

Notice of Proposed Amendments: *The Oil and Gas Emissions Management Regulations and Directive PNG036: Venting and Flaring Requirements*

Background

The Ministry of Energy and Resources (ER) regulates methane emissions from Saskatchewan's upstream oil and gas industry through *The Oil and Gas Emissions Management Regulations* (OGEMR) and *Directive PNG036: Venting and Flaring Requirements* (Directive PNG036). Together, these requirements form the basis of Saskatchewan's methane equivalency agreement with the federal government, ensuring Saskatchewan's jurisdiction over methane emissions regulations in the province.

ER is now seeking written comments on proposed amendments to OGEMR and Directive PNG036. The proposed amendments aim to improve regulatory efficiency, reduce administrative burden, and better align requirements with operational risk while maintaining methane emissions reduction outcomes.

The Process

ER is holding industry consultations on the proposed amendments to OGEMR and Directive PNG036 from October 15, 2026, to October 30, 2026. Once this consultation period has concluded, ER will review feedback received in the preparation of final drafts of OGEMR and Directive PNG036 to be brought forward for approval. The proposed amendments are expected to come into effect in December 2026.

Summary of Proposed Changes

Proposed amendments to Directive PNG036 include updates to venting requirements, Leak Detection and Repair (LDAR) requirements, gas-driven pneumatic device requirements, and flaring provisions. Key changes being considered include:

- Transitioning vent limits from daily to monthly thresholds to better align limits with reporting requirements and compliance monitoring methods;
- Implementing minimum combustion efficiency and auto-ignition or bi-weekly inspection requirements for all flare stacks that are in operation;
- Aligning LDAR requirements with facility-level leak risk, while providing greater flexibility in detection technologies and repair timelines; and
- Eliminating annual reduction requirements for pneumatic devices while retaining the 2029 phase-out deadline for most facilities and providing additional flexibility for facilities that are expected to be decommissioned before 2035.

Proposed amendments to OGEMR will repeal the emissions limit, excess emissions, and penalty framework and consolidate detailed technical methane reduction requirements under Directive

PNG036. OGEMR would continue to provide the regulatory framework for reporting, compliance, enforcement, and annual public reporting of emissions outcomes in Saskatchewan. These amendments are intended to improve regulatory efficiency and clarity by consolidating technical requirements into a single directive while maintaining Saskatchewan's emissions reduction objectives.

Development of the proposed amendments has been informed by implementation experience with OGEMR and Directive PNG036 and through ongoing engagement with industry stakeholders. Feedback received through consultation will be considered in the development of final regulatory proposals.

Once finalized, the amended OGEMR and Directive PNG036 will be used to negotiate equivalency on methane with the Government of Canada in order for Saskatchewan to maintain jurisdiction over emissions from the upstream oil and gas industry.

Review of Proposed Amendments

ER is seeking written comments on proposed amendments to OGEMR and Directive PNG036, which are attached to this notice as Schedules "A" and "B", respectively. Please direct any comments or questions about the proposed amendments to:

ER.servicedesk@gov.sk.ca

Attn: Mathew Jones, Resource Management
Energy Regulation Division

The deadline for submitting written comments is **October 30, 2026**.

SCHEDULE A

Proposed changes to *The Oil and Gas Emissions Management Regulations*

Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
Part 1: Preliminary Matters		
Title	Title	No change.
Definitions 2(1) In these regulations: “Act” means <i>The Oil and Gas Conservation Act</i> ; “approved” means approved by the minister; “assessment notice” means a notice issue in accordance with the Act as a result of emissions exceeding the emissions limit; “associated gas” means gas produced from an oil well; “ATE” or “actual total emissions” means, with respect to all oil facilities in a production class that are licensed by a business associate, the mass of greenhouse gas that: (a) is actually emitted in a year at the oil facilities; and (b) is calculated in accordance with the formula set out in subsection 7(1); “business associate”, subject to section 5, means the person recorded in the registry as the licensee of an oil facility; “CE” or “combined emissions” means ATE in all production classes at all oil facilities that are licensed by a business associate; “CEL” or “combined emissions limit” means EL in all production classes at all oil facilities that are licensed by a business associate; “CO ₂ e” or “carbon dioxide equivalent” means the mass of carbon dioxide that would produce the same global warming potential as a given mass of another greenhouse gas; “combined potential emissions” means PTE, as determined in accordance with Part 3, in all production classes at all oil facilities that are licensed by a business associate; “control person” means any person, including a corporation, or combination of persons that hold or control more than 20% of the outstanding voting securities of the business associate; “EE” or “excess emissions”, other than in section 14, means the amount by which the combined emissions exceed the combined emissions limit, calculated in accordance with subsection 9(2);	Definitions 2(1) In these regulations: “Act” means <i>The Oil and Gas Conservation Act</i> ; “approved” means approved by the minister; “business associate”, subject to section 5, means the person recorded in the registry as the licensee; “CO ₂ e” or “carbon dioxide equivalent” means the mass of carbon dioxide that would produce the same global warming potential as a given mass of another greenhouse gas; “control person” means any person, including a corporation, or combination of persons that hold or control more than 20% of the outstanding voting securities of the business associate; “emissions” means the release of greenhouse gas to the atmosphere as a result of the venting or flaring of gas at a well, facility, or pipeline subject to these regulations; “greenhouse gas” means: (a) carbon dioxide (CO ₂); (b) methane (CH ₄); or (c) any other prescribed gas or compound. “licensee” means the person recorded in the registry as the holder of a licence issued pursuant to <i>The Oil and Gas Conservation Act</i> or <i>The Pipelines Act, 1998</i> ;	Remove and update definitions as needed to align with the updated structure of the regulations.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
~~“EFf” or “emissions factor for flared gas” means the emissions factor for associated gas that is reported as flared, as specified by the minister for the production class of the oil facility at which the gas was flared;~~ ~~“EFv” or “emissions factor for vented gas” means the emissions factor for associated gas that is reported as vented, as specified by the minister for the production class of the oil facility at which the gas was vented;~~ ~~“EIL” or “emissions intensity limit” means the emissions intensity limit for a production class for a year, as set out in Table 2 of the Appendix;~~ ~~“EL” or “emissions limit” means an amount of emissions of greenhouse gases calculated in accordance with section 8;~~ ~~“emissions” means the release of greenhouse gas to the atmosphere as a result of the venting or flaring of associated gas at an oil facility, expressed in carbon dioxide equivalent;~~ ~~“emissions factor” means the factor specified by the minister in accordance with subsection 7(3) for converting reported flared gas volumes and vented gas volumes to a mass of carbon dioxide equivalent, expressed in tonnes of CO₂ e per thousand cubic metres;~~ ~~“FV” or “flared gas volume” means, with respect to all oil facilities in a production class that are licensed by a business associate, the volume of associated gas that is reported as flared at the oil facilities;~~ ~~“greenhouse gas” means carbon dioxide (CO₂) and methane (CH₄);~~ ~~“oil” means oil as defined in <i>The Oil and Gas Conservation Regulations, 2012</i>;~~ ~~“oil facility” means a facility recorded in the registry that has as its primary product oil;~~ ~~“production class” means a production class established in Table 1 of the Appendix to which an oil facility is assigned;~~ ~~“PTE” or “potential total emissions” means, with respect to all oil facilities in a production class that are licensed by a business associate, the mass of greenhouse gas that:~~ <del> (a) could potentially be emitted in a year at the oil facilities;</del> <del> (b) is calculated in accordance with the formula set out in subsection 7(2);</del> ~~“PV” or “produced volume of associated gas” means, with respect to all oil facilities in a production class that are licensed by a business associate, the volume of associated gas that is produced in a year at the oil facilities;~~		

