WITH CHINA IS GOOD FOR BC

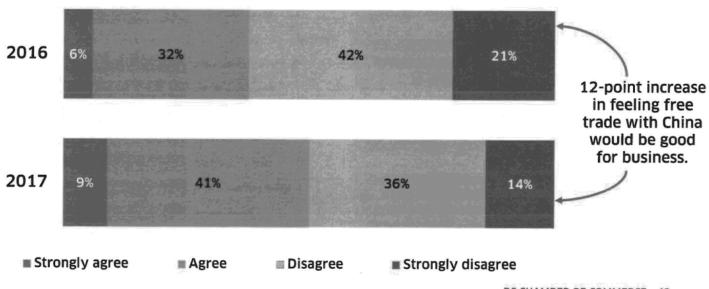
Please indicate if you strongly agree, agree, disagree or strongly disagree with each of the following statements: I think free trade with China would be good for BC





FREE TRADE WITH CHINA IS GOOD FOR MY COMPANY

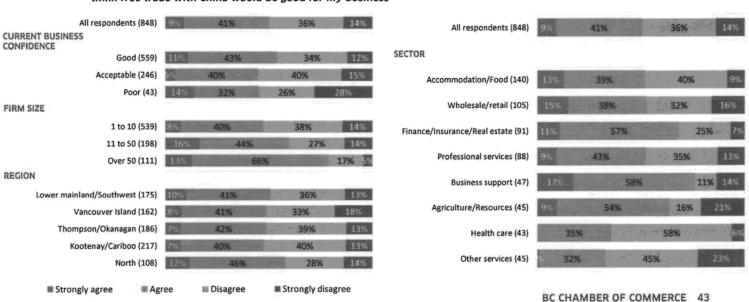
Please indicate if you strongly agree, agree, disagree or strongly disagree with each of the following statements: I think free trade with China would be good for my business

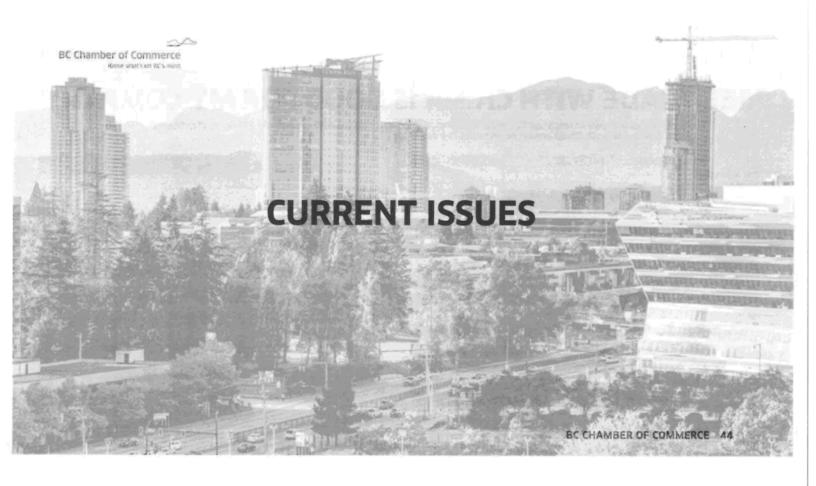




FREE TRADE WITH CHINA IS GOOD FOR MY COMPANY

Please indicate if you strongly agree, agree, disagree or strongly disagree with each of the following statements: I think free trade with China would be good for my business







The cost of housing in parts of BC has become a real problem for the province



It's becoming so expensive to live in some parts of BC that we will have trouble attracting young people to come and work here



It's becoming so expensive to live in some parts of BC that it will be hard to attract new companies to open up businesses here

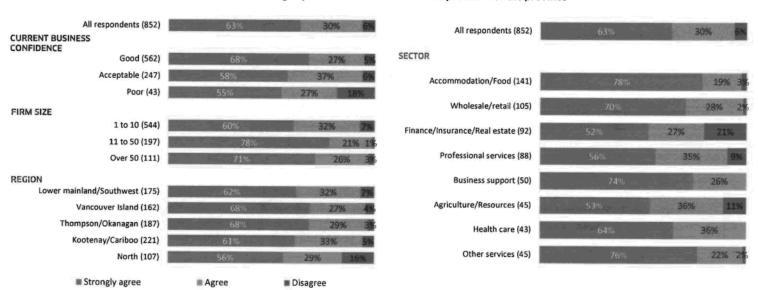


■ Strongly agree

■ Agree ■ Disagree

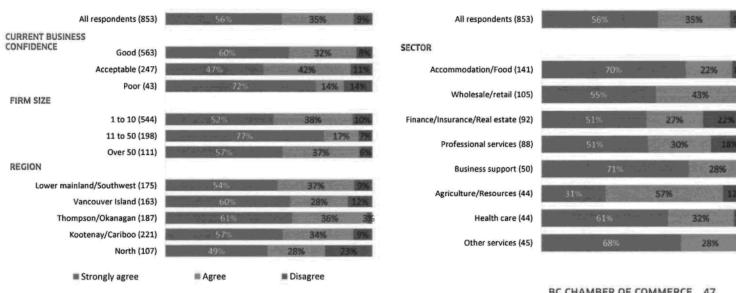


The cost of housing in parts of BC has become a real problem for the province



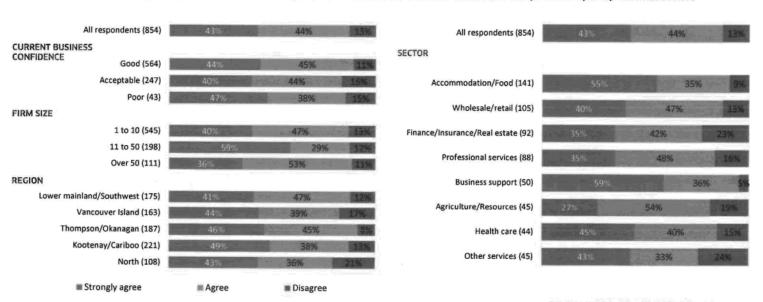


It's becoming so expensive to live in some parts of BC that we will have trouble attracting young people to come and work here





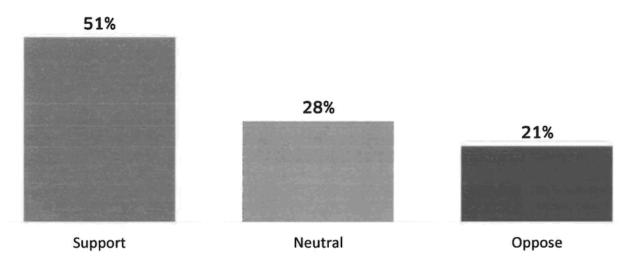
It's becoming so expensive to live in some parts of BC that it will be hard to attract new companies to open up businesses here





