

REPORT OF THE ECONOMIC IMPACT ASSESSMENT TRIBUNAL ON THE  
*OIL AND GAS EMISSIONS CAP AND METHANE 75*

September 3, 2024

The Government of Saskatchewan passed *The Saskatchewan First Act* on May 23, 2023. The Act came into force on September 15, 2023. It established the independent Economic Impact Assessment Tribunal to conduct economic impact assessments of Government of Canada initiatives that may cause harm to Saskatchewan projects, operations, activities, industries, businesses, or residents.

The Members of the Tribunal are:

- Michael W. Milani, K.C. Chairperson
- Dr. Janice MacKinnon, Vice-Chairperson
- Kenneth From
- Dr. Stuart Smyth
- Estella Petersen

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The following Appendices form part of this Report:

- Appendix 1 – Ministry of Energy and Resources – Additional Commentary
- Appendix 2 – Conference Board of Canada – Additional Commentary
- Appendix 3 – Navius Research Inc. – Additional Commentary

The following Schedules form part of this Report:

- Schedule 1 – Copy of Submissions
- Schedule 2 – List of Entities who received an invitation to make a submission to the Tribunal
- Schedule 3 – Navius Research Inc. - A Study to Review the Economic Impact of the Oil and Gas Sector Greenhouse Gas Emissions Cap and Enhanced Oil and Gas Methane Regulations on Saskatchewan dated August 13, 2024
- Schedule 4 - Navius Research Inc. - Methane 75 and Emissions Cap Economic Impact Assessment Tribunal Slides dated August 20, 2024

- Schedule 5 - The Conference Board of Canada Economic Impacts of a Greenhouse Gas Emissions Cap and Methane 75 on the Saskatchewan Economy dated August, 2024
- Schedule 6 - The Conference Board of Canada Economic Impact of Greenhouse Gas Emissions Cap and Methane 75 on the Saskatchewan Economy Slides dated July 30, 2024
- Schedule 7 - Ministry of Energy and Resources Slides dated May, 2024
- Schedule 8 - Ministry of Energy and Resources Slides dated July, 2024
- Schedule 9 - Ministry of Energy and Resources Slides dated August, 2024
- Schedule 10 - A Note on the Economic Impact of the Federal Oil and Gas Cap and Methane Regulations on the Saskatchewan Economy, dated August 27, 2024

## Introduction

1. In December 2023, the Government of Canada (the “**federal government**”) published the Regulatory Framework for an Oil and Gas Sector Greenhouse Gas Emissions Cap (the “**Emissions Cap Framework**”).<sup>1</sup> The limit on emissions described in the Emissions Cap Framework is referred to in this Report as the “**Emissions Cap**”. The federal government anticipates releasing draft Regulations in 2024.

2. On December 16, 2023, the federal government published the proposed regulation to reduce upstream oil and gas methane emissions by at least 75% from 2012 baseline emission levels, by 2030. The proposed regulation would amend existing regulations by expanding the current coverage and stringency levels of existing federal methane regulations. A regulatory impact analysis statement (the “**RIAS**”) was issued. The proposed regulation is referred to in this Report as “**Methane 75**”.

3. The Emissions Cap and Methane 75 are collectively referred to in this Report as the “**Federal Initiatives**”.

4. The Economic Impact Assessment Tribunal (the “**Tribunal**”) was created by *The Saskatchewan First Act*.<sup>2</sup> The Federal Initiatives were referred to the Tribunal.<sup>3</sup> The referring agency is the Saskatchewan Ministry of Energy and Resources (the “**MER**”).

5. The Tribunal was directed<sup>4</sup> to assess the following, in respect of the Federal Initiatives:  
(i) the estimated compliance cost from 2019 to and including 2030, and from 2030 to and

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<sup>1</sup> A Regulatory Framework to Cap Oil and Gas Sector Greenhouse Gas Emissions, Environment and Climate Change Canada, 2023 (Emissions Cap Framework).

<sup>2</sup> SS 2023, c 9.

<sup>3</sup> On April 11, 2024, notice of the referral was served on the Government of Canada. Each member of the Tribunal was appointed as the Panel to consider the referral. For ease of reference, only the term “Tribunal” is used throughout this Report.

<sup>4</sup> Order in Council 154/2024 dated March 28, 2024.

including 2050, (ii) the forecasted cumulative effect on oil and gas investment, production, and royalty/tax revenues in Saskatchewan between 2019 and each of 2030, 2040 and 2050, and (iii) the forecasted cumulative effect on the provincial economy that regulatory compliance would cause as of the end of each of 2030, 2040 and 2050.

6. Order in Council 154/2024 provided additional direction to the Tribunal:

1. The Tribunal shall identify and assess the nature and extent of economic harm and uncertainty to Saskatchewan residents and enterprises caused by the proposed federal regulatory framework known as the Oil and Gas Sector Greenhouse Gas Emissions Cap (the Cap) and the draft Regulations Amending the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) (Methane 75) to be made pursuant to the Canadian Environmental Protection Act, 1999.
2. The Tribunal shall examine against a baseline of existing emissions policies over the same period:
  - (a) the estimated compliance cost of the Cap and Methane 75 between 2019 up to and including 2030, when Methane 75 will drive the majority of emissions reductions;
  - (b) the estimated compliance cost of the Cap and Methane 75 between 2030 up to and including 2050, when the impacts of the Cap will become more pronounced;
  - (c) the forecasted effect of the Cap and Methane 75 on oil and gas investment, production, and royalty/tax revenues in Saskatchewan between 2019 and each of 2030, 2040 and 2050; and
  - (d) the forecasted cumulative effect of the Cap and Methane 75 on the provincial economy that regulatory compliance will cause as of the end of each of 2030, 2040 and 2050.

7. The Federal Initiatives overlap. Emissions covered by the Emissions Cap include methane emissions, and the design of the Emissions Cap considers reductions under existing and forthcoming methane regulations. The Emissions Cap will apply over and above any expected emissions reductions from such regulations, including those contemplated by Methane 75. This overlap has added to the complexity of the Tribunal's review.

8. At the Tribunal's request the MER obtained, assembled and analyzed data respecting Saskatchewan's oil and gas industry. The Tribunal determined that having additional, independent, assessments and economic impact modelling, focussed on Saskatchewan, would

assist the Tribunal. The Tribunal commissioned studies from two independent sources: Navius Research Inc. (“**Navius**”) and the Conference Board of Canada (the “**CBoC**”). Additionally, Dr. Jack Mintz was requested to assess the impact of the Federal Initiatives on the Saskatchewan economy, based on his review of the work of Navius and the CBoC.

9. The Tribunal solicited submissions from a broad range of organizations and entities (including the federal government) that the Tribunal determined might have information that could assist the Tribunal.

## Key Findings

10. The Tribunal discerned a number of key findings concerning the Federal Initiatives, in respect of compliance costs, and the impacts on (i) oil and gas production, (ii) gross domestic product (“GDP”), (iii) employment, (iv) government revenues and royalties, and (v) oil and gas investment. In the following chart, “B” stands for “billions” and “M” stands for “millions”.