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
“VV” or “vented gas volume” means, with respect to all oil facilities in a production class that are licensed by a business associate, the volume of associated gas that is reported as vented at the oil facilities.		
Application 3 These regulations apply to every business associate all of whose combined potential emissions are greater than 50,000 tonnes of CO2 e per year.	Application 3 These regulations apply to every licensee in respect of any well, facility or pipeline licensed pursuant to <i>The Oil and Gas Conservation Act</i> or <i>The Pipelines Act, 1998</i>.	These regulations now apply to all licensees licensed under <i>The Oil and Gas Conservation Act</i> and <i>The Pipelines Act, 1998</i>. Further applicability is defined in section 6 and associated directives.
3.1 Designations as a greenhouse gas emission regulation	3.1 Designations as a greenhouse gas emission regulation	No change.
3.2 Implementation date	3.2 Implementation date	No change.
Penalty is a penalty for the purposes of section 53.68 of the Act 3.3 Any penalty assessed or imposed pursuant to section 10, subsection 14(7) or section 16, with respect to a contravention of section 9 of these regulations, is a penalty for the purposes of section 53.68 of the Act.	Penalty is a penalty for the purposes of section 53.68 of the Act 3.3 Any penalty assessed or imposed pursuant to section 20.1, with respect to a contravention of section 6 of these regulations, is a penalty for the purposes of section 53.68 of the Act.	Updated references to relevant sections of the regulations.
Reference to volume 4 Subject to subsection 15(3), a reference in these regulations to volume is deemed to be a reference to the volume reported by a business associate in accordance with section 6.	Reference to volume 4 A reference in these regulations to volume is deemed to be a reference to the volume reported by a business associate in accordance with section 6.	Remove reference to repealed subsection 15(3).
Associated persons 5(1) The minister may direct that any 2 or more separate business associates are deemed to be 1 business associate if: (a) the minister is satisfied that one of the reasons for their separate existence is to reduce the amount of actual emissions they report; (b) a business associate has in common with another business associate any directors, officers, partners or control persons; (c) the minister is satisfied on reasonable grounds that it is appropriate to do so and in the public interest; or (d) 2 or more business associates ask to be considered as 1 business associate. (2) For the purposes of subsection (1), before making a direction the minister shall: (a) give notice of the minister’s intention to treat the business associates as 1 business associate; and (b) give the business associates an opportunity to make written representations.	Associated persons 5(1) The minister may direct that any 2 or more separate business associates are deemed to be 1 business associate if: (a) the minister is satisfied that one of the reasons for their separate existence is to avoid compliance with these regulations or an applicable directive; (b) a business associate has in common with another business associate any directors, officers, partners or control persons; (c) the minister is satisfied on reasonable grounds that it is appropriate to do so and in the public interest; or (d) 2 or more business associates ask to be considered as 1 business associate. (2) For the purposes of subsection (1), before making a direction the minister shall: (a) give notice of the minister’s intention to treat the business associates as 1 business associate; and (b) give the business associates an opportunity to make written representations.	Updated wording to clarify applicability of this section to applicable directives.
PART 2 Compliance with Directives and Carbon Dioxide Equivalence		

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
6 Compliance with directives	6 Compliance with directives	No change.
Carbon dioxide equivalent 6.1 For the purposes of these regulations, all emissions are to be calculated and expressed in the form of carbon dioxide equivalent.	Carbon dioxide equivalent 6.1 For the purposes of these regulations, emissions may be calculated and expressed in the form of methane or carbon dioxide equivalent.	Updated to allow for methane emissions to be calculated in addition to carbon dioxide equivalent.
PART 3 Emissions		
7 Calculations – actual and potential emissions	REPEALED	Sections 7 to 14 are repealed, as technical requirements are consolidated in Directive PNG036: Venting and Flaring Requirements and must be complied with under section 6.
8 Emissions limit, per production class	REPEALED	
9 Calculation of excess emissions, per business associate	REPEALED	
10 Administrative penalty – excess emissions	REPEALED	
PART 4 Emissions Reduction Plans		
11 Submission of emissions reduction plan	REPEALED	Ibid.
12 Review of emissions reduction plan	REPEALED	
13 Approved emissions reduction plan	REPEALED	
PART 5 Qualifying Conservation Projects		
14 Qualifying conservation projects	REPEALED	Ibid.
PART 6 General		
Emissions audit 15(1) The minister may, at any time, audit the measurement and reporting of volumes of associated gas at oil facilities that are licensed by a business associate in order to determine if the measurement and reporting have been carried out in accordance with the Act, these regulations and any applicable directives. (2) Every business associate shall comply with all requests of the minister made for the purpose of carrying out the audit. (3) If the minister determines by means of an audit conducted pursuant to subsection (1) that a business associate has incorrectly reported volumes of associated gas at oil facilities that are licensed by the business associate, the minister may direct that the information recorded in the registry be changed to reflect the actual volumes of associated gas in any year.	Emissions audit 15(1) The minister may, at any time, audit the measurement and reporting of volumes of gas at wells, facilities, or pipelines that are subject to these regulations in order to determine if the measurement and reporting have been carried out in accordance with the Act, these regulations and any applicable directives. (2) Every business associate shall comply with all requests of the minister made for the purpose of carrying out the audit. (3) If the minister determines by means of an audit conducted pursuant to subsection (1) that a business associate has incorrectly reported volumes of gas at wells, facilities, or pipelines that are licensed by the business associate, the minister may direct that the information recorded in the registry be changed to reflect the actual volumes of gas in any year.	Updated to expand scope of audit to reported volumes at all entities subject to these regulations.
16 Correction to registry – administrative penalty	REPEALED	Sections 16 to 19.3 are repealed, as technical requirements are consolidated in Directive
17 Limitation	REPEALED	
18 Exception	REPEALED	

