



Treasury Board Submission

Request for Decision

Minister: Honourable Don McRae

Ministry: Ministry of Agriculture

Date: 03/09/2012

Ministry Document # 07-12

Title: Greenhouse Carbon Tax Temporary Rebate Program

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Background / Context:

The BC Jobs Plan Special Report

The BC greenhouse sector report was designed to fulfil the Canada Starts Here: BC Jobs Plan commitment to "commission a report to identify opportunities for innovation in greenhouse heating, along with other ways to spur new growth in this important industry". This report noted energy as a key cost driver, and suggested improved energy efficiency, fuel switching, renewable energy and cogeneration as measures to address cost challenges.

The sector is a large user of natural gas and propane for heating and "food grade" CO₂ to enhance plant growth, and is very sensitive to changes in energy pricing.

The greenhouse vegetable and floriculture sector in BC is the second largest in Canada (behind Ontario) with 2010 sales of \$560M (40% of BC's farm cash receipts) and a production area of 447 hectares.

The greenhouse sector currently benefits from carbon tax-enabled cuts to income and property taxes. However, the industry maintains that these benefits are significantly less than the amount of carbon tax it pays.



The Proposed Greenhouse Carbon Tax Temporary Rebate Program (see Appendix 1)

The Greenhouse Carbon Tax Temporary Rebate Program provides one-time temporary relief of \$7.6M for carbon tax paid by Eligible Greenhouse Operators, pending the result of the carbon tax review to be conducted by the BC government during 2012.

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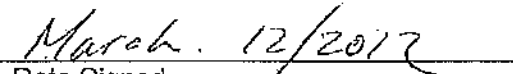
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Contact: Melanie Stewart, ADM
Agriculture, Science and Policy Div.
Phone: 250-356-1821


Honourable Don McRae


Date Signed

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TREASURY BOARD STAFF BRIEFING NOTE

REQUEST NO.: AGRIC 07-12

T.B. MEETING DATE: MARCH 15, 2012

TITLE: GREENHOUSE CARBON TAX TEMPORARY RELIEF

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Finance Contacts: Doug Foster 387-9022/ Cameron Derdak 387-9058

Date: March 12, 2012

Draft sub. 1st received:	Final draft received:	Signed sub. received: March 12, 2012
<u>TB briefing note provided to the Ministry:</u>		
Draft sent: March 12, 2012	Final sent: October 13, 2011	Min. DM fact sign-off: "No" or Date: March 12, 2012



BIF January 2013. File

TB Minor Meeting Date: March 15, 2012
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Honourable Don McRae
Minister of Agriculture
Room 301 Parliament Buildings
Victoria BC V8V 1X4

Dear Colleague:

Re: Greenhouse Carbon Tax Temporary Rebate Program

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Sincerely,

Kevin Falcon
Chair

cc: See attached Distribution List

Ministry of
Finance

Treasury Board

Mailing Address
PO Box 0468 Stn Prov Govt
Victoria BC V8V 0V8

Location Address:
1st Floor - 617 Government St.
Victoria BC

Distribution List:

Wes Shoemaker
Deputy Minister
Ministry of Agriculture

Shaina Brouwer
Assistant Deputy Minister and Executive Financial Officer
Ministry of Agriculture

**Ministry of Agriculture
BRIEFING NOTE FOR MINISTER FOR DECISION**

Ref: 176476Update

Date: October 1, 2012

Issue: Ministry of Agriculture Submission to Ministry of Finance for Carbon Tax Review.

Background:

- The Province announced a review of the carbon tax in Budget 2012. The agriculture sector, specifically food producers, was identified as a priority. Ministry of Finance invited submissions for the review, with an August 31, 2012 deadline for submissions external to government. s.13
- The former Minister of Finance, Kevin Falcon has publically signalled an interest in addressing the effect on agriculture as a sector but not in rescinding the tax.
- The total estimated carbon tax revenues generated from the agri-food sector (including aquaculture production) increased from \$9.1 million in fiscal 2008/09 to \$28.6 million in fiscal 2012/13 (See Table 1). This represents 1% of total sector revenues and 3% of total provincial carbon tax revenues. The primary agri-food sector contributes 0.80% to provincial GDP.
- Based on a 2007 analysis in which fuel consumption was identified as one of the commercial fishing fleet's largest operating costs, s.13
- In April 2012, the province introduced the Greenhouse Carbon Tax Temporary Relief Program for greenhouse vegetable and floriculture growers with \$7.6 million in carbon tax relief, for fiscal 2012-13 only under the following criteria:
 - Eligible growers must be operational in 2012, have had 2011 sales greater than \$20,000, use at least 455 square metres for commercial production, and be able to include their 2011 fuel receipts in their applications.
 - The grants will be provided on 2011 volumes of fuel used, multiplied by 4.2 cents per litre of propane and \$1.37 per Gigajoule of natural gas.