KEY FINDINGS SUMMARY		
Impact Type	Impact Year	Negative Impact/Reduction
Oil and Gas Production	2030	3% - 41%
	2040	9% - 43%
	2050	7% - 52%
GDP	2030	4.2% - 6.7% *
	2040	1.1% - 7.1%
	2050	1.5% - 6.4%
	Cumulative	\$34.5B - \$230B
Employment	2030	90 - 17,000
	2040	3,916 – 29,700
	2050	12,785 - 34,000
Government Revenues	2030	\$26M - \$2B
	2040	\$297M - \$2B
	2050	\$1.1 - \$2B
	Cumulative	\$9.2B - \$43.3B
Royalty/Tax Revenue	2030	\$45M - \$500M
	2040	\$116M - \$500M
	2050	\$472M - \$500M
	Cumulative	\$3.2B - \$7.1B
Compliance Costs	2030	\$1.8B - \$8.2B
	2040	\$3.6B - \$26B
	2050	\$3.6B - \$33.2B
	Cumulative	\$8.9B - \$67.3B
Oil and Gas Investment	2030	\$0.4B - \$1.7B
	2040	\$0.7B - \$2B
	2050	\$0.3B - \$3.6B
	Cumulative	\$19.5B - \$45.8B

\*Navius does not have a direct comparable for 2030 and 2040, and therefore these two figures are from the CBoC and the MER.

## Oil and Gas Production

11. In respect of oil and gas production:

- The matters that are the subject of the Federal Initiatives are global issues. Canada is a small player. Reductions of greenhouse gas emissions (“GHG”) arising from



Saskatchewan oil and gas production will not address global issues if production simply shifts to another jurisdiction that does not have regulations as restrictive as the existing Canadian (and Saskatchewan) regulations.

- The Federal Initiatives will make Canada an outlier, in terms of regulatory impact on oil and gas. This may drive production away from Canada, with the result that it may take place in jurisdictions with reduced environmental and labour standards.
- The Federal Initiatives apply only to Canadian-produced oil, and not to imports of oil. If production of oil and gas decreases as a result of the Federal Initiatives, there will be an increase in imports.
- It is important that the Canadian regulatory regime be consistent with policies in the rest of North America. If that is not the case, Canada will have a diminished role in production, and there will be a flight of capital away from Canada.
- The federal government has chosen to apply the Federal Initiatives only to the oil and gas sector, rather than also to other sectors (such as transportation) that have similar or greater levels of GHG.
- Because the Federal Initiatives are directed at the oil and gas sector, the impacts to the Saskatchewan economy, employment, and government revenue are a direct result of the impact the Federal Initiatives will have on oil production in Saskatchewan.
- Oil and gas is typically the largest sector of Saskatchewan's economy. Any significant impact of the Federal Initiatives on oil and gas production in Saskatchewan will have a corresponding significant impact on Saskatchewan's GDP.
- The studies provided by the CBoC, Navius and the MER project oil and gas production cuts, by 2050, of between 7% and 52% from what would be the case if the Federal Initiatives were not imposed.
- The MER and the CBoC project steep production cuts of between 17% and 41% by 2030, as a result of more wells being shut-in<sup>5</sup> as a consequence of the compliance costs of Methane 75 abatement requirements.
- The Navius model is more optimistic as to the availability and affordability of technology adoption: little shut-in production occurs prior to 2040, after which more wells must shut-in because (i) of the increase in the stringency of the Emissions Cap and (ii) the application of mitigating technology has been exhausted.
- The Navius model is overly optimistic in terms of the availability of technological solutions for Saskatchewan's oil sector required to comply with Methane 75. Much of the technology required to be implemented is not commercially available, as indicated by the

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<sup>5</sup> Shut-in means the process of capping a well in event of cessation of production.

industry responses received. And the economics of adoption of technology (assuming that it is available) are suspect, particularly in the case of smaller operators.

- Saskatchewan’s oil sector is somewhat unique in that there are many single-well sites, and oil production is not co-located with natural gas production. One consequence is reduced feasibility of applying mitigation technology, as the sites are isolated and scattered. In addition, the grades of oil produced in Saskatchewan can vary greatly with location – indicating that a single solution is not transferrable to all producing areas, resulting in greater shut-in of production. The forecasts by CBoC and the MER as to production reductions apply a more realistic measure of the application of technology.
- Under the CBoC’s fixed cap scenario, production will rebound in 2050, assuming that the Emission Cap will stay constant. In the view of the Tribunal, the Emission Cap remaining constant is unlikely. While the federal government has yet to indicate the trajectory of the Emissions Cap after 2030, the regulatory framework, on balance, points to the sector being net zero by 2050.
- The MER, unlike the CBoC and Navius, assessed costs on a site-by-site basis, and may therefore have more accurately projected the feasibility of implementing technologies.

## GDP Impacts

12. In respect of GDP:

- The reduction in the growth of GDP is a macroeconomic impact, impelled by the Federal Initiatives’ negative impact on oil production.
- Each of the MER, the CBoC and Navius project large GDP impacts by 2050, ranging from 1.5% to 6.4%.
- The MER and the CBoC project large negative GDP impacts at 2030 of between 4.2% and 6.7% while Navius projects little GDP impact until after 2040. The results from the MER and the CBoC indicate that the Federal Initiatives would create a recession in Saskatchewan comparable to the impact that the global financial crisis had on the province (negative 5.3% in 2009).<sup>6</sup>
- The cumulative impacts of the Federal Initiatives on Saskatchewan’s GDP could be as high as \$230 billion by 2050.
- The cumulative GDP impacts are highly sensitive to the timing of the impacts. The MER and the CBoC forecast much higher cumulative impacts as a consequence of their projecting earlier shut-in of production than Navius. The Tribunal has concluded that the

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<sup>6</sup> Conference Board of Canada Economic Impacts of a Greenhouse Gas Emissions Cap and Methane 75 on the Saskatchewan Economy August 2024 (the “CBoC Study”), p. 21.

pace of shut-in is most realistically forecasted by the MER, including because the MER analyzed matters based on facility-specific data.

- Navius' conclusion as to GDP impact by 2050 is consistent with that of the MER and the CBoC, but because the Navius model projects a more initial gradual impact, and then a steep impact after 2040, Navius' cumulative GDP figure is lower.

## Employment and Population Impacts

13. As to impacts on employment:

- Saskatchewan's oil and gas sector currently employs approximately 26,000 people.
- The direct and significant impact the Federal Initiatives will have on production of oil in Saskatchewan will result in a direct and significant impact on Saskatchewan jobs.
- There will be not only direct job losses in the oil and gas sector, but also the indirect and induced impact on employment across the Saskatchewan economy. By 2050, this could mean as many as 34,000 fewer jobs economy wide.
- The job losses in the oil and gas sector may impact farmers directly, as 40% of income of Saskatchewan farm families is from off-farm employment, including employment in that sector.<sup>7</sup>
- The CBoC model projected the impact the job losses could have on the population forecast for the province. There could be 13,000 to 17,000 fewer people in Saskatchewan by 2030, and the impact on population impact would peak in 2045, by which time the population could be lower by as much as 52,000 from baseline projections<sup>8</sup>.
- Most job losses will occur in the areas where oil production currently takes place. To a large degree, those are rural, more remote areas of Saskatchewan. Job losses in those communities will have significant knock-on effects on local business that are not part of the oil and gas sector, which in turn will affect broader community initiatives.