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
19 When administrative penalty assessed	REPEALED	PNG036: Venting and Flaring Requirements and must be complied with under section 6.
19.1 Saskatchewan Technology Fund prescribed pursuant to clause 53.68(b) of the Act	REPEALED	
19.2 Payment of penalty to technology fund	REPEALED	
19.3 Methods of payment	REPEALED	
Annual Report 20(1) The minister shall publish an annual report setting out the following: (a) the total of combined emissions at all oil facilities in Saskatchewan; (b) Repealed. 23 Feb 2024 SR 6/2024 s8. (c) the emissions for all oil facilities that are licensed by each business associate for the year. (2) The minister shall make the report mentioned in subsection (1) available on the ministry's website and in any other manner that the minister considers appropriate.	Annual Report 20(1) The minister shall publish an annual report setting out the following: (a) reported greenhouse gas emissions associated with oil and gas activities subject to these regulations in Saskatchewan; (b) emissions reductions and other emissions reduction activities completed subject to these regulations; and (c) any additional information the minister considers appropriate. (2) The minister shall make the report mentioned in subsection (1) available on the ministry's website and in any other manner that the minister considers appropriate.	The updated annual report reflects the consolidation of technical requirements in Directive PNG036: Venting and Flaring Requirements.
N/A	Infractions 20.1 (1) No person shall contravene section 6. (2) Every person who contravenes section 6 may be subject to any compliance or enforcement measure authorized pursuant to the Act, including a penalty not greater than \$500,000.	Penalties for excess emissions have been eliminated. However, ER retains the right to charge an administrative penalty for contraventions of section 6.
PART 7 Coming into Force		
21 Coming into force	21 Coming into force	No change.
APPENDIX TABLE 1 Production Classes TABLE 2 Emissions Intensity Limit TABLE 3 Dollar Amounts (Administrative penalty)	REPEALED	With the repeal of sections 7-14 and 16-19.3 above, the intensity limits and penalty rate schedule listed in the Appendix are no longer necessary and are to be repealed.

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Proposed changes to Directive PNG036: Venting and Flaring Requirements

Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
1. Introduction 2. Definitions Associated gas: Gas produced from an oil well. Conservation: Recovery of associated gas for use as fuel for production facilities, other useful purposes (e.g. power generation), sale or beneficial injection into an oil or gas pool. Emergency flaring or venting: Emergency flaring or venting occurs when safety controls within the facility are enacted to depressurize equipment to avoid possible injury or property loss resulting from explosion, fire or catastrophic equipment failure. Examples of possible causes include pressure safety valve overpressure and emergency shutdown. Equipment component: A component of equipment that comes into contact with hydrocarbons and that has the potential to emit fugitive emissions. Flaring: The combustion of gas in a flare or incinerator. Non-associated gas: Gas produced from a gas well. Non-routine flaring or venting: Intermittent and infrequent flaring or venting. There are two types: planned and unplanned. Pneumatic devices: Devices powered by pressurized gas, used for maintaining a process condition such as liquid level, pressure, or temperature. This includes pneumatic pumps and pneumatic instruments (e.g., controllers, switches, transducers, and positioners). Planned flaring or venting: Flaring or venting where the operator has control over when and for how long it will occur and also has control over release rates. Planned flaring or venting results from the intentional depressurization	1. Introduction 2. Definitions Associated gas: Gas produced from an oil well. Conservation: Recovery of associated gas for use as fuel for production facilities, other useful purposes (e.g. power generation), sale or beneficial injection into an oil or gas pool. Emergency flaring or venting: Emergency flaring or venting occurs when safety controls within the facility are enacted to depressurize equipment to avoid possible injury or property loss resulting from explosion, fire or catastrophic equipment failure. Examples of possible causes include pressure safety valve overpressure and emergency shutdown. Equipment component: A component of equipment that comes into contact with gas-phase hydrocarbons and that has the potential to emit fugitive emissions. Facility: Any facility as defined in <i>The Oil and Gas Conservation Regulations, 2012</i> or any facility associated with a pipeline as defined in <i>The Pipelines Act, 1998</i>. Flaring: The combustion of gas in a flare or incinerator. Non-associated gas: Gas produced from a gas well. Non-routine flaring or venting: Intermittent and infrequent flaring or venting. There are two types: planned and unplanned. Pneumatic devices: Devices powered by pressurized gas, used for maintaining a process condition such as liquid level, pressure, or temperature. This	No Change. Clarifies that leak detection surveys need to be conducted only where gas is present. Clarifies that the requirements for facilities apply to facilities associated with pipelines.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
(purging) of processing equipment or piping systems. Planned flaring or venting may occur during pipeline blowdowns, equipment depressurization, start-ups, facility turnarounds, and well tests. Unplanned flaring or venting: Emergency or upset operational activities closely associated with protecting the integrity of the facility and protecting safety. The operator has no control over when these activities will occur. There are two types: upset and emergency. Upset flaring or venting: Upset flaring or venting occurs when one or more process parameters fall outside the allowable operating or design limits and flaring or venting is required to aid in bringing the production back under control. Upset flaring or venting may occur due to the production of off-spec product; the formation of hydrates; loss of electrical power; process upset; or operator error.	includes pneumatic pumps and pneumatic instruments (e.g., controllers, switches, transducers, and positioners). Planned flaring or venting: Flaring or venting where the operator has control over when and for how long it will occur and also has control over release rates. Planned flaring or venting results from the intentional depressurization (purging) of processing equipment or piping systems. Planned flaring or venting may occur during pipeline blowdowns, equipment depressurization, start-ups, facility turnarounds, and well tests. Unplanned flaring or venting: Emergency or upset operational activities closely associated with protecting the integrity of the facility and protecting safety. The operator has no control over when these activities will occur. There are two types: upset and emergency. Upset flaring or venting: Upset flaring or venting occurs when one or more process parameters fall outside the allowable operating or design limits and flaring or venting is required to aid in bringing the production back under control. Upset flaring or venting may occur due to the production of off-spec product; the formation of hydrates; loss of electrical power; process upset; or operator error.	
3. Governing Legislation	3. Governing Legislation	Minor changes to reference associated guidelines.
4. Applicability	4. Applicability	No change.
5. General	5. General	No change.
6. Oil Well and Oil Facility Venting and Flaring Requirements	6. Oil Well and Oil Facility Venting and Flaring Requirements	No change.
6.1 Venting Limit at Existing Oil Wells and Facilities This sub-section applies to oil wells and oil facilities licensed prior to January 1st, 2025. Unless the gas is vented to avoid serious risk to human health or safety arising from an emergency situation, the following limits apply:	6.1 Venting Limit at Existing Oil Wells and Facilities This sub-section applies to oil wells and oil facilities licensed prior to January 1, 2025. Licensees should prioritize conservation, followed by combustion, to reduce vent volumes wherever possible. If the gas is vented, additional requirements are outlined below.	Clarified that licensees are encouraged to implement non-venting alternatives wherever possible.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
• Prior to January 1st, 2025, oil wells and oil facilities that vent and flare a combined volume of gas greater than a daily average of 900 m3/day on a monthly basis must flare all non-conserved volumes of gas. • Effective April 1st, 2025, oil wells and oil facilities that vent and flare a combined volume of gas greater than a daily average of 500 m3/day on a monthly basis must flare all non-conserved volumes of gas. In the course of properly operating equipment according to the manufacturer’s instructions, gas may be vented from: • the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor; • pneumatic devices; or • flashing losses and breathing losses from storage tanks operating at low pressures.	Unless the gas is vented to avoid serious risk to human health or safety arising from an emergency situation, vent gas at the facility must be limited to 15 10³m³ per month. In the course of properly operating equipment according to the manufacturer’s instructions, gas may be vented from: • the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor; • pneumatic devices; or • flashing losses and breathing losses from storage tanks operating at low pressures. Effective January 1, 2035, total vent gas at the well or facility must be limited to 15 10³m³ per month. This limit includes all vented gas, including the previously exempt sources above, except for fugitive emissions.	To align with reporting requirements, vent limits switch from daily rate limits to total monthly vent limits. This change in requirement eliminates exempt sources from the vent limit by 2035. This implementation date is intended to provide adequate time to source necessary equipment or change operating practices to comply with the changes.
6.2 Venting Limit at New Oil Wells and Facilities This sub-section applies to oil wells and oil facilities licensed on or after January 1st, 2025. Unless the gas is vented to avoid serious risk to human health or safety arising from an emergency situation, or pressures or flow rate do not allow for the continued operation of properly installed destruction or conservation equipment, the following limits apply: • Oil wells and oil facilities that vent and flare a combined volume of gas greater than a daily average of 100 m3/day for any three-month consecutive period must flare all non-conserved volumes of gas. In the course of properly operating equipment according to the manufacturer’s instructions, gas may be vented from:	6.2 Venting Limit at New Oil Wells and Facilities This sub-section applies to oil wells and oil facilities licensed on or after January 1, 2025. At oil wells and oil facilities licensed after this date, gas may be vented only if it is the only feasible option. Licensees should prioritize conservation, followed by combustion, to reduce vent volumes. If venting is the only feasible option, additional requirements are outlined below. Unless the gas is vented to avoid serious risk to human health or safety arising from an emergency situation, or pressures or flow rate do not allow for the continued operation of properly installed destruction or conservation equipment, vent gas at the facility must be limited to 3 10³m³ per month.	Establishes venting as the least preferred gas management option at newly licensed oil wells and facilities and allows it only where it is the only feasible option. To align with reporting requirements, vent limits switch from daily rate limits to total monthly vent limits.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
- the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor; or - flashing losses and breathing losses from storage tanks operating at low pressures.	In the course of properly operating equipment according to the manufacturer’s instructions, gas may be vented from: - the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor; or - flashing losses and breathing losses from storage tanks operating at low pressures. Effective January 1, 2035, total vent gas at the well or facility must be limited to 3 10³m³ per month. This limit includes all vented gas, except for fugitive emissions, from routine and non-routine operations.	This change in requirement eliminates exempt sources from the vent limit by 2035. This implementation date is to give adequate time to source necessary equipment or change operation practices to comply with the changes.
6.3 Associated Gas Flaring Oil wells and oil facilities may flare in excess of 900 m3/day. Flaring activity of any volume must meet the requirements set out in Directive S-20. If flared volumes are greater than a daily average of 900 m3/day on a monthly basis and the flare is within 500 metres (m) of an occupied dwelling, public facility, or urban centre the gas must be conserved. The flare may be permitted if the following is obtained: - consent from occupant or residence within 500 m; or - approval from ER. Licensees must document attempts to obtain consent from all impacted parties before an application will be considered.	6.3 Associated Gas Flaring Flaring is permitted at oil wells and oil facilities if conservation is not economically feasible. Licensees must keep records to justify when gas is not conserved. These records must be kept for 12 months and made available to ER upon request. Effective January 1, 2027, all flare stacks where a pilot or auto-ignition device is not installed in accordance with Directive S-20 must be inspected at least once every two weeks to ensure that the flare is lit and operating as intended Effective January 1, 2030, new flare stacks installed at new facilities must be designed for at least 98% combustion efficiency. If flared volumes are greater than a daily average of 900 m3/day on a monthly basis and the flare is within 500 metres (m) of an occupied dwelling, public facility, or urban centre the gas must be conserved. The flare may be permitted if the following is obtained: - consent from occupant or residence within 500 m; or - approval from ER. Licensees must document attempts to obtain consent from all impacted parties before an application will be considered.	Introduces recordkeeping requirements to support the evaluation of conservation options. Introduces an inspection requirement for flare stacks that are not equipped with an auto-ignition device. This requirement helps prevent unintentional venting of gas from flare stacks. Introduces a minimum combustion efficiency requirement for new flare stacks installed at new facilities. All other flare stacks currently operating are unaffected by this requirement.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
	In addition to the above requirements, flaring activity of any volume must meet the requirements set out in Directive S-20.	
6.4 Discontinuation of Conservation Licensees must notify ER prior to discontinuing conservation. If applicable, the licensee must complete a facility licence amendment that reflects the operational changes.	6.4 Discontinuation of Conservation Licensees must justify that gas conservation is not economically viable prior to discontinuing conservation. If applicable, the licensee must complete a facility license amendment that reflects the operational changes. Licensees must keep records of economic evaluation for 12 months and must make them available to ER upon request.	Clarifies circumstances under which discontinuing gas conservation is acceptable. Removes notification requirement to simplify administrative requirements.
7. Gas Well and Gas Facility Venting and Flaring Requirement	7. Gas Well and Gas Facility Venting and Flaring Requirements	No change.
7.1 Gas Venting	7.1 Gas Venting	No change.
7.2 Gas Flaring	7.2 Gas Flaring	No change.
8. Leak Detection and Repair (LDAR) Requirements	8. Leak Detection and Repair (LDAR) Requirements	No change.
8.1 Application Facilities LDAR surveys must be completed at applicable facilities that produce or receive, or are expected to produce or receive, a combined volume of more than 60 10 ³ m ³ of gas annually. Applicable facilities are determined by facility subtype and include the subtypes listed in the table below: Prior to January 1 st , 2025:	8.1 Application Facilities LDAR surveys must be completed at applicable facilities that produce or receive, or are expected to produce or receive, a combined volume of more than 60 10 ³ m ³ of gas annually. Applicable facilities are determined by facility subtypes and include the subtypes listed below:	Outdated LDAR survey frequency tables have been eliminated and survey requirements going forward are updated to align with a risk-based approach to survey frequency.