VIEWS OF KINDER MORGAN PIPELINE

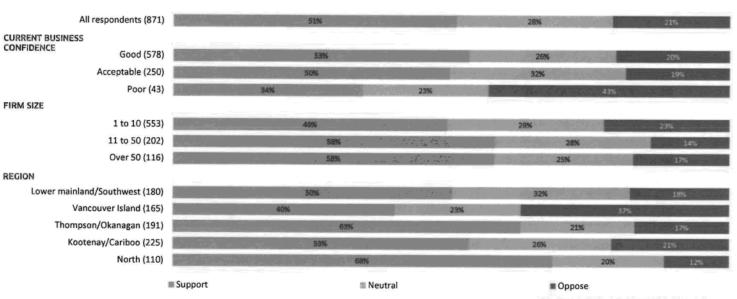
In general, do you support, oppose or are neutral about the Kinder Morgan Trans Mountain Expansion pipeline project?





VIEWS OF KINDER MORGAN PIPELINE

In general, do you support, oppose or are neutral about the Kinder Morgan Trans Mountain Expansion pipeline project?

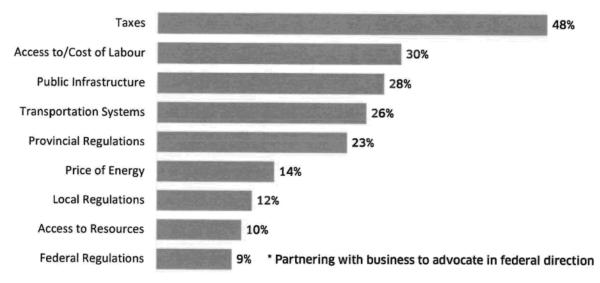






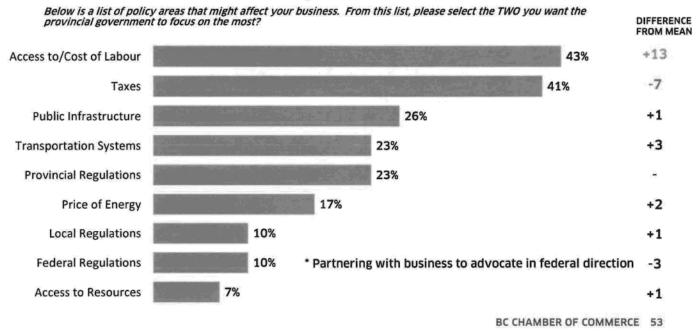
FOCUS FOR ALL BUSINESSES

Below is a list of policy areas that might affect your business. From this list, please select the TWO you want the provincial government to focus on the most?



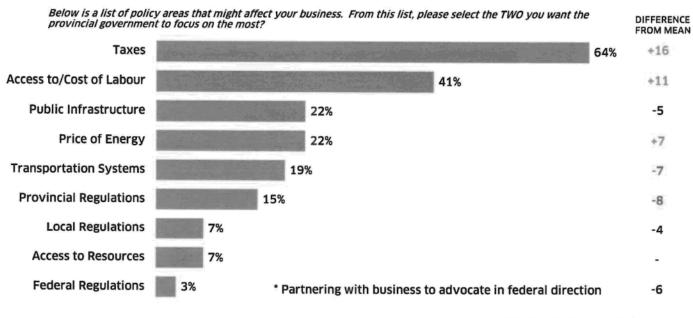


FOCUS FOR HOSPITALITY, FOOD SERVICES & TOURISM



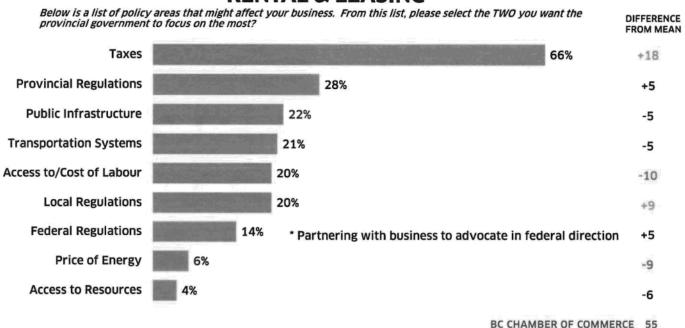


FOCUS FOR WHOLESALE & RETAIL TRADE





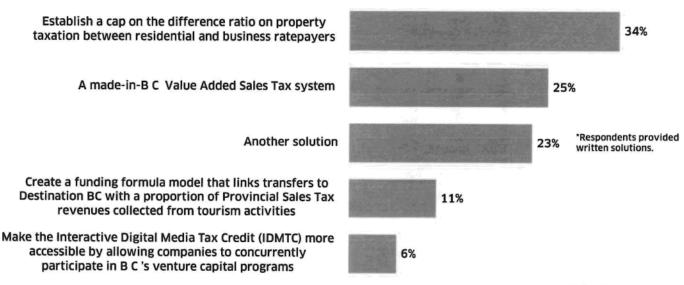
FOCUS FOR FINANCE, INSURANCE, REAL ESTATE, RENTAL & LEASING





PREFERRED SOLUTION: TAXES

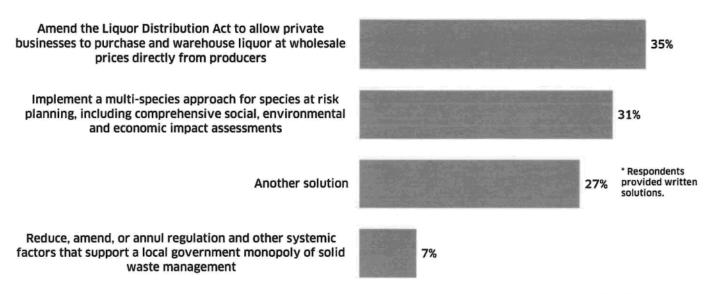
When it comes to taxes, which of the following do you want to see the provincial government do the most?





PREFERRED SOLUTION: PROVINCIAL REGULATIONS

When it comes to provincial regulations, which of the following do you want to see the provincial government do the most?





PREFERRED SOLUTION: LOCAL REGULATIONS

When it comes to local regulations, which of the following do you want to see the provincial government do the most?

Identify and remove administrative barriers that slow increased housing density



Another solution



*Respondents provided written solutions.