## Government Revenue Impacts/Royalty Impacts

14. Concerning impacts on government revenue and royalties:

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<sup>7</sup> Statistics Canada, "The Daily", January 26, 2024.

<sup>8</sup> CBoC Study, p. 19.

- Each of the MER, the CBoC and Navius forecast negative impacts on royalty revenues and tax revenues, as well as overall government revenues, measured at each of 2030, 2040, and 2050.
- The MER estimates that the royalty tax impacts to Saskatchewan at 2030 are \$192 million to \$216 million, and rise to between \$472 million to \$627 million by 2050, with cumulative effects of between \$4.8 billion and \$7.1 billion.
- The MER included royalty/tax revenue impacts in its analysis, but did not assess broader government revenue impacts. As the MER has the facility level data and collects the royalties, the Tribunal's view is that the MER's assessment of the royalty/tax impacts is the most accurate (as compared to the assessments by the CBoC and Navius, respectively).
- The CBoC's model, which extrapolates government revenue beyond royalties, results in forecasts relatively close to those of the MER. The CBoC estimates a total negative government revenue effect of between \$1.1 billion and \$2 billion by 2030, and that the effect is constant through 2050, resulting in a cumulative impact of between \$22.1 billion and \$43.3 billion.
- Navius estimates total government revenue impacts of \$1.3 billion in 2050, again consistent with CBoC's analysis, but the cumulative impacts on government revenues are smaller at \$9.2 billion owing to the model used by Navius that projects more modest effects of the policies from 2025 to 2040.

## Oil and Gas Investment Impacts

15. In respect of investment in the oil and gas sector:

- The cumulative negative impacts on investments in the oil and gas sector range from \$19.5 billion to \$45.8 billion by 2050.
- From an industry and facility perspective, a dollar spent on mitigation technology is a dollar that is not available for production. Saskatchewan's conventional oil production will be disadvantaged by the Federal Initiatives, resulting in a disproportionate share of shut-ins occurring in Saskatchewan. This is due to conventional oil companies have higher sustaining capital needs than, for example, the oil sands.
- Lower production coupled with additional costs means fewer profits to reinvest in production. As such, in addition to the figures generated by each of the MER, the CBoC and Navius, there is a significant risk that the desired investment will not occur, particularly in an uncertain regulatory environment, which will amplify the cuts to production.

- There is the potential flight risk of capital, and sector activity, to jurisdictions that do not impose the types of additional costs that the Federal Initiatives impose.

## Compliance Costs

### 16. Concerning compliance costs:

- The Navius and CBoC models use top-down approaches to estimating compliance costs. This means that they used industry averages for all of Canada to estimate such costs. This approach did not capture the regional differences in the production of oil and gas in the province.
- Compliance cost estimates were the highest using MER's actual facility data, resulting in an estimated \$8 billion of costs by 2030 and cumulative costs of between \$59.7 billion and \$67.3 billion by 2050.
- The approach taken by the federal government does not recognize that additional methane abatement is more costly, and less likely to be occur, where the oil and gas sector has a make-up like Saskatchewan's.
- Compliance costs are exacerbated by compliance complexity. The Emissions Cap will apply an additional layer of complexity over and above existing federal requirements to reduce emissions. All emissions from Saskatchewan's oil and gas sector are already covered by federally recognized emissions reductions policies.

## Summary

17. Many of the foregoing matters are illustrated in the following chart: “B” represents “billion” and “M” represents “million”.<sup>9</sup>

COMPARISON OF IMPACTS PRESENTED TO THE TRIBUNAL				
		MER	CBoC	Navius
Oil and Gas Production	2030	17% - 19%	25% - 41% <sup>10</sup>	3% <sup>11</sup>
	2040	11% - 23%	18% - 43%	9%
	2050	39% - 52%	7% - 44%	38%
GDP	2030	4.2% - 4.3% (2017\$)	4.2% - 6.7% (2023\$) <sup>12</sup>	0.1% (2015\$) <sup>13</sup>
	2040	3.3% - 3.7% (2017\$)	3.9% - 7.1% (2023\$)	1.1% (2015\$)
	2050	4.0% - 4.3% (2017\$)	1.5% - 6.4% (2023\$)	3.1% (2015\$)
	Cumulative	\$104B - \$110B (2017\$) (2030 - 2050)	\$114B - \$230B (2023\$) <sup>14</sup> (2030 - 2050)	\$35.4B (2015\$) <sup>15</sup> (2025 - 2050)
Employment	2030	14,200 - 14,400 <sup>16</sup>	13,000 - 17,000 <sup>17</sup>	90 <sup>18</sup>
	2040	24,500 - 25,600	21,800 - 29,700	3,916
	2050	31,500 - 33,500	12,800 - 34,300	12,785
Government Revenues	2030	-	\$1.1B - \$2.0B (2023\$) <sup>19</sup>	\$26M (2023\$) <sup>20</sup>
	2040	-	\$1.1B - \$2.0B (2023\$)	\$297M (2023\$)
	2050	-	\$1.1B - \$2.0B (2023\$)	\$1.3B (2023\$)
	Cumulative	-	\$22.1B - \$43.3B <sup>21</sup> (2023\$) (2030 - 2050)	\$9.2B (2023\$) (2025 - 2050)
Royalty/Tax Revenues	2030	\$192M - \$216M <sup>22</sup> (nom.)	\$0.2B - \$0.5B (2023\$) <sup>23</sup>	\$45M (2023\$)

<sup>9</sup> The CBoC data was presented as a percentage decline, which was then converted to dollars.

<sup>10</sup> CBoC Study, Chart 7.

<sup>11</sup> Navius Research Inc., “A Study to Review the Economic Impact of the Oil and Gas Sector Greenhouse Gas Emissions Cap and Enhanced Oil and Gas Methane Regulations on Saskatchewan, August, 2024” (the “Navius Study”) Table 11.

<sup>12</sup> CBoC Study, p. 18.

<sup>13</sup> Navius Study, p. 57.

<sup>14</sup> CBoC Study, pp. 21, 22.

<sup>15</sup> Navius Study, pp. 18, 60. Navius’ cumulative GDP impacts are much smaller, despite a comparable effect in 2050, owing to much more modest impacts on the sector modelled from 2025 to 2040.

<sup>16</sup> Note that the MER’s employment impacts include direct, indirect, and induced effects.

<sup>17</sup> CBoC Study, p. 19.

<sup>18</sup> Navius Study, p. 51.

<sup>19</sup> The CBoC Study reports provincial government revenues in annual average terms so these numbers are fixed in each time period.

<sup>20</sup> Navius Study, p. 54.

<sup>21</sup> CBoC Study, pp. 21, 22.

<sup>22</sup> The MER only included royalty/tax revenue impacts and did not assess broader government revenue impacts.

<sup>23</sup> The CBoC Study reports royalty revenues in annual average terms so these numbers are fixed in each time period.

