

Laaksonen-Craig, Susanna ENV:EX

From: Brouwer, Shauna CSNR:EX
Sent: Wednesday, February 11, 2015 2:40 PM
To: Laaksonen-Craig, Susanna ENV:EX
Subject: Please review asap Q&A Cement Industry

Importance: High

Shauna Brouwer | Assistant Deputy Minister Corporate Services for the Natural Resource Sector | 250.387.9878 | CSNR
Contact Lists

From: Ty, Marie FIN:EX
Sent: Wednesday, February 11, 2015 2:40 PM
To: Flanagan, Paul FIN:EX; Lord, Michael CSNR:EX
Cc: Brouwer, Shauna CSNR:EX; Butler, Jason FIN:EX
Subject: Q&A Cement Industry

s.12
concerns or suggestions. Thanks.

Pls advise asap if you have any

s.12

Laaksonen-Craig, Susanna ENV:EX

From: Flanagan, Paul FIN:EX
Sent: Tuesday, February 10, 2015 11:26 AM
To: Laaksonen-Craig, Susanna ENV:EX; Lesiuk, Tim ENV:EX
Subject: QA-Cement Sector Low-Carbon Fuel Development Program-Draft v3_dk comments
Attachments: QA-Cement Sector Low-Carbon Fuel Development Program-Draft v3_dk comments.docx

Other comments.



**Cement Sector Low-Carbon Fuel Development Program
Questions & Answers**

What is this program about?

The Cement Sector Low-Carbon Fuel Development Program will ~~facilitate~~ provide an incentive to B.C. cement sector ~~producers~~ to reduce their greenhouse gas emissions, ~~and~~ will support the sector's long-term competitiveness, and will create new, green jobs in B.C. The program provides incentive funding over five years (2015/16-2019/2020) to B.C.'s cement manufacturers to develop and adopt new low-carbon fuel sources, displacing coal and reducing their carbon emissions to be among the cleanest cement manufacturers in the world.

Why would the Province provide incentive funding to the cement sector?

The B.C. cement sector provides cement for critical infrastructure development across the province, and supports a significant number of direct and indirect jobs for B.C. families. Cement production is fuel intensive, and the major fuel that B.C.'s cement producers currently use, coal, is highly carbon intensive and is subject to B.C.'s carbon tax. (s.13

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It sounds as though government is rebating carbon tax to the cement sector. Doesn't that go against the spirit of the tax?

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Since the carbon tax is revenue-neutral, what will the impact of the revenues lost through this program be?

There is no lost revenue as a result of this program. The program is funded as an expenditure program managed by the Ministry of Environment. All payments under this program will be reported in the public accounts.

Why does the cement sector ~~have to~~ use coal?

Coal is the fuel preferred by cement manufacturers because it has been a low-cost energy source to generate the extreme temperatures that cement manufacturing needs. The next most viable alternative today is natural gas, and B.C. cement producers are using that as well. Natural gas has a lower energy density and ends up costing cement facilities about twice as much to use compared to coal. New products

like <u>such as</u> bio-coal may be able to supply the heat needed like coal , without the greenhouse gas emissions.
Will they stop using coal completely?
Not in the foreseeable future. The physical properties of alternative fuels may prevent 100% displacement and may impact operation, production output and product quality. That being said, t The objective of this program is to incentivize them <u>cement producers</u> to use as much lower carbon fuel as possible. <u>Cement producers may still continue to use some coal.</u>
Do we know that the low-carbon fuel options are viable?
Yes. The two most viable low-carbon options are bio-solids and bio-coal. Dried bio-solids derived from sewage sludge are used successfully for cement manufacturing worldwide.
s.16
Bio-coal is thermally treated wood waste that has been used successfully in the cement-making process in other jurisdictions, has been tested in B.C. cement plants and is proven to match coal in heat energy. Commissioning of a demonstration plant in Merritt is nearly complete.
If <u>low-carbon fuel options</u> are viable, why aren't they available now?
Before the carbon tax the price of coal or natural gas was such that the sector did not need to look for options. B.C.'s carbon tax is based on the carbon content of fuels and coal is the highest carbon content of any fossil fuel. The carbon tax has created an incentive for the cement industry in B.C. to develop new low-carbon fuel sources. Since the carbon tax was put in place t The low-carbon fuel industry has been steadily moving through the pre-commercialization phase; programs like <u>such as</u> the Cement Sector Low-eCarbon Fuel Development Program will accelerate these new businesses <u>options</u> into full implementation.
These fuel sources may generate lower emissions, but do they produce more air pollution than coal or have other environmental concerns associated with them?
Combustion of bio-solids generates ash that is mixed into the cement rather than disposed of, much like coal. Biocoal is a much cleaner fuel than fossil coal because it emits significantly less SO _x and NO _x (sulfur oxides and nitrogen oxides, <u>which</u> are pollutants that cause acid rain). Particulates, including trace metals, can be controlled through use of mechanical collectors, wet scrubbers, fabric filters, and electrostatic precipitators. Biofuels are likely to be lower in many of the heavy metal pollutants found in coal.
How much of the province's total emissions come from the cement sector? Will this program get us significantly closer to our carbon reduction goal of 33% by 2020?
Cement production accounts for 3% of the province's greenhouse gas emissions, broken down into approximately 60% process emissions and 40% combustion emissions – there is currently no cost effective way of reducing non-combustion emissions.
In 2013, the sector emitted approximately 685,000 tonnes of combustion greenhouse gasses; reducing these by half would bring us <u>0.6%</u> closer to our reduction goal. Cutting these further could eliminate up to

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one percent of BC's greenhouse gas emissions.

How do we know that the sector will use the incentive funding to develop and adopt low-carbon fuel sources?

The program is designed to provide incentive funding only on receipt of evidence ~~the that~~ cement companies are taking action. s.13

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Couldn't the cement sector do anything else to reduce their emissions?

There is a certain amount of emission reductions that can be gained by energy efficiency retrofits to cement plants. s.21

s.21

s.21 ~~However, switching the sector to low-carbon fuels is the best use of the incentive funding, and will make B.C.'s cement plants attractive opportunities for future investment in upgrades that could reduce emissions furthermost effective way to reduce the industry's emission intensity.~~

Won't the cement sector also be able to sell carbon offsets for emission reductions generated through this program? Isn't that like paying them twice?

The incentive amounts take into account both the competitiveness of the sector and the fact that they may be able to generate additional revenue through carbon offsets. s.13

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What guarantee do we have that the sector will keep on using clean fuel after the incentive program is over?

As part of the program, the final benchmark for cement plants in B.C. will be added to the new *Greenhouse Gas Industrial Reporting and Controls Act* (GGIRCA) for the cement sector from 2020 onwards. The industry ~~Cement producers~~ will then have the flexibility to keep its ~~their~~ emissions intensity at the benchmark by continuing to use low-carbon fuels, by purchasing B.C. carbon offsets, or by contributing to the technology fund to be established under the GGIRCA. ~~They-Producers~~ will be incentivized to use as much low-carbon fuel as they can, because if their emission ~~intensities~~ goes below the benchmark level, they will be able to sell those reductions as carbon offsets.

Is this program supported by the cement industry? What will the industry's reaction to this program be?

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The Cement Sector Low-carbon Fuel Development Program directly responds to these concerns by providing five years of financial support to transition the cement industry away from coal to low-carbon fuels. The transitional support provided by the program will help to defray the costs of switching from coal to low-carbon fuels, which necessarily requires some investment in new infrastructure and in developing and securing suitable alternative fuels.

Laaksonen-Craig, Susanna ENV:EX

From: Flanagan, Paul FIN:EX
Sent: Tuesday, February 10, 2015 10:57 AM
To: Laaksonen-Craig, Susanna ENV:EX; Lesiuk, Tim ENV:EX
Subject: Cement Sector Low-Carbon Fuel Development Program-Draft v3_dk comments
Attachments: Cement Sector Low-Carbon Fuel Development Program-Draft v3_dk comments.docx

A few comments.



Cement Sector Low-Carbon Fuel Development Program

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Cement production is an energy-intensive process that commonly uses greenhouse-gas-intensive fossil fuels, such as like-coal, in large quantities. In 2013, the cement sector accounted for 3 percent of BC's greenhouse gas emissions. The B.C. cement sector has two producers, Lehigh Hanson and Lafarge, with plants in the Lower Mainland and the Thompson Region.

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Starting in fiscal 2015/16, the Ministry of Environment will administer an incentive program that will:

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- ~~facilitate~~ provide an incentive to the B.C. cement industry to reduce their greenhouse gas emissions; and
- assist in the development of a **B.C. low-carbon fuel industry** that will provide clean fuel for cement, and generate new clean jobs and new export commodities.

Over its five-year life span, the Cement Sector Low-Carbon Fuel Development Program will incentivize B.C.'s cement sector to move towards being the cleanest in the world. At the outset, the Ministry of Environment will conduct a global study on carbon intensities at leading cement production facilities to benchmark the B.C. cement industry. Based on this benchmarking and the B.C. cement industry's current carbon intensity, annual carbon intensity ~~reduction~~ targets will be set to progress towards that goal by 2020.

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In order to receive incentive funding, a cement manufacturing operation will be required to:

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s.13

There are several feasible opportunities for the development of low-carbon fuel supplies over this time frame.

s.16

Bio-coal – thermally treated wood waste —has been tested in B.C. cement plants and is proven to match coal in heat energy. Commissioning of a demonstration plant in Merritt is nearly complete and a small initial delivery is predicted for 2015. Investment or leveraging contracts could ramp up this low-carbon fuel supply on a timeline compatible with this incentive program.

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Laaksonen-Craig, Susanna ENV:EX

From: Lesiuk, Tim ENV:EX
Sent: Tuesday, February 10, 2015 8:06 AM
To: Laaksonen-Craig, Susanna ENV:EX
Cc: Reeve, Soledad ENV:EX; Coney, David ENV:EX
Subject: RE: Cement-Low Carbon - revisions
Attachments: Cement Sector Low-Carbon Fuel Development Program-Draft v2.docx; QA-Cement Sector Low-Carbon Fuel Development Program-Draft v2.docx

Susanna,

Attached are the revised program documents for Finance. I believe they need these for their deputy on Tuesday.

Sol, thanks for the amazing work on this project!!

tim

From: Reeve, Soledad ENV:EX
Sent: Friday, February 6, 2015 4:12 PM
To: Lesiuk, Tim ENV:EX; Laaksonen-Craig, Susanna ENV:EX; Coney, David ENV:EX
Subject: Cement-Low Carbon - revisions

Find attached revisions based on conversation with Finance.

