

Deputy Minister Steve Carr  
Ministry of Natural Gas Development  
Government of British Columbia  
Parliament Buildings  
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Victoria, British Columbia – V8W 9E2

September 26, 2014

## **RE: Policy Recommendations for the LNG GHG Framework**

Dear Deputy Minister Steve Carr,

We write to you today as a group of British Columbia clean energy industry groups and non-government organizations that are working to address energy, climate, and ecosystem challenges. We are concerned with the scale of greenhouse gas (GHG) emissions from the proposed LNG sector and how those emissions will be regulated and so have developed several recommendations for your consideration.

Without policy, the wellhead to waterline GHG emissions from the proposed LNG industry will be between 10 to 12 million tonnes (MT) CO<sub>2eq</sub> for each 12 million tonne per year (MTA) facility – the average capacity for the first phase of LNG facilities in the Northwest. Approximately 25% of these emissions will occur at the LNG terminal with an additional 10% from operating the pipeline and 65% from natural gas production and processing, based on Pembina and Clean Energy Canada estimates.

For comparison, BC's current emissions are 62 MT CO<sub>2eq</sub>, so five phases, or three of the leading LNG projects would double BC's current emissions. The province has legislated that provincial GHG emissions will decline to 43 MT CO<sub>2eq</sub> by 2020 and 13 MT CO<sub>2eq</sub> by 2050.

We support BC meeting its legislated greenhouse gas emissions reduction targets, and we do not see how this is possible if LNG development proceeds at the scale being pursued by the province. Strong policy can help to limit the GHG emissions from LNG development, but the targets will only be achievable with matching policy elsewhere in the economy and a smaller scale of development.

## **Policy Context**

The BC government has committed to the “Cleanest LNG in the world”, but has yet to release the policy mix that will achieve that commitment, and has redefined “cleanest” a number of times with the current definition limited to the cleanest gas combusting LNG terminals in the world. Public information on the GHG framework intended to satisfy the Cleanest LNG promise is as follows:

- **Carbon Tax:** The carbon tax is expected to apply from wellhead to waterline, excluding fugitive emissions and venting. This means the carbon tax would apply to approximately 70% of emissions (see figure on following page).

- **LNG Terminal Carbon Benchmark:** There will be a carbon intensity benchmark applied at the LNG terminal where compliance can occur via payment into a technology fund, offsets or reductions at the facility.

Figure 1 summarizes the sources of GHG emissions and proposed policy coverage. The checkmarks and “xs” show where the carbon tax applies and doesn’t respectively.

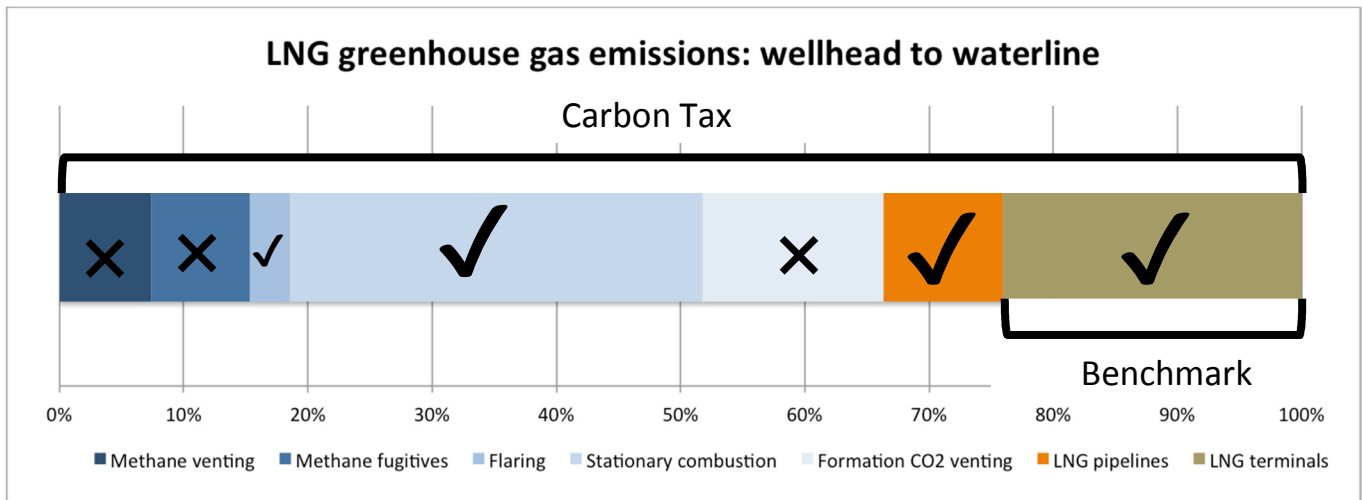


Figure 1: LNG GHG emissions and existing policy<sup>1</sup>

## Policy Recommendations

The BC government has provided some detail on the elements of a GHG framework for the proposed LNG industry. The policy mix below is based on these elements by providing additional detail on the carbon benchmark and complementing it with several additional pieces. The recommendations are limited to GHG emissions, recognizing that the government’s “Cleanest LNG” commitment and the concerns of British Columbians encompass many other issues, including: water quality, air quality, fish habitat and local jobs.

1. **Benchmark:** The benchmark should include all measurable greenhouse gas emissions from LNG terminals (including CO<sub>2</sub> venting) and initially be set at 0.13 tonnes greenhouse gas emissions per tonne LNG. The benchmark target should become increasingly stringent over time.
2. **Compliance options:** If the terminal operator is unable to comply with the benchmark by reducing emissions on site, they would have the option of paying into a technology fund or purchasing offsets. The technology fund rate should initially be set at \$25 per tonne and increase over time to provide an increasing incentive to reduce GHG emissions. Technology fund and offset investments should only take

<sup>1</sup> Adapted from Horne, Matt. (2014) *British Columbia and LNG: Sources of greenhouse gas emissions and policies to reduce them*, The Pembina Institute

place in carbon abatement opportunities that aren't economic at the carbon tax rate (currently \$30/tonne), and both investment streams should look for opportunities to benefit First Nations and communities directly impacted by LNG development.

3. **Upstream shale and natural gas:** Government policy should also lead to GHG emissions abatement in the production, processing and transportation of natural gas. Opportunities include electrifying natural gas processes, improving compressor efficiency, reducing leaks and venting and installing carbon capture and storage. Policy options include strengthening the carbon tax and/or complementing it with other approaches such as technology requirements or performance benchmarks. Of particular importance is addressing the gaps in the carbon tax coverage for vented and fugitive methane, and vented CO<sub>2</sub>.
4. **Climate Action 2.0:** The government should also commit to policy actions to continue progress in reducing GHG emissions in the rest of the economy. As noted in the province's 2014 Climate Progress report, continuing to make progress will require ongoing policy progress across the economy and should build on the successful actions the government has already taken (e.g. the carbon tax, low carbon fuel standard, clean energy requirements, etc.).

We support BC meeting its legislated targets and believe these recommendations are necessary components of that goal. We would like to meet to discuss these recommendations further.

Sincerely,



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On behalf of:

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BluEarth Renewables  
Boralex  
Chinook Power Corp.  
Clean Energy BC  
Ecofish Research Ltd.  
Finavera Wind Energy  
Innergex Renewable Energy Inc.

Seabreeze Power Corp.  
MKI  
Clean Energy Canada  
David Suzuki Foundation  
The Pembina Institute  
Watershed Watch Salmon Society  
West Coast Environmental Law Association