# The Oil and Gas Emissions Management Regulations Annual Report 2024

Ministry of Energy and Resources

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# Letters of Transmittal

The Honourable Colleen Young
Minister of Energy and Resources

Office of the Lieutenant Governor of Saskatchewan

I respectfully submit the Annual Emissions Report for *The Oil and Gas Emissions Management Regulations*, pursuant to section 53.63 of *The Oil and Gas Conservation Act*, for the calendar year ending December 31, 2024.

The Honourable Colleen Young
Minister of Energy and Resources

Blair Wagar
Deputy Minister of Energy and Resources

The Honourable Colleen Young
Minister of Energy and Resources

Dear Minister:

I respectfully submit to you the Annual Emissions Report for *The Oil and Gas Emissions Management Regulations* for the calendar year ending December 31, 2024.

Blair Wagar
Deputy Minister of Energy and Resources

# Ministry's Responsibilities

The Oil and Gas Emissions Management Regulations (OGEMR) Annual Report is the responsibility of the Ministry of Energy and Resources. It provides background on Saskatchewan's upstream oil and gas emissions reduction program, fulfills legislated reporting requirements and highlights emissions reduction progress for the 2024 calendar year.

The Ministry upholds and enforces OGEMR to ensure that emissions reduction commitments outlined in *Prairie Resilience: A Made in Saskatchewan Climate Change Strategy* are met.

This report satisfies the reporting requirements outlined in section 20(1) of OGEMR, which was created pursuant to section 53.61 of *The Oil and Gas Conservation Act*. The Minister of Energy and Resources is required, through section 53.63(3) of the Act, to submit any report prepared in accordance with this section to the Legislative Assembly of Saskatchewan.

# Introduction

OGEMR came into effect in January 2019 to reduce greenhouse gas (GHG) emissions from the upstream oil and gas sector by 4.5 million (M) tonnes (t) of carbon dioxide equivalent ($CO_2e$) from 2015 levels by the end of 2025. OGEMR is part of several crucial initiatives:

- An equivalency agreement on methane emissions with the federal government of Canada. OGEMR provides flexible, results-based regulations that allow industry to achieve greater emissions reduction at a significantly lower cost than the federal equivalent;
- The Ministry of Energy and Resources' Methane Action Plan (MAP); and
- The Government of Saskatchewan's *Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy* (the Strategy).

The 2024 calendar year is the fifth year of required emissions reductions under OGEMR and the fifth year of associated annual emissions reporting.

### OGEMR Purpose

OGEMR was specifically designed to achieve a 40 to 45 per cent reduction in annual GHG emissions from venting and flaring activities in the upstream oil and gas industry from 2015 levels by 2025. To achieve this goal, OGEMR set a reduction target of 4.5 Mt of $CO_2e$.

In late 2020 Saskatchewan and Canada established an equivalency agreement regarding the reduction of methane emissions from the oil and gas sector. This agreement with Environment and Climate Change Canada (ECCC) was established for a five-year timeframe until December 31, 2024. A subsequent agreement with ECCC extends equivalency with federal methane regulations to December 31, 2029.

### OGEMR Scope

OGEMR was designed to focus on the largest emissions reduction opportunities. In the case of the Saskatchewan oil and gas sector, the largest source of emissions is from gas that is produced in association with oil production, also known as associated gas. There is more natural gas produced in Saskatchewan from oil wells than from dedicated gas wells. The natural gas industry is localized within the province and there are limited gas collection and processing opportunities, resulting in some of the produced associated gas being vented and flared.

Venting gas results in methane being released into the atmosphere, and flaring gas results in carbon dioxide.

The more associated gas a company produces, the greater potential they have to contribute emissions through venting activities. To determine if a company is subject to the regulations, OGEMR uses associated gas production to calculate each company's potential emissions

Both are considered GHGs and contribute to the data supplied in this report. To allow the consideration of both methane and carbon dioxide, the data is rolled up into units of $CO_2e$. Companies with potential emissions greater than 50,000 t $CO_2e$ on an annual basis are subject to requirements in OGEMR.