Sol

soledad (sol) reeve • business development • climate action secretariat • b.c. ministry of environment • 250.387.3230



Cement Sector Low-Carbon Fuel Development Program

Cement production is an energy intensive process that commonly uses greenhouse gas intensive fossil fuels like coal in large quantity. In 2013, the cement sector accounted for 3 percent of BC's greenhouse gas emissions. The B.C. cement sector has two producers, Lehigh and Lafarge, with plants in the Lower Mainland and the Thompson Region.

s.13

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s.13,s.17

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Bio-coal – thermally treated wood waste has been tested in B.C. cement plants and is proven to match coal in heat energy. Commissioning of a demonstration plant in Merritt is nearly complete and a small initial delivery is predicted for 2015. Investment or leveraging contracts could ramp up this low-carbon fuel supply on a timeline compatible with this incentive program.

s.13



Cement Sector Low-Carbon Fuel Development Program Questions & Answers

What is this program about?

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Why would the Province provide incentive funding to the cement sector?

The B.C. cement sector provides cement for critical infrastructure development across the province, and supports a significant number of direct and indirect jobs for B.C. families. Cement production is fuel intensive, and the major fuel that B.C.'s cement producers currently use, coal, is highly carbon intensive and is subject to B.C.'s carbon tax. s.13

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Will they stop using coal completely?

Not in the foreseeable future. The physical properties of alternative fuels may prevent 100% displacement and may impact operation, production output and product quality. That being said, the objective of this program is to incentivize them to use as much lower carbon fuel as possible.

Do we know that the low-carbon fuel options are viable?

Yes. The two most viable low-carbon options are bio-solids and bio-coal.

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s.16

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If they are viable, why aren't they available now?

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s.13

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s.21

s.21 Switching the sector to low-carbon fuels is the best use of the incentive funding, and will make B.C.'s cement plants attractive opportunities for future investment in upgrades that could reduce emissions further..

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s.13

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s.13

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Laaksonen-Craig, Susanna ENV:EX

From: Shoemaker, Wes ENV:EX
Sent: Friday, February 6, 2015 10:30 AM
To: Laaksonen-Craig, Susanna ENV:EX
Subject: Cement

Follow Up Flag: Follow up
Due By: Friday, February 6, 2015 12:00 PM
Flag Status: Completed

Categories: ACTION

Susanna,

Are you and/or Tim writing up the description of the cement initiative as you articulated yesterday? I would not mind at least being able to articulate this myself in the next day or two in case I am asked by John or others. Can you help equip me for this?

Wes

W.H. (Wes) Shoemaker, MBA
Deputy Minister
Ministry of Environment
5th Floor, 2975 Jutland Road
Victoria, BC
Tel: 250.387.5429 | Fax: 250.387.6003
E-mail: wes.shoemaker@gov.bc.ca

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Sent from my iPad

Laaksonen-Craig, Susanna ENV:EX

From: Flanagan, Paul FIN:EX
Sent: Friday, February 6, 2015 9:28 AM
To: Laaksonen-Craig, Susanna ENV:EX; Karp, David FIN:EX; Reeve, Soledad ENV:EX; Lesiuk, Tim ENV:EX
Subject: RE: Cement incentive description and Qs & As

I would suggest you come up with an approach for the benchmark(s) and we can discuss it. We have general instructions on the program but likely some leeway on the details.

We need to get back to our deputy on Tuesday morning to give him the design.

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Recall though that LNG is different. LNG facilities buy a design and have little ability to change behaviour afterwards to lower emissions. Cement is all about changing behaviour.

From: Laaksonen-Craig, Susanna ENV:EX
Sent: Thursday, February 5, 2015 4:44 PM
To: Karp, David FIN:EX; Reeve, Soledad ENV:EX; Lesiuk, Tim ENV:EX
Cc: Flanagan, Paul FIN:EX
Subject: RE: Cement incentive description and Qs & As

Hi David,

Just a quick question/clarification. When you say "we have highlighted items where we would like your opinion, as these are somewhat flexible areas of the program", does that indicate that other parts are not ^{s.13}

s.13

Thanks,
Susanna

*Susanna Laaksonen-Craig, PhD
Head, Climate Action Secretariat
Tel. (250) 387-9456*

From: Karp, David FIN:EX
Sent: Thursday, February 5, 2015 4:33 PM
To: Reeve, Soledad ENV:EX; Lesiuk, Tim ENV:EX
Cc: Laaksonen-Craig, Susanna ENV:EX; Flanagan, Paul FIN:EX
Subject: Cement incentive description and Qs & As

Hi Sol and Tim,

I have attached a description of the cement incentive program, along with some Qs & As that could be used to respond to potential media questions on budget day (I understand that Paul has already shared the description document with Susanna).

We would appreciate your feedback on these two documents by end-of-day Monday. In particular, for the description document, we have highlighted items where we would like your opinion, as these are somewhat flexible areas of the program. For the Qs & As, we have indicated where there are a few questions that we thought would be better for you to draft responses for. But please feel free to provide feedback on all the Qs and As, as well as add any additional Qs & As that we may not have thought of.

Finally, we have a grammar question for you. Would you say the singular “emission intensity benchmarks” or the plural “emissions intensity benchmarks”?

Thanks!

- David.

David Karp

Tax Policy Analyst | Policy & Legislation Division | Ministry of Finance
105-617 Government Street, Victoria, BC V8W 9V8
Tel. 250-387-9021 | Email: David.Karp@gov.bc.ca

Laaksonen-Craig, Susanna ENV:EX

From: Karp, David FIN:EX
Sent: Thursday, February 5, 2015 4:33 PM
To: Reeve, Soledad ENV:EX; Lesiuk, Tim ENV:EX
Cc: Laaksonen-Craig, Susanna ENV:EX; Flanagan, Paul FIN:EX
Subject: Cement incentive description and Qs & As
Attachments: cement one pager -pf.docx; cement Qs and As.docx

Hi Sol and Tim,

I have attached a description of the cement incentive program, along with some Qs & As that could be used to respond to potential media questions on budget day (I understand that Paul has already shared the description document with Susanna).

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- David.

David Karp

Tax Policy Analyst | Policy & Legislation Division | Ministry of Finance
105-617 Government Street, Victoria, BC V8W 9V8
Tel. 250-387-9021 | Email: David.Karp@gov.bc.ca

Page 022 to/à Page 024

Withheld pursuant to/removed as

s.13;s.17

Page 025 to/à Page 026

Withheld pursuant to/removed as

s.13

Laaksonen-Craig, Susanna ENV:EX

From: Brouwer, Shauna CSNR:EX
Sent: Thursday, February 5, 2015 7:58 AM
To: Lord, Michael CSNR:EX; Ty, Marie FIN:EX
Cc: Laaksonen-Craig, Susanna ENV:EX
Subject: Edits - cement

The way the document reads now it looks like 22 million over 3 years and over the next five years 27 million for a total of 49 million over 8 years.

This is not the program – see suggested edits below.

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I think it would be best to leave any kind of payment type out of the program description....

Laaksonen-Craig, Susanna ENV:EX

From: Flanagan, Paul FIN:EX
Sent: Wednesday, February 4, 2015 1:05 PM
To: Laaksonen-Craig, Susanna ENV:EX
Subject: cement one pager -pf
Attachments: cement one pager -pf.docx

Categories: Follow up

Subject: Wes and Susanna and Shauna Meet/Call re Cement
Location: Wes' Office ... Wes & Susanna will call Shauna on her cell at 250-213-7074
Start: Wed 02-04-2015 4:30 PM
End: Wed 02-04-2015 5:00 PM
Show Time As: Out of Office
Recurrence: (none)
Meeting Status: Accepted
Organizer: Shoemaker, Wes ENV:EX
Required Attendees: Laaksonen-Craig, Susanna ENV:EX; Brouwer, Shauna CSNR:EX
Categories: DM/MO
Importance: High



Cement

Laaksonen-Craig, Susanna ENV:EX

From: Lesiuk, Tim ENV:EX
Sent: Monday, February 2, 2015 1:40 PM
To: Laaksonen-Craig, Susanna ENV:EX
Subject: FW: Cement one-pager
Attachments: cement one pager.docx

Importance: High

From: Karp, David FIN:EX
Sent: Thursday, January 29, 2015 4:29 PM
To: Lesiuk, Tim ENV:EX
Cc: Flanagan, Paul FIN:EX
Subject: FW: Cement one-pager
Importance: High

Tim, please see attached. If you have any comments, we'd appreciate if you could provide them tomorrow. Thanks!

From: Karp, David FIN:EX
Sent: Thursday, January 29, 2015 3:55 PM
To: Reeve, Soledad ENV:EX
Cc: Flanagan, Paul FIN:EX
Subject: Cement one-pager
Importance: High

Hi Sol,

We've put together a draft document (attached) that sets out the details for what a grant program could look like. Would you be able to take a look and give us your comments relatively quickly? Nothing has been finalized so we are very open to your feedback.

Thanks,

David.

David Karp

Tax Policy Analyst | Policy & Legislation Division | Ministry of Finance
105-617 Government Street, Victoria, BC V8W 9V8
Tel. 250-387-9021 | Email: David.Karp@gov.bc.ca

Page 031

Withheld pursuant to/removed as

s.13;s.17

From: Laaksonen-Craig, Susanna ENV:EX
Sent: Monday, February 16, 2015 9:06 AM
To: Dalal, Suntanu GCPE:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Crebo, David GCPE:EX
Subject: RE: Info please: Cement producers...
Attachments: ENV top three budget day issues.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Suntanu,

This is what we provided for Finance. We had a call with Finance and they wanted to ensure that at this point we stay very "High Level" in our description of the Cement program and simply say that we will work with industry and others to develop the details of the program, so the document has the level of info we'll stick to at the lock up.

Thanks,
Susanna

*Susanna Laaksonen-Craig, PhD
Head, Climate Action Secretariat
Tel. (250) 387-9456*

From: Dalal, Suntanu GCPE:EX
Sent: Monday, February 16, 2015 8:58 AM
To: Laaksonen-Craig, Susanna ENV:EX; Lesiuk, Tim ENV:EX; Spence, Suzanne ENV:EX
Cc: Ireland, Shannon L ENV:EX
Subject: Info please: Cement producers...

Hi,

Crebo is asking about any information that you have on the cement producers carbon tax break. Please send me the materials ASAP today.

Thanks,
Suntanu

Ministry of Environment - Top three issues for Budget Day

Prepared for Ministry of Finance

2. Cement Sector Low-Carbon Fuel Development Program

- Cement production is an energy intensive process that commonly uses greenhouse gas intensive fossil fuels like coal in large quantity.

