



Comments on the Order Declaring that the Provisions of the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) Do Not Apply in British Columbia and an accompanying Regulatory Impact Analysis Statement (RIAS)

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We are thankful for the opportunity to provide commentary on the Order Declaring that the Provisions of the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) Do Not Apply in British Columbia.

We appreciate the ongoing effort to engage with stakeholders regarding the regulations and equivalency agreement and ECCC's modelling efforts. However, there are still critical assumptions in the modelling that don't align with how the regulations will be implemented and enforced, based on available evidence. These issues are outlined below, with recommended actions at the end.

1) Modelling assumptions

We acknowledge the complexity and difficulty of modelling the impact of the federal and provincial regulations on methane emissions in B.C. with the available data. We are nevertheless concerned that in a number of ways, ECCC's modelling has:

- 1) overestimated the mitigation that would result from the B.C. methane regulations, and
- 2) underestimated the mitigation that would result from the ECCC regulations.

Given the negative impacts of policy uncertainty on industry, we strongly urge ECCC to use conservative assumptions about the effectiveness of B.C. regulations in its analysis. This will reduce the risk of federal regulations being imposed in the future to make up for a likely shortfall in meeting the reduction target, should the B.C. regulations fail to meet expected outcomes.

Co-located sites

ECCC's modelling overestimates the effectiveness of the B.C. leak detection and repair rules by assuming that a higher number of facilities will receive LDAR one or three times per year than what is required by the BC regulations. ECCC assumes that if a facility with weaker LDAR requirements is located next to a facility with stronger LDAR requirements (*i.e.*, the sites are 'co-located') then the stronger requirements will be applied to all of the facilities. This approach is not outlined in the B.C. regulations. Under the BC rules:

- multi-well batteries receive LDAR three times per year,
- single-well batteries receive LDAR once per year,
- unconventional single well production sites require LDAR one time per year, and
- conventional single well production sites¹ only receive a single screening per year.²

ECCC's modelling of leak detection and repair is based on the assumption that a significant number of single well production sites are located adjacent to batteries (co-located sites) and will therefore receive stronger LDAR requirements. By assuming co-located single well production sites will be inspected according to the requirements for the battery, ECCC's modelling is assuming more frequent and / or more effective LDAR inspections than BC's rules require.

¹ Conventional SWP sites which include a tank are required to receive a comprehensive survey once per year, but these are thought to be a small portion of conventional SWP sites in BC.

² As we have previously noted, these single screenings per year are largely ineffective.

While this approach follows the *guidance* spelled out in the recent B.C. OGC Fugitive Emissions Management Guideline,³ it is not required by the BC *regulations*. Our conversations with ECCC have confirmed that ECCC is modelling the B.C. rule with the assumption that the non-binding guidelines will be followed.

This modelling approach is problematic. As stated by the B.C. OGC, guidance materials are not enforceable and there is no evidence of compliance rates with guidance materials. As a result, ECCC should not count on this guidance rule to result in emissions reductions.

BC has been clear, in the rule and in discussions with stakeholders, about what operators are required to do under the regulations. It is not credible to assume that operators will voluntarily do more than is required by law. A voluntarily provincial guideline should not be considered equivalent to a legally binding federal standard.

We note that under the facility definition in the ECCC rule, co-located wells are considered part of a battery facility, and will therefore receive comprehensive LDAR inspections three times per year.⁴ In conclusion, the modelling should reflect the two different approaches in the ECCC rules and the BC rules for leak detection requirements for wells co-located with a battery.

Single well sites

ECCC's modelling of the mitigation resulting from the ECCC regulation assumes that a large number of B.C. single well production (SWP) sites would be exempt from the ECCC leak detection requirements because they would qualify for the leak detection exemption under provision 28(1)(a) of the ECCC rules.

