



Honourable Catherine McKenna
Minister of Environment and Climate Change
10 Wellington
Gatineau, Québec
K1A 0H3

27 July 2017

Dear Minister McKenna,

RE: Proposed Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)

On behalf of the Canadian Energy Pipeline Association (CEPA) and its member companies, I would like to bring to your attention significant concerns regarding the proposed Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) pursuant to the *Canadian Environmental Protection Act* (1999).

Our members have been actively engaged in reducing methane emissions for several decades and support the Government of Canada's objective to reduce methane emissions to help meet Canada's climate change targets. This objective is consistent with CEPA's commitment to minimizing the environmental impact of pipelines throughout the entire pipeline lifecycle.

CEPA appreciates the ongoing consultation process that has taken place over the past year and has and will continue to support regulatory requirements that meet the Government of Canada's objectives, while at the same time considers the unique characteristics of the industry's upstream and transmission sectors.

Through its public consultation ECCC clearly differentiated between the transmission and upstream sectors of the oil and gas industry. ECCC reported that in 2012 the transmission sector comprised only five percent of methane emissions from the oil and gas industry, while the upstream sector, which is understood to be the intended target of the regulation, accounted for 82 percent of the oil and gas industry's methane emissions.

Notwithstanding this distinction, the definition of *upstream oil and gas facility* in the proposed regulation includes infrastructure connected to a central processing site and gathering pipelines with one or more well sites. CEPA members are concerned that the proposed regulation has inappropriately inferred that the transmission sector is included in the upstream sector.

Including the transmission sector within upstream production and processing will target methane reductions at a scope and scale which are both economically and logistically unfeasible. This is due to the range of natural gas volumes managed within each sector of the gas industry and the scale of its associated infrastructure. The transmission sector handles significantly larger volumes of natural gas at higher operating pressures than the upstream sector and regulatory requirements should reflect this reality. Similarly, requiring quarterly inspections of hundreds of aboveground facilities located along a pipeline facility



which ranges in length from several hundred to thousands of kilometers (as is the case with transmission) is impractical and will not achieve cost effective methane reductions.

CEPA members would like to reiterate to ECCC that the transmission sector of the oil and gas industry is unique in the scope and scale of its operations in comparison to the upstream sector. We recommend a more appropriate definition of oil and gas facilities and a regulatory approach that reflects this distinction. The appended letter has our specific comments and recommendations which were submitted through the Gazette process.

Notwithstanding our support of the underlying objective of the proposed regulations, CEPA urges the government to ensure the final regulations apply reasonable and practically achievable requirements while still meeting the government's overall objective of reducing methane emissions.

Sincerely,

Chris Bloomer
President and CEO



Helen Ryan
Director General
Energy and Transportation Directorate
Environment and Climate Change Canada

Submission by email: ec.methane-methane.ec@canada.ca

Dear Ms. Ryan,

Comments on Proposed Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)

The Canadian Energy Pipeline Association (CEPA) would like to thank Environment and Climate Change Canada (ECCC) for the opportunity to comment on the Proposed Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) pursuant to the Canadian Environmental Protection Act (1999).

CEPA members collectively operate more than 77,000 kilometres of natural gas transmission pipeline in Canada. These energy highways transport approximately 5.6 trillion cubic feet of natural gas each year. Pipelines are the only viable means of moving large quantities of natural gas over land. They are also the least greenhouse gas (GHG) intensive means of connecting energy producing regions to consumers across Canada and to international markets. Virtually all of Canada's natural gas production flows through transmission pipelines on-route to markets.

CEPA supports the Government of Canada's objective to reduce methane emissions to help meet Canada's climate change targets. This objective is consistent with CEPA's commitment to minimizing the environmental impact of pipelines throughout the entire pipeline lifecycle and our members have been actively engaged in reducing methane emissions for several decades.

The proposed regulation seems to incorporate measures aimed at reducing methane emissions from 'upstream' natural gas production sources, with the measures then applied to transmission pipelines. Transmission pipelines tend to be larger diameter, operate at much higher pressure and transport significantly more product than the 'upstream' pipelines that feed into them. Thus, some measures may not be practical or achieve cost-effective methane reductions for the transmission pipeline industry.

