Equivalency Report 2024

In fulfillment of reporting obligations under the Agreement on the Equivalency of Federal and British Columbia Regulations Respecting the Release of Methane from the Upstream Oil and Gas Sector in British Columbia

BCER
BRITISH COLUMBIA ENERGY REGULATOR

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1. Introduction

The Agreement on the Equivalency of Federal and British Columbia Regulations Respecting the Release of Methane from the Oil and Gas Sector in British Columbia, 2025 (Equivalency Agreement) came into force on March 12, 2025, with the publication of a final order under section 10(3) of the Canadian Environmental Protection Act (CEPA). As a result, the following federal regulations no longer apply in British Columbia (B.C.): Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector). The 2025 Equivalency Agreement replaced the previous 5-year agreement that came into effect in 2020.

Under the Equivalency Agreement, the provincial methane regulations, which were introduced in December 2018 through amendments to the Drilling and Production Regulation (DPR) under the Energy Resource Activities Act (ERAA), apply instead. These methane regulations came into force on Jan. 1, 2020, and are the primary policy instrument for achieving the Province's 2025 methane emissions reduction target of 45 per cent below 2014 levels. In 2025, additional amendments were made to the DPR. The 2025 amendments are the primary policy instrument for achieving the Province's 2030 methane emissions reduction target of 75 per cent below 2014 levels as well as making significant progress towards achieving the Province's target for near elimination of methane emissions by 2035.

The provincial methane regulations set emission limits on fugitive emissions and venting sources from B.C.'s upstream oil and gas industry. They include requirements for leak detection and repair (LDAR), pneumatic pumps and devices, compressor seals, glycol dehydrators, storage tanks, surface casing vents, and enhanced monitoring of flare stacks.

The 2025 amendments include requirements for the near elimination of venting emissions from new and modified facilities, interim thresholds to reduce venting from existing facilities, and near elimination of all venting emissions from facilities by 2035. The amendments increase the stringency of LDAR requirements, including the requirement for additional surveys at facilities with the highest leak rates, replacement of screening surveys with comprehensive surveys for active wells, new requirements for screening surveys at inactive wells, and requirements for fixed leak monitoring systems for controlled storage tanks.

The data and analysis provided in this report are for the 2024 reporting year.

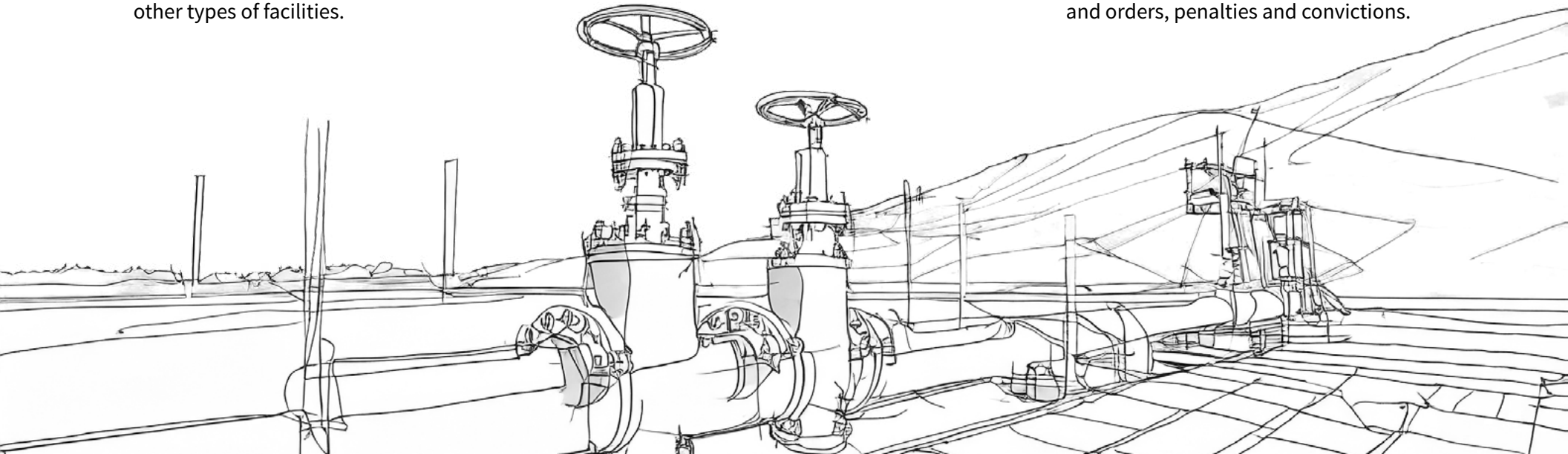
2. Summary of Reporting Obligations under the Equivalency Agreement

Section 3 of the Equivalency Agreement requires B.C. to provide Canada with information representing the previous year by no later than December 31 of each year. This document reflects reporting obligations under the Equivalency Agreement for the 2024 calendar year. Submission of the following information is required:

A. The number of existing facilities and wells that are subject to the DPR and, as of January 1 of the year data is being submitted for, the number of new facility and well permits issued in the preceding year and the number of closures of facilities and wells, with all information disaggregated by well type and facility classification (as specified in the DPR), and other types of facilities.

B. Information assessing the implementation and effectiveness of the DPR in reducing methane emissions (in CO_2e), including the methodology, analysis undertaken and results of calculations of emission reductions.

C. A summary of compliance verification activities and enforcement or sanctions measures applied to facilities and wells, segregated by well type and facility classification, including the number of inspections, verifications other than inspections, equipment repairs completed to comply with the DPR requirements, the number and type of non-compliance events and orders, penalties and convictions.