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Existing Section/Wording			New Section/Wording			Explanation of Proposed Changes																																																																																																														
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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
8.2 LDAR Program Requirements Surveys must be completed at least 90 days after a previous survey. New facilities that report first gas production after July 1st must complete at least one survey that year. Eligible leak detection instruments must be operated and maintained in accordance with the recommendations, if any, of its manufacturer. Licensees must conduct a leak survey on all equipment components using one of the following eligible leak detection instruments: • a gas-imaging camera that is designed to detect pure methane gas emitted at a rate of 1.0 gram per hour or less under controlled laboratory conditions. When using gas-imaging cameras, the licensee should: • be within 1.5 to 3 m from the equipment being surveyed, depending on the size and accessibility of the equipment, except tank tops; or • be at the minimum distance required to view tank-top components. • an organic vapour analyzer that detects hydrocarbon gases at a concentration of 500 parts per million (ppm) when used in accordance with the United States Environmental Protection Agency’s (EPA) Method 21. Equipment components that are exempt from LDAR are: • those used on a wellhead at a site where there is no other wellhead or equipment except for gathering pipelines or a meter connected to a wellhead; • a pair of isolation valves on a transmission pipeline if no other equipment is located on the segment of the pipeline that may be isolated by closing the valves; and • those that would pose a serious risk to human health or safety by undergoing an inspection. A person that conducts leak surveys must have proper training and experience in: • the operation and maintenance of the leak detection instruments; • leak survey procedures; and	8.2 LDAR Program Requirements Surveys must be completed at least 90 days after a previous survey. New facilities that report first gas production after July 1st must complete at least one survey that year. Eligible leak detection instruments must be operated and maintained in accordance with the recommendations, if any, of its manufacturer. Licensees must conduct a leak survey on all equipment components using one of the following eligible leak detection instruments: • a gas-imaging camera that is designed to detect pure methane gas emitted at a rate of 1.0 gram per hour or less under controlled laboratory conditions. When using gas-imaging cameras, the licensee should: • be within 1.5 to 3 m from the equipment being surveyed, depending on the size and accessibility of the equipment, except tank tops; • be at the minimum distance required to view tank-top components. • an organic vapour analyzer that detects hydrocarbon gases at a concentration of 500 parts per million (ppm) when used in accordance with the United States Environmental Protection Agency’s (EPA) Method 21; or • other equipment or methods that are equally capable of detecting fugitive emissions. Equipment components that are exempt from LDAR are: • those used on a wellhead at a site where there is no other wellhead or equipment except for gathering pipelines or a meter connected to a wellhead; • a pair of isolation valves on a transmission pipeline if no other equipment is located on the segment of the pipeline that may be isolated by closing the valves; and • those that would pose a serious risk to human health or safety by undergoing an inspection	Increases flexibility and allows the use of alternative technologies that meet minimum detection standards. Introduces a risk-based exemption from LDAR survey requirements for facilities that vent all