	2040	\$124M - \$255M (nom.)	\$0.2B - \$0.5B (2023\$)	\$116M (2023\$)
	2050	\$472M - 627M (nom.)	\$0.2B - \$0.5B (2023\$)	\$495M (2023\$)
	Cumulative	\$4.8B - \$7.1B (nom.) (2025 - 2050)	\$3.2B - \$11.4B <sup>24</sup> (2023\$) (2030 - 2050)	\$3.8B (2023\$) (2025 - 2050)
<b>Oil and Gas Investment</b>	2030	\$1.7B (2017\$) <sup>25</sup>	\$1.0B - \$1.7B (2023\$) <sup>26</sup>	\$0.4B <sup>27</sup>
	2040	\$1.6B - \$1.7B (2017\$)	\$1.1B - \$2.0B (2023\$)	\$0.7B
	2050	\$2.2B - \$2.4B (2017\$)	\$310M - \$1.7B (2023\$)	\$3.6B
	Cumulative	\$43.3B - \$45.8B (2017\$) (2030 - 2050)	\$25.1B - \$45.6B (2023\$) <sup>28</sup> (2030 - 2050)	\$19.5B (2023\$) (2025 - 2050)
<b>Compliance Costs</b>	Up to 2030	\$8.0B - \$8.2B (nom.) <sup>29</sup> (2025 - 2030)	\$2.5B - \$3.1B (2023\$) <sup>30</sup> (2027 - 2030)	\$1.8B (2023\$) <sup>31</sup> (2025 - 2030)
	2031 – 2040	\$23.7B - \$26.0B (nom.)	\$5.4B - \$6.3B (2023\$)	\$3.6B (2023\$)
	2041 – 2050	\$28.0B - \$33.2B (nom.)	\$5.4B - \$6.3B (2023\$)	\$3.6B (2023\$)
	Cumulative	\$59.7B - \$67.3B (nom.) (2025 - 2050)	\$13.2B - \$15.6B (2023\$) (2027 - 2050)	\$8.9B (2023\$) (2025 - 2050)

<sup>24</sup> CBoC Study, pp. 21, 22.

<sup>25</sup> The MER only looked at oil and gas sector investment as a function of increased sector compliance costs and did not attempt to estimate broader investment impacts across the economy.

<sup>26</sup> This figure was derived using raw data from the CBoC's model output.

<sup>27</sup> Navius Study, p. 50. Navius reports only on oil and gas sector investment. In 2030, investment is positive relative to the baseline owing to assumed significant investments in CCUS.

<sup>28</sup> CBoC Study, pp. 21, 22. The CBoC includes all investment impacts across the economy, including the investment impacts of emissions abatement projects (such as CCUS).

<sup>29</sup> The MER used a bottom-up facility by facility analysis to estimate compliance costs of Methane 75 and used per tonne costs for CCUS deployment, offset purchases, and emissions allowance purchases to estimate compliance costs of the Emissions Cap.

<sup>30</sup> CBoC Study, p. 3. The CBoC only estimated compliance costs for Methane 75 using cost data from the RIAS as well as the purchase of flexible compliance for \$50/tonne under the Emissions Cap. The CBoC did not attempt to evaluate compliance costs for additional capital investments emissions abatement under the cap (such as CCUS) as the CBoC deemed it too uncertain.

<sup>31</sup> Navius Study, p. 17. Navius does not include an assessment of total compliance costs associated with the Emissions Cap in the Navius Study, but does provide an estimated price for emissions allowances. These values only include only Methane 75 compliance costs from 2025 to 2050 at \$356 million /year.

## Other Key Observations

18. The matters in the Key Finding section of this Report are supplemented by the Tribunal's additional observations.

19. The cost to the Saskatchewan economy, and to Saskatchewan residents, of the Federal Initiatives are very significant. The Federal Initiatives will result in a very marked reduction in the production of oil in Saskatchewan. In the view of the Tribunal, if fully enacted as planned, the Federal Initiatives will result in negative economic consequences to Saskatchewan's economy and its population.

20. The Tribunal has concluded that modelling and analyses that assume that technology will be available at scale and at the required times are too optimistic. The responses the Tribunal has received from those in industry, and the data assembled by the MER, underscores the significant likelihood that the technology will not be so available. Equally importantly, uncertainty about availability may drive industry to produce elsewhere, where the same regulatory restrictions do not exist. There will be carbon leakage, including to jurisdictions without similar environmental safeguards as exist today in Saskatchewan.

21. The Tribunal views 'bottom-up' analyses applying facility by facility data, as being the most empirically robust. The Tribunal places a high degree of confidence in information based on wellhead production, as compared to simulations of national statistics.

22. The Federal Initiatives fail to adequately recognize or accommodate regional differences, as between Canadian provinces, as to the way in which oil and gas is produced. These differences go to the heart of the underlying issues, including as to whether Saskatchewan's oil and gas industry is capable of making the changes mandated by the Federal Initiatives within the times prescribed.



23. The technological solutions suggested by the federal government do not exist at scale, and Saskatchewan industry is not able to implement them in way that makes sense, from an economic and return on investment perspective. There are oil and gas wells in multiple areas of Saskatchewan, where the resource pools are much smaller in size as compared to those in Alberta (particularly at the Alberta oil sands). Among other matters, this makes the introduction of technology (assuming for the sake of the discussion that it is available) economically unfeasible in the case of many facilities.

24. The implicit suggestion that some of the technology described can be readily incorporated into all small operations is fanciful. An example is direct air capture (“DAC”). DAC involves the removal of carbon dioxide from the atmosphere, which is then stored permanently in materials or geological formations. DAC is a very expensive and energy intensive process, with only a handful of demonstration projects worldwide.

25. The application of technology to older facilities creates greater technological issues. For example, some of the facilities will be unable to make the required technological changes, without first upgrading their existing infrastructure. Extra expenditures would be incurred, to position those businesses to then pay the additional costs of complying with the requirements.

26. Industry will make rational investment decisions. If carbon capture, utilization and storage (“CCUS”) is available then an investment in that technology might take place if the returns cover the cost of capital. Such investment decisions will be made against the backdrop of potential increases in the carbon tax rate. If the rate increases, the likelihood of such investment decreases.

27. The cumulative effects of the Federal Initiatives, together with other federal endeavors such as the imposition of a carbon tax are all inextricably linked.

28. While the geology of Saskatchewan is amenable to CO<sub>2</sub> storage, the geography and sparse density of operations make the implementation of CCUS significantly more expensive, and a more protracted timeline would apply. There is a strong likelihood that CCUS cannot work in Saskatchewan, for small producers.

29. The Federal Initiatives are extremely prescriptive as to steps that industry must take to comply. The actual experts are those who work in the industry. They believe that the actions prescribed by the Federal Initiatives are unworkable. Allowing industry flexibility in achieving regulatory results is desirable.

30. The very prescriptive directions as to how compliance must occur are particularly prohibitive for smaller operations. The requirement of multiple inspections, reports, audits and verifications will cause disruption for large operations. The effects of such disruption and the challenges with compliance are multiplied, for smaller operations. A significant portion of Saskatchewan's oil and gas sector is comprised of smaller operations.

31. The Federal Initiatives presuppose that capital will in fact be available to implement changes (assuming, for the sake of discussion, that there is or will be technology that permits industry to do so). Accessing capital for infrastructure projects that are novel, or which may well not succeed, would be very challenging.

