

Methane Action Plan



Methane Action Plan:

Introduction

On December 4, 2017, the Government of Saskatchewan released *Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy*. This comprehensive approach allows Saskatchewan's economy to continue to grow and prosper while also making major reductions in greenhouse gas (GHG) emissions, which are driving the global challenge of climate change.

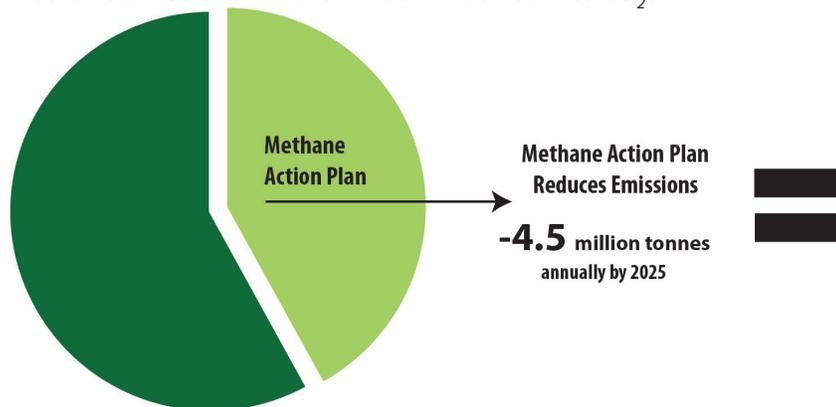
Prairie Resilience identifies the entire combined oil and gas sector – upstream (oil and gas production facilities) and downstream (oil and gas upgrading, refining, processing and pipelines) – as the largest source of GHG emissions in the province and commits to implementing a bold plan to reduce emissions in a manner that balances economic growth and industrial competitiveness.

Efforts to reduce GHG emissions in the oil and gas sector will be broadly covered by two separate initiatives: the *Output-based Performance Standards* for industrial facilities and the *Methane Action Plan*.

"Upstream Oil and Gas Industry" section of *Prairie Resilience*:

- introduce new made-in-Saskatchewan results-based regulations to reduce methane-based GHG emissions by 40 to 45 per cent of 2015 levels or between 4 and 4.5 million tonnes of carbon dioxide equivalent (CO₂e);
- reaffirm provincial regulatory jurisdiction over GHG emissions from the sector;
- provide each oil & gas operator the ability to efficiently prioritize emission reduction investments;
- introduce a new made-in-Saskatchewan strategy that supports the increased use of methane for heating, electricity production and other commercial applications; and
- introduce new made-in-Saskatchewan programs that support the adoption of new emissions management innovations and technologies in the sector.

*Methane Emissions in 2015 = 10.9 million tonnes CO₂e



Sources: Canada's National Inventory Report 1990-2015 (2017)
United States Environmental Protection Agency

*A Note on Methane and Associated Gas

By and large, when oil is produced it comes from a reservoir to the surface mixed with a combination of gases, which the industry refers to as gas produced in association with oil or “associated gas”. To avoid confusion, the term “methane” is used throughout the document in place of the less well-known term “associated gas”.

Associated gas emissions in 2015, the *Prairie Resilience* baseline year, were 10.9 million tonnes CO₂e .

Importance of the Upstream Oil and Gas Industry

The upstream oil and gas industry is the largest sector of the provincial economy, accounting for approximately 15 per cent of total Gross Domestic Product (GDP). The sector supports roughly 34,000 full-time equivalent jobs and has been the top provincial exporter nine of the last 10 years. In recent years, companies in the sector have invested between \$4 billion and \$6 billion annually and have provided over \$1 billion annually to the provincial budget through royalties, various taxes and other revenue streams.

The upstream oil and gas industry is the largest sector of the provincial economy, supporting roughly 34,000 full-time equivalent jobs.

The significant role that the upstream oil and gas industry plays in Saskatchewan’s economy, and in supporting quality of life and services in the province, means there is a great deal at stake for the people of Saskatchewan as

the sector transitions to a lower GHG emissions profile. *The Methane Action Plan* recognizes this by focusing on unique local conditions and challenges in ways that only a made-in-Saskatchewan approach can. This includes regulations and programs that align to the specific emission management, infrastructure and investment requirements in each of the province’s four major oil producing regions.