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
data collection and reporting	Facilities that vent all produced gas, or that use produced gas as fuel and have no other gas destruction equipment on site, are exempt from LDAR survey requirements. A person who conducts leak surveys must have proper training and experience in: - the operation and maintenance of the leak detection instruments; - leak survey procedures; and - data collection and reporting	produced gas or use produced gas exclusively as fuel without on-site gas destruction equipment.
8.3 Alternative LDAR Program Requirements An alternative LDAR program must have an equivalent fugitive emissions reduction outcome as the LDAR program in section 8.2. The alternative LDAR program must address: - the operation of leak detection instruments (if applicable); - the inspection of leaks; and - the repair of leaks detected. ER must be notified and provided with supporting documents prior to conducting an alternative LDAR program. If ER is not satisfied with the outcomes of the alternative LDAR program, a standard LDAR program may be required.	8.3 Alternative LDAR Program Requirements An alternative LDAR program must have an equivalent fugitive emissions reduction outcome as the LDAR program in section 8.2. The alternative LDAR program must address: - the operation of leak detection instruments (if applicable); - the inspection of leaks; and - the repair of leaks detected. ER must be notified and provided with supporting documents prior to conducting an alternative LDAR program. If ER is not satisfied with the outcomes of the alternative LDAR program, a standard LDAR program may be required. Additional details on approved alternative LDAR programs may be made available in Guideline PNG041: Leak Detection and Repair Annual Reporting.	ER does not currently have any pre-approved alternative LDAR programs. If an alternative program is approved by ER, it will be made available in Guideline PNG041.
8.4 Repair If a leak is detected at a facility during a leak survey, the leak must be repaired: - within 30 days of detection; - if the repair requires the facility to be shut down, at the next turnaround for the facility; or	8.4 Repair If leak is detected at a facility during a leak survey, the leak must be repaired within 24 hours if the leak: - contains gas with H₂S concentration greater than 0.01 mol/kmol; - causes off-lease odours; - has potential to cause health or safety issues; or	Changes provide greater clarity regarding repair timelines and implement risk-based requirements for repairs.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
immediately if the leak contains gas with an H2S concentration greater than 0.01 mol/kmol or causes off-lease odours. If repairs are not possible within 30 days, licensees must keep a record of justification for late repair and the repair schedule. A gas release detected during a leak survey is not considered a leak if it is found in a concentration of less than 500 ppm.	is the result of an unlit flare stack or combustor. For all other leaks, if the leak rate is not quantified, then it must be repaired within 30 days of detection unless the repair requires the facility to be shut down. In this case, the repair can occur at the next planned shutdown at the facility. If the leak rate is quantified, leaks found with a flow rate less than 1 kg/hour must be repaired within 90 days of detection unless the repair requires the facility to be shut down. In this case, the repair can occur at the next planned shutdown at the facility. If repair timelines exceed the limits above, licensees must keep a record of justification for late repair and the repair schedule. A gas release detected during a leak survey is not considered a leak if it is found in a concentration of less than 500 ppm.	
8.5 Records and Reporting	8.5 Records and Reporting	Small change, wording in last paragraph to add “reporting content and submission”.
9. Venting of Non-Combustible or Inert Gas Mixtures	9. Venting of Non-Combustible or Inert Gas Mixtures	No change.
10. Temporary Well Flaring and Venting	10. Temporary Well Flaring and Venting	No change.
10.1 Temporary Flaring	10.1 Temporary Flaring	No change.
10.2 Temporary Venting	10.2 Temporary Venting	No change.
11. Gas-Driven Pneumatic Devices	11. Gas-Driven Pneumatic Devices	No change.
11.1 New Facilities	11.1 New Facilities	No change.

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Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes										
11.2 Existing Facilities As of January 1st, 2025, licensees must maintain an inventory of natural gas driven pneumatic devices installed at existing facilities. In accordance with the timelines specified in the table below, licensees must reduce either: - the total annual vented natural gas volumes from pneumatic devices at facilities licensed prior to January 1st, 2025; or - the total number of pneumatic devices venting natural gas at facilities licensed prior to January 1st, 2025. <table><tr><th>Date</th><th>Reduction from 2024</th></tr><tr><td>December 31st, 2025</td><td>25% reduction</td></tr><tr><td>December 31st, 2026</td><td>50% reduction</td></tr><tr><td>December 31st, 2027</td><td>75% reduction</td></tr><tr><td>December 31st, 2028</td><td>100% reduction</td></tr></table>	Date	Reduction from 2024	December 31st, 2025	25% reduction	December 31st, 2026	50% reduction	December 31st, 2027	75% reduction	December 31st, 2028	100% reduction	11.2 Existing Facilities For facilities licensed prior to January 1, 2025, licensees must: - maintain an inventory of natural gas-driven pneumatic devices installed at existing facilities; and - eliminate all natural gas-driven pneumatic devices by January 1, 2029. A natural gas-driven pneumatic device will be considered eliminated if vented gas is eliminated and gas from the devices is controlled through combustion or conservation.	This change retains the 2029 pneumatic device phase-out deadline for most facilities but removes the annual 25% reduction requirements to allow additional flexibility. Clarification added that combusted or conserved gas from pneumatic devices is considered eliminated.
Date	Reduction from 2024											
December 31st, 2025	25% reduction											
December 31st, 2026	50% reduction											
December 31st, 2027	75% reduction											
December 31st, 2028	100% reduction											
11.3 Exemptions If a pneumatic device that vents natural gas is needed to maintain safe operating conditions and no non-emitting alternatives exist, the pneumatic device is exempt from the requirements in sub-sections 11.1 and 11.2. The licensee must demonstrate that venting is required to maintain safe operations. Exempt devices must be identified with a visible tag.	11.3 Exemptions A natural gas-driven pneumatic device is exempt from sections 11.1 and 11.2 if: - the device is required to maintain safe operating conditions; or - no technically feasible non-emitting alternatives exist. Exempt devices must be clearly identified with a visible tag. Natural gas-driven pneumatic devices at facilities that are expected to be decommissioned before January 1, 2035, are exempt from the elimination requirement. If the facility remains in operation after this date, all remaining pneumatic devices must be eliminated. All pneumatic devices that are not eliminated by January 1, 2029, must be included in the pneumatic device inventory submitted to ER.	Paragraph is reorganized for clarity. Introduces an exemption for marginal facilities to allow for continued usage of gas-driven pneumatic devices beyond 2029 if the facility is expected to be decommissioned by 2035.										
11.4 Annual Reporting	11.4 Annual Reporting											