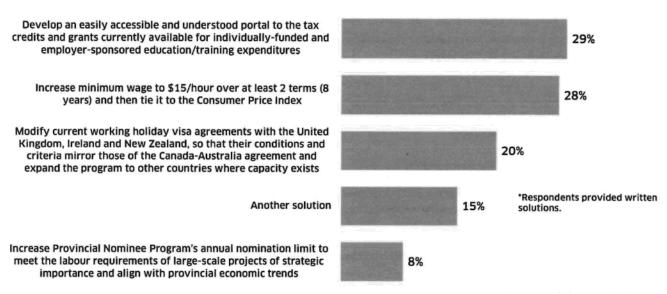
Merge existing Mobile Business License programs into expanded regional Mobile Business License programs and expanded sector list of eligible mobile businesses





PREFERRED SOLUTION: ACCESS TO/COST OF LABOUR

When it comes to access to resources, which of the following do you want to see the provincial government do the most?





PREFERRED SOLUTION: ACCESS TO RESOURCES

How would you describe the prospects for your business over the coming 3-5 years would you say things look very good, good, acceptable, poor or very poor?

Negotiate and ratify a new Softwood Lumber Agreement (SLA) with the United States



Maintain a harmonized "one project, one review" environmental process between senior levels of government



Make the Mining Flow Through Share (MFTS) tax credit program permanent and expand flow-through eligibility to include both surface and underground greenfield and brownfield exploration and development expenditure



Another solution



*Respondents provided written solutions.



PREFERRED SOLUTION: PRICE OF ENERGY

When it comes to price of energy, which of the following do you want to see the provincial government do the most?

Maintain the revenue neutrality of the carbon tax return to broad-based reductions in B C 's personal and business



Another solution



*Respondents provided written solutions.

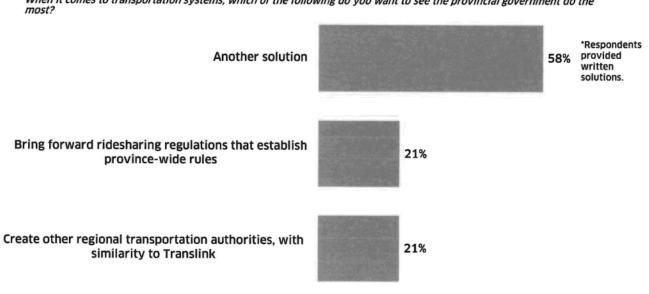
Continue to standardize and harmonize the costs of controlling carbon emissions





PREFERRED SOLUTION: TRANSPORTATION SYSTEMS

When it comes to transportation systems, which of the following do you want to see the provincial government do the





ANOTHER SOLUTION: TRANSPORTATION SYSTEMS

When it comes to transportation systems, which of the following do you want to see the provincial government do the most?

Other solutions offered by respondents:

- Expand Highway 1
- Expand and Improve Public Transportation
- Invest in BC Ferries
- Replace the Massey Tunnel



PREFERRED SOLUTION: PUBLIC INFRASTRUCTURE

When it comes to public infrastructure, which of the following do you want to see the provincial government do the most?

Develop a renewed Asia Pacific Gateway and Corridor Initiative strategy to meet the needs of the Pacific Gateway and international trade though this corridor



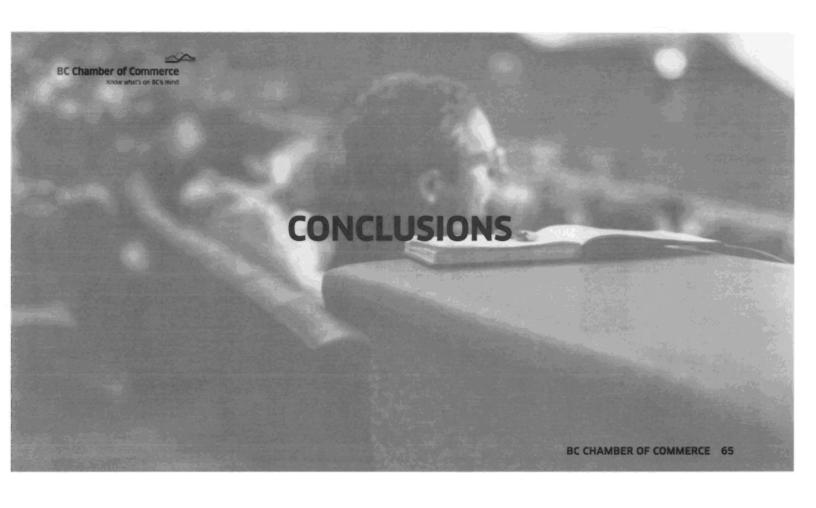
Another solution



*Respondents provided written solutions.

To facilitate permit approval for loads up to 85 metric tonnes, upgrade infrastructure on both existing routes designated as heavy haul corridors and on routes that are of interest to industry but are currently not designated as heavy haul corridors









BROAD CONFIDENCE AND OPTIMISM TODAY – BUSINESS BELIEVES IN ITSELF!



CRITICAL TO SUCCESS: MACRO ECONOMY, REGULATIONS, TAXES









TRADE AGREEMENTS & INVESTMENT PROMOTION EFFORTS WELCOMED

Page 72 to/à Page 75

Withheld pursuant to/removed as

s.14

Page 76 to/à Page 77

Withheld pursuant to/removed as

s.14;s.13

Cameron, Tara D ENV:EX

From:

Jens Wieting <jens@sierraclub.bc.ca>

Sent:

Wednesday, January 24, 2018 4:33 PM

To:

Zacharias, Mark ENV:EX; Plecas, Bobbi ENV:EX

Subject:

RE: LNG and climate

Thanks Mark and hello Bobbi. I also hope you had a good holiday season. I have to admit that I found it difficult not to think too much about BC's increasing GHG emissions, the Premier's intention to continue support LNG development and the Site C decision.

Bobbi, I hope you will find this information useful and received our recent news releases I shared with government staff. Would it be possible to find a time for a phone call or meeting? It would be great to talk with you about some of our concerns related to how the provincial government reports emissions, particularly the recent lack of detail on emissions from forests. I will send previous emails for context.

Best regards

Jens

Jens Wieting Forest and Climate Campaigner



Unceded Lekwungen Territory C (604) 354-5312 sierraclub.bc.ca

Note: I am mostly working from Vancouver and only occasionally in Victoria



Connect with us on Instagram, Facebook, Twitter, YouTube or our newsletter.

Inspiring generations to defend nature and confront climate change, so families, communities and the natural world can prosper together.

----Original Message----

From: Zacharias, Mark ENV:EX [mailto:Mark.Zacharias@gov.bc.ca]

Sent: January 24, 2018 10:23 AM

To: Plecas, Bobbi ENV:EX <Bobbi.Plecas@gov.bc.ca>

Cc: Jens Wieting <jens@sierraclub.bc.ca>

Subject: Fwd: LNG and climate

Thanks Jens

Copying Bobbi Plecas the climate deputy. Hope you had a good holiday season.