In 2024 but retroactive to January 1, 2023, OGEMR was amended to focus emissions reduction efforts on venting activities alone. Although reduction requirements in OGEMR pertain solely to vented gas for 2023 onward, amendments to OGEMR were designed to maintain the target set out in the Climate Change Strategy from both flaring and venting activities. Throughout this report, mentions of flared gas and flared gas emissions data are included where they relate to the province's Climate Change Strategy.

To calculate emissions, OGEMR applies emissions factors to industry-reported volumes of vented gas. The Ministry developed Saskatchewan-specific emissions factors by using average associated gas compositions for different production types and geographic areas in the province. These compositions consist of varying levels of methane and other hydrocarbon constituents. OGEMR calls these different areas Production Classes. Emissions factors are summarized in Appendix A in Table 1: Production Class Emissions Factors.

Each year OGEMR typically regulates 30 to 40 companies who contribute the majority of annual emissions from venting. A company's potential emissions determine the maximum emissions they would have if all their produced gas was vented to the atmosphere. However, OGEMR allows only a portion of each company's produced gas to be vented by setting company-level annual emissions limits. These limits decrease over time to ensure Saskatchewan's 2025 reduction targets are met. Most of the associated gas produced in Saskatchewan is conserved, if collection infrastructure is available, or used for a beneficial purpose on site as a type of fuel source, as summarized in Appendix B in Table 2: Saskatchewan Annual Associated Gas Utilization.

Different challenges exist for emissions reduction, such as low gas rates and limited access to gas collection infrastructure. OGEMR is designed to allow regulated companies the flexibility to determine where to implement emissions reduction projects to comply with their annual emissions limits. To reduce emissions, companies can convert vented gas to flare gas, tie in vented gas to conservation infrastructure or use vented gas for a beneficial purpose on site, such as generating electricity. This flexibility also translates to giving companies recognition for emissions reduction efforts that they have already undertaken.

## Progress on OGEMR Activities

### Provincial Emissions

Overall, in 2024 provincial emissions from venting and flaring at upstream oil facilities were 3.2 Mt CO2e. This is a 7.7 Mt, or 71 per cent, reduction from 2015 levels and a 0.5 Mt, or 13 per cent, reduction from 2023 levels. Emissions from venting alone were 1.8 Mt CO2e, which is a 6.7 Mt, or 79 per cent, reduction from 2015 levels and a 0.4 Mt CO2e, or 18 per cent, reduction from 2023 levels. The 2024 provincial emissions data is summarized in Appendix B in Table 3: 2024 Production Class Emissions from Flaring and Venting at Upstream Oil Facilities and in Table 4: Annual Provincial Emissions from Flaring and Venting at Upstream Oil Facilities.

Primarily, reductions came from installing combustion equipment at oil wells and facilities that were routinely venting gas, as well as using vented gas on site as fuel for a beneficial purpose such as power generation.

In Saskatchewan, the combined potential emissions[1] from gas produced in association with oil in 2024 were 36,648,356 t CO2e (36.6 Mt). OGEMR set emissions limits on regulated companies, restricting venting emissions to a maximum of 4,083,130 (4.1 Mt) t CO2e. The combined emissions[2] from venting activities at upstream oil facilities in 2024 were 1,786,016 (1.8 Mt)t CO2e.

### Company Level Emissions

In 2024 a total of 40 oil and gas companies had potential emissions greater than 50,000 t CO2e and were required to comply with their 2024 company-level emissions limit. All 40 companies had previously submitted an Emissions Reduction Plan for approval by the Ministry, which detailed their path to achieving emissions reduction targets out to 2025. The 40 companies that were subject to OGEMR represented 96 per cent of vented emissions from upstream oil facilities in 2024.

The company-level combined potential emissions and combined emissions, for the 40 companies OGEMR applied to in 2024, can be seen in Appendix B in Table 5: 2024 Company Level Annual Emissions.