SCHEDULE B

Existing Section/Wording	New Section/Wording	Explanation of Proposed Changes
Companies must submit a report annually for the purpose of establishing corporate-level natural gas driven pneumatic inventories to demonstrate compliance with the reduction requirements in section 11.2. Companies must submit an initial annual report by April 1st, 2025.	Companies must submit annual reports to establish corporate-level natural gas-driven pneumatic inventories and demonstrate compliance with reduction requirements in section 11.2 All pneumatic devices that are not eliminated by January 1, 2029, must be included in the pneumatic device inventory submitted to ER. Companies must submit an annual report by April 1 of each year.	Minor change in wording for clarity. Clarifies reporting requirements for pneumatic devices remaining after 2029.
12. Non-routine Requirements	12. Non-routine Requirements	No change.
12.1 Unplanned Non-routine	12.1 Unplanned Non-routine	No change.
12.2 Planned Non-routine	12.2 Planned Non-routine	No change.
12.3 Records	12.3 Records	No change.
13. Notification Requirements	13. Notification Requirements	No change.
13.1 Notification to Public	13.1 Notification to Public	No change.
13.2 Notification to ER	13.2 Notification to ER	No change.
Appendix 1	Repealed	This section will be moved into <i>Guideline PNG041: Leak Detection and Repair Annual Reporting</i> .

Venting and Flaring Requirements

Directive PNG036

October 2026

Revision 5.0

Governing Legislation:

Acts: *The Oil and Gas Conservation Act*

The Pipelines Act, 1998

Regulation: *The Oil and Gas Conservation Regulations, 2012*

Order: XX/XX

Record of Change

Revision	Date	Description
0.0	August 2018	Initial draft
1.0	December 2019	Approved first version
2.0	March 2020	Revised with LDAR requirements
3.0	June 2022	Clarification/alignment with Directive S-20; extension to pipelines and associated facilities governed by <i>The Pipelines Act, 1998</i> .
4.0	March 2024	Updated venting requirements and LDAR requirements; addition of pneumatic requirements.
5.0	October 2026	Updated venting, LDAR requirements, and pneumatic device requirements, and consolidated technical emissions management requirements.

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1. Introduction

Directive PNG036: Venting and Flaring Requirements (Directive PNG036) sets out the requirements for venting and flaring from all oil and gas wells, facilities and pipelines associated with *The Oil and Gas Conservation Act* and *The Pipelines Act, 1998*.

The purpose of Directive PNG036 is to manage venting and flaring in a responsible manner to ensure the protection of human health, public safety, property and the environment and to prevent fire or explosion.

Questions on Directive PNG036 can be directed to the Ministry of Energy and Resources (ER) Service Desk at 1-855-219-9373 or ER.servicedesk@gov.sk.ca.

2. Definitions

Associated gas: Gas produced from an oil well.

Conservation: Recovery of associated gas for use as fuel for production facilities, other useful purposes (e.g. power generation), sale or beneficial injection into an oil or gas pool.

Emergency flaring or venting: Emergency flaring or venting occurs when safety controls within the facility are enacted to depressurize equipment to avoid possible injury or property loss resulting from explosion, fire or catastrophic equipment failure. Examples of possible causes include pressure safety valve overpressure and emergency shutdown.

Equipment component: A component of equipment that comes into contact with gas-phase hydrocarbons and that has the potential to emit fugitive emissions.

Facility: Any facility as defined in *The Oil and Gas Conservation Regulations, 2012* or any facility associated with a pipeline as defined in *The Pipelines Act, 1998*.

Flaring: The combustion of gas in a flare or incinerator.

Non-associated gas: Gas produced from a gas well.

Non-routine flaring or venting: Intermittent and infrequent flaring or venting. There are two types: planned and unplanned.

Pneumatic devices: Devices powered by pressurized gas, used for maintaining a process condition such as liquid level, pressure, or temperature. This includes pneumatic pumps and pneumatic instruments (e.g., controllers, switches, transducers, and positioners).

Planned flaring or venting: Flaring or venting where the operator has control over when and for how long it will occur and also has control over release rates. Planned flaring or venting results from the intentional depressurization (purging) of processing equipment or piping systems. Planned flaring or venting may occur during pipeline blowdowns, equipment depressurization, start-ups, facility turnarounds, and well tests.

Unplanned flaring or venting: Emergency or upset operational activities closely associated with protecting the integrity of the facility and protecting safety. The operator has no control over when these activities will occur. There are two types: upset and emergency.

Upset flaring or venting: Upset flaring or venting occurs when one or more process parameters fall outside the allowable operating or design limits and flaring or venting is required to aid in bringing the production back under control. Upset flaring or venting may occur due to the production of off-spec product; the formation of hydrates; loss of electrical power; process upset; or operator error.

3. Governing Legislation

The requirements in this Directive are authorized under and supplemented by:

- *The Oil and Gas Conservation Act (OGCA)*
- *The Pipelines Act, 1998 (PA)*
- *The Oil and Gas Conservation Regulations, 2012*
- *The Oil and Gas Emissions Management Regulations*

Associated Directives:

- *Directive PNG001: Facility Licence Requirements*
- *Directive PNG017: Measurement Requirements for Oil and Gas Operations*
- *Directive PNG032: Volumetric, Valuation and Infrastructure Reporting*
- *Directive S-01: Saskatchewan Upstream Petroleum Industry Storage Standards*
- *Directive S-20: Saskatchewan Upstream Flaring and Incineration Requirements (Directive S-20)*

Associated Guidelines:

- *Guideline PNG041: Leak Detection and Repair Annual Reporting*
- *Guideline PNG051: Pneumatic Annual Reporting*

4. Applicability

Sections 5, 8, and 11-13 apply to all entities licensed under either the OGCA or the PA. Sections 6, 7, 9, and 10 apply only to entities licensed under the OGCA. Further limits on applicability may be specified in each section.

5. General

In addition to specific requirements for certain facilities set out in the following sections, no venting or flaring activities from any source may:

- cause an exceedance of the *Saskatchewan Ambient Air Quality Standards* administered by the Ministry of Environment; or
- cause off-lease odours.

No person shall vent any volume of gas that:

- contains H₂S in a concentration greater than 10 mol/kmol as measured at the source; or
- contains H₂S in a concentration greater than 0.01 mol/kmol as measured at the lease edge.

Licensees are required to conduct air dispersion modelling at a well or facility, in accordance with the *Saskatchewan Air Quality Modelling Guideline* (unless otherwise approved) when:

- licensing a well or facility where the gas being flared contains H_2S in a concentration greater than 10 mol/kmol; or
- ordered by ER.