Regards, Mark

s.17

From: Jens Wieting

Sent: January 24, 2018 9:42 AM

To: 'Frampton, Caelie ENV:EX' <Caelie.Frampton@gov.bc.ca>

Cc: 'Zacharias, Mark ENV:EX' <Mark.Zacharias@gov.bc.ca>; 'Xia, Eveline ENV:EX' <Eveline.Xia@gov.bc.ca>; Caitlyn Vernon <caitlyn@sierraclub.bc.ca>; Mark Worthing <mark@sierraclub.bc.ca>; Tim Pearson <tim@sierraclub.bc.ca>

Subject: LNG and climate

Hello Caelie.

Do you know whether Minister Heyman and his colleagues are fully aware of the warnings about the full GHG footprint of increasing fracking and building new LNG terminals? And have time to read up on latest climate change science?

New NASA Study Solves Climate Mystery, Confirms Methane Spike Tied to Oil and Gas

https://www.desmogblog.com/2018/01/16/nasa-study-resolves-climate-mystery-confirms-methane-spike-ties-oil-gas Hundreds of BC Gas Wells Leak Methane

https://thetyee.ca/News/2017/11/23/Hundreds-of-BC-Gas-Wells-Leak-Meth/

Milestone energy expert warning in the NYT about shale gas (as bad as coal for the climate) from 2013: Gangplank to a Warm Future

http://www.nytimes.com/2013/07/29/opinion/gangplank-to-a-warm-future.html

Barry Saxifrage estimates of emissions enabled through new LNG terminals, including uncounted emissions from burning gas after exporting

https://www.vancouverobserver.com/blogs/climatesnapshot/thirteen-proposed-lng-projects-equivalent-13-times-current-bc-emissions

Economic outlook: the end of natural gas:

https://www.greenbiz.com/article/end-natural-gas-near

and the leaked findings from special IPCC report

https://www.reuters.com/article/us-climatechange-draft/warming-set-to-breach-paris-accords-toughest-limit-by-mid-century-draft-idUSKBN1F02RH

"The draft estimated that humanity could emit just 580 billion tonnes of greenhouse gases to give a better than 50 percent chance of limiting warming to 1.5C - roughly 12-16 years at current rates of emissions."

This is a reminder that our existing targets (which we are not on track to meet) are insufficient and a blueprint for global disaster (even if we WOULD meet them)

Please share. Thank you so much.

Best Jens

From: Jens Wieting

Sent: January 15, 2018 12:27 PM

To: 'Frampton, Caelie ENV:EX' < Caelie.Frampton@gov.bc.ca>

Cc: 'Zacharias, Mark ENV:EX' < Mark.Zacharias@gov.bc.ca >; 'Xia, Eveline ENV:EX' < Eveline.Xia@gov.bc.ca >; Caitlyn Vernon < caitlyn@sierraclub.bc.ca >; Mark Worthing < mark@sierraclub.bc.ca >; Tim Pearson < tim@sierraclub.bc.ca > Subject: RE: Follow up email/material related to Doc 4 mosting with Minister Housean

Subject: RE: Follow up email/material related to Dec 4 meeting with Minister Heyman

Hello Caelie,

As a follow up to our media release here are a few links to media coverage and background related to BC's GHG emissions trends and Premier Horgan's trip to Asia. We would really prefer if our new provincial government would raise awareness about our increasing emissions, the alarming climate impacts and the need for drastic climate action including the fact that it is impossible to build any LNG terminals and meet climate targets at the same time. We hope you can widely share these links within government in case there is any lack of clarity with regards to the climate crisis and the urgency to phase out fossil fuels and speed up the renewable energy revolution already underway. We hope the government will show real climate leadership and fully reject the LNG course of the previous government.

Sierra Club spotlight with additional context and links

https://sierraclub.bc.ca/noble-rhetoric-climate-change-wheres-the-action/

Latest figures show B.C.'s carbon emissions continue to increase

http://vancouversun.com/business/energy/latest-figures-show-b-c-s-carbon-emissions-continue-to-increase

B.C. Quietly Releases Emissions Update That Shows It'll Blow 2020 Climate Target

https://www.desmog.ca/2018/01/12/b-c-quietly-releases-emissions-update-shows-it-ll-blow-2020-climate-target

Premier's interview on Asia trip and support for LNG (close to the end)

http://www.alaskahighwaynews.ca/site-c/q-a-premier-john-horgan-on-site-c-trade-mission-to-asia-1.23128716

B.C. Premier Horgan's LNG push at odds with NDP emissions goals

https://www.theglobeandmail.com/news/british-columbia/bc-premier-horgans-lng-push-at-odds-with-ndp-emissions-goals/article37600803/

Sierra call for climate test and link to report (from 2015)

https://sierraclub.bc.ca/new-report-calls-for-climate-test/

Our 2015 forest emissions review looking at a full decade of carbon loss from BC's forests

https://sierraclub.bc.ca/bcs-forests-full-decade-of-carbon-loss/

With the limited information on forest emissions now shared in excel files in the last 2 years we are no longer able to step in and do our own Sierra Club estimate of emissions related to destructive logging practices.

Here is Pembina explaining how LNG Canada and/or Woodfibre would make it impossible to meet BC targets in coming years and decades http://www.pembina.org/op-ed/bc-lng-climate

And here is an older milestone NYT op-ed from 2013 from expert warning about methane leakage and fracking, describing natural gas as a

"Gangplank to a Warm Future"

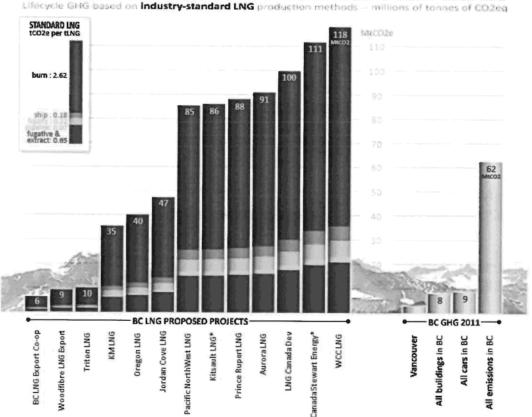
http://www.nytimes.com/2013/07/29/opinion/gangplank-to-a-warm-future.html

(We have seen more and more evidence of methane leakage emissions higher than reported across North America over the last several years)

Barry Saxifrage estimates of full GHG impact of LNG proposals (from a few years ago, still relevant)

https://www.vancouverobserver.com/blogs/climatesnapshot/thirteen-proposed-lng-projects-equivalent-13-times-current-bc-emissions

FULL CLIMATE IMPACT OF BC LNG PROPOSALS



Jens Wieting
Forest and Climate Campaigner



Unceded Lekwungen Territory C (604) 354-5312

sierraclub.bc.ca

Note: I am mostly working from Vancouver and only occasionally in Victoria



Connect with us on Instagram, Facebook, Twitter, YouTube or our newsletter.