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- Starting fiscal 2015/16, the Ministry of Environment will administer a five-year incentive program that will:
 - s.13
 - facilitate the B.C. cement industry to reduce their greenhouse gas emissions; and
 - assist in the development of a B.C. low-carbon fuel industry that will provide clean fuel for cement, and generate new clean jobs and new export commodities.
- At the outset Ministry of Environment will conduct a global study on carbon intensities at leading cement production facilities to benchmark the B.C. cement industry. Based on this benchmarking and the B.C. cement industry's current carbon intensity, annual carbon intensity reduction targets will be set to progress towards that goal by 2020.

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3. Carbon tax

- B.C.'s revenue-neutral carbon tax aims to reduce GHG emissions by encouraging the efficient use of fossil fuels, and by contributing to sustainable economic activity and green jobs.
- We have already had success in reducing our emissions while growing our economy – in June 2014 we announced that B.C. had reached its first interim GHG emissions reduction target of 6% below 2007 levels by 2012.
- Our revenue-neutral carbon tax approach – where tax reductions are applied broadly across individuals and industries – has protected overall economic growth, while still creating a meaningful incentive to reduce GHG emissions.
- In a December 2014 speech, World Bank President Jim Yong Kim praised B.C.'s carbon tax as "one of the most powerful" examples of carbon pricing.
- In 2013, government committed to freezing the carbon tax at \$30 per tonne for five years.

Ministry of Environment - Top three issues for Budget Day

Prepared for Ministry of Finance

1. Impacts of new and upcoming fees and fee increases

Camping-

- BC Parks recently increased camping fees as an initial step towards financial sustainability - key in achieving and maintaining financial sustainability is to ensure that user fees for BC Parks camping experiences cover the cost of providing those experiences.
- User fees are generally lower than those of most private campsites in the province and competitive with public sector campgrounds in other jurisdictions. The BC Parks service quality goes beyond that offered by most private facilities.
- The \$2 to \$5 per night increase is the first system wide increase in almost 5 years. The immediate increase isn't that much more per night, but with the total, nearing \$30 a night to camp, may be limiting for some families.

Water-

- New water fees and rentals were announced on February 5, 2015 and will come into effect in January 2016 when the new Water Sustainability Act is implemented.
- All existing non-domestic groundwater users and any new applications after 2016 will be required to pay the same fees and rentals as surface water users.
- Although some of the changes are significant for users of large volumes of water, about 88 percent of surface water users will see increases of \$100 or less and 77 percent of non-domestic groundwater users will pay \$250 or less.
- Households supplied by a municipal water system may see a small increase in their utility bill of one to two dollars annually.
- The new fees and rentals continue to be among the lowest in Canada and help to maintain BC's competitive business climate.

Environmental Assessment

- On April 14, 2014, British Columbia introduced modest fees for environmental assessments and post-certificate fees, including for compliance inspections.
- These fees represent partial cost recovery for reviewing new projects.
- To date, EAO has invoiced for \$1.787 million in fees with these funds going to general revenue.
- Most other jurisdictions in Canada charge fees or otherwise transfer costs to proponents for environmental assessments. British Columbia's fees are competitive with those of Alberta, Quebec and Manitoba.
- The introduction of fees stabilized EAO's resourcing which has resulted in 19 new hires.
- EAO has also made \$0.750 million available to other ministries to enhance their capacity, which cuts down on environmental assessment delays.
- EAO is establishing key performance indicators and measures for the objectives, which will provide better accountability by the EAO and define expectations internally to the office.
- EAO is committed to providing excellent client service, including options for electronic invoicing and fund transfer. These service enhancements were effective February 2015.

Subject: Cement Sector Carbon Tax Relief & Fuel Switching Offset Contract
Location: Susanna's Office - Conference call-in details below.
Start: Fri 01-09-2015 1:00 PM
End: Fri 01-09-2015 2:00 PM
Recurrence: (none)
Meeting Status: Accepted
Organizer: Lesiuk, Tim ENV:EX
Required Attendees: Laaksonen-Craig, Susanna ENV:EX; Spence, Suzanne ENV:EX; Reeve, Soledad ENV:EX
Categories: Mgmnt CAS

Dial-in: 1-877-353-9184

Participant code: s.15

Tim to moderate.



Cement Association
of Canada Association
Canadienne
du Ciment

CAS

276564

December 15, 2014

Honourable Mike de Jong, Q.C.
Minister of Finance
Government of British Columbia
Room 153
Parliament Buildings
Victoria, BC
V8V 1X4

MINISTER'S OFFICE - RECEIVED
MINISTRY OF ENVIRONMENT

DEC 19 2014

☐ Min Reply ☐ Reply Direct ☐ Dtn Reply ☒ Info/File
☐ Send Interim ☐ Redirect to _____
☐ cc. _____
CLIFF# _____

Ministry of Environment
Correspondence Unit

JAN 07 2015

Dear Minister:

Re: Resolution to the Inequitable Application of the BC Carbon Tax on the Cement Industry

We write as a follow-up to a series of meetings that the Cement Association, Lehigh Hanson Materials Inc., and Lafarge Canada Inc. have had with staff from the Ministry of Finance and the Ministry of Environment. Our discussions have been collaborative and have had a positive tone. The cement industry has appreciated the opportunity for two-way dialogue on seeking potential solutions to the inequitable application of the carbon tax on the cement industry.

One of the potential solutions raised by government staff at our last meeting would involve a **"hybrid grant / incentive solution"** with government providing a five-year grant to the cement industry equivalent to the carbon tax, s.13

Other options that have been discussed with staff have focused on providing incentives to enhance the use of alternative fuels. Cement manufacturing is an energy intensive process and the cement industry continues to be interested in sourcing and pursuing the use of alternatives to fossil fuels. However, given that the industry is recognized both locally and around the world as trade-exposed, and that cost of fuel is a key factor in keeping the industry competitive, there are challenges to the use of alternative fuels which result in net manufacturing costs that approach, or are equal to the cost of using fossil fuel plus the carbon tax. Nevertheless, BC cement manufacturers continue to use alternative fuels, including end-of-life scrap tires (although tires also incur the carbon tax), processed and sorted construction waste, and other selected materials when it is viable to do so.

The existing markets in BC for alternative fuels are not yet mature enough to allow significant expansion in the near or medium term. In order for alternative fuels to be used, they need to be sourced on a secure, long-term basis at a competitive cost for both the fuel and its transportation. This includes materials such as selected municipal waste materials (e.g. additional construction / demolition materials or refuse derived fuel / "RDF"), and dried sewage sludge biosolids residues from wastewater treatment. We would suggest that both of these types of materials might be

1188 West Georgia Street, Suite 900, Vancouver, BC V6E 4A2 Tel: (604) 269-0582
www.cement.ca

From: Quin, Melissa ENV:EX
Sent: Thursday, October 30, 2014 9:16 AM
To: Ireland, Shannon L ENV:EX
Cc: Quin, Melissa ENV:EX; Crozier, Bev ENV:EX; Jackson, Vickie ENV:EX
Subject: URGENT! MO REQUEST: MMP Meeting with Cement Assoc. of Canada - IN 211192 - DUE to DMO by 10:00am on November 3rd
Importance: High

Hi Shannon,

MO is requesting the following:

Who: MMP and Cement Assoc. of Canada – Tim Lesiuk is recommend as attending – additional staff?
What: To provide an update on our industry and to bring your Minister up to speed on the carbon tax file with our discussion to date with the Ministry of Finance
When: November 4th, 1:00pm-1:30pm
Where: Room 112, MO
Materials: IN 211192 – DUE to DMO by 10:00am on Monday, November 3rd

Thank you,
Melissa

From: Griffin, Julia ENV:EX
Sent: Wednesday, October 29, 2014 6:16 PM
To: Quin, Melissa ENV:EX
Cc: Crozier, Bev ENV:EX; Jackson, Vickie ENV:EX
Subject: Staff/BN Request: Meeting Request November 4th or 5th

Hi again ☺

Please accept this as a staff and briefing note request for this scheduled meeting.

Accept/Regrets: Accept

Meeting Requested by/for: Cement Association of Canada

Meeting Purpose: to provide an update on our industry and to bring your Minister up to speed on the carbon tax file with our discussion to date with the Ministry of Finance

Staff Attendees Y/N/Who?: Yes, Tim Lesiuk please

Date/Time/Location: November 4 / 1-1:30pm / MMP's office

Request BN?: Yes please

Meeting Duration: 30 mins

Thanks and please confirm,

Julia Griffin

Administrative Coordinator to the Honourable Mary Polak
Minister of Environment
P.O. Box 9339, Stn Prov Govt, Victoria, B.C., V8W 9M1
P: 250.387.1187

From: TJ Parhar
Sent: October-08-14 10:11 AM
To: matt.mitschke@gov.bc.ca
Subject: Meeting Request November 4th or 5th

Hi Matt,

I hope you are doing well and good luck with session! As you are aware the Cement Association of Canada will be in Victoria hosting a reception on November 4th at the Steamship Terminal Tap house for Government. My CEO Michael McSweeney will be flying down from Ottawa to participate that evening, I was hoping to see if we could set up a meeting with Minister Polak either on the 4th or 5th of November? The purpose of this meeting would be to provide an update on our industry and to bring your Minister up to speed on the carbon tax file with our discussion to date with the Ministry of Finance. We are very flexible and could meet any time your Minister is available. Feel free to call me if you would like to discuss further.

Look forward to seeing you at the reception!

Cheers,

TJ

Tejindar (TJ) Parhar
Senior Director, Government and Public Affairs-Western Region
Cement Association of Canada
1188 West Georgia, Suite 900
Vancouver, BC V6E 4A2
E-mail: tjparhar@cement.ca
Office: (604) 269-0582
Cell: (250)818-0629
www.cement.ca



Cement
Association
of Canada

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**MINISTRY OF ENVIRONMENT
MEETING INFORMATION NOTE**

Thursday October 30, 2014

File: 280-20

CLIFF/tracking #: 211192

PREPARED FOR: Honourable Mary Polak, Minister of Environment

DATE AND TIME OF MEETING: November 4, 1:00pm-1:30pm

ATTENDEES: Cement Association of Canada; Tim Lesiuk, Climate Action Secretariat

ISSUE(S): The Cement Association of Canada would like to update the Minister on their discussions to date with the Ministry of Finance.

BACKGROUND:

The Cement Association of Canada has engaged formally and informally with MLAs, the Ministry of Finance, and the Climate Action Secretariat regarding the impact of the Carbon Tax on the competitiveness of the cement industry in British Columbia.

On October 8, 2014, staff from the Ministry of Finance and the Climate Action Secretariat met with representatives of the Cement Association of Canada to discuss options to ameliorate the impact of the Carbon Tax on the cement sector and other users of coal and similar high emissions fuels for heat or energy.