Conversely, transitioning Saskatchewan’s upstream oil and gas industry to a lower GHG emissions profile in a way that does not balance economic growth and industrial competitiveness will result in the worst possible outcome: a loss of investment to competing jurisdictions, job losses, a decline in oil production and exports, and tax base erosion. Moreover, investment moving from Saskatchewan to jurisdictions that have less stringent standards would do nothing to truly reduce global GHG emissions (so-called ‘carbon leakage’), but it would harm the quality of life and services in our province.

GHG Emissions in the Upstream Oil and Gas Industry

The upstream oil and gas industry has a unique GHG emissions profile compared to other major sectors and, for that reason, has a standalone section in *Prairie Resilience* entitled “Upstream Oil and Gas Industry”. Oil production has two sources of GHG emissions:

1. Methane emissions, which the *Methane Action Plan* addresses; and,
2. GHG emissions related to the use of fossil fuels to power and operate facilities (stationary fuel combustion) which the province’s *Output-based Performance Standards* for industrial facilities regulates.

Saskatchewan’s oil reservoirs are a combination of oil, brine, various types of sands and sediments, and different types of gases. When oil is extracted from the reservoir it typically comes to the surface as a mixture of oil, brine, sediment and associated gas [methane, butane, propane, ethane and carbon dioxide (CO₂)]. Methane released directly into the atmosphere is a type of GHG emission that is 25 times more potent than CO₂ over a 100-year timeframe.

Companies generally have three options for managing methane at the point of production: They can vent (release) the gas into the atmosphere; flare (burn) the gas; or, capture and make commercial use of the gas.

In terms of the relative GHG emissions profile, venting gas is the most potent form of the three options, flaring gas (i.e., burning it to transform it into CO₂) is less potent than venting; and capturing and commercializing is the least emitting. Capture and commercialization is not only the most desirable option from an environmental standpoint, but it also offers economic opportunities and job creation benefits.

Although methane capture and commercialization is the most desirable option, persistently low prices for natural gas across North America, combined with a lack of gas gathering infrastructure across most of Saskatchewan’s main oil producing regions, make the economics of methane capture and commercialization challenging when compared to the other alternatives.

The commitment in *Prairie Resilience* to introduce a strategy that will increase the use of methane in heating and electricity production (along with other commercial uses) is recognition that this option is the best pathway to reaching the lowest possible methane emissions in the sector. Furthermore, it allows Saskatchewan to simultaneously pursue broad economic goals such as growing oil and gas production, exports, investment, jobs, and the provincial tax base. The *Methane Action Plan* is the Government of Saskatchewan’s roadmap to responsibly guide the upstream oil and gas sector in a multi-year transition away from venting and flaring and towards capture and commercialization opportunities.



Made-in-Saskatchewan Regulations

On January 1, 2019, the Government of Saskatchewan introduced the *Oil and Gas Emission Management Regulations* (OGEMR), which will reduce methane emissions in the province by over 40 per cent between 2020-2025. OGEMR's mandatory emissions reductions are equivalent to a decrease of 4.5 million tonnes of CO₂e annually by 2025. Between 2020-2025, OGEMR will result in a cumulative emission reduction of 15.7 million tonnes of CO₂e, and a total of 38.2 million tonnes CO₂e between 2020-2030.

OGEMR is a results-based approach that focuses on achieving proven and verifiable emissions reductions without rigidly prescribing the reduction method or unnecessarily restricting the way to achieve the desired reductions. Results-based regulatory regimes are recognized around the world as best practice because they encourage and enable innovative new technologies and creative solutions to be developed and implemented quickly.

Oil and Gas Emission Management Regulations to reduce methane emissions in Saskatchewan by over 40 per cent between 2020-2025.

OGEMR's mandatory methane emissions reduction requirements are results-based at the company level, not prescribed on individual facilities or pieces of equipment. This provides companies the ability to strategically plan their emissions reductions across all their facilities so they can achieve the most cost-effective approach, which eliminates the prospect of being forced to prematurely shut down and strand assets before their natural end of life.

OGEMR has a built-in cap on provincial methane emissions that follows a scheduled path downward between 2020-2025; where it will remain beyond 2025.

As a result, this source of GHG emissions will not rise in Saskatchewan under OGEMR no matter what the volume of provincial oil production.

In addition to OGEMR, the Government of Saskatchewan will be enhancing emissions measurement and information reporting requirements as well as expanding facility inspections and auditing. Any company failing to comply with their OGEMR obligations will be subject to escalating financial penalties but will also still be required to make all regulated emissions reductions.