Inspiring generations to defend nature and confront climate change, so families, communities and the natural world can prosper together.

From: Jens Wieting

Sent: January 11, 2018 9:54 AM

To: 'Frampton, Caelie ENV:EX' < Caelie.Frampton@gov.bc.ca>

Cc: Zacharias, Mark ENV:EX < Mark.Zacharias@gov.bc.ca >; Xia, Eveline ENV:EX < Eveline.Xia@gov.bc.ca >; Caitlyn Vernon

<a href="mailto:; Mark Worthing <mark@sierraclub.bc.ca">mark@sierraclub.bc.ca

Subject: RE: Follow up email/material related to Dec 4 meeting with Minister Heyman

Hello Caelie,

Quick heads-up that we just sent out this press release. We are very concerned that the new BC government has not undertaken any public communication (to our knowledge) with regards to the BC greenhouse gas emissions inventory published on the government website in December to inform the public about the very concerning recent BC emission trends and the drastic steps needed to reduce emissions in the coming years.

We hope that the Premier and the Minister will speak out about the severe failure to reduce emissions and the urgent need for climate action.

Please share widely within government.

Best Jens

From: Sierra Club BC [mailto:social=sierraclub.bc.ca^{s.22}

On Behalf Of Sierra Club BC

Sent: January 11, 2018 9:29 AM

To: Jens Wieting < jens@sierraclub.bc.ca>

Subject: MEDIA RELEASE: B.C.'s greenhouse gas emissions have risen in four of the last five years

And the second s	
×	

FOR IMMEDIATE RELEASE:

January 11, 2018

B.C.'s greenhouse gas emissions have risen in four of the last five years

New data mark years of failure to reduce carbon pollution

The provincial government quietly updated its greenhouse gas inventory on the eve of the December holiday season, showing that emissions were higher in 2015 than in 2010 and have risen in four of the last five years.

The provincial inventory shows that in 2015, emissions were 63.3 million tonnes of carbon dioxide. This is 1.6 per cent higher than 2014, 4.5 per cent higher than in 2012, and only 2.1 per cent lower than the baseline year of 2007.

"B.C.'s latest emissions data marks years of failure to reduce emissions by more than a token amount," said Sierra Club BC's forest and climate campaigner Jens Wieting. "Ten years after the previous government legislated the target to reduce emissions by 33 per cent from 2007 levels by 2020 we are essentially in the same

place we started."

British Columbia's emissions are now 10 per cent higher than 1990 levels, in contrast to the European Union, which has reduced its emissions by 23 per cent over the same period.

"B.C. has just two years to make up for this lack of progress towards meeting its 2020 target, and to prepare steps to achieve much more dramatic emissions reductions needed to contribute to the goal agreed to at the Paris climate summit to keep global warming below two degrees.

"What we have seen in B.C. for years is noble rhetoric about the need to confront climate change, but a lack of meaningful action. Avoiding the worst climate impacts in our communities means that the new B.C. government must reject new fossil fuel development such as the Kinder Morgan pipeline and new LNG terminals which would make it impossible to meet the emissions reduction targets of the province and other jurisdictions burning imported fossil fuels.

2016 and 2017 were the two hottest years on record with regard to global average temperatures. High temperatures have been accompanied by record-setting wildfires, the continued rapid reduction in sea ice extent and thickness, and high levels of drought in various parts of the world. Sixteen of the seventeen warmest years on record have occurred this century.

"British Columbians need to see their new government wake up to the urgency of the situation and take action that will dramatically reduce emissions in the coming years."

Sierra Club BC is calling on the government to:

- Acknowledge that a decade of failure to address the climate crisis means a decisive course change is needed.
- Hold a public inquiry into the impacts of fracking, which each year releases 118,000 tonnes of methane, a greenhouse gas 84 times more potent than carbon dioxide.
- · Immediately implement a robust climate test including the full carbon

footprint of major industrial projects such as oil pipelines and LNG terminals as part of reforming the environmental assessment process.

- Accelerate increases to the carbon tax.
- Take immediate action to protect old-growth forests that store carbon and end destructive forestry practices such as slash burning, a significant source of emissions.
- Invest heavily in clean energy solutions such as wind, solar, geothermal, small-scale hydro, energy conservation, energy efficiency retrofits, and public transportation.

Instead of sharing emissions data in the form of a detailed report every second year as in the past, the B.C. government has only published an excel file for the second year in a row. More information is needed to inform the public and decision makers about B.C.'s greenhouse gas emissions. The excel sheet no longer shows the amount of emissions related to logging and emissions related to slash burning are shown as 'under review.'

A 2015 Sierra Club BC review of provincial forest emissions data showed that average annual emissions from logging were close to 50 million tonnes of carbon dioxide and emissions from slash burning were more than 8 million tonnes during the 10-year period 2003-2012. Forest emissions are not counted as part of the official provincial emissions. Despite their significance, the currently used excel sheet makes it impossible to track emissions from logging and slash burning.

-30-

Contact:

Jens Wieting
Forests and Climate Campaigner
Sierra Club BC
604-354-5312
jens@sierraclub.bc.ca

Release: https://sierraclub.bc.ca/bcs-greenhouse-gas-emissions-risen-four-of-last-five-years

x x x x

Copyright © 2018 Sierra Club BC, All rights reserved.
You are receiving this e-mail because you are on our media distribution list.

Our mailing address is: Sierra Club BC 301 - 2994 Douglas Street Victoria, B.C. V8T 4N4 Canada

Add us to your address book

Want to change how you receive these emails?
You can <u>update your preferences</u> or <u>unsubscribe from this list</u>

----Original Message----

From: Frampton, Caelie ENV:EX [mailto:Caelie.Frampton@gov.bc.ca]

Sent: December 22, 2017 9:27 AM

To: Jens Wieting <jens@sierraclub.bc.ca>

Cc: Zacharias, Mark ENV:EX < Mark.Zacharias@gov.bc.ca >; Xia, Eveline ENV:EX < Eveline.Xia@gov.bc.ca >; Caitlyn Vernon

<caitlyn@sierraclub.bc.ca>; Mark Worthing <mark@sierraclub.bc.ca>

Subject: Re: Follow up email/material related to Dec 4 meeting with Minister Heyman

Thanks Jens. I'll be sure to pass this on to the Minister.