Ministry of Finance staff does not support an exemption from payment of the tax or a shifting of the tax to the point of sale of cement. 's.13

s.13

s.13

DISCUSSION:

s.13

s.13

s.13

SUGGESTED RESPONSE:

s.13

Attachments:

Contact:

*Susanna Laaksonen-Craig, Head
Climate Action Secretariat
250 387-9456*

Alternate Contact:

*Tim Lesiuk, ED
Climate Action Secretariat
250 356-7557*

Prepared by:

*Soledad Reeve, Analyst
Climate Action Secretariat
250 387-3230*

[Insert additional rows if needed]

Reviewed by	Initials	Date
DM		
DMO		
ADM	SLC	2014/11/03
ED	TL	10/31/14
Author	SR	10/30/14

From: Laaksonen-Craig, Susanna ENV:EX
Sent: Monday, February 16, 2015 3:37 PM
To: Dalal, Suntanu GCPE:EX; Crebo, David GCPE:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX; Shoemaker, Wes ENV:EX; Lilly, Liz ENV:EX
Subject: RE: For Review and Approval: Cement producers IN...
Attachments: IN_CAS_CementProducersCarbonTaxRelief_Draft1 slc.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hey,

I did a few more edits to keep the language in the messaging as neutral as possible.

Susanna

*Susanna Laaksonen-Craig, PhD
Head, Climate Action Secretariat
Tel. (250) 387-9456*

From: Dalal, Suntanu GCPE:EX
Sent: Monday, February 16, 2015 3:04 PM
To: Crebo, David GCPE:EX; Laaksonen-Craig, Susanna ENV:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX; Shoemaker, Wes ENV:EX; Lilly, Liz ENV:EX
Subject: RE: For Review and Approval: Cement producers IN...

The re-ordering of the messaging bullets works for me.

I'm still OK with the amount of detail in the background section of the IN – it's about half the info that was provided (though some of that info is also included as messaging).

From: Crebo, David GCPE:EX
Sent: Monday, February 16, 2015 2:56 PM
To: Dalal, Suntanu GCPE:EX; Laaksonen-Craig, Susanna ENV:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX; Shoemaker, Wes ENV:EX; Lilly, Liz ENV:EX
Subject: RE: For Review and Approval: Cement producers IN...

A suggested re-ordering of response points to put more emphasis on the solution (transitioning to lower carbon fuel source) rather than the problem (cement industry complaining about carbon tax). Thoughts?

Not sure if this much detail is desired in the BG?

From: Dalal, Suntanu GCPE:EX
Sent: Monday, February 16, 2015 11:01 AM
To: Laaksonen-Craig, Susanna ENV:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX; Shoemaker, Wes ENV:EX; Crebo, David GCPE:EX; Lilly, Liz ENV:EX
Subject: For Review and Approval: Cement producers IN...

For review and approval...

From: Dalal, Suntanu GCPE:EX
Sent: Monday, February 16, 2015 9:30 AM
To: Laaksonen-Craig, Susanna ENV:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX; Shoemaker, Wes ENV:EX; Crebo, David GCPE:EX
Subject: RE: Info please: Cement producers...

Thanks.

I'll draft an Issues Note right away and send to you for review.

From: Laaksonen-Craig, Susanna ENV:EX
Sent: Monday, February 16, 2015 9:28 AM
To: Dalal, Suntanu GCPE:EX; Crebo, David GCPE:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX; Shoemaker, Wes ENV:EX
Subject: RE: Info please: Cement producers...

I have attached the two pager we have done on this (this is the info we verbally described to MMP at the meeting on the 5th). This 2-pager has detail that we have been asked not to describe at this point so the messaging should stay at the level it is in the doc DMO provided for Finance on the top 3 issues.

*Susanna Laaksonen-Craig, PhD
Head, Climate Action Secretariat
Tel. (250) 387-9456*

From: Dalal, Suntanu GCPE:EX
Sent: Monday, February 16, 2015 9:18 AM
To: Crebo, David GCPE:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Laaksonen-Craig, Susanna ENV:EX; Lesiuk, Tim ENV:EX; Murphy, Bernadette GCPE:EX
Subject: RE: Info please: Cement producers...

I've asked whether CAS has a briefing note that I could use as the basis of background for an Issues Note to go with the messaging.

From: Crebo, David GCPE:EX
Sent: Monday, February 16, 2015 9:16 AM
To: Laaksonen-Craig, Susanna ENV:EX; Dalal, Suntanu GCPE:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX
Subject: Re: Info please: Cement producers...

Thx Susanna - we'll likely be asked about this in the days following budget, so I'm thinking we should have an IN done up with that sort of holding messaging.

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Laaksonen-Craig, Susanna ENV:EX
Sent: Monday, February 16, 2015 9:06 AM
To: Dalal, Suntanu GCPE:EX
Cc: Ireland, Shannon L ENV:EX; Spence, Suzanne ENV:EX; Lesiuk, Tim ENV:EX; Crebo, David GCPE:EX
Subject: RE: Info please: Cement producers...

Hi Suntanu,

This is what we provided for Finance. We had a call with Finance and they wanted to ensure that at this point we stay very "High Level" in our description of the Cement program and simply say that we will work with industry and others to develop the details of the program, so the document has the level of info we'll stick to at the lock up.

Thanks,
Susanna

*Susanna Laaksonen-Craig, PhD
Head, Climate Action Secretariat
Tel. (250) 387-9456*

From: Dalal, Suntanu GCPE:EX
Sent: Monday, February 16, 2015 8:58 AM
To: Laaksonen-Craig, Susanna ENV:EX; Lesiuk, Tim ENV:EX; Spence, Suzanne ENV:EX
Cc: Ireland, Shannon L ENV:EX
Subject: Info please: Cement producers...

Hi,

Crebo is asking about any information that you have on the cement producers carbon tax break. Please send me the materials ASAP today.

Thanks,
Suntanu

CEMENT SECTOR LOW-CARBON FUEL DEVELOPMENT PROGRAM

- Cement production is an energy-intensive process that uses large amounts of GHG-intensive fossil fuels like coal.

s.13

- Starting in fiscal 2015/16, the Ministry of Environment will administer a five-year incentive program that will:
 - help the B.C. cement industry reduce their GHG emissions
 - assist in the development of a B.C. low-carbon fuel industry that will provide cleaner fuel for cement, and generate new clean jobs and new export commodities.
 - ~~reduce the impact of the revenue-neutral carbon tax on the cement sector;~~
 - ~~help the B.C. cement industry reduce their GHG emissions; and~~
 - ~~reduce the impact of the revenue-neutral carbon tax on the cement sector;~~
 - ~~assist in the development of a B.C. low-carbon fuel industry that will provide cleaner fuel for cement, and generate new clean jobs and new export commodities.~~
- At the outset, the Ministry of Environment will conduct a

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global study on carbon intensities at leading cement production facilities to benchmark the B.C. cement industry.

- Based on this benchmarking and the B.C. cement industry's current carbon intensity, annual carbon intensity reduction targets-goals will be set to progress towards that goal by 2020for the 5-year program period.
- Helping B.C.'sThe cement sector transition to lower carbon fuel sources will help address its concerns that the industry may be negatively impacted by the carbon tax, in B.C.-if surrounding jurisdictions do not adopt similar carbon pricing policies in the near-term.

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Background:

- In 2013, the cement sector in B.C. accounted for 3% of the province's GHG emissions. The B.C. cement industry has two producers, Lehigh and Lafarge, with plants in the Lower Mainland and the Thompson Region.

s.13

- Over its five-year life span, the Cement Sector Low-carbon Fuel Development Program will incentivize B.C.'s cement sector to move towards becoming one of the cleanest in the world.

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s.13

- There are currently several feasible opportunities for development of low-carbon fuel supply over this timeframe, including:

s.13,s.16

- Bio-coal – thermally-treated wood waste has been tested in B.C. cement plants and is proven to match coal in heat energy.

- s.13

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Potential Emission Reduction Incentives for Cement Industry (Coal Fired Manufacturing Plants)

ISSUE: Cement sector is requesting relief from payment of the carbon tax.

BACKGROUND:

The BC cement industry has two firms, Lehigh and Lafarge, which have plants in the Lower Mainland and the Thompson Region.

The cement industry is highly emissions intensive and its products are undifferentiated, transportable commodities. The industry is strongly impacted by carbon pricing due to its emissions intensity and trade exposure.

According to a Cement Association of Canada News Release, May 9, 2014:

- *“Local producers have lost nearly a third of the market share to imports since the inception of the carbon tax in 2008.”*
- *“BC cement facilities are now running at only 65 per cent of capacity compared to five years ago when they were running at near full capacity.”*

Addressing carbon tax competitiveness impacts is the number one issue for the cement industry.

In 2011 the industry requested consideration of either an exemption for cement manufacturers from payment of the Carbon Tax; or establishment of a carbon tax on retail cement sales and refund of BC cement manufacturers Carbon Tax (attached IN dated XX, 2011).

In October 2014 the industry met with Ministry of Finance and Ministry of Environment; it was determined that exemption from the carbon tax and carbon tax on retail sales of cement will NOT be considered.

Instead the following categories of options to assist the cement industry with reducing GHG emissions, and therefore reducing carbon tax paid, are explored here.

1. Manufacturing Process Incentives
2. Fuel Use and/or Production Incentives

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Page 048 to/à Page 050

Withheld pursuant to/removed as

s.13;s.17



Climate Action Secretariat, Ministry of Environment

MEETING AGENDA

Cement Sector Low-Carbon Fuel Development Program Start-up Meeting

Tuesday February 24, 1:00 p.m. – 2:30 p.m.

Meeting Room 2-1 (second floor), 395 Waterfront Crescent, Victoria

Dial-in: 1-877-353-9184; Participant Code: s.13

Comment [SR1]: Tim – what's protocol - OK to ask them to come here?

Ministry of Finance have announced the roll-out of the Cement Sector Low-Carbon Fuel Development Program, an incentive program, managed by Ministry of Environment, with the objective of assisting the cement sector to reduce emissions, reduce carbon tax and build a new low-carbon fuel source.

Invitees:	
Ken Carrusca, VP, Environment & Marketing (Western Region)	Cement Association of Canada
Pat Heale, VP, Cement Operations Canada Region	Lehigh Hanson Cement Group
Jonathan Moser, Director, Environment & Public Affairs, Western Canada	LaFarge
TJ Parhar, Senior Director, Government & Public Affairs (Western Region)	Cement Association of Canada
Jasper van de Wetering, Environmental Manager	Lehigh Hanson Cement Group
Tim Lesiuk, Executive Director, Business Development	Climate Action Secretariat
David Coney, Manager Environmental Markets	Climate Action Secretariat
Sol Reeve, Business Development Analyst	Climate Action Secretariat

Note: no proprietary information will be discussed at this start up meeting. Future meetings will be facility-specific to maintain confidentiality.