3. Part A: Facility and Well Counts

Facility Counts

Table 1 shows the overall number of natural gas and oil facilities in B.C. by year, disaggregated by facility status. Further to the explanatory notes provided, the number of permitted facilities increased by 124, and there were 133 facility closures from 2023 to 2024. From 2024 to 2025, the number of permitted facilities increased by 102 and there were 149 facility closures.

As some of the "Active" facilities are inactive, suspended, or removed, the British Columbia Energy Regulator (BCER) continues to work with permit holders to update and correct the status of their facilities. In addition, some active facilities exist for production reporting purposes only and do not correspond to physical facilities. The data summarized in all tables in this report are for January 31 of each year to ensure consistent reporting of data.

Please note: well and facility statuses, as shown in Tables 1 and 2, are updated retroactively in the BCER databases so the counts are reflective of the moment the data is extracted from the database. The data in the tables were extracted on or about Oct. 1, 2025.

Table 1. Summary of Facility Status

Facility Status	Number of Facilities		
	2025	2024	2023
Active	6,566	6,627	6,680
Cancelled	12,157	12,145	12,141
Construction Complete	18	20	19
Inactive	812	828	802
Permit Approved	323	300	295
Removed	2,766	2,508	2,374
Suspended	1,176	1,281	1,312
Under Construction	76	83	45
Total	**23,894**	**23,792**	**23,668**

Notes:

- Linkages to Part A of the Equivalency Agreement:
  - Existing facilities denoted as "Active" facilities must undergo LDAR surveys when they are operating.
  - Facility closures include "Cancelled", "Inactive", "Suspended" and "Removed" statuses. Facilities with one of these statuses do not require LDAR surveys because they are no longer operating, never existed or no longer exist.
  - New facilities include "Construction Complete", "Permit Approved" and "Under Construction". As they are not operating yet, facilities with one of these statuses do not require LDAR surveys.
- Facilities receive a "Removed" status after the permit holder submits a "Remove Facility" notice of intent to the BCER indicating all equipment and associated piping have been removed from site.

Well Counts

Table 2 shows the overall number of wells in B.C. as of January 1 of each year, disaggregated by well status. Further to the explanatory notes, the number of well authorizations increased by 1,002 and there were 259 well closures from 2023 to 2024. From 2024 to 2025 the number of well authorizations increased by 1,025 and there were 427 well closures.

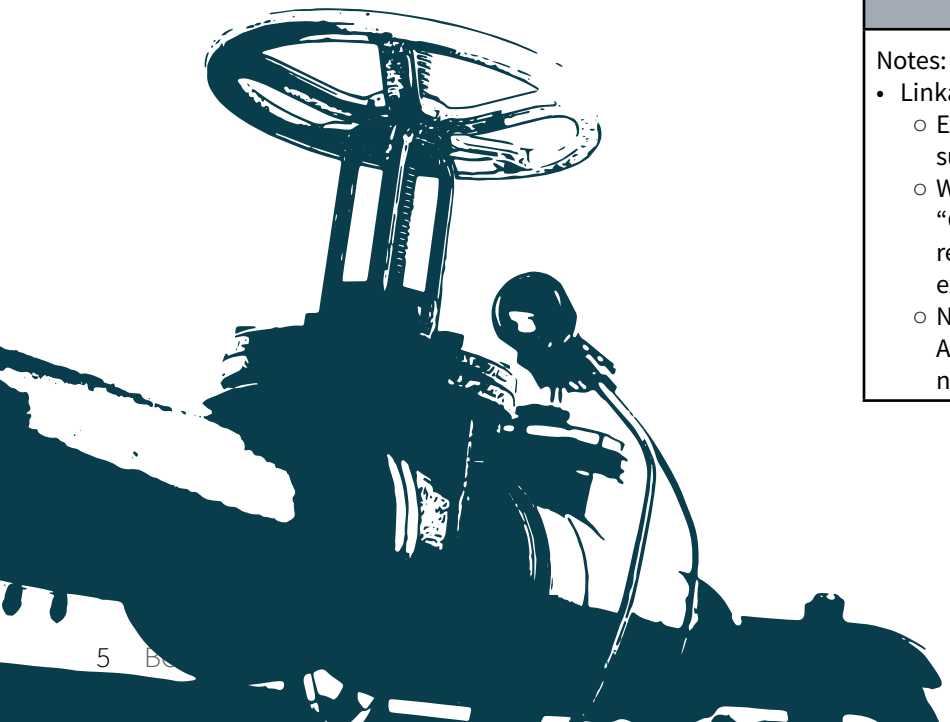


Table 2. Summary of Well Status

Well Status	Number of Wells		
	2025	2024	2023
Abandoned	11,238	10,785	10,235
Active	10,875	10,703	10,478
Cancelled	5,875	5,870	5,840
Inactive	1,277	1,093	1,244
Suspended	4,849	5,064	5,234
Under Development	308	309	187
Well Authorized	3,439	3,012	2,616
Total	**37,861**	**36,836**	**35,834**

Notes:

- Linkages to Part A of the Equivalency Agreement:
  - Existing wells include “Active” wells, and these must undergo LDAR surveys when they are operating.
  - Well closures include “Abandoned”, “Inactive”, “Suspended” and “Cancelled” statuses. Wells with one of these statuses do not require LDAR surveys because they are no longer operating, never existed or no longer exist.
  - New wells include “Under Development” and “Well Authorized”. As they are not operating yet, wells with one of these statuses do not require LDAR surveys.