Happy holidays,

Caelie

Sent from my iPhone

On Dec 21, 2017, at 8:32 PM, Jens Wieting < jens@sierraclub.bc.ca < mailto:jens@sierraclub.bc.ca >> wrote:

Hello Mark, Caelie and Eveline,

Thank you for meeting with us on December 4 and apologies for the late follow-up email, it was a rough month. Please find attached the PDF versions of the NGO Policy Recommendations for Old-Growth Forest Protection, support for First Nations and Sustainable Forestry Jobs in BC (short and expanded).

Instead of additional briefing notes, I am also attaching the two Tyee articles we shared, one summarizing the climate urgency for protecting carbon-rich old-growth rainforest, and the second one summarizing the good news story underway in Clayoquot Sound with the Ahousaht land use vision (which will require provincial support). Also attached is the IPCC table I shared highlighting the immediate benefit of protecting carbon rich intact forest in contrast to benefits of other forest management options which require more time to show a benefit.

Here is the link to our Vancouver Island 'hotspot' map https://www.dropbox.com/s/kg69xmbvgl0y659/Hot Spots Oct17 2017 27x36.pdf?dl=0

Here is a different version of the same map without the hotspots, focusing on the state of the forest and a table showing how little productive old-growth rainforest remains on the island https://www.dropbox.com/s/1x8fmtzzor0pf9z/VI no Hot Spots Chart Nov20 2017 18x24.pdf?dl=0

This is a useful backgrounder summarizing the state of the forest on Vancouver Island and very high ecological risk for species as a result of extensive clearcutting of old-growth rainforest ecosystems https://sierraclub.bc.ca/wpcontent/uploads/2015/08/South-Coast-Backgrounder March-2016.pdf

We are looking forward to working with the BC government in 2018 to identify next steps to protect highly endangered ecosystems, the species that depend on them and keeping carbon stored in endangered old-growth on the ground. Happy holiday and best wishes Jens

Jens Wieting Forest and Climate Campaigner <image001.png><http://sierraclub.bc.ca/> **Unceded Lekwungen Territory** C (604) 354-5312 sierraclub.bc.ca<http://sierraclub.bc.ca/> Note: I am mostly working from Vancouver and only occasionally in Victoria

<image002.png><http://sierraclub.bc.ca/donate/>

Connect with us on Instagramhttp://www.instagram.com/sierraclubbc,

Facebookhttp://www.facebook.com/SierraClubBC, Twitterhttp://twitter.com/SierraBC,

YouTubehttp://www.youtube.com/user/SierraClubofBC or our newsletterhttp://sierraclub.bc.ca/#SignUp.

Inspiring generations to defend nature and confront climate change, so families, communities and the natural world can prosper together.

<Old Growth Forest Protection Policy Brief (expanded) - August 2017.pdf> <Old-Growth Protection & Sustainable Forestry Policy Brief - July 2017.pdf> <Ahousaht Land Use Vision Is Best News Tyee article.p ision Is Best News Tyee article.pdf> <Preserve Old Tyee.pdf> <IPPC forest slide.pdf>

Page 87 to/à Page 93

Withheld pursuant to/removed as

s.14;s.13

Cameron, Tara D ENV:EX

From:

David Keane <david.keane@BCLNGA.CA>

Sent:

Tuesday, January 30, 2018 8:53 AM

To:

Plecas, Bobbi ENV:EX

Subject:

Attachments:

Carbon pricing regulatory framework for the output-based pricing system -

Canada.ca.pdf

Bobbi,

Attached is the latest from Environment and Climate Change Canada regarding carbon pricing. My members and I are interested in knowing where things are concerning emissions intensive and trade exposed industries and how they may be protected.

Would you have time for a quick call in the next few days?

Kind regards, David

David Keane President and CEO, British Columbia LNG Alliance

BC LNG Alliance 625 Howe Street, Suite 615 Vancouver, BC V6C 2T6 Office (778) 379-7644 www.bclnga.ca



Government of Canada

Gouvernement du Canada

Home → Environment and natural resources → Weather, climate and hazards → Climate change → Canada's action on climate change → Pricing carbon pollution

Carbon pricing: regulatory framework for the output-based pricing system

Introduction

Carbon pricing is a central component of the <u>Pan-Canadian Framework on Clean Growth and Climate Change (PCF)</u>. Carbon pricing is an efficient way to reduce greenhouse gas (GHG) emissions at the lowest cost to businesses and consumers, while stimulating innovation and clean growth.

In October 2016, the Government of Canada published the Pan-Canadian Approach to Pricing Carbon Pollution (the benchmark) to ensure that carbon pricing applies to a broad set of emission sources throughout Canada in 2018 with increasing stringency over time. Under the benchmark, provinces and territories can implement the type of carbon pricing system that makes sense for their circumstances--either an explicit price-based system (such as a carbon tax or carbon charge and performance-based emissions system) or cap-and-trade. As part of the benchmark, the federal government also committed to implement a federal carbon pricing backstop that will apply in any province or territory that requests it or that does not have a carbon pricing system in place in 2018 that meets the benchmark (referred to as "backstop jurisdictions"). In early 2018, the Government of Canada will release a draft legislative proposal for the federal backstop for comment.

The Government of Canada has requested that provinces and territories that choose the federal backstop, in whole or in part, confirm this by March 30, 2018. Those opting to establish or maintain a provincial or territorial pricing system that meets the benchmark need to outline how they are doing so by September 1, 2018. After reviewing each system, the Government of Canada intends to implement the federal backstop in whole or in part on January 1, 2019 in any province and territory that does not have a carbon pricing system that meets the benchmark. To minimize uncertainty for residents, businesses and investors, once in effect, the backstop will remain in effect until at least 2022.

From 2019 onwards, there will be an annual verification process to ensure carbon pricing systems continue to meet the benchmark. We will also monitor major changes to provincial and territorial systems on an ongoing basis.

In May 2017, the federal government released a <u>Technical Paper on the Federal Carbon Pricing Backstop</u> ¹ outlining the federal carbon pricing backstop with two elements:

- a charge on fossil fuels ² that is generally payable by fuel producers or distributors, with rates that will be set for each fuel such that they are equivalent to \$10 per tonne of carbon dioxide equivalent (CO₂e) ³ in 2018, rising by \$10 per year to \$50 per tonne CO₂e in 2022; and
- · an Output-Based Pricing System (OBPS) for industrial facilities

The aim of the OBPS is to minimize competitiveness risks for emissions-intensive, trade-exposed industrial facilities, while retaining the carbon price signal and incentive to reduce GHG emissions. The charge is not intended to apply to fuel used at a facility that is part of the OBPS. Each OBPS facility ⁴ will instead be subject to the carbon price on the portion of emissions that exceed an annual output-based emissions limit. In jurisdictions where the backstop applies, the OBPS will apply to industrial facilities that emit 50 kilotonnes (kt) CO₂e or more and for which an output-based standard is specified, or that emit between 10 and 50 kt CO₂e per year and whose application for voluntary participation is approved.