Red font = CAS notes, to be removed from copy sent to cement sector.

	Item	Action
1.0	Introductions	
2.0	Context and Program overview	
	s.13 (Review program concept document)	

3.0	<p>CAS Short Term Requirements (2 weeks?)</p> <ul style="list-style-type: none"> - Facility specific production data going back 3 years – tonnes cement produced by facility; and - Emissions data by gas type <u>and</u> fuel source. 	<p>Lafarge Lehigh</p>
4.0	<p>Business case:</p> <ul style="list-style-type: none"> - Each facility to provide executive summary by [Day, Month]. - Full business case requirements to be developed by CAS in response to each summary – (described at high-level in concept paper). - Approval of business case – requirements provided by CAS to each facility by [Day, Month]. 	<p>Lafarge Lehigh CAS</p>
5.0	<p>Release of incentive funding Year 1:</p> <ul style="list-style-type: none"> - Completed business case due by Feb 1, 2016. - Intensity data and validation report submitted through Single Window system by Feb 1, 2016 (and years 2 through 5). 	<p>Lafarge Lehigh</p>
6.0	<p>Next steps:</p> <ul style="list-style-type: none"> - Status meetings: <ul style="list-style-type: none"> o Lehigh & Lafarge to assign staff contacts? o Meetings how often? - Review meetings with Executive – how often? 	<p>All</p>
	Adjourn.	



Climate Action Secretariat, Ministry of Environment

MEETING AGENDA

Potential Emission Reduction Incentives for Coal Fired Manufacturing Plants Addressing the Financial Impacts of the Inequity of the Carbon Tax on BC Cement Manufacturers

Thursday November 6, 10:30 a.m. – 12:00 p.m.

Monday November 17 9:00 - 12:00 noon

	Item	Action
1.0	<u>Introductions:</u> <ul style="list-style-type: none"> BC Ministry of Finance, BC Ministry of Environment Cement Association of Canada, Lehigh Hanson, Lafarge Canada Inc. 	
2.0	<u>Review of Notes</u> <ul style="list-style-type: none"> Review of Notes of October 8, 2014 meeting 	
3.0	<u>Overview and Summary of Issues</u> <ul style="list-style-type: none"> Financial Impacts of the Carbon Tax on the BC Cement Industry Imports of Cement into BC Review of Overall Schedule 	
4.0	<u>Potential Options to Review</u> <ul style="list-style-type: none"> Establishing a BC Cement Industry Benchmark <i>As per BC Bill 2-2014, the Greenhouse Gas Industrial Reporting and Control Act</i> Carbon Off-set Program Others 	
15.0	Category 1 – Manufacturing process incentives (energy efficiency/clinker substitutes) <ul style="list-style-type: none"> Overview Summary of survey Development of specific options for consideration <ul style="list-style-type: none"> Articulating options Identifying implications of each option Identifying additional work required to complete development of each option 	
26.0	Category 2 – Fuel use incentives <ul style="list-style-type: none"> Overview Summary of survey Development of specific options for consideration <ul style="list-style-type: none"> Articulating options 	

	<ul style="list-style-type: none"> o Identifying implications of each option o Identifying additional work required to complete development of each option 	
37.0	<p>Category 3 – Fuel production incentives</p> <ul style="list-style-type: none"> • Overview • Summary of survey • Development of specific options for consideration <ul style="list-style-type: none"> o Articulating options o Identifying implications of each option o Identifying additional work required to complete development of each option 	
8.0	<p><u>Next steps</u></p> <ul style="list-style-type: none"> • <u>Next meeting date and time</u> 	

December 15, 2014

Honourable Mike de Jong, Q.C.
Minister of Finance
Government of British Columbia
Room 153
Parliament Buildings
Victoria, BC
V8V 1X4

Dear Minister:

Re: Resolution to the Inequitable Application of the BC Carbon Tax on the Cement Industry

We write as a follow-up to a series of meetings that the Cement Association, Lehigh Hanson Materials Inc., and Lafarge Canada Inc. have had with staff from the Ministry of Finance and the Ministry of Environment. Our discussions have been collaborative and have had a positive tone. The cement industry has appreciated the opportunity for two-way dialogue on seeking potential solutions to the inequitable application of the carbon tax on the cement industry.

One of the potential solutions raised by government staff at our last meeting would involve a **"hybrid grant / incentive solution"** with government providing a five-year grant to the cement industry equivalent to the carbon tax, s.21

s.21

Other options that have been discussed with staff have focused on providing incentives to enhance the use of alternative fuels. Cement manufacturing is an energy intensive process and the cement industry continues to be interested in sourcing and pursuing the use of alternatives to fossil fuels. However, given that the industry is recognized both locally and around the world as trade-exposed, and that cost of fuel is a key factor in keeping the industry competitive, there are challenges to the use of alternative fuels which result in net manufacturing costs that approach, or are equal to the cost of using fossil fuel plus the carbon tax. Nevertheless, BC cement manufacturers continue to use alternative fuels, including end-of-life scrap tires (although tires also incur the carbon tax), processed and sorted construction waste, and other selected materials when it is viable to do so.

The existing markets in BC for alternative fuels are not yet mature enough to allow significant expansion in the near or medium term. In order for alternative fuels to be used, they need to be sourced on a secure, long-term basis at a competitive cost for both the fuel and its transportation. This includes materials such as selected municipal waste materials (e.g. additional construction / demolition materials or refuse derived fuel / "RDF"), and dried sewage sludge biosolids residues from wastewater treatment. We would suggest that both of these types of materials might be



managed in a more sustainable manner than at present, which currently involves significant transportation and disposal costs. Nevertheless, it must be recognized that the cement manufacturing process is sensitive to fuel quality and that no amount of incentive will allow a 100% conversion from fossil fuels to non-hazardous alternative waste based fuels. Support from the BC government, both financial and legislative/regulatory, would be required in order to provide local solutions that can benefit both government and industry. Tied to a five-year grant, this solution could be the proverbial "win-win" for all parties.

When dealing with government, industry is looking for equity and certainty. The cement industry is no different in this respect. While BC-based cement manufacturers currently pay a total of between \$15 and \$20 million per year in carbon tax, importers of cement that is manufactured in Asia or the United States and imported to this province pay none of these costs. This year's BC Standing Committee on Finance and Government Services once again recognized this severe imbalance. The **"hybrid grant / incentive solution"** raised by government staff, coupling a five-year carbon tax grant to the cement industry, along with an alternative fuels financial incentive, would go a long ways towards providing equity for Lafarge and Lehigh's BC operations. As such, we recommend that this solution be considered and implemented as part of the current Provincial budget process.

We appreciate the efforts of government staff to date in seeking solutions that can support our industry, and we look forward to further positive dialogue on this issue with you at the meeting we have scheduled in January 2015.

Should you have any questions, please feel free to call me at (604) 839-6627.

Sincerely,

Ken Carrusca, P.Eng.
Vice President, Environment and Marketing (Western Region)
Cement Association of Canada

cc: Honourable Mary Polak, Minister of Environment, BC Ministry of Environment
Peter Milburn, Deputy Minister, BC Ministry of Finance
Tim Lesiuk, BC Climate Action Secretariat, BC Ministry of Environment

Pat Heale, Vice President, Lehigh Hanson Materials Limited
Jasper van de Wetering, Production Manager, Lehigh Hanson Materials Limited
Jonathan Moser, Director, Environment and Public Affairs, Lafarge Canada Inc.

Michael McSweeney, President and CEO, Cement Association of Canada (CAC)
TJ Parhar, Senior Director, Government and Public Affairs (Western Region), CAC

Chouan, Alexis ENV:EX

From: Reeve, Soledad ENV:EX
Sent: Wednesday, February 11, 2015 10:08 AM
To: Coney, David ENV:EX; Lesiuk, Tim ENV:EX
Subject: Cement Sector Meeting-Agenda-February X 2015
Attachments: Cement Sector Meeting-Agenda-February X 2015.docx

Please have a look at this draft agenda and add or comment. Then we can set aside until budget day.

I have meeting with Metro Van on 18th re: bio-solids – I'll find out what I can, and will get an exec. contact.

Thx. Sol



Climate Action Secretariat, Ministry of Environment

MEETING AGENDA

Cement Sector Low-Carbon Fuel Development Program

Start-up Meeting

Tuesday February 24, 1:00 p.m. – 2:30 p.m.

Meeting Room 2-1 (second floor), 395 Waterfront Crescent, Victoria

Dial-in: 1-877-353-9184; Participant Code:s.13

Comment [SR1]: Tim – what's protocol - OK to ask them to come here?

Ministry of Finance have announced the roll-out of the Cement Sector Low-Carbon Fuel Development Program, an incentive program, managed by Ministry of Environment, with the objective of assisting the cement sector to reduce emissions, reduce carbon tax and build a new low-carbon fuel source.

Invitees:	
Ken Carrusca, VP, Environment & Marketing (Western Region)	Cement Association of Canada
Pat Heale, VP, Cement Operations Canada Region	Lehigh Hanson Cement Group
Jonathan Moser, Director, Environment & Public Affairs, Western Canada	LaFarge
TJ Parhar, Senior Director, Government & Public Affairs (Western Region)	Cement Association of Canada
Jasper van de Wetering, Environmental Manager	Lehigh Hanson Cement Group
Tim Lesiuk, Executive Director, Business Development	Climate Action Secretariat
David Coney, Manager Environmental Markets	Climate Action Secretariat
Sol Reeve, Business Development Analyst	Climate Action Secretariat

Note: no proprietary information will be discussed at this start up meeting. Future meetings will be facility-specific to maintain confidentiality.

Red font = CAS notes, to be removed from copy sent to cement sector.

Item		Action
1.0	Introductions	
2.0	Context and Program overview	
	s.13 (Review program concept document)	

3.0	<p>CAS Short Term Requirements (2 weeks?)</p> <ul style="list-style-type: none"> - Facility specific production data going back 3 years – tonnes cement produced by facility; and - Emissions data by gas type <u>and</u> fuel source. 	<p>Lafarge Lehigh</p>
4.0	<p>Business case:</p> <ul style="list-style-type: none"> - Each facility to provide executive summary by [Day, Month]. - Full business case requirements to be developed by CAS in response to each summary – (described at high-level in concept paper). - Approval of business case – requirements provided by CAS to each facility by [Day, Month]. 	<p>Lafarge Lehigh CAS</p>
5.0	<p>Release of incentive funding Year 1:</p> <ul style="list-style-type: none"> - Completed business case due by Feb 1, 2016. - Intensity data <u>and validation report</u> submitted through Single Window system by Feb 1, 2016 (and years 2 through 5). 	<p>Lafarge Lehigh</p>
6.0	<p>Next steps:</p> <ul style="list-style-type: none"> - Status meetings: <ul style="list-style-type: none"> o Lehigh & Lafarge to assign staff contacts? o Meetings how often? - Review meetings with Executive – how often? 	<p>All</p>
	Adjourn.	