32. An approach that might potentially work in other circumstances, such as at the Alberta oil sands, is simply too optimistic for Saskatchewan. In the oil sands, most of the capital has already been invested (that is, it has been spent and recovered).

33. Firms in Saskatchewan's oil and gas industry has fewer financial resources available to participate in the cap and trade system that is a feature of the Emissions Cap, as compared to big operations. This in part due to the smaller size of many of the operations, and remoteness of Saskatchewan's facilities and the ongoing investments required to maintain or grow conventional resources. Everyone participant in the cap-and-trade system will compete for credits. It is unlikely that small operators will have the financial ability to participate in that competition, with success.

34. The shutting-in of oil and gas production will have dramatic effects on an economy like Saskatchewan's, where such production is extremely important to the overall economy. Those who

might equate the oil and gas industry with huge international operations ignore the reality of the Saskatchewan landscape.

35. There will be a significant financial impact on freehold mineral rights, rural municipalities and indigenous communities<sup>32</sup>.

- Approximately 35% of Saskatchewan's oil production occurs on privately owned (freehold) mineral lands. In the same way that government royalties are impacted by the production cuts, these freehold mineral owners would be affected.
- MER estimates that the impacts to freehold mineral rights holders could be up to \$154 million by 2030; \$210 million by 2040 and \$543 million by 2050.
- There are 153 rural municipalities in Saskatchewan that generate property tax revenues from oil and gas properties. For 34 of these municipalities this represents at least one-third of their total tax revenues.
- It is estimated that in 2023 \$150 million in property tax was collected by rural municipalities from the oil and gas sector.
- In 2023 there were 14,250 barrels of oil per day being produced on First Nations' mineral lands. The value of this production is estimated at \$330 million.
- Production impacts on the scale identified in this Report would have a significant impact on these communities.

36. Shutting-in of oil and gas production, particularly in an economy where that sector is crucial, is an unacceptable negative consequence. As the shutting-in will occur in provinces in addition to Saskatchewan, there is a possibility that (among the many potential negative results), Canada could become an importer of oil and gas. By any logical measure, that does not make sense, given our abundant resources. The use of Canada's natural resources, in a responsible way and in support of the Canadian economy, should be optimized.

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<sup>32</sup> MER Slides dated August, 2024, p. 2.

37. Although this Report necessarily focuses on Saskatchewan matters, as directed by the Order in Council, the consequences for the Canadian economy are significant. Each of Navius, the CBoC and the MER speak of the significant effects of the Federal Initiatives on Canada as a whole.

38. The preceding two parts of this Report set out the Tribunal's key findings, supplemented by other observations. The underpinnings of those matters are set out in the balance of this Report.

## The Tribunal's Process

39. The Tribunal members began their work by reviewing publicly available information including Methane 75, the RIAS, and the Emissions Cap Framework, and the published responses to the RIAS (which includes submissions from a broad spectrum of organizations, entities, and individuals, many of which addressed matters not within the mandate of the Tribunal).

40. Invitations to provide written submissions in respect of matters within the Tribunal's mandate were sent to a broad range of governmental and other entities. Schedule 1 lists those entities who received an invitation. Schedule 2 is a copy of the submissions.

41. The Government of Canada was invited to make a written submission to the Tribunal. The Honourable Steven Guilbeault, Minister of Environment and Climate Change Canada, responded by his letter of July 8, 2024. The Minister pointed to the publicly available material in the RIAS and in the Emissions Cap Framework. The Minister advised that the detailed information and modelling results that the Tribunal had requested had not yet been completed as they will be based on the actual regulatory design.

42. The Tribunal met with Navius, the CBoC and the MER to review the submissions made by each.

43. Each Tribunal member reviewed all documents (including all submissions), independently. Throughout the process, Tribunal members met periodically to discuss, as a group, their own comments and to share their observations. The Tribunal then prepared this Report.

44. Tribunal members were assisted by the economic modelling that was provided to it, and described elsewhere in this Report. The Tribunal recognized that the scope of all economic modelling is inherently limited, and that the results are influenced markedly by the assumptions made and variables applied. If any one or more of the assumptions is based on predictions that

are not accurate, then the conclusions and forecasts may be inaccurate. That is not a criticism of the economic modelling that was undertaken: it is simply a reality and limitation of such studies.

## Methane 75

45. Methane 75 was accompanied by the RIAS. A regulatory impact statement seeks to quantify, and (to the extent possible) monetize the incremental direct and indirect costs and benefits of a regulation, over time. It compares a baseline scenario of existing measures to a regulatory scenario that reflects key aspects of the proposed amendments.

46. The RIAS applied a cost-benefit analysis to quantify the incremental direct and indirect costs and benefits associated with Methane 75. It compares two scenarios: a baseline scenario (describing what would occur in the absence of Methane 75) and a scenario that assumes that Methane 75 is in place.<sup>33</sup>

47. Methane emissions from the oil and gas industry, either intentional or unintentional, occur primarily through venting, flaring and fugitive emissions.

48. The existing methane regulations<sup>34</sup> do not apply where the federal government and a province have entered into an equivalency agreement. Saskatchewan's equivalency agreement ends on December 31, 2024.

49. In 2021 Canada endorsed the Global Methane Pledge, which committed countries to reduce methane emissions by 30%, by 2030. Three options were considered by the federal government: (i) increasing the scope of the output based price system, (ii) including methane emissions reduction in the proposed Emissions Cap, and (iii) amending the existing regulations. Option (iii) was chosen.

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<sup>33</sup> The RIAS employs two economic models, the outputs from which form the basis of the cost benefit analysis: (i) the NextGrid Model, which projects electricity production infrastructure and usage subject to system reliability and resource availability and (ii) the Energy, Emissions and Economy Model for Canada, which is used by the Government of Canada for international reporting and forecasting emissions trends.

<sup>34</sup> Under the *Canadian Environmental Protection Act, 1999*, S.C. 1999, c.33

50. Methane 75 reflects the federal government’s policy objective of achieving at least a 75% reduction in oil and gas sector methane emissions by 2030, relative to 2012 levels. It sets emissions management requirements for upstream oil and gas facilities, as well as an alternative performance-based approach for compliance.

51. Rather than leaving it to industry to determine the most appropriate way to achieve the mandated reductions, Methane 75 sets very prescriptive requirements. Facilities will be expected to either destroy or conserve gas.<sup>35</sup> The way in which that must occur is prescribed, by a matrix of complex provisions that dictate the way in which compliance, operation, testing, monitoring and verification must occur.<sup>36</sup>

52. The RIAS notes<sup>37</sup> that stakeholders expressed concern about potential cost, lack of flexibility, and strict application of specific standards without regard to safe operation of facilities. Stakeholders were also concerned about costs and technical feasibility challenges, often due to regional, subsector and facility characteristics.

53. The RIAS recommends<sup>38</sup> that the federal department focus engagement activities with the major oil and gas producing provinces of British Columbia, Alberta and Saskatchewan, noting that each of these provinces regulates oil and gas methane emissions through provincial regulations. The RIAS observes that the provinces highlighted the unique regional characteristics of their oil and gas sectors.