Discussion:

- The following issues should be considered in assessing options for relief to the agriculture sector:
 1. **The Cost to Government:** The agri-food sector wants carbon tax revenues collected from the sector to be fully rebated in order to help address their competitiveness issues. A full rebate to industry would reduce government revenue by an estimated \$28.6 million per year.

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3. **Carbon Tax Impact Variability in Agriculture Subsectors:** The impacts of the carbon tax vary significantly by product sector because of the different amounts and types of fuels used to produce different products (See Table 2).
4. **Industry Expectations:** The agri-food sector contends that the carbon tax is reducing their competitiveness in both domestic and export markets as BC is the only jurisdiction in North America to impose such a tax. The agriculture industry is expected to request an exemption from the carbon tax. s.13

Options: The following options reflect the discussion above:

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Approved / Not Approved

Norm Letnick, Minister

Date Signed

Contact: Jo Ann Sandhu, Agrifoods Policy and Legislation Branch, 250 387-4565
Alternate Contact: David Coney, Agrifoods Policy and Legislation Branch, 250 387-3232

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**Ministry of Agriculture
BRIEFING NOTE FOR MINISTER FOR DECISION**

Ref: 176476

Date: September 12, 2012

Issue: Ministry of Agriculture Submission to Ministry of Finance for Carbon Tax Review.

Background:

- The Province announced a review of the carbon tax in Budget 2012. The agriculture sector, specifically food producers, was identified as a priority. Ministry of Finance invited submissions for the review, with an August 31, 2012 deadline for submissions external to government.
- The former Minister of Finance, Kevin Falcon has publically signalled an interest in addressing the effect on agriculture as a sector but not in rescinding the tax.
- The total estimated carbon tax revenues generated from the agri-food sector (including aquaculture production) increased from \$9.1 million in fiscal 2008/09 to \$28.6 million in fiscal 2012/13 (See Table 1). This represents 1% of total sector revenues and 3% of total provincial carbon tax revenues. The primary agri-food sector contributes 0.80% to provincial GDP.
- Based on a 2007 analysis in which fuel consumption was identified as one of the commercial fishing fleet's largest operating costs, ^{s.13}
- In April 2012, the province introduced the Carbon Tax Rebate Program for greenhouse vegetable and floriculture growers with \$7.6 million in carbon tax relief, for fiscal 2012-13 only.

Discussion:

- Climate change models predict increased weather variability and more severe weather events. Research conducted under the BC Agriculture Council's Climate Action Initiative indicates that climate change will have significant impacts on agricultural production and adaptation of the agri-food sector is key to the sector's long-term viability.
- The following issues should be considered in assessing options for relief to the agriculture sector:
 1. **The Cost to Government:** The agri-food sector wants carbon tax revenues collected from the sector to be fully rebated in order to help address their competitiveness issues. A full rebate to industry would reduce government revenue by an estimated \$28.6 million per year.
 2. **Expected Costs of Adaption to Climate Change:** Most agri-food sectors require adaptation strategies to deal with climate change. The key actions that industry needs to take are listed in the executive summary of "BC Agriculture Climate Change Adaption Risk + Opportunity Assessment" (attached). Some costs related to planning and developing best practices will be minimal while other costs related to the development of new technology and infrastructure could be significant.
 3. **Carbon Tax Impact Variability in Agriculture Subsectors:** The impacts of the carbon tax vary significantly by product sector because of the different amounts and types of fuels used to produce different products (See Table 2).

4. **Opportunities to Reduce Emissions:** For some, including the greenhouse and floriculture industries, mitigation rather than adaptation is the more pressing need. Opportunities identified require substantial and costly research and development in new technologies (list attached).
5. **Industry Expectations:** The agri-food sector contends that the carbon tax is reducing their competitiveness in both domestic and export markets as BC is the only jurisdiction in North America to impose such a tax. The agriculture industry is expected to request an exemption from the carbon tax.

