



Comparing Saskatchewan and Federal Oil and Gas Methane Emissions Regulations

A FACT SHEET FOR POLICY-MAKERS

“Saskatchewan has chosen an outcome-based regulatory approach that doesn’t follow best practices for managing methane emissions.”

This fact sheet presents the results of a comprehensive review comparing Saskatchewan rules to federal regulations. Saskatchewan finalized their methane regulations in late 2018.

Saskatchewan has chosen an outcome-based regulatory approach that doesn’t follow best practices for managing methane emissions. It ignores sources accounting for 40% of the province’s methane emissions including pneumatics, compressors, and leaks. However, they have targeted their largest source of emissions – venting and flaring from oil facilities. Saskatchewan’s outcome-based approach gives

operators flexibility in finding the most cost-effective reductions. For this approach to succeed, the province needs to implement accurate and detailed measurement and reporting along with strong enforcement.

Using five key areas of methane oil and gas regulation best practices, we compared Saskatchewan’s rules to best practices. This comparison identifies improvement opportunities that could be implemented to align with such practices in order to meet the level of ambition set out by the federal regulation.

Key Aspects	Best Practices	Federal Regulation	Provincial Regulation	How it Compares	Improvement Opportunity
1. Achieves ambitious methane emission reductions across multiple segments of the oil and gas sector and from all significant emission sources, new and existing.	1.1. Mandatory, performance-based standards.	Federal regulation establishes mandatory performance-based standards.	Outcome based regulation sets gas conservation limit by for oil facilities by region but doesn’t update outdated measurement and reporting systems.	Needs major improvement	Strong measurement and reporting standards are required for outcome-based regulations to succeed. Known flaws in measurement of solution gas venting have not been addressed.
	1.2. Effectively targets largest emissions sources.	Federal regulation effectively targets largest emission sources.	Regulations target venting from oil production, which is Saskatchewan’s largest source of methane emissions.	Needs minor improvement	Include rules on pneumatics for new facilities.
	1.3. Limited, and clearly circumscribed, exceptions.	Federal regulation establishes limited and clearly circumscribed exceptions maintaining strict limits for the largest emissions sources.	SK regulation includes exceptions allowing the government to set emission factors, waive payments, and allow business associates to merge.	Needs major improvement	These exceptions will have a large impact on the effectiveness of the regulation that are difficult to quantify.

2. Reduce designed and intentional venting from pneumatics and compressors.	2.1. Engineer and design new pneumatic devices and pumps to be zero or near zero emitting (e.g. use electricity or instrument air in lieu of natural gas as power source).	Federal regulation sets venting limits for new devices. (Section 37.1) No emissions are allowed from new pneumatic pumps (Section 39.1) with exceptions for infrequently used pumps.	Regulation doesn't set rules for new pneumatic devices or pumps.	Needs major improvement	Require new pneumatic pumps and devices to be non-emitting or controlled.
	2.2. Retrofit existing pneumatic devices and pumps to be zero or near zero emitting (e.g. replace high-bleed pneumatic devices with low or zero-bleeds).	Federal regulation sets a venting limit for existing pneumatic devices (Section 37.1) and requires no emissions from existing pneumatic pumps with exceptions for infrequently used pumps (Section 39.1).	Regulation doesn't set rules for existing pneumatic devices or pumps.	Needs major improvement	Set venting limits for existing pneumatic devices and pumps.
	2.3. Reduce intentional venting from compressors.	Federal regulation establishes a venting limit for compressors that is ambitious and aims to reduce intentional venting (Section 18 and Section 50).	Regulation doesn't set rules for venting from compressors.	Needs major improvement	Set venting limits for new and existing compressors.
3. Reduce venting and flaring from storage tanks and oil wellheads.	3.1. Reduces venting of gas from tanks.	Federal regulation establishes an annual venting limit for facility that is ambitious and aims to reduce venting of gas from major sources including tanks.	Regulation sets a limit on the percentage of vented gas that must be conserved or destroyed by region.	Needs minor improvement	A site venting limit is more efficient than a conservation requirement because it doesn't target the smallest emitters.
	3.2 Reduce venting of gas from oil wellheads ¹ .	Federal regulation sets an annual venting limit for facility that is ambitious and aims to reduce venting of gas from major sources including solution gas venting.			
	3.3. Limit flaring of gas; only allow where capture is infeasible.	Federal regulation doesn't establish a requirement limiting flaring of gas	Regulation promotes conservation of gas and doesn't consider flaring as an acceptable alternative (Directive S-10. Section 3 and 4).	Follows best practices	
	3.4. Require use of high efficiency flares and combusters.	Federal regulation doesn't establish a requirement to use high efficiency flares but points out to follow provincial rules (Section 9) which don't require the use of high efficiency flares.	Regulation makes mandatory that all allowed flaring should be conducted with efficient flares encouraging the use of incinerators with a conversion efficiency of more than 99% (Directive S-20. Section 3.3).	Needs major improvement	Require a 98% destruction and reduction efficiency of flare and combustion.
4. Regular leak detection and repair (LDAR).	4.1. Quarterly inspections of well sites, gas processing plants, compressor stations, tank batteries.	Federal regulation requires inspections three times per year for all but single well heads (Sections 30 (3); 52).	The regulation doesn't have any leak detection and repair requirements.	Needs major improvement	Require comprehensive leak surveys at all facilities three times per year.
	4.2. Comprehensive inspections that apply to all sources with the potential to leak, unintentionally vent or abnormally operate.	Federal regulation requires LDAR inspections on all sources including thief hatches and pneumatic devices.	The regulation doesn't have any leak detection and repair requirements.	Needs major improvement	Require comprehensive inspections that apply to all sources.
	4.3. Include robust alternative compliance pathway that allows for the use of emerging technologies that are as effective in reducing emissions as allowable instruments and that is subject to public input and regulatory review.	Federal regulation establishes robust alternative compliance pathway (Sections ; 29; 35; 50).	The regulation doesn't have any leak detection and repair requirements.	Needs major improvement	Include alternate compliance pathways.
5. Record keeping, reporting and measurement	5.1 Include robust, detailed, site-specific record keeping provisions, demonstrating compliance with each of the mandatory methane reduction measures.	Federal regulation requires comprehensive site level record keeping by source type (Sections 6; 7; 10; 12; 19; 25; 27; 36; 38; 45; 48; 51; 53; 56).	Regulation does not require any record keeping on methane emissions from venting or other sources.	Needs major improvement	Require detailed record keeping for all sources of methane emissions.
	5.2. Require annual public reporting demonstrating compliance.	Federal regulation doesn't require annual public reporting demonstrating compliance.	Regulation requires no public reporting of methane emissions.	Needs major improvement	Include comprehensive reporting and a requirement to make reports public.
	5.3. Reliable measurement requirements.	Federal regulation establishes reliable measurement requirements (Section 15, 16 and 17).	Regulations set measurement requirements but have not addressed known flaws in estimation of solution gas venting.	Needs major improvement	Improve requirements for measurement of solution gas venting.