54. The RIAS estimates that the proposed amendments will have incremental costs of \$15billion across Canada, with the costs largely incurred in Alberta (\$8.2 billion) and Saskatchewan (\$4.2 billion).<sup>39</sup> Cumulative greenhouse gas emission reductions are estimated to

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<sup>35</sup> Destruction of gas would be through the installation of a combustor or an oxidizer. Facilities that would conserve gas would likely install a vapour recovery unit.

<sup>36</sup> The details of such matters are set out in Methane 75, and are summarized in the MER submission, the CBoC Study and the Navius Study attached as Schedules to this Report.

<sup>37</sup> RIAS, p. 11<sup>38</sup> RIAS, p. 15.<sup>39</sup> RIAS, p. 53.<sup>40</sup> RIAS, p. 19.

<sup>38</sup> RIAS, p. 15.<sup>39</sup> RIAS, p. 53.<sup>40</sup> RIAS, p. 19.

<sup>39</sup> RIAS, p. 53.<sup>40</sup> RIAS, p. 19.

be \$217 mt of CO<sub>2</sub>e valued at \$27.8 billion, in terms of the estimated social benefit of avoided global damages from climate change. The RIAS states that the monetized net benefits of the proposed amendments are estimated to be \$12.4 billion and are estimated to be achieved at an average cost of \$71 per tonne of CO<sub>2</sub>e over the time frame of the analysis [from 2027 to 2040].<sup>40</sup>

55. At page 52 the RIAS notes the following:

The proposed Amendments are expected to result in benefits that exceed costs for Canadian society, but the benefits and costs may not be equally distributed. The GHG emission reductions are discussed regionally, as provinces can negotiate equivalency agreements to achieve the same reductions at a lower cost than estimated for the proposed Amendments.

56. Under the heading “Competitive Analysis”, the RIAS notes at pages 53 and 54 the following:

The proposed Amendments would impose additional compliance costs on oil and gas companies. Annualized compliance costs are estimated to be \$1.2 billion over the period of analysis. Total capital and operating expenditures in the oil and gas extraction sector were \$41.6 billion in 2021 — a figure that was 10% lower than the average annual expenditures over the previous seven years. If spending in the sector remains at these comparatively low levels, increased costs attributable to the proposed Amendments would represent an increase in annual industry expenditures of roughly 3%. Given the relative scale of the estimated costs of the proposed Amendments, and the potential for these costs to be partially offset by conserved gas, significant impacts on overall production are not expected.

57. As discussed more fully in this Report, each of the MER, Navius and the CBoC disagrees with the federal government’s assertions as to the scale of the estimated costs of Methane 75, and its conclusion that there will be no significant impacts on production.

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<sup>40</sup> RIAS, p. 19.



58. Navius, the CBoC and the MER reviewed the RIAS in respect of forecasted costs and benefits, and anticipated industry response. As described later in this Report, among other matters, the results of the Navius Study, the CBoC Study and the MER submission differ from the federal government's conclusions.

## Emissions Cap

59. The Emissions Cap Framework reflects the federal government's commitment to reduce GHG emissions from the oil and gas sector at a pace and scale necessary to contribute to Canada's climate goals, to achieve net-zero GHG emissions by 2050, and in a manner that allows the sector to compete in the emerging net-zero global economy.<sup>41</sup>

60. The federal government considered two regulatory options: (i) a new national GHG emissions cap-and-trade system, and (ii) modifying the carbon pricing system. The federal government chose cap-and-trade<sup>42</sup>. The cap-and-trade system would apply to liquid natural gas facilities and upstream oil and gas facilities.<sup>43</sup> The GHGs covered would include carbon dioxide, methane, nitrous oxide and others.

61. The cap-and-trade system would employ (i) the emissions cap level, which is equivalent to the total emission allowances issued by the federal government for a given year, and (ii) the legal upper bound, which is the maximum emissions the sector will be allowed to emit that year, comprised of the total number of emission allowances issued plus the maximum allowable quantity of other eligible compliance units.

62. The cap-and-trade system would be phased in between 2026 and 2030. The emissions cap level is equivalent to the total emission allowances issued annually. The current proposal is

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<sup>41</sup> Emissions Cap Framework, p. 1.

<sup>42</sup> Through regulations to be made under the *Canadian Environmental Protection Act, 1999*, S.C. 1999, c.33.

<sup>43</sup> The regulations would cover bitumen and other crude oil production, including upstream oil gathering pipelines when they are part of a covered facility, surface mining of oil sands and extraction of bitumen, upgrading of bitumen or heavy oil to produce synthetic crude oil, production and processing of natural gas and production of natural gas liquids and production of liquefied natural gas.

that the 2030 level be between 106 and 112 Mt CO<sub>2e</sub>, and that the 2030 legal upper bound would be between 131 and 137 Mt of CO<sub>2e</sub> in 2030. Post-2030, there are to be reductions to align with the goal of net zero emissions by 2050. However, neither the allowance level nor the maximum allowable emissions from covered sources for the post-2030 period are disclosed.

63. Entities would be prohibited from emitting GHGs, without remitting one emission allowance or other eligible compliance unit for each tonne of GHG emissions up to the legal upper bound. Emission allowances and other prescribed types of compliance units could be bought and sold on an emissions trading market.

64. Initially, there will be a free allocation of allowances allocated facility by facility, based on (i) a baseline production level and (ii) a free allocation rate for a given product or activity. The allocation rate would be set as the number of CO<sub>2e</sub> tonnes per unit of product produced (i.e., emissions intensity of production). The free allocation amount would be adjusted up or down if the facility's production were to increase or decrease by more than a specified percentage from the baseline production level.

65. The maximum level is comprised of the total number of emission allowances plus the maximum allowable quantity of other eligible compliance units. Each emission allowance would be equivalent to one tonne of CO<sub>2e</sub>.

66. Emissions allowances issued under the cap-and-trade regulations would not be fungible with other carbon pricing systems or regulatory instruments.<sup>44</sup> Surplus credits, and all other allowances would not be eligible for use within the oil and gas emissions cap-and-trade system. Facilities would be able to bank allowances for up to two compliance periods (six years).

67. The Emissions Cap Framework states that “technically achievable” emissions reductions were estimated based on an assessment of the abatement technologies that can feasibly be deployed within the sector by 2030. The details of the “technically achievable” emissions reductions have not been provided. It is not possible to assess if the resulting conclusion is optimistic (in terms of the speed with which technology can be incorporated). The Emissions

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<sup>44</sup> Emissions Cap Framework, p. 7.

Cap Framework assumes that 2019 emissions intensities remain constant for the applicable production level.

68. The allocation of emissions between light, heavy and ultra-heavy types of oil have not been articulated. The Emissions Cap Framework indicates that “better performers”, will be recognized. It is unclear what impact this would have on regions or facilities that have higher emissions intensities.

69. It is significant that the federal government has provided no details of how the Emissions Cap is to move to zero following 2030, and that the interaction of Methane 75 and the Emissions Cap is uncertain. It is not clear what will occur if a province fails to meet its implied emissions reductions under Methane 75: will the additional emissions reductions required under the Emissions Cap fall on that province alone or be shared across all jurisdictions?