This paper provides additional information on the proposed design of the OBPS, and seeks further input from the public and stakeholders on key technical issues to inform its development.

Design principles of the Output-Based Pricing System

The OBPS is based on the following principles, subject to practical considerations:

- 1. Deliver incremental GHG emissions reductions
 - The OBPS will create incentives for incremental GHG emission reductions (meaning fewer emissions than would have occurred without the OBPS in place).
- 2. Minimize carbon leakage and competitiveness risks
 - The OBPS will be designed to minimize carbon leakage by limiting impacts on competiveness from carbon pricing for large industrial facilities.
- 3. Treat OBPS participants in a consistent manner
 - The design of output-based standards will be consistent within and across sectors and products.
- 4. Provide transparency
 - The OBPS will be implemented in a transparent manner.
- 5. Commitment to review
 - The OBPS will be reviewed by 2022, in conjunction with the review of the overall pan-Canadian approach to carbon pricing, committed to as part of the

https://www.canada.ca/en/services/environment/weather/climatechange/c...ate-action/pricing-carbon-pollution/output-based-pricing-system.html

Page 1 of 5

Pan-Canadian Framework on Clean Growth and Climate Change.

Overview of the Output-Based Pricing System

Industrial facilities that are registered under the OBPS will be able to purchase charge-free fuel from the time the charge starts to apply. OBPS facilities will instead be subject to the carbon price on the portion of their emissions that exceed an annual output-based emissions limit.

An OBPS facility's annual GHG emissions limit, expressed in tonnes of CO₂e, will be based on the prescribed output-based standards (OBS) for the production activities that the facility undertakes. The limit for a single product facility will be determined by multiplying the applicable output-based standard and the facility's total annual production. For a facility to which more than one output-based standard applies, the annual facility emissions limit will be based on the sum of the limits for each product, expressed as follows:

Annual Facility Emissions Limit (tonnes CO2e) = $\sum_{i=1}^{n} \left[\left(\frac{\text{tonnes CO2e}}{\text{units i}} \right) \times (\text{units i}) \right]$

The compliance obligation of a facility will be calculated as follows:

Compliance obligation (tonnes CO₂e) = Total annual facility emissions - Annual facility emissions limit

The Government of Canada will issue surplus credits to facilities whose emissions are below their annual facility emissions limit. Each surplus credit will represent one tonne of CO₂e.

A facility whose emissions are above its limit will have three options to meet its obligation:

- paying a charge to the Government of Canada. This charge will be set at the same level as the fuel charge (\$10 per tonne CO₂e in 2018, increasing by \$10 per tonne CO₂e each year to \$50 per tonne CO₂e in 2022);
- · submitting surplus credits issued by the federal government; and
- submitting eligible offset credits ⁵

Regulated facilities

The OBPS will apply to facilities:

- · in backstop jurisdictions;
- that reported annual emissions of 50 kt CO₂e or more; and
- that carry out an activity for which an output-based standard is prescribed.

Consideration is being given to which year(s) will be included when assessing a facility's emissions against the threshold of 50 kt CO2e.

The OBPS will not apply to buildings (including municipal, hospitals, universities, schools, and commercial), or landfills not associated with an OBPS facility, municipal wastewater treatment facilities or to natural gas distribution pipelines.

Facilities that meet the 50 kt CO2e threshold will be required to register with Environment and Climate Change Canada.

Voluntary participation in the Output-Based Pricing System (opt-in)

Facilities in backstop jurisdictions with annual emissions between 10 kt CO₂e and 50 kt CO₂e and that carry out an activity for which an output-based standard has been prescribed will be able to opt-in to the OBPS starting with the January 1 to December 31, 2020 compliance period (i.e., they will purchase charge-in fuel during 2019). Once a facility opts-in, it will be subject to the same obligations as all other OBPS facilities and will be able to purchase charge-free fuel.

A facility wishing to opt-in will need to submit a request to Environment and Climate Change Canada in advance of the first year in which it would like to be subject to the OBPS. Environment and Climate Change Canada will review each application and will designate approved applicants. For those facilities, the OBPS will apply starting at the beginning of the next relevant compliance period.

Additional information will be provided following further consultation on the eligibility criteria and process for opting in.

Covered emission sources

Covered emission sources will include fuel combustion, industrial process, flaring, and some venting and fugitive sources. Methane venting and methane fugitive emissions from oil and gas facilities will not be subject to pricing under the OBPS.

Emissions of all seven of the United Nations Framework Convention on Climate Change (UNFCCC) greenhouse gases will be included, to the extent practicable – carbon dioxide (CO_2) 6 , methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (N_3).

Output-based standards

To the extent practicable, output-based standards will be developed using a consistent approach across sectors.

In most cases, output-based standards will be set as a percentage of the production-weighted national average of emission intensity ^Z . In some cases it may be necessary to use alternate metrics that better characterize the sector.

The proposed starting percentage for all output-based standards will be 70% of the production-weighted national average of emission intensity (i.e., the output-based standard will be set 30% below the production-weighted national average of emission intensity). That percentage may be adjusted based on various considerations, such as the emissions intensity of the best-in-class performer (the facility with the lowest emissions intensity); the distribution of emissions intensities among facilities in the sector; and potential impacts on competitiveness.

The stringency of output-based standards will increase over time. Consideration is being given to different approaches, including a fixed annual percent reduction and scheduled revisions at multi-year intervals.

Output-based standards will initially be developed for the following industrial sectors: oil and gas, pulp and paper, chemicals, nitrogen-fertilizers, lime, cement, base metal smelting and refining, potash, iron ore pelletizing, mining, iron and steel, and food processing. Over time, output-based standards for additional sectors may be developed.

To address heterogeneity within some sectors, output-based standards may be developed within sub-sector categories at a product level, or in some cases, for a grouping of products, as illustrated in Table 1.