4. Part B: Implementation, Effectiveness & Research

4.1 Assessing implementation

Implementation of the regulatory requirements is assessed by a variety of means. For requirements related to new equipment installations and new facility construction, compliance is assessed by engineering reviews of facility designs at the permitting stage, followed by facility start-up inspections and reviews of as-built drawings.

Surface casing vent flow requirements are monitored through field inspections of wells combined with testing and reporting requirements. Testing and reporting requirements for surface casing vent flows are set out in sections 41(2) to 41(4) of the Drilling and Production Regulation (DPR). If a surface casing vent flow test presents an immediate safety or environmental hazard, the permit holder is required to identify and implement mitigations which may include repair or decommissioning of the well, production, combustion or installation and monitoring of a burst plate or pressure safety valve.

Implementation of and compliance with (Leak LDAR requirements is monitored through annual submissions of data on Leak Detection and Repair (LDAR) surveys, combined with data on well and facility status, in addition to inspections for leaks during regular inspections of wells and facilities.

Compliance with venting requirements, including those associated with pneumatic devices and pumps, compressor seals and storage tanks, is addressed through targeted audits. In 2024, the BCER completed its second round of venting emissions audits.

4.2 Assessing effectiveness

The Province measures the effectiveness of its regulation through an oil and gas methane emissions modeling framework and the Provincial GHG Emissions Inventory. The Provincial modeling framework closely follows the federal methodology for modelling methane emissions from the upstream oil and gas sector. It also incorporates B.C.-specific data from industrial reporting and methane emission inventory research. The Provincial GHG Emissions Inventory is largely based on the National Inventory Report (NIR) produced by the federal government, which reports on emissions with a two-year delay.

In 2025, the Provincial modeling framework was updated to align with peer-reviewed information gathered using airborne remote sensing measurements and operator-reported emissions and production data. Using this updated information, the Province's modeling framework suggests B.C.'s methane emissions reductions would reduce 2025 methane emissions by over 50 per cent from 2014 levels under the current regulatory framework.

B.C. and Environment and Climate Change Canada (ECCC) have collaborated to revise the 2024 NIR's methane emissions estimation methodology to better incorporate B.C.-specific data for certain sources, like pneumatic devices. Recognizing B.C.'s low oil and gas sector emissions, the 2024 NIR stated that "B.C. has consistently been shown to have one of the lowest emissions intensities (emissions per unit of production) in Canada and internationally". Canada's 2025 NIR findings stated that B.C. had achieved a 51 per cent methane emissions reduction as of 2023, exceeding B.C.'s 2025 methane reduction target two years early.

4.3 Research

The BC Methane Emissions Research Collaborative (MERC) was established to reduce knowledge gaps related to methane emissions through research and information sharing. Membership includes representatives from the provincial and federal government, BCER, industry associations, Geoscience BC, and environmental non-governmental organizations.

In 2025, the MERC updated the three-year research plan which will inform the implementation and further improvement of B.C.'s methane regulations. Recently, the MERC has undertaken studies exploring methods for the measurement of methane emissions from controlled tanks and compressor exhaust with the intention of informing future policy and regulatory development. Additional information on projects either underway or completed under the MERC can be found on the BC Oil and Gas Research and Innovation Society website (www.bcogris.ca).

Building on the research completed through the MERC, the Province is supporting additional studies to identify and measure methane emission sources from the oil and gas sector. The Province is funding a three-year study to advance world leading measurement research done through Carleton University's Energy and Emissions Research Lab, including aerial remote sensing surveys across the upstream oil and gas sector. This work adds insights into individual methane sources that are critical to policy development and achieving B.C.'s methane reduction targets. Measurements completed in 2024 indicate B.C.'s oil and gas sector has a methane emission intensity (i.e. methane emissions as a percentage of natural gas produced) of approximately 0.2 per cent. This is a significantly lower intensity than those measured in Alberta and Saskatchewan.

The Province continues to consider additional methane detection and measurement research to support informed reporting on progress to targets, assessment of the methane regulation's efficacy, and identification of further methane reduction opportunities.

5. Part C: Compliance and Enforcement

The BCER's website contains comprehensive information on Compliance and Enforcement operations including documentation of manuals and procedures and information on Compliance and Enforcement activities, including reports, inspections and enforcement decisions.

5.1. Overview of BCER LDAR Compliance Framework

5.1.1. Compliance Awareness and Promotion

The BCER has encouraged compliance awareness and promotion in the following manner:

1. Stakeholder consultation activities related to the development and review of the regulations.
2. BCER methane webpage materials, technical guidance and information updates.
3. Direct engagement with permit holders on permit applications, data submission, inspections and audits.

5.1.2. Inspections Framework for LDAR

An important part of the BCER's Compliance Management System is proactive inspections of permit holder activities and documentation of alleged non-compliances. Inspection results, including any non-compliances identified, are tracked and shared with permit holders for action. Non-compliances identified through BCER inspections are referred to as "deficiencies" according to its Compliance Management System. If a deficiency is not addressed, the BCER may respond with escalated enforcement action (Figure 1).

The BCER conducted inspections of 3,698 facilities and 9,421 wells in 2024.