Chouan, Alexis ENV:EX

From: Lesiuk, Tim ENV:EX
Sent: Friday, October 17, 2014 2:47 PM
To: Reeve, Soledad ENV:EX
Subject: FW: BC Carbon Tax and the Cement Association of Canada - Thanks and Next Steps
Attachments: Cement manufacturing options for additional relief discussion.pdf

From: Foy, Anne FIN:EX
Sent: Friday, October 10, 2014 5:29 PM
To: 'Ken Carrusca'; 'TJ Parhar'
Cc: Lesiuk, Tim ENV:EX
Subject: RE: BC Carbon Tax and the Cement Association of Canada - Thanks and Next Steps

Hi Ken and TJ,

Here is the summary of what we discussed at our meeting on Wednesday.

At our next meeting towards the last week of October I hope we are able to develop specific options within each of the broad categories identified which can then be the focus of further development and analysis.

Anne Foy
Strategic Advisor
Tax Policy Branch
Ministry of Finance

From: Ken Carrusca [<mailto:kcarrusca@cement.ca>]
Sent: Thursday, October 9, 2014 5:14 PM
To: Purnell, Richard FIN:EX; Foy, Anne FIN:EX; Lesiuk, Tim ENV:EX
Cc: TJ Parhar; Michael McSweeney
Subject: BC Carbon Tax and the Cement Association of Canada - Thanks and Next Steps

Richard, Anne and Tim:

Thank you once again for meeting with us at your offices yesterday. We really appreciated the collaborative tone of our discussion, and the fact that we're getting down to working on this issue. As I mentioned during our meeting, I would be remiss if I didn't point out that the BC cement industry has been quite frustrated with the lack of two-way dialogue on the issue of the carbon tax. Having stated that, we will be relaying to both Lafarge and Lehigh that we are hoping to move forward towards a decision by the Minister later in the year. As you indicated Anne, we fully understand that a decision may take into consideration many factors, and consequently the decision is ultimately up to the Minister. We will work as hard as we can to support you and your staff and provide you with as much information on these issues as we have, and that our members can supply.

Moving forward, I'll touch base with Tim to see whether there is any data, either technical or financial that might be helpful as you look forward to setting out the basis of some of the alternatives. The discussion of calculating the equivalent heating value, and consequently the cost, for a natural gas alternative is one example. s.16,s.21

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s.21

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s.21

Our goal is to have a follow-up meeting with you in Victoria (or perhaps by video-conference as you suggested), towards the last week in October 2014.

Thanks again, and we look forward to working with you.

Ken

Ken Carrusca, P.Eng.
Vice President, Environment & Marketing (Western Region)
Cement Association of Canada
1188 West Georgia Street, Suite 900
Vancouver, BC V6E 4A2
E-mail: kcarrusca@cement.ca
Office: (604) 269-0582
Cell: (604) 839-6627
www.cement.ca



Chouan, Alexis ENV:EX

From: Kaye, Erik FIN:EX
Sent: Tuesday, February 17, 2015 2:08 PM
To: ENV Climate Action Secretariat
Subject: FYI - BC Budget announcement on GHG emissions in cement industry, new funding for CEV program

<http://bcbudget.gov.bc.ca/2015/default.htm>

Cement industry:

Budget 2015 also introduces a measure to strengthen the province's cement industry, which has been working to reduce its greenhouse gas emissions. In 2011, for example, companies in Richmond and Delta started manufacturing a new cement type that results in a 10 per cent reduction in emissions. By 2013, the low-emission product accounted for 50 per cent of their sales; it's now the preferred standard for most of our major construction projects. At the same time, new fuel options like bio-coal are being developed and are becoming more commercially feasible.

Today I am announcing measures that encourage a transition to cleaner fuels and act as an incentive for the industry to lower its emissions even further. Over the next five years the Province will offer transitional assistance to encourage cement companies to meet or beat new benchmarks for emission intensity. We believe B.C.'s cement industry can produce a product that is competitively priced and that sets the standard for environmental sustainability.

Budget 2015 provides \$22 million over three years for an incentive program for the cement industry to produce cement in a cleaner manner. Over the five year life of the program, the Province will offer up to \$27 million in conditional incentives to encourage cement producers to meet or beat new emissions intensity benchmarks.

CEV program announcement:

In addition, *Budget 2015* reintroduces the Clean Energy Vehicle Incentive Program and a fuelling/charging infrastructure program which will provide British Columbians incentives when considering the variety of clean and green choices for their transportation needs. Additional energy efficiency and conservation initiatives will also be implemented.

Erik Kaye
Senior Policy Advisor, Climate Change Policy
Climate Action Secretariat
(250) 387-1160 (office)
(250) 507-2076 (cell)
Erik.Kaye@gov.bc.ca



Please consider the environment before printing this email.

Chouan, Alexis ENV:EX

From: Ken Carrusca <kcarrusca@cement.ca>
Sent: Wednesday, November 12, 2014 1:39 PM
To: Foy, Anne FIN:EX; Lesiuk, Tim ENV:EX; Reeve, Soledad ENV:EX
Cc: Heale, Pat (Vancouver) CAN; jwetering@hanson.biz; jonathan.moser@lafarge.com; TJ Parhar
Subject: Meeting with Lehigh Hanson, Lafarge Canada and Cement Association of Canada - November 17, 2014
Attachments: Cement Sector Meeting-Draft Agenda-Nov 17-2014.docx; 2014-10-10 Doc - DRAFT Cement manufacturing options for additional relief discussion.docx
Importance: High

Anne, Tim, Soledad:

Please find attached the following:

1. Draft Agenda

We have added to the draft agenda provided by Soledad in her e-mail of November 4th. Additions are shown with 'track-changes.'

Representatives from both Lehigh Hanson and Lafarge Canada (Pat Heale, Jasper van de Wetering, and Jonathan Moser - copied on this note) are planning on attending, and we would propose an opportunity to do a quick review of the key impacts to the BC industry. In addition, we'd like to touch on some options that were brought up with Ministers / MLAs in Victoria last week by the industry. This includes the ideas of establishing a *BC Cement Industry Benchmark* and a carbon off-set program; this was specifically introduced in discussion with Minister Mary Polak.

2. Meeting Notes from October 8, 2014

Thank you Anne for forwarding us notes from our meeting on October 8th. We have made some revisions; again shown with 'track-changes.'

3. Data and other Information Supplied by the Cement Industry

It is our understanding that the Cement Industry has in the past provided a significant amount of detailed data and background information to government staff. We learned last week that there may be reasons why this data/information has not been shared between the BC Ministry of Environment and BC Ministry of Finance. We propose that both Lehigh Hanson and Lafarge Canada provide written confirmation (by e-mail) of their approval for staff from both Ministries to share the data/information as may be required.

Thank you. We're looking forward to seeing you next Monday.

Ken

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of Canada

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Climate Action Secretariat, Ministry of Environment

MEETING AGENDA

Potential Emission Reduction Incentives for Coal Fired Manufacturing Plants Addressing the Financial Impacts of the Inequity of the Carbon Tax on BC Cement Manufacturers

Thursday November 6, 10:30 a.m. – 12:00 p.m.

Monday November 17 9:00 - 12:00 noon

	Item	Action
1.0	<u>Introductions:</u> <ul style="list-style-type: none"> BC Ministry of Finance, BC Ministry of Environment Cement Association of Canada, Lehigh Hanson, Lafarge Canada Inc. 	
2.0	<u>Review of Notes</u> <ul style="list-style-type: none"> Review of Notes of October 8, 2014 meeting 	
3.0	<u>Overview and Summary of Issues</u> <ul style="list-style-type: none"> Financial Impacts of the Carbon Tax on the BC Cement Industry Imports of Cement into BC Review of Overall Schedule 	
4.0	<u>Potential Options to Review</u> <ul style="list-style-type: none"> Establishing a BC Cement Industry Benchmark <i>As per BC Bill 2-2014, the Greenhouse Gas Industrial Reporting and Control Act</i> Carbon Off-set Program Others 	
15.0	Category 1 – Manufacturing process incentives (energy efficiency/clinker substitutes) <ul style="list-style-type: none"> Overview Summary of survey Development of specific options for consideration <ul style="list-style-type: none"> Articulating options Identifying implications of each option Identifying additional work required to complete development of each option 	
26.0	Category 2 – Fuel use incentives <ul style="list-style-type: none"> Overview Summary of survey Development of specific options for consideration <ul style="list-style-type: none"> Articulating options 	

	<ul style="list-style-type: none"> o Identifying implications of each option o Identifying additional work required to complete development of each option 	
37.0	<p>Category 3 – Fuel production incentives</p> <ul style="list-style-type: none"> • Overview • Summary of survey • Development of specific options for consideration <ul style="list-style-type: none"> o Articulating options o Identifying implications of each option o Identifying additional work required to complete development of each option 	
8.0	<p><u>Next steps</u></p> <ul style="list-style-type: none"> • <u>Next meeting date and time</u> 	

Cement manufacturing discussion

Ministry of Finance, Ministry of Environment and representatives of the Cement Association of Canada met on October 8, 2014 to discuss options to ~~further~~ ameliorate the impact of the carbon tax on the cement sector and other users of coal and similar ~~high emissions~~ fuels for heat or energy. The Ministry of Finance ~~has identified several~~ noted two potential options to ~~further~~ ameliorate the impact of the carbon tax that ~~were~~ are not presently under consideration ~~by the Ministry; these are:~~

- An exemption for cement manufactures from payment of the Carbon Tax;
- Establishment of a carbon tax on retail cement sales and refund of BC cement manufacturers Carbon Tax

s.13

s.13

s.13

s.13

Chouan, Alexis ENV:EX

From: Reeve, Soledad ENV:EX
Sent: Tuesday, February 10, 2015 4:04 PM
To: Karp, David FIN:EX
Cc: Coney, David ENV:EX
Subject: RE: Cement info.

Thanks for this David. I have asked Dennis, he's under the impression that he can't share it with me. I'll follow up again with Tim, and if we don't hear back from Anne I think we'll just ask the cement guys and bear their irritation.