The recently released B.C. Oil and Gas Methane Emissions Field Study shows that ECCC's assumption is inappropriate. The dataset that was used in that report included equipment counts from 201 single-well sites in B.C. – a large sample. We analyzed the equipment present at those sites and found that only 13% would meet the criteria described in ECCC's regulation (sites with only one wellhead, and no other equipment except for gathering pipelines and a meter connected to the wellhead). The remaining 87% of sites had additional equipment, and therefore would be subject to ECCC's leak detection requirements.⁵

³ BC OGC (2019), "Fugitive Emissions Management Guideline." Version 1.0. Available at: <https://bcogc.ca/node/15539/download>

⁴ The ECCC rule defines an "upstream oil and gas facility" as the collection of structures and equipment "located on a single site, on contiguous or adjacent sites or on sites that form a network in which a central processing site is connected by gathering pipelines with one or more well sites." Therefore, co-located wells are considered to be part of the same facility, and would therefore be subject to the ECCC rule LDAR provisions. One minor exception would be if the well was on a separate "site" with only a wellhead and meter present, in which case the wellhead-only exception under section 28(1)(a) of the ECCC rules would apply and LDAR would not be required. As we show below, these wellhead-only sites are rare in B.C.

⁵ Clean Air Task Force analyzed the equipment count data provided in the anonymized data file released along with the study for conventional, tight, and oil wells (facility types WC, WT, and WO). We found that 87% of well sites had present one or more of the following equipment types: Compressor, Dehydrator, Generator, Heater, Incinerator, Pig Trap, Pump, Separator, Sweetening Equipment, and/or Tank. With this extra equipment, these sites will not qualify for the leak detection exemption in ECCC regulations section 28(1)(a).

Sites with equipment beyond a wellhead, a meter, and gathering pipeline have more components, including relatively leaky components such as valves and pneumatic controllers, and are therefore more liable to have leak emissions. Recognizing this, the ECCC regulations take a reasonable approach by requiring leak detection at any site with equipment beyond a wellhead and a meter.

We note that in the U.S., federal standards for leak detection at new and modified well production facilities have a very similar exception: leak detection surveys are required unless the site only contains one or more wellhead(s).⁶ Given the benefit of reducing leaks at the more complex sites that dominate B.C. SWPs, ECCC's modelling of the potential benefits of implementing the federal regulations in B.C. must properly and accurately account for the actual number of sites in BC that would qualify for the single-well exemption under the ECCC rules.

Batteries

We appreciate the work that ECCC has done to improve the information used in their model so that the model more accurately reflects the B.C. oil and gas industry and its emissions. However, ECCC's model still greatly over-predicts the number of batteries in the province, based on the latest data from ECCC.

2) Transparency and on-going evaluation

There are significant doubts about whether the BC regulations will achieve an equivalent outcome to the ECCC regulations and achieve a 45% reduction in methane emissions by 2025. Given this uncertainty, ECCC should commit to a transparent and robust annual review process to evaluate the effectiveness of the regulations to ensure that they are equivalent.

ECCC should require that future determinations of the degree of mitigation occurring from LDAR will be determined with actual compliance data, not LDAR frequencies assumed based on B.C. OGC *guidance* materials.

We are also concerned that the data that is needed to evaluate the effectiveness of the B.C. regulations will not be publicly available. The B.C. guidance materials do not commit to posting any of the data, including data from leak detection and repair reports. As a result, it is critical that the annual ECCC review include a public consultation process, making use of updated modelling results, that transparently examines the effectiveness of the regulations.

Recommendations:

- 1) ECCC must work to improve its modelling approach and assumptions to address the discrepancies we have identified above. We recognize that these issues are not trivial to address, but nevertheless ECCC should work to ensure that the present assessment of equivalency is performed using the best available data and assessment methodologies.

⁶ See 40 CFR § 60.5365a(i)(2).

- 2) ECCC must also continue working to improve the model methodology, input data and assumptions to ensure that future reviews accurately assess the environmental outcomes of provincial regulations and whether they are equivalent to the federal regulations, so that emission targets will be met.
- 3) Section 4.3 of the equivalency agreement should be amended to state that the federal government:
 - commits to reviewing the information collected in Section 3 to reassess equivalency on an annual basis, using the most up-to-date information and assessment approaches (i.e., models) available at the time
 - has an obligation to rescind or renegotiate the agreement if it cannot be demonstrated that B.C. regulations are achieving equivalent reductions.
- 4) ECCC and B.C. should commit to consult with stakeholders during the annual equivalency review, including posting the data, evaluation methodology and draft results of the review for public comment.
- 5) The review should be based on data on actual compliance with the regulations and guidance materials, rather than assuming full compliance with guidance materials on leak detection and repair.