[1] Combined potential emissions are the maximum emissions that could occur if all the associated gas produced in Saskatchewan were vented to the atmosphere.
[2] Combined emissions are what was emitted to the atmosphere from venting activities.

## Conclusion

Overall, Saskatchewan producers have taken strong action to implement emissions reduction measures that exceed the current requirements of OGEMR. Although venting and flaring emissions in 2024 were below the 2025 target outlined in the Strategy, the Ministry of Energy and Resources and the oil and gas industry will need to continue to decrease the industry's carbon footprint as development continues. The 2024 results continue to demonstrate Saskatchewan's regulatory leadership and the innovation of the upstream oil and gas sector.

# Appendix A – Calculation Overview

## Table 1: Production Class Emissions Factors

| Production Class | Flared Gas Emissions Factor $EF_f$ (tonnes $CO_2e/10^3m^3$) | Vented Gas Emissions Factor $EF_v$ (tonnes $CO_2e/10^3m^3$) | *Combusted Gas Emissions Factor $EF_f$ (tonnes $CO_2e/10^3m^3$) |
|---|---|---|---|
| **Lloydminster Heavy and Non-Heavy** | 2.53 | 15.94 | 1.83 |
| **Kindersley Heavy** | 2.68 | 15.65 | 2.00 |
| **Kindersley Non-Heavy** | 2.91 | 14.45 | 2.30 |
| **Swift Current Heavy and Non-Heavy** | 2.71 | 14.21 | 2.11 |
| **Estevan Heavy and Non-Heavy** | 3.23 | 9.84 | 2.88 |

*Combusted Gas Emissions Factors are applied to volumes of gas that are combusted in an enclosed combustor or incinerator to recognize the increased combustion efficiency.

# Appendix B – Emissions Data

## Table 2: Saskatchewan Annual Associated Gas Utilization

| Year | Produced Associated Gas ($10^3m^3$) | Flared (%) | Vented (%) | Conserved/Fuel Use (%) |
|---|---|---|---|---|
| **2015** | 3,649,873 | 21.0% | 16.2% | 62.8% |
| **2016** | 3,446,650 | 18.3% | 13.8% | 67.9% |
| **2017** | 3,631,742 | 17.0% | 14.7% | 68.3% |
| **2018** | 3,697,443 | 15.6% | 13.8% | 70.6% |
| **2019** | 3,659,504 | 14.7% | 12.7% | 72.6% |
| **2020** | 3,231,679 | 16.7% | 7.8% | 75.5% |
| **2021** | 2,923,658 | 19.3% | 6.5% | 74.2% |
| **2022** | 2,853,264 | 18.0% | 5.8% | 76.2% |
| **2023** | 2,910,469 | 17.2% | 5.2% | 77.6% |
| **2024** | 2,854,389 | 16.6% | 4.4% | 79.0% |

## Table 3: 2024 Production Class Emissions from Flaring and Venting at Upstream Oil Facilities

| Production Class | Flared Emissions (tonnes $CO_2e$) | Vented Emissions (tonnes $CO_2e$) | Total Emissions (tonnes $CO_2e$) |
|---|---|---|---|
| **Lloydminster Heavy and Non-Heavy** | 279,454 | 645,921 | 925,375 |
| **Kindersley Heavy** | 39,504 | 105,448 | 144,952 |
| **Kindersley Non-Heavy** | 247,663 | 734,723 | 982,386 |
| **Swift Current Heavy and Non-Heavy** | 98,270 | 64,580 | 162,850 |
| **Estevan Heavy and Non-Heavy** | 713,259 | 235,343 | 948,602 |
| **Total** | **1,378,150** | **1,786,015** | **3,164,165** |

*Production class and provincial emissions totals include all flaring and venting emissions including companies that were not regulated by OGEMR.