I'll definitely share what I find out. To that point, do you know how much Finance will want to be involved going forward? Will you, for example, want to be at the start up meeting and any subsequent working meetings? Or would you rather have us report to you throughout the program?

Thanks for letting me know,

Sol

From: Karp, David FIN:EX
Sent: Tuesday, February 10, 2015 3:57 PM
To: Reeve, Soledad ENV:EX
Cc: Foy, Anne FIN:EX
Subject: RE: Cement info.

Hi Sol,

No problem about the emissions intensity data. I'm glad you're finding it helpful.

s.13

Cheers,

David.

David Karp

Tax Policy Analyst | Policy & Legislation Division | Ministry of Finance
105-617 Government Street, Victoria, BC V8W 9V8
Tel. 250-387-9021 | Email: David.Karp@gov.bc.ca

From: Reeve, Soledad ENV:EX
Sent: Tuesday, February 10, 2015 3:11 PM
To: Karp, David FIN:EX
Cc: Coney, David ENV:EX
Subject: Cement info.

Hi David,

Apologies that I got credit in Friday's meeting for your cement emissions intensity data (<http://www.wbcdcement.org/GNR-2012/index.html>) – I tried to break into the conversation to give you credit but couldn't get in. I didn't find that data previously, so am grateful for you forwarding.

Can you let me know?

Thanks,

Sol

soledad (sol) reeve • business development • climate action secretariat • b.c. ministry of environment • 250.387.3230

Chouan, Alexis ENV:EX

From: Foy, Anne FIN:EX
Sent: Monday, October 20, 2014 9:29 AM
To: Reeve, Soledad ENV:EX
Cc: Lesiuk, Tim ENV:EX
Subject: RE: Cement sector and Carbon Tax

Hi Soledad,

The value of the incentive will be one of the things the Minister of Finance will need to decide should the Minister choose to provide an incentive.

One of the principles that we have been given is that any incentive should not provide over compensation (the sector benefits from corporate tax cuts and property tax cuts) nor fully remove the impact of the carbon tax.

The incentive also has to recognize they are significant users of coal (and therefore carbon tax costs are higher than they would have been had the sector chosen to switch to cleaner fuels in the past six years)

s.13,s.17

Anne Foy
Strategic Advisor
Tax Policy Branch
Ministry of Finance

From: Reeve, Soledad ENV:EX
Sent: Monday, October 20, 2014 9:16 AM
To: Foy, Anne FIN:EX
Cc: Lesiuk, Tim ENV:EX
Subject: Cement sector and Carbon Tax

Hi Anne,

I'd like to introduce myself, I'm new to CAS Business Development and will be working on this file with Tim.

I need to know from you the value of the incentive you see government providing – could you express it in \$ per tonne for me?

Thanks very much, and feel free to prompt me for any additional information you need.

Best,

Sol

soledad (sol) reeve • business development • climate investment branch • climate action secretariat • ministry of environment • 250.356.0567

Chouan, Alexis ENV:EX

From: Reeve, Soledad ENV:EX
Sent: Wednesday, February 11, 2015 3:51 PM
To: Coney, David ENV:EX
Subject: RE: Cement Sector Meeting-Agenda-February X 2015

Interesting – thx. For sending, I'll add to the notes.

From: Coney, David ENV:EX
Sent: Wednesday, February 11, 2015 3:30 PM
To: Reeve, Soledad ENV:EX
Subject: RE: Cement Sector Meeting-Agenda-February X 2015

Sorry - one other thought – just reading the 2015 estimates notes, I see that Lafarge Canada is the third largest single emitter in BC, at 0.9 Mt (after Spectra and Teck Coal). Made me think – perhaps we might want to build this into our material going forward, for use within govt and with industry.

David Coney
Manager, Environmental Markets
Climate Action Secretariat
250 387 9220
250 889 0507 (cell)

From: Reeve, Soledad ENV:EX
Sent: 11 February 2015 10:08
To: Coney, David ENV:EX; Lesiuk, Tim ENV:EX
Subject: Cement Sector Meeting-Agenda-February X 2015

Please have a look at this draft agenda and add or comment. Then we can set aside until budget day.

I have meeting with Metro Van on 18th re: bio-solids – I'll find out what I can, and will get an exec. contact.

Thx. Sol

Chouan, Alexis ENV:EX

From: Reeve, Soledad ENV:EX
Sent: Monday, February 9, 2015 6:40 PM
To: Laaksonen-Craig, Susanna ENV:EX
Cc: Lesiuk, Tim ENV:EX; Coney, David ENV:EX
Subject: RE: Cement-Low Carbon - revisions

My pleasure, Susanna, I'm glad to get a chance to use my best competencies on behalf of CAS. Designing and developing innovative climate action programs is what gets me excited to come into work.

Sol

From: Laaksonen-Craig, Susanna ENV:EX
Sent: Friday, February 06, 2015 4:32 PM
To: Reeve, Soledad ENV:EX
Subject: RE: Cement-Low Carbon - revisions

Thank you VERY much for all your work on this, much appreciated!!

Susanna Laaksonen-Craig, PhD
Head, Climate Action Secretariat
Tel. (250) 387-9456

From: Reeve, Soledad ENV:EX
Sent: Friday, February 6, 2015 4:12 PM
To: Lesiuk, Tim ENV:EX; Laaksonen-Craig, Susanna ENV:EX; Coney, David ENV:EX
Subject: Cement-Low Carbon - revisions

Find attached revisions based on conversation with Finance.

Sol

soledad (sol) reeve • business development • climate action secretariat • b.c. ministry of environment • 250.387.3230

**MINISTRY OF ENVIRONMENT
BRIEFING NOTE**

Date: January 20, 2015

Date of previous note:

File:

CLIFF/tracking #:

PREPARED FOR: Honourable Mary Polak, Minister of Environment

ISSUE: Cement sector is requesting relief from payment of the carbon tax. Climate Action Secretariat has submitted a recommendation to Ministry of Finance for incentives tied to emission reductions. Finance's decision will be published in Budget 2015.

BACKGROUND:

The BC cement sector has two producers, Lehigh and Lafarge, which have plants in the Lower Mainland and the Thompson Region.

The cement sector is highly emissions intensive and its products are undifferentiated, transportable commodities. The sector reports that it is strongly impacted by carbon pricing due to its emissions intensity and trade exposure. According to a Cement Association of Canada news release, May 9, 2014:

- *"Local producers have lost nearly a third of the market share to imports since the inception of the carbon tax in 2008."*
- *"BC cement facilities are now running at only 65 per cent of capacity compared to five years ago when they were running at near full capacity."*

The sector has requested consideration of either an exemption from payment of the Carbon Tax, or establishment of a carbon tax on retail cement sales and refund of BC cement manufacturers Carbon Tax (Appendix A - IN 151662, September 2011).

In October 2014 the sector met with Ministry of Finance and Ministry of Environment and at that time Finance determined that exemption from the carbon tax and carbon tax on retail sales of cement will NOT be considered.

Instead the following categories of incentives were explored (for full details see Appendix A, "Summary of Potential Emission Reduction Incentives for Cement Sector").

1. Manufacturing process incentives (infrastructure improvements, product substitution)
2. Fuel use incentives (\$ per GJ energy used, or revenue from carbon offsets)
3. Direct payment equaling partial relief of carbon tax (as determined by Ministry of Finance), offset each year by any other incentives granted

DISCUSSION:

There is little apparent room for improvement in the B.C. cement sector's current manufacturing processes. Two of B.C.'s three cement plants are already within the top quartile of efficiency among Canada's plants. Large scale infrastructure improvements could be made to the third facility, but with high capital expense for reportedly low improvement of energy intensity. Increased product substitution (substituting processed cement with raw limestone, making Portland Limestone Cement) will realize only negligible additional reductions.

Fuel switching holds more potential. Fuel represents 40% of the cement sector's costs – multiple fuels are used and mix is adjusted constantly to capture lowest overall price while maintaining product quality and integrity of manufacturing process. The sector expects to continue using a mix of fuels, with a goal of switching from coal to alternative low-carbon fuels (e.g. bio-fuels, waste derived fuels) by 50% over time (physical properties of alternative fuels may prevent 100% displacement due to impacts on operation, production output and product quality).

However meaningful alternatives do not exist at this time: alternative low-carbon fuel sources are nascent, have political and logistical challenges to overcome, and are realistically at least five years away from displacing coal in any significant way.

None the less, developing a low carbon fuel source for the cement sector is an obvious benefit to the Province's GHG reduction goals. Of the options explored, Climate Action Secretariat recommended the following to Ministry of Finance, as an integrated program with a single start date:

- 1 A five-year annual direct payment equaling partial relief of carbon tax (as determined by Ministry of Finance); and
- 2 A ten-year Offset Purchase Agreement for displacement of coal with lower-carbon fuel(s), with the annual direct payment being reduced by the amount of emission offset revenues in each year.

s.13,s.17

NEXT STEPS: Upon approval by Ministry of Finance, Climate Action Secretariat will:

- 1 Work with Ministry of Finance to coordinate the two-part incentive program; and
- 2 Invite the cement sector to respond to the offset procurement process, assessing proposed projects against the requirements of the BC Emissions Offset Regulation (or superseding regulation under the *Greenhouse Gas Reduction Target and Control Act*), and work towards execution of an Offset Purchase Agreement. (Note that as long as the proposed project is assessed to be compliant with the offset regulation, the new offset procurement process allows for selection of projects to "meet government priorities and objectives" – displacing coal with low carbon fuel is a sound rationale for project selection.)

s.13

s.13,s.16

Attachments:

Appendix A: Information Note 151662, Cement Tax Policy, September 26, 2011

Appendix B: Summary of Potential Emission Reduction Incentives for Cement Sector, December 2014

**MINISTRY OF ENVIRONMENT
INFORMATION NOTE**

September 26, 2011
File: 280-20
CLIFF/tracking #: 151662

PREPARED FOR: Honourable Terry Lake, Minister of Environment

ISSUE: Cement industry is lobbying to change the application of the carbon tax to the point of sale to address competitive impacts.

Background:

The BC cement industry has two firms, Lehigh and Lafarge, which have plants in the Lower Mainland and the Thompson Region.

The cement industry is highly emissions intensive and its products are undifferentiated, transportable commodities. The industry is strongly impacted by carbon pricing due to its emissions intensity and trade exposure.

Addressing carbon tax competitiveness impacts is the number one issue for the cement industry. Carbon tax concerns are a barrier to engaging with cement on the broader Economic Analysis of Climate Action in BC.