Table 1: Preliminary list of output-based standards

Sector/ sub-sector	Proposed standard basis	Proposed standard metric
Base Metal Smelting and Refining	Base metals	Tonne CO ₂ e/tonne base metals produced
Bitumen and Heavy Oil Upgrading	Synthetic Crude Oil (SCO)	Tonne CO ₂ e/barrel SCO
Cement	Grey cement	Tonnes CO₂e/tonne clinker
Chemicals (Ethanol)	Ethanol	Tonne CO ₂ e/tonne ethanol
Iron ore pelletizing	Iron ore pellets	Tonne CO ₂ e/tonne iron ore pellets
Iron and Steel	Mini mills	Tonnes CO₂e/tonne cast steel
Lime	High calcium and dolomitic	Tonnes CO₂e/tonne lime
Mining	Overburden and ore or coal	Tonnes CO₂e/tonne overburden and ore or coal product
Natural Gas Pipelines	Natural gas transmission pipelines	Tonne CO ₂ e/km throughput
Nitrogen Fertilizers	Nitric acid Ammonia	Tonne CO₂e/tonne nitric acid Tonne CO₂e/tonne ammonia
Oil Sands and Heavy Oil	Thermal production of bitumen and heavy oil	Tonne CO ₂ e/barrel bitumen (or heavy oil)
Other Manufacturing	Food processing	Tonne CO ₂ e/unit product
Potash	Conventional Solution	Tonnes CO₂e/tonne potash
Pulp and Paper	Pulp or paper from a chemical process Pulp or paper from a mechanical process	Tonne CO ₂ e/air dried tonne finished product
Refining	Complexity weighted barrel (CWB)	Tonne CO ₂ e/CWB
Steam/Heat	Steam/heat transferred on or off-site	Tonne CO ₂ e/gigajoule steam
Upstream Oil & Gas	Natural gas processing	Tonne CO ₂ e/volume processed NG

Consideration is being given to how to apply carbon pricing to offshore oil and gas production and to electricity generation.

Developing new output-based standards

Although all efforts will be made to ensure that output-based standards are developed for all types of eligible facilities, there may be facilities in a backstop jurisdiction that meet the 50 kt CO₂e threshold, or facilities that have annual emissions between 10 kt and 50 kt CO₂e, for which an output-based standard has not been prescribed. For example, the need for an output-based standard for a facility producing a new product line that is unique to Canada, may not be identified in advance. Options to enable these facilities to participate in the OBPS after 2020 are being considered.

Treatment of indirect emissions

Many facilities produce energy and intermediate products on-site, with the resulting emissions occurring on-site. Other facilities may purchase energy and intermediate products from third parties. The emissions associated with this energy production and these intermediate products occur off-site and are considered "indirect emissions". Consideration is being given to how to address these emissions under the OBPS.

Compliance

Compliance periods will generally be on a calendar year basis (i.e. January 1 to December 31).

Facilities will be required to submit a compliance report for each compliance period.

Compliance reports will include the information needed to assess whether the facility meets its compliance obligations. This information will include: the facility's annual emissions limit, its total emissions, and its calculated compliance obligation. Reports will also include information such as total emissions by activity/product; quantity of fuel used by type of fuel; production, sale, and purchase of key products such as electricity, steam, and hydrogen; and information related to facility emissions that are not subject to pricing.

Facilities will be required to quantify their emissions using prescribed methodologies, and will need to arrange for their annual compliance reports to be third-party verified to a reasonable level of assurance by verification bodies that are accredited to ISO 14065 by the Standards Council of Canada or the American National Standards Institute.

Consideration is being given to setting a deadline for submission of compliance reports of June 1 the year following the compliance year (e.g., reports would be due June 1, 2020 for a compliance period ending Dec. 31, 2019).

Facilities that emit above their annual facility emissions limit will need to fulfill compliance obligations by a set date. Consideration is being given to setting that deadline as November 1 of the year following the compliance year.

Compliance units

Consideration is being given to the need for, and the design of, rules designed to enhance market liquidity (i.e., to encourage trading of surplus credits among OBPS participants). Examples include limits on the banking and holding of credits.

Further information will be provided on eligible offset credits in a forthcoming guidance paper. This will build on the recommendations of the pan-Canadian Offset Framework report of the Canadian Council of Ministers of the Environment.

Tracking systems for compliance units

A tracking and compliance assessment system to track issuance and use of OBPS surplus credits and the use of eligible offsets will be developed. Each OBPS facility will be required to open accounts in the tracking system.

Review and update

The Pan-Canadian Framework includes a commitment for a review of the overall approach to carbon pricing by early 2022 to confirm the path forward. An interim report will also be completed in 2020. The design of the OBPS may be adjusted in response to these reviews.

Next steps and engagement process

The federal government plans to introduce legislation and regulations to implement the carbon pricing backstop system, including the OBPS, in jurisdictions that request it or that do not have a system in place in 2018 that meets the pan-Canadian benchmark.

In jurisdictions where both components of the federal backstop apply (the charge and the OBPS), both components will take effect at the same time. Registered OBPS facilities will be able to access charge-free fuel from the time the charge starts to apply.

https://www.canada.ca/en/services/environment/weather/climatechange/c...ate-action/pricing-carbon-pollution/output-based-pricing-system.html

Page 4 of 5

Environment and Climate Change Canada will undertake structured engagement on the OBPS in the winter/spring 2018. This will include engagement and consultation with provinces and territories, Indigenous Peoples, environmental non-governmental organizations, industry, and business. Further details will be made available in advance of the start of consultations.

In the meantime, interested parties wishing to comment on any aspect of this Framework are invited to provide written comments to Environment and Climate Change Canada at the following address, on or before April 9, 2018: ec.tarificationducarbonecarbonpricing.ec@canada.ca

- 1 Individuals, businesses, civil society, governments and academia from across Canada provided more than 200 submissions on the Technical Paper.
- 2 For more information on the charge on fossil fuels, see the <u>Technical Paper on the Federal Carbon Pricing Backstop</u>
- The concept of "global warming potential" allows for a comparison of the ability of each GHG to trap heat in the atmosphere relative to CO₂. CO₂e is a measure of the quantity of CO₂ that would be required to produce a similar warming effect as another GHG over the same time horizon
- The requirements for a facility under the OBPS will generally apply to a person responsible for a covered facility. For simplicity, this document refers to "facility" when referring to OBPS obligations.
- 5 ECCC will provide further information on eligible offset credits in a forthcoming paper.
- At the outset, CO₂ emissions from the combustion of biomass will not be subject to carbon pricing. The intent is to remain aligned with the treatment of biomass under Canada's National Greenhouse Gas Inventory. At present, the Inventory only accounts for emissions of methane and nitrous oxide resulting from biomass combustion.
- Production-weighted average is calculated as the total emissions of the sector (or grouping of products) divided by the total production of the sector (or grouping of products).

Date modified:

2018-01-15