## Table 4: Annual Provincial Emissions from Flaring and Venting at Upstream Oil Facilities

| Year | Flared Emissions (tonnes $CO_2e$) | Vented Emissions (tonnes $CO_2e$) | Total Emissions (tonnes $CO_2e$) |
|---|---|---|---|
| **2015** | 2,351,414 | 8,521,717 | 10,873,131 |
| **2016** | 1,908,692 | 6,781,460 | 8,690,151 |
| **2017** | 1,858,593 | 7,538,394 | 9,396,986 |
| **2018** | 1,763,475 | 7,330,210 | 9,093,685 |
| **2019** | 1,637,222 | 6,697,650 | 8,334,872 |
| **2020** | 1,602,603 | 3,641,254 | 5,243,858 |
| **2021** | 1,665,998 | 2,738,447 | 4,404,444 |
| **2022** | 1,491,428 | 2,369,719 | 3,861,148 |
| **2023** | 1,452,912 | 2,169,733 | 3,622,646 |
| **2024** | **1,378,150** | **1,786,015** | **3,164,165** |

*Annual emissions totals include all flaring and venting emissions including companies not regulated by OGEMR.

## Table 5: 2024 Company Level Annual Emissions

| Regulated Company | Combined (Vented) Emissions (tonnes CO2e) | Potential Emissions (tonnes CO2e) |
|---|---|---|
| ALDON OILS LTD. | 362 | 154,899 |
| ANOVA RESOURCES INC. | 142 | 135,172 |
| BARREL OIL CORP. | 10,683 | 173,164 |
| BAYTEX ENERGY LTD. | 144,071 | 2,257,030 |
| BURGESS CREEK EXPLORATION INC. | 1,147 | 102,774 |
| CANADIAN NATURAL RESOURCES LIMITED | 172,469 | 1,428,965 |
| CARDINAL ENERGY LTD. | 19 | 135,344 |
| CENOVUS ENERGY INC. | 249,620 | 5,578,702 |
| FALLON ENERGY INC. | 11,611 | 115,818 |
| FIVE POINT ENERGY INC. | 5,291 | 435,985 |
| GEAR ENERGY LTD. | 36,549 | 285,165 |
| HUMMINGBIRD ENERGY INC. | 677 | 131,119 |
| INTREPID PETROLEUM LTD. | 15,771 | 107,064 |
| IPC CANADA LTD. | 17,800 | 339,300 |
| ISH ENERGY LTD. | 56,125 | 1,108,666 |
| LONGHORN OIL & GAS LTD. | 4,058 | 143,780 |
| LONGSHORE RESOURCES LTD. | 185 | 109,921 |
| LYCOS ENERGY INC. | 16,096 | 107,317 |
| MARLIN RESOURCES LTD. | 13,831 | 95,673 |
| MIDALE PETROLEUMS LTD. | 556 | 227,200 |
| NORTHERN HAWK ENERGY LTD. | 0 | 62,666 |
| NOVUS ENERGY INC. | 42,467 | 748,041 |
| PRAIRIE THUNDER RESOURCES LTD. | 29,258 | 151,409 |
| PROSPERA ENERGY INC. | 5,839 | 116,145 |
| RIFE RESOURCES LTD. | 14,711 | 322,629 |
| ROK RESOURCES INC. | 3,611 | 604,314 |
| SATURN OIL & GAS INC. | 193,263 | 2,304,014 |
| STRATHCONA RESOURCES LTD. | 60,448 | 1,264,530 |
| SURGE ENERGY INC. | 3,694 | 755,362 |
| TAKU GAS LIMITED | 858 | 73,757 |
| TEINE ENERGY LTD. | 136,329 | 4,001,524 |
| TRILAND ENERGY INC. | 0 | 60,866 |
| TUNDRA OIL & GAS LIMITED | 18,377 | 1,279,592 |
| VEREN INC. | 67,479 | 4,115,844 |
| VERMILION ENERGY INC. | 20,709 | 1,488,583 |
| VILLANOVA ENERGY INC. | 0 | 60,812 |
| WEST LAKE ENERGY CORP. | 478 | 143,802 |
| WHITECAP RESOURCES INC. | 348,665 | 4,929,932 |
| WOODLAND DEVELOPMENT CORP. | 3,174 | 312,157 |