ER may specify a limit for concentration of volatile organic compounds or other air contaminants that can be emitted into the air, where or when in the opinion of ER it is necessary to do so to protect the environment, property or public safety.

Investigations may occur as part of an ER inspection or may be triggered by public complaint(s) regarding any venting or flaring activity. After investigation, ER may require the licensee to:

- conduct an air quality investigation;
- install air quality monitoring equipment;
- conduct an air dispersion model;
- attempt to eliminate the air contaminants at their source;
- implement good housekeeping to minimize fugitive emissions;
- implement a reduced venting or flaring limit;
- flare the gas by means of alternate closed-flame combustion equipment;
- conserve the gas;
- shut-in the well or facility; or
- conduct any combination of the aforementioned requirements.

6. Oil Well and Oil Facility Venting and Flaring Requirements

The following sub-sections apply to associated gas from oil wells and oil facilities.

6.1 Venting Limit at Existing Oil Wells and Facilities

This sub-section applies to oil wells and oil facilities licensed prior to January 1, 2025.

Licensees should prioritize conservation, followed by combustion, to reduce vent volumes wherever possible. If the gas is vented, additional requirements are outlined below.

Unless the gas is vented to avoid serious risk to human health or safety arising from an emergency situation, vent gas at the facility must be limited to $15 \times 10^3 \text{m}^3$ per month.

In the course of properly operating equipment according to the manufacturer's instructions, gas may be vented from:

- the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor;
- pneumatic devices; or
- flashing losses and breathing losses from storage tanks operating at low pressures.

Effective January 1, 2035, total vent gas at the well or facility must be limited to $15 \times 10^3 \text{ m}^3$ per month. This limit includes all vented gas, including from the previously exempt sources above, except for fugitive emissions.

6.2 Venting Limit at New Oil Wells and Facilities

This sub-section applies to oil wells and oil facilities licensed on or after January 1, 2025.

At oil wells and oil facilities licensed after this date, gas may be vented only if it is the only feasible option. Licensees should prioritize conservation, followed by combustion, to reduce vent volumes. If venting is the only feasible option, additional requirements are outlined below.

Unless the gas is vented to avoid serious risk to human health or safety arising from an emergency situation, or pressures or flow rate do not allow for the continued operation of properly installed destruction or conservation equipment, vent gas at the facility must be limited to $3 \times 10^3 \text{ m}^3$ per month.

In the course of properly operating equipment according to the manufacturer's instructions, gas may be vented from:

- the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor; or
- flashing losses and breathing losses from storage tanks operating at low pressures.

Effective January 1, 2035, total vent gas at the well or facility must be limited to $3 \times 10^3 \text{ m}^3$ per month. This limit includes all vented gas, including from the previously exempt sources above, except for fugitive emissions.

6.3 Associated Gas Flaring

Flaring is permitted at oil wells and oil facilities if conservation is not economically feasible. Licensees must keep records to justify when gas is not conserved. These records must be kept for 12 months and made available to ER upon request.

Effective January 1, 2027, all flare stacks where a pilot or auto-ignition device is not installed in accordance with Directive S-20 must be inspected at least once every two weeks to ensure that the flare is lit and operating as intended.

Effective January 1, 2030, new flare stacks installed at new facilities must be designed for at least 98% combustion efficiency.

If flared volumes are greater than a daily average of $900 \text{ m}^3/\text{day}$ on a monthly basis and the flare is within 500 metres (m) of an occupied dwelling, public facility, or urban centre the gas must be conserved. The flare may be permitted if the following is obtained:

- consent from occupant or residence within 500 m; or
- approval from ER.

Licensees must document attempts to obtain consent from all impacted parties before an application will be considered.

In addition to the above requirements, flaring activity of any volume must meet the requirements set out in Directive S-20.

6.4 Discontinuation of Conservation

Licensees must justify that gas conservation is not economically viable prior to discontinuing conservation. If applicable, the licensee must complete a facility licence amendment that reflects the operational changes.

Licensees must keep records of economic evaluation for 12 months and must make them available to ER upon request.

7. Gas Well and Gas Facility Venting and Flaring Requirements

The following sub-sections apply to gas wells and gas facilities.

7.1 Gas Venting

Venting from a gas well or gas facility, including gas plants, is not permitted unless it is an emergency and a reasonable level of precaution has been taken to protect human health, public safety, property and the environment and to prevent fire or explosion.

In the course of properly operating equipment according to the manufacturer's instructions, gas may be vented from:

- the seals of a centrifugal compressor or from the rod packings and distance pieces of a reciprocating compressor; or
- pneumatic devices.

7.2 Gas Flaring

Flaring at a gas well or gas facility, excluding gas plants, is not permitted unless it is an emergency and a reasonable level of precaution has been taken to protect human health, public safety, property and the environment and to prevent fire or explosion.

Gas plants are approved to flare as per the conditions on the facility licence.

8. Leak Detection and Repair (LDAR) Requirements

For the purpose of limiting leaks from equipment components at applicable facilities, licensees must establish and carry out:

- an LDAR program that satisfies the requirements of Section 8.2; or
- an alternative LDAR program that satisfies the requirements of Section 8.3.

8.1 Applicable Facilities

LDAR surveys must be completed at applicable facilities that produce or receive, or are expected to produce or receive, a combined volume of more than 60 10³m³ of gas annually.

Applicable facilities are determined by facility subtypes and include the subtypes listed below:

Facility type	Facility subtype codes	Frequency
Sweet Multi-well Oil Batteries	321, 322, 326, 327	3x annually
Thermal Oil Batteries	344	
Multi-well Gas Batteries	361, 362, 363, 364	
Sweet Gas Plants	401	
Straddle and Fractionation Plants	406, 407	
Compressor Stations/Gas Gathering Systems	601, 621	
Single-well Oil Batteries	311, 325	1x annually
Sour Multi-well Oil Batteries	321, 322, 326, 327	
Paper Oil Batteries	313	
Single-well Gas Batteries	351	
Sour Gas Plants	402, 403, 404, 405	

8.2 LDAR Program Requirements

Surveys must be completed at least 90 days after a previous survey. New facilities that report first gas production after July 1 must complete at least one survey that year.

Eligible leak detection instruments must be operated and maintained in accordance with the recommendations, if any, of its manufacturer. Licensees must conduct a leak survey on all equipment components using one of the following eligible leak detection instruments:

- a gas-imaging camera that is designed to detect pure methane gas emitted at a rate of 1.0 gram per hour or less under controlled laboratory conditions. When using gas-imaging cameras, the licensee should:
 - be within 1.5 to 3 m from the equipment being surveyed, depending on the size and accessibility of the equipment, except tank tops;
 - be at the minimum distance required to view tank-top components.
- an organic vapour analyzer that detects hydrocarbon gases at a concentration of 500 parts per million (ppm) when used in accordance with the United States Environmental Protection Agency's (EPA) Method 21; or
- other equipment or methods that are equally capable of detecting fugitive emissions.

Equipment components that are exempt from LDAR are:

- those used on a wellhead at a site where there is no other wellhead or equipment except for gathering pipelines or a meter connected to a wellhead;
- a pair of isolation valves on a transmission pipeline if no other equipment is located on the segment of the pipeline that may be isolated by closing the valves; and
- those that would pose a serious risk to human health or safety by undergoing an inspection.