Options: The following options reflect the discussion above:

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Proposed Next Steps:

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Norm Letnick, Minister

Date Signed

Contact: Jo Ann Sandhu, Agrifoods Policy and Legislation Branch, 250 387-4565

Alternate Contact: David Coney, Agrifoods Policy and Legislation Branch, 250 387-3232

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CARBON TAX ACT

REQUEST FOR EXEMPTION FROM GREENHOUSE GROWERS

I. ISSUE

Greenhouse operators have requested an exemption from carbon tax for natural gas combusted for the carbon dioxide content to promote plant growth.

II. BACKGROUND

British Columbia is the second largest greenhouse vegetable producer in Canada with approximately 24 per cent of total Canadian production. In 2009 there were 71 greenhouse operators in British Columbia¹. There were 43 operators in the Fraser Valley (representing 96 per cent of the total production area), 12 on Vancouver Island and 15 in the Interior.

With limited exceptions, production of greenhouse tomatoes, peppers, cucumbers and butter lettuce is regulated under the *Natural Products Marketing (BC) Act* and quota allocations are reviewed annually by the BC Vegetable Marketing Commission. The purpose of the quota system is to maintain price stability by managing supply.

The sector generates approximately \$220 million a year in sales and employs between 3000 and 4000 people; a percentage of whom are temporary foreign workers.

It is the BC Greenhouse Growers Association's position that the sector is facing competitive pressures from the increasing strength of the Canadian dollar relative to the US dollar, increases in imports from Mexico and Europe, and increases in production costs due to the carbon tax (which is affecting exports). The Association argues that as a result of the competitive pressures the sector has not expanded in the past three years and profitability per acre has declined over 33 per cent since 2003.

However, according to analysis done in September 2009 by the Ministry of Agriculture and Lands, in 2008, compared to 2007, sales volumes increased 18 per cent, total crop value increased 19 per cent, and total planted area increased 10 per cent. In 2009 compared to 2008, the number of operators increased by one and the total area planted was down by two acres.

¹ Descriptions of the sector in this paper are limited to greenhouse operators producing vegetables which are regulated under the *Natural Products Marketing (BC) Act*. Flower Growers are not included.

The crop mix for 2009/10 is estimated at 45 per cent peppers, 36 per cent tomatoes, 12 per cent cucumbers and 7 per cent other speciality crops. While 2009 sales data is not available for peppers and cucumbers, according to Canada's Tomato Industry Report the total value of exports for January to August 2009 to the US has increased very slightly over the same period in 2008 and increased significantly in exports to other countries. Approximately 65 to 70 per cent of total production is exported to the US.

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The Association has requested an exemption from carbon tax for natural gas combusted for the carbon dioxide content used to promote plant growth.

As alternatives to an exemption from carbon tax for natural gas combusted for the carbon dioxide content, the Association requests that the carbon tax be frozen at the July 1, 2009 rates and/or that revenues collected from the sector are recycled directly back to the sector, through targeted spending programs for biomass and/or liquid carbon dioxide.

III. DISCUSSION

The Association has offered the fact that two greenhouse operators have expanded their operations into the US, building significant facilities in California, as proof of the difficulties caused by the carbon tax.

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It is the Association's position that greenhouse operators are unique from other sectors which have a range of fuel choices as they must use carbon dioxide to promote plant growth and have no alternatives to obtaining carbon dioxide but from the combustion of natural gas.

Use of Carbon Dioxide

All plant growth is the result of photosynthesis which requires a combination of oxygen and carbon dioxide.

Commercial greenhouses by their nature and design are carbon dioxide poor environments (lower levels than are normally found in the atmosphere). To stimulate plant growth by up to 40 per cent, operators need to create environments that are higher in carbon dioxide than normally found in the atmosphere. As a result, all commercial greenhouses must add some amount of carbon dioxide to promote plant growth.

The amount of carbon dioxide required to be added varies depending on a number of factors including the crop being produced, the point in the lifecycle of the crop, the size and design of the greenhouse, as well as the heat and humidity in the greenhouse.

Food grade carbon dioxide can come from several sources: liquid carbon dioxide, combustion of wood in certain circumstances, and the combustion of natural gas.

Liquid carbon dioxide is usually recovered as a by-product from natural gas processing and other industrial processes and has a number of commercial uses in addition to use in commercial greenhouses. Liquid carbon dioxide is the easiest source of carbon dioxide to apply and control in a greenhouse and is not subject to carbon tax, but it is more expensive than the other sources of carbon dioxide. Most of the liquid carbon dioxide in British Columbia comes from the processing of natural gas in the US.