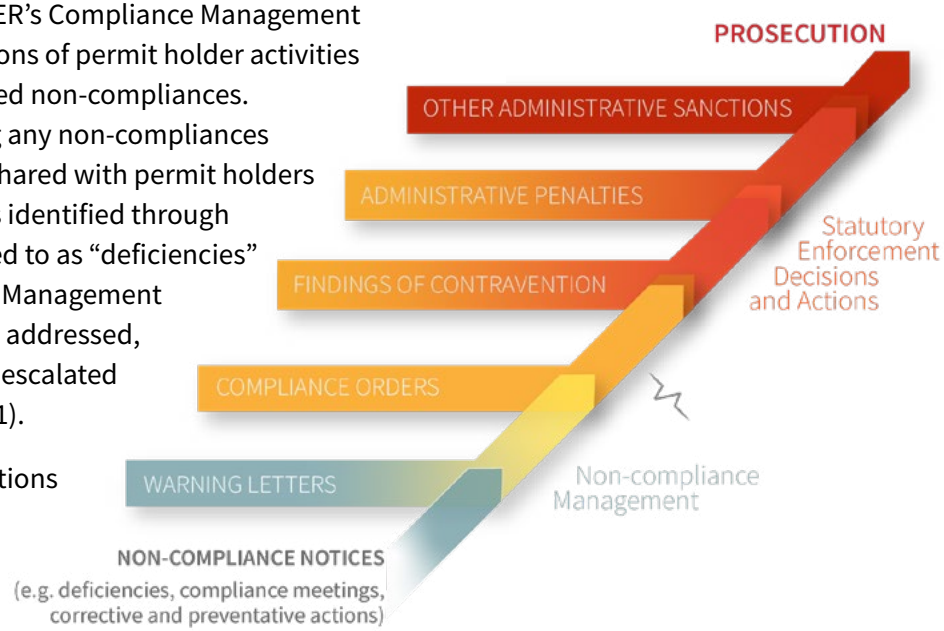


Figure 1. The BCER's graduated non-compliance management model

5.1.3. LDAR Submission Compliance Review

In addition to inspections, the BCER conducted an administrative review with respect to industry compliance with LDAR reporting requirements. Following the review, the BCER followed up directly with permit holders that had missing submissions.

For 2024 LDAR surveys, the compliance review focused on the following areas:

1. Assessing survey completion and operational status for each well and facility that is listed as having “Active” status.
2. Assessing compliance with the required number of surveys and minimum survey spacing for natural gas processing plants.
3. Assessing compliance with leak repair timelines.

Based on the findings of the compliance reviews, the BCER has initiated two enforcement investigations related to completion of required 2024 LDAR surveys and there is one ongoing enforcement investigation related to completion of required 2023 LDAR surveys. An enforcement investigation may result in a statutory enforcement decision or action, (Figure 1) depending on the outcome of the investigation.

In 2024, the BCER issued warning letters to three permit holders for failures to complete required 2023 LDAR surveys:

- Canadian Natural Resources Ltd.
- Sukunka Natural Resources Inc.
- Canlin Energy Corp.

An administrative penalty was issued to Petronas Energy Canada Ltd. for failing to ensure that emissions from a Surface Casing Vent Flow do not exceed 100 m^3/d.

Five orders were issued to permit holders:

- Three orders were issued to Pavilion Energy Corp. including one order to submit 2023 LDAR data, one order to mitigate emissions from a surface casing vent flow >100 m^3/d, and one order to repair the vent flow,
- One order was issued to Erikson National Inc. to submit 2023 LDAR data, and
- One order was issued to Canadian Natural Resources Ltd. to repair a casing failure associated with a surface casing vent flow >100 m^3/d.

5.2. BCER Inspections Data

Table 3 details the number of facilities inspected by BCER staff in 2024. Overall, 3,698 facilities were inspected. The BCER has documented procedures for detecting and reporting leaks and spills, including methane leaks. Leaks, spills and unauthorized emissions are a primary focus area of inspections.

Table 3. Number of Facilities Inspected by BCER Staff in 2024

Facility Type	Number Inspected
Battery Site	87
Compressor Dehydrator	78
Compressor Station	49
Disposal Station	52
Gas Dehydrator	5
Gas Processing Plant	39
Gas Sales Meter	10
Injection Station	11
LNG Facility	4
Oil Sales Meter	8
Processing Battery	28
Pump Station	3
Satellite Battery	111
Tank Terminal	3
Water Hub	9
Well Facility	3,201
Total	**3,698**


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Table 4 shows the number of wells inspected by BCER staff in 2024. In total, 9,421 inspections of wells were completed.

Table 4. Number of Wells Inspected by BCER Staff in 2024

Well Type	Number Inspected
Acid Gas	10
Gas	7,133
Multiple Gas	489
Multiple Oil and Gas	107
Multiple Oil	31
Oil	913
Undefined	413
Water	325
Total	**9,421**

Notes:
- "Multiple" refers to multiple completion events within the same well.
- An undefined well type is one where the primary product has not yet been determined or reported.