The BC Government has addressed a reduction opportunity identified by the working group by fast-tracking adoption of new Canadian Standards Association cement standards. As a result GHG emissions and the industry's carbon tax burden have been reduced. The cement industry has identified additional policy options to mitigate the competitive impacts of the carbon tax and presented these to the Minister of Finance:

- Option 1: Place an upper cap on total carbon tax payments as a share of sales/profits/energy costs (e.g. 1.5% of total sales);
- Option 2: Move application of the carbon tax to point of sale (\$/tonne of cement powder) so that imported cement is treated equally;
- Option 3: Rebate or exempt cement exports from carbon tax to increase competitiveness and avoid increased production outside of BC at facilities that may be less efficient;
- Option 4: Defer planned carbon tax increases.

Discussion:

The Government is committed to maintaining the competitiveness of BC industries under carbon pricing policy and minimizing associated increases in emissions outside of BC.

BC Finance has laid out criteria for policy options to be considered. Policies must be administratively feasible, fair and non-discriminatory, leave the carbon tax “whole”, not involve substantive revisions to the Act, and must address the identified issue.

Option 2 is preferred. Considerations include:

Application of the carbon tax at the point of sale meets the BC Finance policy criteria and is the proposed approach of the Cement Climate Action Industry Working Group.

The BC cement industry would compete on an equal carbon pricing footing with imports from jurisdictions without carbon pricing policies.

Carbon tax revenues would increase by expanding coverage to cement imports.

If cap and trade is implemented the facility level carbon tax exemption/rebate associated with point of sale application would need to be extended to cap and trade carbon costs. It could be administratively difficult to avoid double application of a carbon price on BC producers and those of its Western Climate Initiative partner jurisdictions.

Rationale for not recommending the other policy proposals:

Option 1: Establishing an upper limit on carbon tax payments would be arbitrary and could eliminate the incentive to seek mitigation options. For operations which exceed the cap the marginal price on emissions would be zero.

Option 3: Creating a tax credit for BC exports would remove the price signal created by the carbon tax and will reduce the overall effect of the carbon tax approach. A partial rebate might serve to improve export competitiveness while maintaining a price signal on fossil fuel combustion and providing an incentive to increase usage of biomass and waste. However, such a reduction may be viewed by tax policy as discriminating in favour one sector.

Option 4: Deferring planned carbon tax increases would weaken the price signal on fossil fuel combustion across the BC economy.

RECOMMENDATION:

The Minister of Environment to engage the Minister of Finance on point of sale application of carbon tax as a reasonable climate action approach that would increase carbon tax revenues and address BC cement industry competitiveness concerns.

Contact:

James Mack

*Climate Action Secretariat
(250) 356-6243*

Alternate Contact:

Tim Lesiuk

*Climate Action Secretariat
(250) 387-9216*

Prepared by:

Chris Koski

*Climate Action Secretariat
(250) 387-9229*

Reviewed by	Initials	Date
DM		
DMO		

Head	JM	10/19/2011
Exec Director	TL	10/19/2011
Author	CK	9/26/2011

DRAFT

Appendix B:
Summary of Potential Emission Reduction Incentives for Cement Sector, December 2014

BACKGROUND DATA:

The BC cement sector has two producers, Lehigh and Lafarge, two large plants and one smaller plant. Baseline information below is calculated and approximated to represent the entire sector.

Current Data

- ~2 million tonnes cement/year produced
- ~250,000 tonnes coal/year used
- 2013 combustion emissions ~685,000 t CO₂e
- Fuel mix: 75 -90% coal , other 10 to 25% comprises mostly pet-coke, natural gas, wood waste, mixed waste, tires (tires make up 8 – 10% of fuel mix)
- Current plant efficiency – ~3.6 GJs / tonne clinker
- Current cost per tonne of clinker (including carbon tax):
 - Coal = \$21.
 - Natural gas = \$36. (includes 1.5 energy factor + 9% production loss)
- Portland-limestone cement:
 - 25% of cement produced/year
 - 8 – 10 % clinker substitute
 - ~75,000 t CO₂e/year emissions avoided

s.13,s.17

s.13,s.17

Page 080 to/à Page 083

Withheld pursuant to/removed as

s.13;s.17



Climate Action Secretariat, Ministry of Environment

MEETING AGENDA

Potential Emission Reduction Incentives for B.C. Cement Industry

Tuesday December 3, 2:00 p.m. – 4:00 p.m.

Meeting Room 2-1 (second floor)

395 Waterfront Cres. Victoria

Dial-in: 1-877-353-9184; Participant Code: s.17

A summary document will be sent prior to the meeting for review at the meeting. Summary document will contain:

- Background information as researched and obtained from the cement industry; and
- Potential opportunities for incentives.

	Item	Action
1.0	Confirm background data and economic information.	All
2.0	Opportunity for cement industry to comment on proposed incentive options.	All

Page 085 to/à Page 104

Withheld pursuant to/removed as

s.13;s.17



Cement Sector Low-Carbon Fuel Development Program Questions & Answers

What is this program about?

The Cement Sector Low-carbon Fuel Development Program will facilitate B.C. cement sector to reduce their greenhouse gas emissions, will support the sector's long term competitiveness, and will create new, green jobs in B.C. The program provides incentive funding over five years (2015-2020) to B.C.'s cement manufacturers to develop and adopt new low-carbon fuel sources, displacing coal and reducing their carbon emissions to be among the cleanest cement manufacturers in the world.

Why would the Province provide incentive funding to the cement sector?

The B.C. cement sector provides cement for critical infrastructure development across the province, and supports a significant number of direct and indirect jobs for B.C. families. Cement production is fuel intensive, and the major fuel that B.C.'s cement producers currently use, coal, is highly carbon intensive and is subject to B.C.'s carbon tax. s.13

replace B.C. produced cement. Imported cement is not subject to carbon tax, and the sector is worried

s.13

s.13

Since the carbon tax is revenue neutral, what will the impact of the revenues lost through this program be?

There is no lost revenue as a result of this program. The program is funded as an expenditure program managed by the Ministry of Environment. All payments under this program will be reported in the public accounts.

Why does the cement sector have to use coal?

Coal is the fuel preferred by cement manufacturers because it has been a low cost energy source to generate the extreme temperatures that cement manufacturing needs. The next most viable alternative today is natural gas, and B.C. cement producers are using that as well. Natural gas has a lower energy density and ends up costing cement facilities about twice as much to use compared to coal. New products like bio-coal may be able to supply the heat needed like coal, without the greenhouse gas emissions.

Will they stop using coal completely?
Not in the foreseeable future. The physical properties of alternative fuels may prevent 100% displacement and may impact operation, production output and product quality. That being said, the objective of this program is to incentivize them to use as much lower carbon fuel as possible.
Do we know that the low-carbon fuel options are viable?
Yes. The two most viable low-carbon options are bio-solids and bio-coal. Dried bio-solids derived from sewage sludge are used successfully for cement manufacturing worldwide. s.16 Bio-coal is thermally treated wood waste that has been used successfully in the cement-making process in other jurisdictions, has been tested in B.C. cement plants and is proven to match coal in heat energy. Commissioning of a demonstration plant in Merritt is nearly complete.
If they are viable, why aren't they available now?
Before the carbon tax the price of coal or natural gas was such that the sector did not need to look for options. B.C.'s carbon tax is based on the carbon content of fuels and coal has the highest carbon content of any fossil fuel. The carbon tax has created an incentive for the cement industry in B.C. to develop new low-carbon fuel sources. Since the carbon tax was put in place the low-carbon fuel industry has been steadily moving through the pre-commercialization phase; programs like the Cement Sector Low-carbon Fuel Development Program will accelerate these new businesses into full implementation.
These fuel sources may generate lower emissions, but do they produce more air pollution than coal or have other environmental concerns associated with them?
Combustion of bio-solids generates ash that is mixed into the cement rather than disposed of, much like coal. Biocoal is a much cleaner fuel than fossil coal because it emits significantly less SOx and NOx (sulfur oxides and nitrogen oxides are pollutants that cause acid rain). Particulates, including trace metals, can be controlled through use of mechanical collectors, wet scrubbers, fabric filters, and electrostatic precipitators. Biofuels are likely to be lower in many of the heavy metal pollutants found in coal.
How much of the province's total emissions come from the cement sector? Will this program get us significantly closer to our carbon reduction goal of 33% by 2020?
Cement production accounts for 3% of the province's greenhouse gas emissions, broken down into approximately 60% process emissions and 40% combustion emissions – there is currently no cost effective way of reducing non-combustion emissions. In 2013 the sector emitted approximately 685,000 tonnes of combustion greenhouse gasses; reducing these by half would bring us .6% closer to our reduction goal. Cutting these further could eliminate up to one percent of BC's greenhouse gas emissions.
How do we know that the sector will use the incentive funding to develop and adopt low-carbon fuel sources?
The program is designed to provide incentive funding only on receipt of evidence the cement companies

are taking action. s.13

s.13

Couldn't the cement sector do anything else to reduce their emissions?

There is a certain amount of emission reductions that can be gained by energy efficiency retrofits to cement plants. s.21

s.21

s.21 Switching the sector to low-carbon fuels is the best use of the incentive funding, and will make B.C.'s cement plants attractive opportunities for future investment in upgrades that could reduce emissions further.

Won't the cement sector also be able to sell carbon offsets for emission reductions generated through this program? Isn't that like paying them twice?

The incentive amounts take into account both the competitiveness of the sector and the fact that they may be able to generate additional revenue through carbon offsets. s.13

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What guarantee do we have that the sector will keep on using clean fuel after the incentive program is over?

The cement sector is committed to using cleaner fuels wherever viable, and the carbon tax on high-carbon fuels will be a deterrent to them switching back. The objective of the program is to ensure there is a viable low-carbon fuel source available for them to use into the future.

Is this program supported by the cement industry? What will the industry's reaction to this program be?

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The Cement Sector Low-carbon Fuel Development Program directly responds to these concerns by providing five years of financial support to transition the cement industry away from coal to low-carbon fuels. The transitional support provided by the program will help to defray the costs of switching from coal to low-carbon fuels, which necessarily requires some investment in new infrastructure and in developing and securing suitable alternative fuels.

Cement manufacturing discussion

Ministry of Finance, Ministry of Environment and representatives of the Cement Association of Canada met on October 8, 2014 to discuss options to further ameliorate the impact of the carbon tax on the cement sector and other users of coal and similar high emissions fuels for heat or energy. . The Ministry of Finance has identified several potential options to further ameliorate the impact of the carbon tax that were not under consideration by the Ministry:

- An exemption for cement manufacturers from payment of the Carbon Tax;
- Establishment of a carbon tax on retail cement sales and refund of BC cement manufacturers Carbon Tax.

The Cement Association concurs with the exclusion of these options from the present discussion.

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