The distinction between upstream and transmission pipelines has been clarified through CEPA's discussions with ECCC and it is our understanding that ECCC is seeking input regarding practical measures for natural gas transmission. CEPA's recommendations are set out below:



Definition of Oil and Gas – Section 2(1)

CEPA recommends for clarity, the proposed facility definition be revised to define a 'natural gas transmission facility' separately from upstream oil and gas facility as suggested below:

upstream oil and gas facility means the buildings, other structures and stationary equipment — that are 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 pipeline with one or more well sites — that function together in an integrated manner for the purpose of

- (a) the extraction of hydrocarbons from an underground geological deposit or reservoir;
- (b) the primary processing of those hydrocarbons; ~~or~~
- (c) ~~the transportation of hydrocarbons — including their storage for transportation purposes — other than for local distribution.~~

natural gas transmission facility means an onshore natural gas transmission compressor station, an underground natural gas storage compressor station or an LNG storage plant.

According to this recommended revised definition valve sites, meter stations and the pipeline connecting 'facilities' on transmission systems would clearly fall outside the regulatory requirements. These types of sites are comparable to 'single wellhead' facilities which are subject to exclusions in the proposed regulation on the same basis.

Hydrocarbon Gas Conservation and Destruction Equipment – Section 4

Discussions between CEPA and ECCC have also clarified that the intent of these provisions is to limit the venting from separator and tank systems (only). CEPA supports this approach as both a practical and achievable undertaking and recommends that ECCC clarify this limitation in the regulation.

Further, CEPA recommends ECCC adopt provisions consistent with the recent *California Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities*¹. This legislation provides an exemption at compressor stations where the operator is able to substantiate the recovery of petroleum waste products for small tanks is less than 10 gallons per day.

Compressors

Gas Conservation Equipment - Section 11

The draft regulation requires that:

11. *The emissions of hydrocarbon gas from the seals of a centrifugal compressor, or from the rod packings of a reciprocating compressor, at an upstream oil and gas facility must*

(a) if the compressor is installed on or after January 1, 2020, be captured and routed to hydrocarbon gas conservation equipment.

¹ California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 10 Climate Change, Article 4.



CEPA members are concerned gas conservation equipment of sufficient size and capacity for transmission compressors is not yet commercially available. We request sufficient time to design, prove and install such equipment in a manner which assures we are able to continue the safe and reliable transmission of natural gas. We believe our industry can achieve this requirement by 2025 and ask the date be amended accordingly.

Measurement of Flow Rates - Section 12

CEPA members already voluntarily conduct continuous monitoring of most modern dry gas seal systems to detect problems and schedule interventions or repairs. CEPA recommends Section 12(1) be amended to also allow a primary seal gas leakage continuous monitoring system as an acceptable measurement approach. This is the approach the American Petroleum Institute (API) standard "Compressor Dry Gas Seals" (API 692) adopts in its draft standard which will be released prior to the end of 2017.

Flow Rate Limits Requiring Corrective Action - Section 13

Section 13(1) of the proposed regulation specifies limits to flow rates of emissions from compressors which require corrective action. These limits are expressed in metres cubed per minute. Invoking a single numeric limit does not adequately recognize that dry gas seal leakage is a function of many compressor characteristics including shaft size, operating speed, compressor settle-out and operating suction pressures.

The above mentioned API 692 provides proportional limits which address this issue². CEPA recommends that Section 13(1)(a) be amended to:

(a) in the case that the emissions are from the seals of a centrifugal compressor, the product of the number of those seals and 300 percent of the compressor manufacturer's guaranteed seal leakage flow per seal (in standard m3/min);

Venting Limits – Section 19

The proposed 250 standard cubic metres venting limit does not take into consideration the millions of cubic metres of natural gas transported by transmission pipelines each month nor the higher operating pressures typical of transmission systems. For transmission pipelines, this venting limit would effectively prevent the necessary operations and maintenance activities required to deliver the service they provide.

Further, we estimate that permanent flare installation at compressor stations across Canada would cost the transmission pipeline industry approximately \$6 million per tonne of methane avoided. We also note that in the US-Canada Joint Statement on Climate, Energy and Arctic Leadership³ (March 2016), Canada committed to implementing the World Bank's Zero Routine Flaring by 2030 Initiative which would potentially render flaring a temporary

² Section 3, Table 5 – Recommended Alarms for Tandem Seals

³ <http://pm.gc.ca/eng/news/2016/03/10/us-canada-joint-statement-climate-energy-and-arctic-leadership>



solution. In this context, CEPA recommends that pipeline installations be exempt from the venting limits requirement.