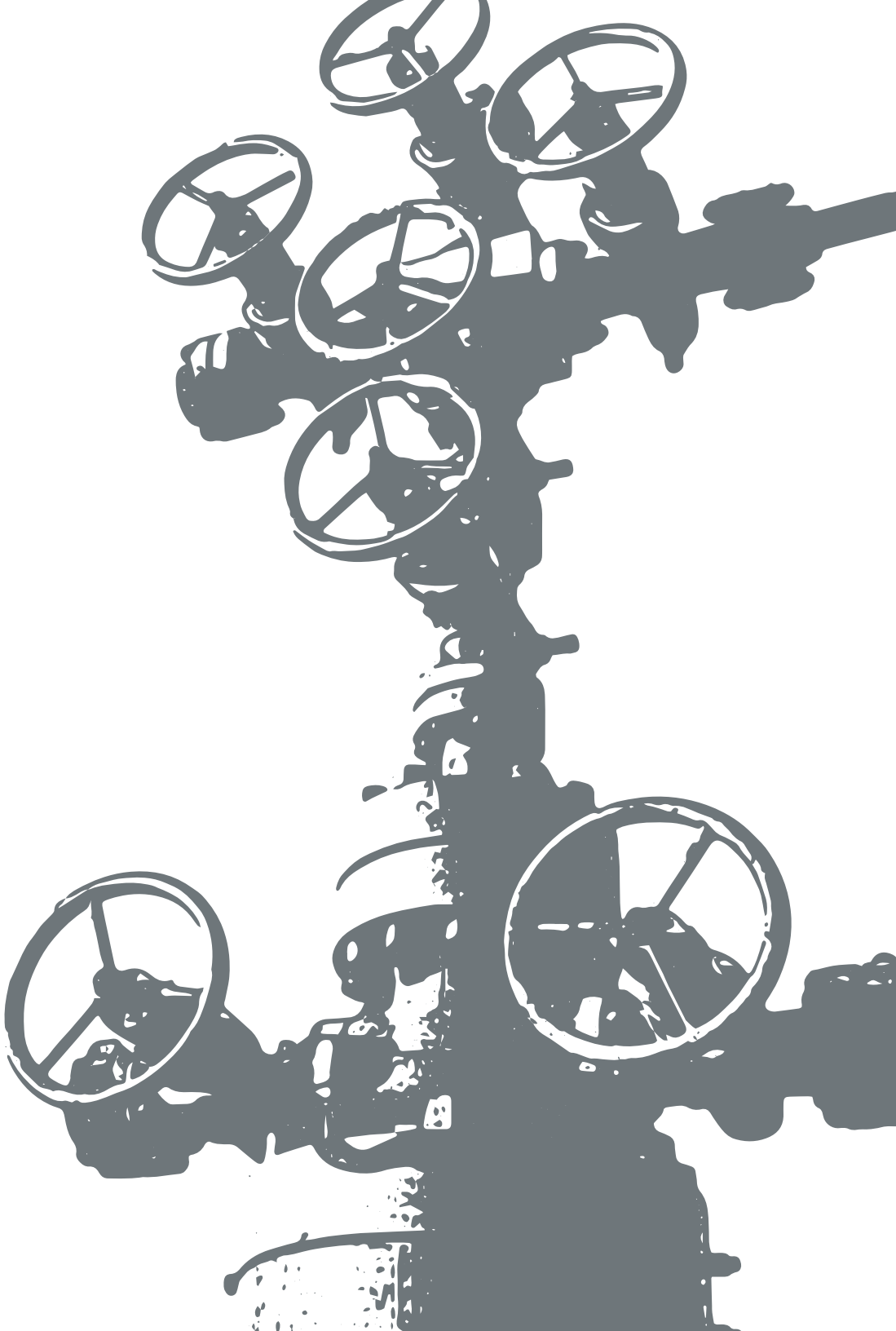

Table 5 details the number of deficiencies issued at facilities that may be related to methane emissions. All 162 deficiencies have been corrected. The number of reported deficiencies has reduced from previous years due to data improvements, allowing deficiencies that are not methane-related to be screened out.

Table 5. Summary of Deficiencies Issued at Facilities that may be Related to Methane Emissions

Facility Type	Number of Potential Methane-Related Deficiencies in 2024	
	Deficiencies	Deficiencies Corrected
Battery Site	4	4
Compressor Dehydrator	7	7
Compressor Station	1	1
Disposal Station	0	-
Gas Dehydrator	0	-
Gas Processing Plant	0	-
Gas Sales Meter	0	-
Injection Station	0	-
Natural Gas Liquids Fractionation Facility	0	-
Oil Sales Meter	0	-
Pipeline Gathering	0	-
Processing Battery	1	1
Satellite Battery	1	1
Tank Terminal	0	-
Test Facility	0	-
Water Hub	0	-
Well Facility	148	148
Total	**162**	**162**

Notes:
- "Deficiency" means alleged non-compliance under the BCER's inspection framework.
- Methane-related deficiencies include deficiencies that are or might be related to methane.

Table 6 details the deficiencies issued at wells that may be related to methane emissions. Of the 211 deficiencies identified, 208 were corrected. The remaining three deficiencies relate to minor wellhead leaks for Tallahassee Exploration Incorporated, a permit holder that is insolvent and unresponsive. It is expected that these leaks will be addressed once insolvency proceedings are complete and the wells are transferred to a new owner or designated as orphans.

Table 6. Summary of Deficiencies Issued at Wells that may be Related to Methane Emissions

Well Type	Number of Potential Methane-Related Deficiencies in 2024	
	Deficiencies	Deficiencies Corrected
Acid Gas	0	-
Gas	160	159
Multiple Gas	16	16
Multiple Oil and Gas	3	3
Multiple Oil	1	1
Oil	11	9
Undefined	19	19
Water	1	1
Total	**211**	**208**

Notes:
- "Multiple" refers to multiple completion events within the same well.
- The number of deficiencies does not match the number of deficiencies from well facilities in Table 5 because multiple wells can be associated with each well facility.
- An "undefined" well type is one where the primary product has not yet been determined or reported.
- "Deficiency" means alleged non-compliance under the BCER's inspection framework.
- Methane-related deficiencies include deficiencies that are or might be related to methane.