70. A high level summary of the Emissions Cap Framework is as follows:

- There will be a national system that applies to all GHG emissions from upstream oil and gas facilities.
- The level of the Emissions Cap in 2030 will be set using 2019 production.
- The level of the Emissions Cap in 2030 assumes all “technically achievable” GHG reductions are implemented by 2030.
- The Emissions Cap requires a 35% to 38% reduction by 2030.
- After 2030, the Emissions Cap will require a decline, to meet a net-zero target by 2050, but the speed of reduction is not set out.
- A “legal upper bound” concept is introduced, the theory of which is that it accommodates “compliance flexibility”, to allow production growth in line with the CER’s Canada Net Zero forecast.
- Regulated facilities must register, and will be subject to quantification, verification, and annual reporting with third-party verification.
- In order to release emissions, a covered facility must remit corresponding emissions allowances.

- The allocation of emissions allowances will initially be at no cost.
- Each compliance period will be three years.
- Emissions allowances may be banked for two compliance period.
- Production growth relative to 2019 levels will be permitted.
- All production related emissions will be addressed.

## Oil and Gas Production in Saskatchewan

71. Saskatchewan’s oil and gas sector emissions are subject to Saskatchewan regulations. The majority of CO<sub>2</sub> emissions from the oil and gas sector in Saskatchewan are subject to the provincial Output Based Performance Standard. Saskatchewan has mandated a 45% reduction in GHG emissions from upstream oil and gas by 2025 (relative to 2015 levels).<sup>45</sup>

72. As at 2023, Saskatchewan’s oil production takes place in four regions of the province, with the following approximate levels of production<sup>46</sup>:

- Estevan/Weyburn–135,000 barrels per day (“**bpd**”)–mix of light and medium oil;
- Swift Current–42,000 bpd–primarily medium oil;
- Kindersley–88,000 bpd–mix of heavy and light oil;
- Lloydminster–189,000 bpd–primarily heavy oil.

73. Saskatchewan produces oil using several recovery methods<sup>47</sup>:

- Conventional production–151,000 bpd;
- Cold Heavy Oil Production with Sand (“**CHOPS**”)–42,000 bpd;
- Steam Assisted Gravity Drainage (“**SAGD**”)–155,000 bpd;
- Carbon dioxide (CO<sub>2</sub>) enhanced oil recovery (“**EOR**”)–22,000 bpd; and
- Other (Waterflood, Polymer EOR, etc.)–84,000 bpd.

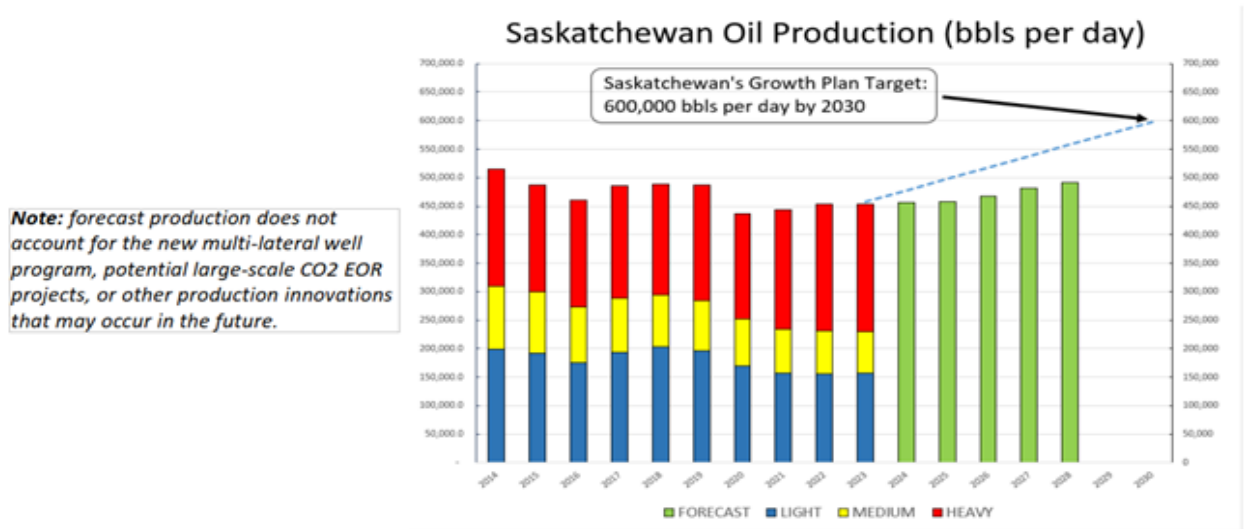
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<sup>45</sup> *The Oil and Gas Emissions Management Regulations*. Flaring and venting emissions in upstream oil and gas are regulated, and the requirements are reflected in the provincial *Methane Action Plan*.

<sup>46</sup> MER Slides May 2024, p. 4.

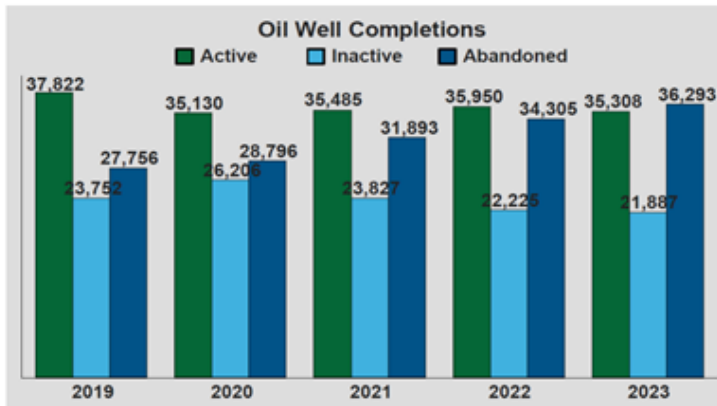
<sup>47</sup> *Ibid*, p. 4.

74. Saskatchewan’s oil production (bpd per day) is reflected in the following chart<sup>48</sup>:



75. The following chart describes Saskatchewan oil wells, segregated between active, inactive and abandoned wells:

### Overview: Production Infrastructure



76. The oil produced is upgraded and refined. Saskatchewan has two oil upgrader facilities: one in Lloydminster and one in Regina. Saskatchewan has two oil refineries: one in Regina and

<sup>48</sup> Ibid, p. 6.

one operated in Moose Jaw. Natural gas is processed into commercially saleable products, at 28 gas processing plants.

77. There are unique elements to the Saskatchewan oil and gas sector. Oil production is not located in the vicinity of a large natural gas industry. Because there are lower densities of gas conservation infrastructure, the cost of incorporating infrastructure to reduce methane emissions is significantly enhanced. Additionally, Saskatchewan's oil industry is spread across a vast geographic area and Saskatchewan does not have areas where many facilities are co-located (such as at the Alberta oil sands).

78. There are regional differences, within Saskatchewan:

- In the Lloydminster area conventional heavy oil is produced either using CHOPS or SAGD. Wells employing CHOPS have methane emissions caused by fuel use, and have a production life of seven to ten years. Wells employing SAGD create methane emissions by using natural gas to generate steam, and have a longer productive life. There is limited methane gathering infrastructure in the area.
- Conventional light oil is produced in the Kindersley Viking area (where there is very limited methane gathering infrastructure) and in the Estevan Bakken area (where there is some methane gathering infrastructure). The wells have three to five years of substantial production life.
- In the Swift Current and Estevan areas, the wells generally have in excess of ten years of significant productive life. The primary method of production is waterflood, CO<sub>2</sub>-enhanced oil recovery.