Leak Detection and Repair Program

CEPA is supportive of the approach to Leak Detection and Repair (LDAR), as proposed, provided our recommendations regarding facility definitions are adopted (refer to recommendations on page 2). CEPA estimates 82 percent of fugitive emissions generated by natural gas transmission occur at compressor stations and we anticipate reasonable costs to complete leak surveys at \$87.40 per tonne of methane avoided.

Inspection frequency - Section 21(1)

The proposed regulation requires three LDAR inspections per year. CEPA recommends the wording in the regulation be amended to allow for the inspection frequency to be reduced based on improved performance over time (i.e. reduction in number of leaks found).

CEPA recommends that ECCC includes a provision allowing inspections to be delayed in the event of lack of accessibility due to extreme weather conditions. This approach was adopted in US EPA requirements under *Title 40 CFR Part 60, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed and Modified Sources*. This is particularly relevant to Canada as a large portion of our equipment is located outdoors and may be buried under snow for significant portions of the year.

Timelines for repairs - Section 24

The equipment utilized at our members' natural gas transmission facilities is generally custom manufactured given the size and scale of their operations. As such, compliance with this clause would not be achievable for our members.

CEPA proposes ECCC adopt wording such as:

24 (1) A leak from an equipment component that is detected, whether as a result of an inspection or otherwise, must be repaired

(a) if the repair can be carried out while the equipment component is operating, within 30 days after the day on which it was detected;

(b) if the equipment component — other than an equipment component that can be repaired while it is operating — is at a facility that is located offshore, within 365 days after the day on which it was detected; and

(c) in any other case, by the end of the next planned shutdown after which the necessary equipment components (or part thereof) may reasonably be acquired or other good cause that makes a sooner repair impracticable and/or would lead to excess emissions



24 (2) The next shutdown referred to in subparagraph (1)(c) must be scheduled, after necessary equipment components (or part thereof) may reasonably be acquired, not later than the date on which the volume of hydrocarbon gas at standard conditions that would be emitted if the hydrocarbon gas in the equipment component were purged in order to carry out the repair is equal to the estimated volume of hydrocarbon gas that would, since the day on which the leak was detected, be emitted until that next shutdown if no repair were made.

Pneumatic Devices – Section 26

CEPA interprets this clause to apply only to sites where compression is present and is supportive of this approach. We recommend pneumatics that control the process such as level switches, positioners, pressure switches, thermostats, flow integrators, controller-pilot and pilot boosters be included. Conversely, we recommend pneumatic devices that do not actuate frequently and are used for emergency isolation such as transmitters, transducers, relays, gauges, control valve operator/actuators and self-contained regulators be excluded. These types of exclusions have been made in other jurisdictions, such as EPA – Subpart W and WCI. Intermittent bleed pneumatics rarely actuate, typically once per year during annual maintenance and for emergencies.

In addition, we would like ECCC to be aware that our members are likely to seek a significant number of exemptions under Schedule 1 of the proposed regulation. In the interest of efficiency, CEPA requests that ECCC allow these exemptions to be sought at a facility level rather than as a separate application/permit for each individual device.

Conclusion

Notwithstanding our support of the underlying objective of the proposed regulations, CEPA urges ECCC to consider the above concerns in order to address the significant compliance challenges with the regulation as proposed.

CEPA and our member companies look forward to continuing to work together with ECCC to develop regulations that will deliver methane reductions, in a manner that is both economically and practically achievable by the natural gas transmission sector.

Please do not hesitate to contact the undersigned if you have any questions or require clarification regarding any of the comments made above.

Sincerely,

Cathy Hay
Director, Regulatory & Business Environment

C.c.: Mr. James Diamond, Manager Upstream Oil and Gas, Oil, Gas and Alternative Energy Division, ECCC



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C.c.: Mr. Tim Egan, President and CEO, Canadian Gas Association

C.c.: Ms. Jasmine Urisk, Executive Director, Canadian Energy Partnership for Environmental Innovation