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5.3. Industry Compliance Data Based on Analysis of LDAR Submission Data

5.3.1. Survey Methods Conducted by Industry

Table 7 details the LDAR surveys reported by industry at facilities in 2024. Overall, 1,409 surveys were reported with 1,378 of the surveys using Optical Gas Imaging (OGI) technology. Surveys that involve the use of OGI technology are termed "comprehensive surveys" and those that do not involve the use of OGI technology are termed "screening surveys" which use the following methods: a soap solution bubble test and/or the senses of hearing, sight and smell.

Table 7. Summary of LDAR Surveys at Facilities

Facility Type	Number of LDAR Surveys		
	Total Surveys	Comprehensive Surveys (OGI-based)	Screening Surveys (No OGI)
Battery Site	163	162	1
Compressor Dehydrator	325	321	4
Compressor Station	200	183	17
Disposal Station	40	40	0
Gas Dehydrator	9	9	0
Gas Processing Plant	212	207	5
Gas Sales Meter	90	87	3
Injection Station	4	4	0
LNG Facility	5	5	0
Natural Gas Liquids Fractionation Facility	3	3	0
Oil Sales Meter	41	41	0
Processing Battery	74	74	0
Pump Station	11	11	0
Satellite Battery	183	183	0
Tank Terminal	12	11	1
Test Facility	1	1	0
Water Hub	36	36	0
Well Facility	Not Applicable	Not Applicable	Not Applicable
Total	**1,409**	**1,378**	**31**

Table 8 details the LDAR surveys reported by industry at wells in 2024 based on well fluid type. Overall, 8,874 surveys were reported with 5,940 (67 per cent) of them involving the use of OGI technology.

Table 8. Summary of LDAR Surveys at Wells

Well Type	Number of LDAR Surveys		
	Total Overall Surveys	Comprehensive Surveys (OGI-based)	Screening Surveys (No OGI)
Acid Gas	1	0	1
Gas	7,481	5,370	2,111
Multiple Gas	548	182	366
Multiple Oil and Gas	2	0	2
Multiple Oil	46	25	21
Oil	548	200	348
Undefined	133	128	5
Water	115	35	80
Total	**8,874**	**5,940**	**2,934**

Notes:
- "Multiple" refers to multiple completion events within the same well.
- An "undefined" well type is one where the primary product has not yet been determined or reported.

5.3.2. Leak Detection and Repair Data

Table 9 summarizes leaks detected and their repair status at facilities, at the time of the 2024 data submission. In total, 3,797 leaks were identified and 3,028 (80 per cent) of the detected leaks were reported as repaired at the time of data reporting. Leak repair rates at the time of reporting remained steady as compared with 2023. The regulation requires leaks found at facilities to be repaired within 30 days unless the facility must be shut down to complete the repair, in which case the repair must be completed on or before the next turnaround.

In general, repair rates were higher at smaller facilities (batteries 90 per cent) and lower at larger, more complex facilities (gas processing plants 73 per cent) that are more likely to require facility shutdowns to complete repairs.

Table 9. Summary of Leak Detection and Repairs at Facilities in 2024

Facility Type	Number of Leaks Identified	Number of Leak Repairs Completed at the Time of Reporting	Number of Leak Repairs Not Completed at the Time of Reporting
Battery Site	112	100	12
Compressor Dehydrator	910	784	126
Compressor Station	428	365	63
Disposal Station	30	30	0
Gas Dehydrator	4	4	0
Gas Processing Plant	1857	1348	509
Gas Sales Meter	58	35	23
Injection Station	0	0	0
LNG Facility	10	8	2
Natural Gas Liquids Fractionation Facility	4	4	0
Oil Sales Meter	1	1	0
Processing Battery	128	111	17
Pump Station	3	2	1
Satellite Battery	48	48	0
Tank Terminal	23	20	3
Test Facility	1	1	0
Water Hub	5	5	0
Well Facility	175	162	13
Total	**3,797**	**3,028**	**769**

Note: All leaks reported are included in the counts, regardless of their methane content.

Table 10 summarizes leaks detected and their repair status at wells, at the time of the 2024 data submission. In total, 1,402 leaks were identified, and 1,287 (92 per cent) of the detected leaks were reported as repaired at the time of data reporting. Repair rates at the time of reporting increased from 85 per cent in 2023 to 92 per cent in 2024.

The regulation requires leaks found at wells to be repaired within 30 days. Some leaks reported at wells may be associated with facility permits and are subject to the regulatory requirements for facility leak repairs. An assessment of compliance with leak repair timing requires a detailed audit and potentially a site inspection to assess the location and nature of the leak and operational considerations for its repair.

Table 10. Summary of Leak Detection and Repairs at Wells in 2024

Well Type	Number of Leaks Identified	Number of Leak Repairs Completed	Number of Leak Repairs Not Completed
Acid Gas	0	0	0
Gas	1,233	1,134	99
Multiple Gas	79	77	2
Multiple Oil and Gas	0	0	0
Multiple Oil	1	1	0
Oil	85	75	10
Undefined	0	0	0
Water	4	0	4
Total	**1,402**	**1,287**	**115**

Notes:
- "Multiple" refers to multiple completion events within the same well and "solvent injection" refers to solvent injection for enhanced oil recovery.
- An "undefined" well type is one where the primary product has not yet been determined or reported.
- All leaks reported are included in the counts, regardless of their methane content.

A review of leak repair rates and timelines shows there are significant variations between permit holders with respect to the percentage of leaks reported as repaired and median leak repair timelines.

For wells, permit holders with median repair times of less than 30 days accounted for 1,188 of the reported leaks and had repaired 1,104 of these leaks (93 per cent repair rate). Overall, 73 per cent of leaks identified at wells were repaired within 30 days.