Facilities that vent all produced gas, or that use produced gas as fuel and have no other gas destruction equipment on site, are exempt from LDAR survey requirements.

A person who conducts leak surveys must have proper training and experience in:

- the operation and maintenance of the leak detection instruments;
- leak survey procedures; and
- data collection and reporting.

8.3 Alternative LDAR Program Requirements

An alternative LDAR program must have an equivalent fugitive emissions reduction outcome as the LDAR program in section 8.2.

The alternative LDAR program must address:

- the operation of leak detection instruments (if applicable);
- the inspection of leaks; and
- the repair of leaks detected.

ER must be notified and provided with supporting documents prior to conducting an alternative LDAR program. If ER is not satisfied with the outcomes of the alternative LDAR program, a standard LDAR program may be required.

Additional details on approved alternative LDAR programs may be made available in *Guideline PNG041: Leak Detection and Repair Annual Reporting*.

8.4 Repair

If a leak is detected at a facility during a leak survey, the leak must be repaired within 24 hours if the leak:

- contains gas with an H_2S concentration greater than 0.01 mol/kmol;
- causes off-lease odours;
- has potential to cause health or safety issues; or
- is the result of an unlit flare stack or combustor.

For all other leaks, if the leak rate is not quantified, then it must be repaired within 30 days of detection unless the repair requires the facility to be shut down. In this case, the repair can occur at the next planned shutdown at the facility.

If the leak rate is quantified, leaks found with a flow rate less than 1 kg/hour must be repaired within 90 days of detection unless the repair requires the facility to be shut down. In this case, the repair can occur at the next planned shutdown at the facility.

If repair timelines exceed the limits above, licensees must keep a record of justification for late repair and the repair schedule.

A gas release detected during a leak survey is not considered a leak if it is found in a concentration of less than 500 ppm.

8.5 Records and Reporting

Once annually, the licensee must submit a report containing the results of the LDAR program for all facilities for that year. If an alternative program is used, the licensee must also confirm the effectiveness of the program.

Reports must be submitted by April 1 of the following year. Further information on reporting content and submission may be found in *Guideline PNG041: Leak Detection and Repair Annual Reporting*.

9. Venting of Non-combustible or Inert Gas Mixtures

Releases of inert gases such as nitrogen, carbon dioxide and water vapour from upstream petroleum industry equipment or produced from wells may not have sufficient heating value to support combustion. These gases may be vented to atmosphere if the gas does not contain an H₂S concentration greater than 0.01 mol/kmol.

Alternatives to venting gas include flaring with sufficient fuel gas to ensure destruction of odorous compounds.

10. Temporary Well Flaring and Venting

Temporary well flaring and venting activities include well testing, well cleanup, and well completions.

10.1 Temporary Flaring

ER recommends licensees evaluate opportunities to use existing gas gathering systems prior to commencing well testing, well cleanup, or well completions. If using existing gas gathering systems is not possible, licensees must flare all gas if combustion can be sustained.

10.2 Temporary Venting

If combustion cannot be sustained, temporary venting is allowed subject to the following conditions:

- the gas does not contain an H₂S concentration greater than 0.01 mol/kmol; and
- the gas does not contain free hydrocarbon liquid.

11. Natural Gas-Driven Pneumatic Devices

This section applies to natural gas-driven pneumatic devices, including pneumatic instruments and pneumatic pumps.

11.1 New Facilities

Licensees must not vent from natural gas-driven pneumatic devices at facilities licensed on or after January 1, 2025.

11.2 Existing Facilities

For facilities licensed prior to January 1, 2025, licensees must:

- maintain an inventory of natural gas-driven pneumatic devices installed at existing facilities; and
- eliminate all natural gas-driven pneumatic devices by January 1, 2029.

A natural gas-driven pneumatic device will be considered eliminated if vented gas is eliminated and gas from the device is controlled through combustion or conservation.

11.3 Exemptions

A natural gas-driven pneumatic device is exempt from sections 11.1 and 11.2 if:

- the device is required to maintain safe operating conditions; or
- no technically feasible non-emitting alternatives exist.

Exempt devices must be clearly identified with a visible tag.

Natural gas-driven pneumatic devices at facilities that are expected to be decommissioned before January 1, 2035, are exempt from the elimination requirement. If the facility remains in operation after this date, all remaining pneumatic devices must be eliminated.

11.4 Annual Reporting

Companies must submit annual reports to establish corporate-level gas-driven pneumatic device inventories and demonstrate compliance with the reduction requirements in section 11.2.

All pneumatic devices that are not eliminated by January 1, 2029, must be included in the pneumatic device inventory submitted to ER.

Annual reports must be submitted by April 1 of each year.

12. Non-routine Requirements

Non-routine flaring or venting may be carried out where a reasonable level of precaution has been taken to protect human health, public safety, property and the environment and to prevent fire or explosion.

All non-associated gas must be shut-in during facility outages.

ER requires notification of non-routine flaring or venting events as described in section 13.

12.1 Unplanned Non-routine

Licensees should evaluate and consider options to minimize non-routine flaring or venting during upsets and emergencies at oil and gas facilities.

12.2 Planned Non-routine

Licensees should evaluate and consider the implementation of appropriate measures to reduce associated gas flaring. Measures to be considered include:

- delivering associated gas to a nearby gas plant that is not on turnaround;
- scheduling maintenance at related oil facilities to coincide with the gas plant turnaround;
- communicating with well, battery and gas plant operators to ensure that planned non-routine associated gas flaring and venting are minimized; and
- curtailment of oil production to reduce associated gas production.

12.3 Records

The licensee must maintain a log of flaring and venting events and respond to public complaints in order to comply with reporting requirements. The logs must:

- Include information on complaints related to flaring and venting events and include how these complaints were investigated and addressed;
- Describe each non-routine flaring and venting incident and any changes implemented to prevent future non-routine events of a similar nature from occurring;
- Include the date, time, duration, gas source, H₂S concentration and volumes for each incident; and
- Be kept for a minimum of 12 months.

Flaring and venting records must be made available to ER upon request.

13. Notification Requirements

Licensees must notify ER and occupants of a dwelling, public facility, or urban centre located within 500 m that temporary or non-routine flaring or venting will occur, as detailed in the following sub-sections.

If a new dwelling or public facility is constructed or relocated within 500 m of an existing facility, the licensee must provide information to the new occupants about flaring or venting operations.

13.1 Notification to Public

Notification must be given to occupants of dwellings, public facilities, and urban centres within 500 m:

- 48 hours prior to commencement of planned non-routine flaring and venting events; or
- 48 hours following unplanned non-routine flaring and venting events.

Alternative notification requirements may be agreed upon between licensees and occupants within 500 m.

13.2 Notification to ER

Notifications must be given to ER through the Integrated Resource Information System (IRIS) for all temporary and non-routine flaring and venting events that last longer than 4 hours in duration. Notification must be given:

- 48 hours prior to commencement of planned non-routine flaring and venting events; or
- 48 hours following unplanned non-routine flaring and venting events.

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