The technology to produce food grade carbon dioxide from the combustion of wood is not yet widely available on a commercial scale. SunSelect Produce (Delta) received \$2.24 million from the ICE Fund to develop, construct and operate a wood waste energy power plant that will also capture food grade carbon dioxide. ^{s.13}

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There is also ongoing research that indicates that the combustion of wood pellets without additional scrubbers may produce food grade carbon dioxide. ^{s.13}

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There are examples of obtaining carbon dioxide from alternative sources. For example: according to the Ministry of Agriculture and Lands, one greenhouse operator accesses landfill methane for their operations (which is also exempt from carbon tax) and other operators are investigating the possibility of piping excess heat and carbon dioxide from industrial facilities which combust natural gas; this has been done successfully in Europe. However, these alternatives may not be widely available to all operations, particularly outside of the Lower Mainland.

Fuel Use

Energy costs are estimated to account for 25 per cent of the sector's total cost. It is the second highest cost after labour.

Currently most, if not all, commercial greenhouses in British Columbia obtain carbon dioxide from the combustion of natural gas as the cheapest source of carbon dioxide even though it is subject to carbon tax. For a combination of wood for heating and liquid carbon dioxide to be economically viable, natural gas prices, including carbon tax, has to be between \$10 and \$12 per gigajoule. Currently natural gas prices, including carbon tax, are between \$6 and \$6.50 per gigajoule.

Over half the total British Columbia production area (primarily in the Lower Mainland), now use biomass for heat. They retain their natural gas systems as back-ups and for the carbon dioxide.

Four greenhouse operations have received money from the Pacific Carbon Trust for fuel switching or energy efficiency investments:

- SunSelect Produce (Delta) – biomass boiler and energy curtains.
(90,000 tonnes over five years, maximum value \$2.25 million)
- Randhawa Farms (Abbotsford)–energy curtains.
(20,000 tonnes over five years, maximum value \$500,000)
- Glenwood Valley Farms (Langley) – enhanced environmental system and energy curtains.
(23,000 tonnes over five years, maximum value \$575,000)
- Quik Farms (Chilliwack) – biomass boiler.
(8,000 tonnes over five years, maximum value \$200,000)

The Association estimates members will pay \$2.6 million in carbon taxes in 2009 and nearly \$6 million in carbon taxes in 2012.

The Association estimates that in the Lower Mainland from May to October approximately 90 per cent of the natural gas that is combusted is combusted for the carbon dioxide and not for the heat value. There are no estimates for the Interior or Vancouver Island regions.

While the majority of natural gas combusted in summer months is for carbon dioxide, there is some component used for night time heating and humidity control. The percentage used for heat and humidity control depends on specific weather conditions as well as the crop being produced and will vary from greenhouse to greenhouse.

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Generally, commercial greenhouse operations qualify as farms and as a result, they pay less provincial tax than other businesses. Farm classed properties pay lower property taxes (in 2011 there will be a 50 per cent reduction in school tax for properties classified as farms). Farmers are also entitled to exemptions from motor fuel taxes and exemptions from provincial sales tax for natural gas heating systems used to provide heat for greenhouses as well as natural gas, propane and fuel oil used for farm purposes. While, commercial greenhouse operators will not receive an added benefit from input tax credits on natural gas after the harmonized sales tax (HST) is implemented due to the current PST exemption, all farmers, including commercial greenhouse operations, will receive greater benefits under HST.

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If government wishes to provide relief to the greenhouse vegetable sector there are a number of possible options, including those requested by the Association.

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In the United States there is a Biomass Crop Assistance Program that pays eligible owners (agricultural and forest land owners and operators) for the sale and delivery of eligible materials (for example, cutting of invasive species or disease or insect infested wood to restore ecosystems, wood waste and non-woody crops that have no higher use such as switch grass) to qualified biomass conversion facilities. Sale and delivery includes the collection, harvest, storage and transportation of eligible material. The payment is limited to a maximum of \$45 per dry tonne and is limited to two years per eligible owner.

On November 2, 2009, the government announced the creation of the Green Energy Advisory Task Force. The Task Force on Resource Development is charged with considering the allocation of forest fibre to support energy development. ^{s.12}

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s.12 The work of this Task Force is in addition to the Wood First Initiative and the Mountain Pine Beetle Action Plan of the Ministry of Forests and Range.

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VI. RECOMMENDATION

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VII. DECISION

Option 1 / Option 2 / Option 3