For facilities, permit holders with median repair times of less than 30 days accounted for 2,694 of the reported leaks and had repaired 2,231 of these leaks (83 per cent repair rate). Overall, 49 per cent of the leaks identified at facilities were repaired within 30 days.

5.3.3. LDAR Data Analysis

Table 11 summarizes the likelihood of a leak being detected during a survey, average leak volume per survey and proportion of leaks for each facility type. Five facility types accounted for 95 per cent of methane emissions from leaks: gas processing plant, compressor dehydrator, compressor station, battery site and processing battery.

Leaks associated with storage tanks accounted for 42 per cent of the total volume of leaks that were detected at facilities in 2024. Gas processing plants and compressor dehydrator facilities are the facility types most likely to have controlled storage tanks.

Table 11. Summary of Leak Detection Frequency and Volumes at Facilities in 2024

Facility Type	Proportion of Surveys With Leaks Detected (%)	Average Volume of Leaks Detected per Survey (m^3/h)	Proportion of Total Facility Leak Volume (%)*
Battery Site	28	0.2	2
Compressor Dehydrator	71	0.5	28
Compressor Station	62	0.2	5
Disposal Station	33	0.4	1
Gas Dehydrator	33	0.1	<1
Gas Processing Plant	87	0.5	58
Gas Sales Meter	6	0.1	<1
Injection Station	0	-	0
LNG Facility	33	0.1	<1
Natural Gas Liquids Fractionation Facility	100	0.1	<1
Oil Sales Meter	3	0.1	<1
Processing Battery	51	0.3	3
Pump Station	27	0.1	<1
Satellite Battery	12	0.1	<1
Tank Terminal	75	0.3	<1
Test Facility	100	0.2	<1
Water Hub	8	0.1	<1
Well Facility	11	0.3	3

*Total may not add to 100 per cent due to rounding.

5.3.4. Compliance Review Results

The compliance review addressed three focus areas:

1. Assessing survey completion and operational status for each well and facility listed as having active status.
2. Assessing compliance with the required number of surveys and minimum survey interval for natural gas processing plants. These facilities require three LDAR surveys per year and the minimum time interval between surveys is 60 days.
3. Assessing compliance with leak repair timelines.

For focus area one, consideration was given to:

- Paper and Alberta facilities – these facilities codes are created for production accounting purposes and do not correspond to physical facilities in B.C.
- Inactive, suspended or removed facilities – these facilities may have active status in the BCER database if the permit holder has not submitted a notice to demonstrate they are inactive and to update their operational status. These facilities were identified based on discussions with permit holders, BCER inspection information and a map review of connected wells, facilities and pipelines. For example, a facility with an active status associated with one or more decommissioned wells can be considered inactive.
- Well production data – monthly production reporting data for wells.
- Co-located wells and facilities – survey reporting may be missed for one or more wells or facilities if there are multiple wells or facilities located on a site. This issue is most prevalent on large, multi-well pads that straddle multiple surface coordinates such that all the wells or facilities on the site don't share the same NTS (National Topographic System) or DLS (Dominion Land Survey) location as applicable. These wells and facilities are identified by reviewing site identifiers and through discussions with permit holders.
- Identification of facilities that did not meet the minimum activity threshold to require an LDAR survey. These could only be identified through discussions with the permit holder.

The review determined 95 per cent of facilities and 97 per cent of wells that required at least one LDAR survey were surveyed in 2024. The BCER has initiated two investigations of permit holders with non-compliances in completing LDAR surveys.

Common reasons for not completing required surveys are as follows:

- Asset sale during the survey year – failure to coordinate with the previous owner or to communicate new assets with the LDAR service provider.

- Contract operator – lack of coordination between LDAR service provider and contract operator to ensure LDAR surveys are completed.
- Failure to survey wells or facilities that initiated production or were reactivated partway through the year.
- Access limitations at the time of survey. No follow-up when access has improved.
- Well or facility shut in prior to completion of required survey.

For focus area two, assessing compliance with completing the required number of surveys and minimum survey interval for gas processing plants included consideration of the following:

- Alberta facilities – these facilities process natural gas produced in B.C. and are assigned facility codes for production reporting purposes.
- Inactive, suspended and removed facilities – as noted in item one.
- Production data – gas processing plants submit monthly production reports. This information can be used to identify inactive facilities and partially inactive facilities for prorating LDAR surveys.
- The review determined 74 gas plants were active in 2024 and required leak detection and surveys.
- Seventy-one facilities required three surveys, two facilities required two surveys, while one facility required a single survey. Of the 74 facilities, 66 had the required number of surveys completed. Of 218 surveys required, 13 were missed for an overall compliance rate of 94 per cent.
- For the 58 gas plants reporting three surveys, only four surveys occurred within 60 days of a previous survey. There were 13 other instances of surveys occurring within 60 days of a previous survey; however, these took place at five gas plants where more than three surveys were reported and are therefore not indicative of a non-compliance.

For focus area three, assessing compliance with repair timelines is a complex task that includes confirming identified leaks are correctly attributed to well or facility permits. In the case of leaks associated with a facility permit, assessing compliance must consider if repair of the leak requires shutdown of the facility.

Table 12 summarizes leak repair data for well and facility surveys for 2022 to 2024. Follow-up with permit holders is ongoing at the time of reporting, with a focus on addressing permit holders with the lowest performance with respect to repair rates and timelines.