Additional details about OGEMR can be found on the Government of Saskatchewan's website at: <http://www.publications.gov.sk.ca/redirect.cfm?p=92804&i=109853>



Complementary Programs and Policies

In addition to OGEMR, the Government of Saskatchewan will also introduce a suite of new programs and policies that will increase and accelerate opportunities to capture and commercialize methane and, as a result, balance economic growth and industrial competitiveness considerations with real climate change action.

- SaskPower is launching the new *Power Generation Partner Program* (PGPP). PGPP will enhance the upstream oil and gas industry's ability to produce electricity for sale to SaskPower for projects that utilize methane from oil production as the primary fuel source.
- SaskPower and First Nations Power Authority have signed an agreement to source 20 megawatts of electricity from power generation projects that utilize methane from oil production as the fuel source and that are led by First Nations communities and businesses.
- SaskEnergy is launching the new *Associated Gas Conservation Program* (AGCP). AGCP will create more opportunities in the upstream oil and gas industry for the sale and movement of methane between oil production facilities for the purpose of on-site use.
- The Ministry of Environment is establishing a Technology Fund. Penalty payments under OGEMR will be deposited in the Technology Fund, but held separately from other payments made to the fund. The OGEMR portion of the fund will prioritize all types of methane capture and commercialization projects and other emissions management projects in the sector.
- The Ministry of Energy and Resources will launch the *Oil and Gas Processing Investment Incentive* (OGPII). OGPII will provide a royalty credit for all new and expanded large-scale value-added oil and gas facilities, including methane gathering, processing and power generation infrastructure, and carbon capture, utilization and storage (CCUS) projects.
- The Ministry of Energy and Resources will review the associated gas royalty regime to ensure it aligns with the province's goal to achieve greater volumes of methane capture and commercialization.
- The Ministry of Energy and Resources will launch the *Saskatchewan Petroleum Innovation Incentive* (SPII). SPII will provide a royalty credit for new-to-Saskatchewan commercial innovation projects that have the ability to better manage GHG emissions and all other types of environmental impacts. Projects that increase oil reservoir recovery rates or advance value-added processing or CCUS technologies in the sector will also be eligible.
- The Ministries of Energy and Resources, Environment, SaskPower and SaskEnergy will collaborate to create an integrated comprehensive *Geographic Information System* (GIS) that will encompass all relevant upstream oil and gas information collected by provincial regulatory bodies and all relevant infrastructure to support methane capture and commercialization projects.
- The Ministries of Energy and Resources, Environment, SaskEnergy and SaskPower will collaborate to establish *Industry-Utility-Government Joint Planning Areas* in regions of the province where significant volumes of methane venting and flaring occur. These planning areas will assist stakeholders in developing and executing methane capture and commercialization projects with a focus on overcoming unique local challenges.
- Beginning in 2021, the Government of Saskatchewan will release an annual progress report on all commitments, targets, programs and policies listed in the *Methane Action Plan*.

Implementation

OGEMR was introduced on January 1, 2019 and will require companies to submit methane emissions reduction plans by September 2019, before compliance obligations take effect on January 1, 2020.

Items in the Complementary Programs and Policies section will be introduced in 2019/2020.

The upstream oil and gas industry will make one of the largest contributions to provincial emission reductions with 4.5 million tonnes of CO₂e annually reduced by 2025 and further reductions occurring as part of the *Output-based Performance Standards* for industrial facilities program.

This also represents a considerable contribution towards Canada's commitment to reduce GHG emissions by 30 per cent by 2030.

Furthermore, the reductions will be made while leaving investment decisions to industry and by aligning complementary policies and programs that ensure competitiveness is not harmed.

Methane Action Plan Key Takeaways:

- ✓ A comprehensive approach that combines flexible results-based regulations with complementary policies and programs to protect industrial competitiveness and limit carbon leakage risks.
- ✓ Will reduce methane emissions by 4.5 million tonnes of CO₂e annually by 2025, and provincial methane emissions are then capped at that level. Total methane emissions reductions of 38.2 million tonnes CO₂e between 2020-2030.
- ✓ 10 new complementary programs and policies to support the provinces regulatory framework.
- ✓ A significant contribution to Canada's commitment under the Paris Agreement to reduce national GHG emissions by 30 per cent by 2030.