Table 12. Summary of Leak Repairs

	Leaks Repaired at time of Reporting (%)			Median Leak Repair Time (days)		
	2022	2023	2024	2022	2023	2024
Wells	91	85	92	6	7	7
Facilities	79	79	80	22	19	20

5.4. Surface Casing Vent Flows

There were three wells with surface casing vent flows that exceed the emissions threshold of 100 m^3/d reported in 2024:

- One well has been repaired.
- Pressure safety valves were installed on two wells to mitigate the emissions.

5.5. New Equipment Installations

Compliance for new equipment installations, including new compressors, new pneumatic pumps and pneumatic devices at new facilities, is assessed through the facility permitting process, facility startup inspections and through compliance reviews of as-built drawings. This process ensures compliance at the time of facility startup. In 2024, the BCER approved 81 new facility permits and 90 facility permit amendments.

5.6. Venting Compliance Audit

In 2024, the BCER completed a venting compliance audit focused on compliance with emissions requirements for pneumatic devices, reciprocating compressor seals and uncontrolled storage tanks. The audit included 20 permit holders including four permit holders of transmission and midstream processing operations, 14 producers, one utility and one natural gas storage project.

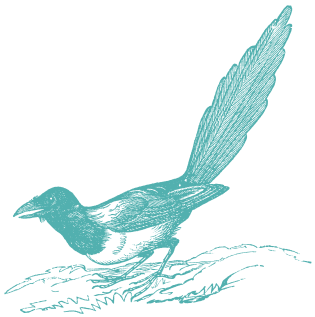
No non-compliances were identified with the two permit holders of transmission and midstream processing operations for compressors that exceed the individual emissions threshold.

Non-compliances were identified with eight of the 14 producers. This included one reciprocating compressor that exceeded the individual emission threshold for compressor seals and 27 pneumatic devices that exceed the emission threshold. There were no non-compliances identified with the emissions thresholds for uncontrolled storage tanks or the fleet average reciprocating compressor seals. Non-compliances with all of the permit holders have been addressed and data from audits will be used to target future compliance oversight activities to the highest risk permit holders and sites.

6. Continuous Improvement

6.1. Compliance Awareness and Promotion

The BCER continues to update technical guidance to clarify regulatory requirements and issue technical updates as needed. As there is now a high awareness of methane regulatory requirements that have been in effect for a few years, the BCER is focusing more on compliance activities and escalating enforcement where there is continued non-compliance.



6.2. Regulation Amendments

In 2024 the BCER amended the provincial methane regulations which were phased in beginning on Jan. 1, 2025. These changes were made as part of the Province's commitment to reduce emissions from the oil and gas sector by 75 per cent by 2030 compared to a 2014 baseline, and a near elimination of all industrial methane emissions (including oil and gas) by 2035. The focus is on key areas and sources of emissions, such as compressor seals, pneumatic pumps and devices, dehydrators, surface casing vent flows, and LDAR requirements. The regulation updates will require automated monitoring systems on equipment with the highest rate of leakage, increase the number of LDAR surveys required for large facilities, tighten venting limits for certain operations, and impose stricter design and operating standards for new and modified facilities. Provincial modelling indicates the 2030 B.C. methane reduction targets will be met with these regulatory amendments.

7. Exemption Requests

Permit holders can apply for exemptions to specific requirements of DPR section 41.1 under DPR section 4. Four exemption requests (totaling 12 separate leaks) to leak repair timelines were approved for leaks in 2024. One exemption was granted for a leak where the repair was unsuccessful, and a facility shutdown was required to complete the repair. The other three exemptions were granted due to delays with engineering and procurement, as there was not enough time to complete these tasks between the time the leak was identified and the next facility shutdown.

8. Summary

The 2024 Equivalency Report addresses annual reporting obligations outlined in the Equivalency Agreement between Canada and British Columbia, which came into force March 2025, replacing the previous agreement. Key findings and information from the 2024 report are as follows:

- The Provincial modeling framework and Provincial GHG Emissions Inventory indicate B.C. is on track to exceed its 2025 methane emissions reduction target.
- Canada's 2025 National Inventory Report stated that B.C. had achieved a 51 per cent methane emissions reduction as of 2023, exceeding B.C.'s 2025 methane reduction target of 45 per cent two years early.
- The BCER completed a venting compliance audit focused on emissions requirements for pneumatic devices, reciprocating compressor seals and uncontrolled storage tanks. The audit included 20 permit holders and focused on smaller producers. The audit identified 27 pneumatic devices exceeding the emission threshold and one reciprocating compressor that exceeded the individual emission threshold for compressor seals. The BCER has addressed the identified non-compliances with the permit holders.
- The BCER completed inspections of 3,698 wells and 9,421 facilities in 2024 and issued 373 potential methane-related deficiencies, of which 370 have been corrected. The remaining three deficiencies are associated with a permit holder that is insolvent and unresponsive, Tallahassee Exploration Incorporated. It is expected that these leaks will be addressed once insolvency proceedings are complete.
- The BCER initiated two enforcement investigations related to the completion of required 2024 LDAR surveys. The enforcement investigations are currently in progress. An enforcement investigation may result in a statutory enforcement decision or action.
- In 2025, regulatory amendments to achieve the Province's methane emission reduction target for the oil and gas sector of 75 per cent by 2030 compared to a 2014 baseline and make progress towards near elimination of all industrial methane emissions (including oil and gas) by 2035 came into effect.
- By furthering our understanding of methane emissions, emission reduction opportunities, and regulatory effectiveness, B.C. continuously improves focus on research and data collection. This includes supporting methane emissions research through the MERC and co-funding a study to advance world leading measurement research through Carleton University's Energy and Emissions Research Lab.

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BCER

BRITISH COLUMBIA **ENERGY REGULATOR**