79. The mix of oil and gas and natural gas production in Saskatchewan differs from what occurs in British Columbia and Alberta. In British Columbia there is some conventional oil production, but natural gas production dominates. In Alberta there is significant natural gas production and conventional oil production, and the areas of such production are often co-located.

80. The overall economic impact of Saskatchewan’s production of oil and gas is significant. In 2023<sup>49</sup>:

- Saskatchewan’s oil and gas sector generated over \$1.0 billion in revenue for the province;
- Of the \$17.1 billion total capacity investment in the Saskatchewan economy, \$3.0 billion was in the oil and gas sector;
- Saskatchewan’s oil and gas sector employed an estimated 26,000 people;
- The value of Saskatchewan’s oil production was \$13.1 billion;
- The value of oil exports from Saskatchewan was \$11.6 billion.

## Ministry of Energy and Resources

81. The Tribunal requested that the MER make a submission to the Tribunal. A reproduction of the full set of the slides provided by the MER (the “**MER Slides**”) dated May, 2024, July, 2024 and August, 2024 appears at Schedules 7, 8 and 9 to this Report.

82. The MER applied Methane 75 to each existing Saskatchewan well and facility, to determine impacts. It also applied very recent (2023) data in respect of active upstream oil and gas infrastructure in Saskatchewan to its review. The analysis employed the 2024 National Inventory Report, and production and emission impacts were forecast out to 2050.

83. The MER provided its key insights in respect of Methane 75:

- While Methane 75 sets a national target to reduce overall methane emissions by 75%, it will have disproportionate effects on different oil producing regions and types, requiring a 90% reduction in Saskatchewan.
- Methane 75 is prescriptive and reduces industry flexibility to prioritize lower-cost methane abatement, resulting in higher shut-in production than is necessary to achieve the emissions reduction target.

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<sup>49</sup> Ibid, p. 12

- The oil producing regions in Saskatchewan that will be most impacted are the Kindersley and Lloydminster areas, given the prevalence of CHOPS and single-well batteries.

84. The MER provided its key insights in respect of the Emissions Cap:

- The proposed federal Emissions Cap, as set out in the regulatory framework, relies heavily on CCUS as a compliance pathway, applied at facility types and scales not yet demonstrated.
- Even with optimistic assumptions about CCUS deployment, the Emissions Cap will have significant production impacts in Saskatchewan.
- Considering the stated goal of the policy to reduce emissions and not production, the proposed Emissions Cap goes too far too fast.
- In the outer years, severe impacts can only be avoided by adjusting the level of the Emissions Cap, increasing access to flexible compliance (at a cost), or relying on technologies not yet commercially available.
- If global demand deviates from the Canada Energy Regulator's Canada Net Zero scenario, the Emissions Cap will have little, if any, impact on global emissions while creating domestic economic harm.
- The federal government has signaled that it does not intend to apply these same emissions standards to imported oil and gas products, potentially increasing Canada's reliance on imported energy.
- The oil and gas sector is a major contributor to Saskatchewan's economy and is highly productive. These policies will result in significant impacts to the overall provincial economy and government revenues.

85. More details of the MER submission, and the Tribunal's observations, are set out in Appendix 1.

86. Many of the MER's observations were reflected in responses to the RIAS and in submissions received by the Tribunal.



87. Triland Energy Inc. addressed many of these concerns. The following quotes are taken from its submission to the Tribunal:<sup>50</sup>

- The resources and costs it takes for government record keeping and reporting will hinder Triland’s ability to focus on growth and building production, curtailing our contributions to the Saskatchewan economy.
- The high costs associated with emissions reduction measures must be weighed against potential penalties for non-compliance and reputational risks. For smaller companies operating on tighter margins, achieving a balance between regulatory compliance and financial sustainability is paramount.
- The stringent regulatory environment will divert investment from Saskatchewan's oil and gas sector.
- The regulatory requirements impose operational constraints, increased compliance costs, and pose technological feasibility concerns, particularly for smaller operators.
- If the Cap and Methane 75 policies are implemented, oil and gas companies will divert capital from well development to government compliance and will limit the number of wells drilled in a year.

88. Kuva Canada Inc. suggests what it believes to be the correct regulatory approach<sup>51</sup>:

- Focus regulations on a desired outcome (emissions reductions), rather than prescribing a specific technology class with a narrow set of inflexible parameters.

89. The Saskatchewan Chamber of Commerce has a unique perspective, as it has insight not only into businesses that belong to the oil and gas sector, but also to the broader range of businesses that comprise the provincial and local economies. The Chamber provided<sup>52</sup> the following comments:

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<sup>50</sup> Triland Energy Inc., submission to the Tribunal, p.3.

<sup>51</sup> Kuva Canada Inc., submission in response to the RIAS.

<sup>52</sup> Saskatchewan Chamber of Commerce, submission to the Tribunal, pp. 1 and 2.

- Producers have also shown a longstanding commitment towards reducing their environmental impact: greenhouse gas emissions from the conventional oil and gas sector across Canada fell by 24% while production grew by 21%.
- ... neither the Cap, nor the Methane 75 regulations would provide a reasonable timeline of implementation for producers.
- ... the Chamber is concerned by the potential for the Cap and Methane 75 initiatives to incentivise capital flight and carbon leakage to the United States.
- ... there is also a need for greater coordination between Canada and the United States on any potential initiatives concerning the oil and gas industry. As many producers conduct operations on both sides of the Canada-US border, they will be subject to two different sets of regulations.

90. In its response to the RIAS, the Chamber commented on the unique features of the Saskatchewan's oil and gas industry:<sup>53</sup>

- Due to the nature of production in Saskatchewan (having a greater focus on oil than other jurisdictions), the remoteness of most facilities, and the lack of existing methane capture infrastructure, significantly more time would be required to make the necessary changes to petroleum infrastructure than has been allocated by these regulations. Oil and gas producers have indicated their willingness to comply with guidelines which do not significantly compromise their operations, and have proposed reasonable pathways for emissions reduction, even up to 75%, that are much less costly than the methods proposed by these federal regulations.

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<sup>53</sup> Saskatchewan Chamber of Commerce, submission to the Tribunal, p. 2.

## The Conference Board of Canada

91. The Tribunal commissioned the CBoC to conduct economic modelling of the impact of the Federal Initiatives on Saskatchewan's economy. The CBoC delivered its report entitled *Economic Impacts of a Greenhouse Gas Emissions Cap and Methane 75 on the Saskatchewan Economy* (the “**CBoC Study**”). A copy of the CBOC Study is included as Schedule 5 to this Report. The CBoC Study was supplemented by slides (the “**CBoC Slides**”), reproduced at Schedule 6 to this Report.

92. The CBoC Study makes the following key findings:

- Compliance with the proposed Oil and Gas Cap regulatory framework will require production to be cut by roughly one-quarter in 2030 versus our The Conference Board's forecast, bringing combined oil and gas production down to 2017 levels (a reduction of 2.4-2.6 million barrels of oil equivalent per day).
- The effect of the Oil and Gas Cap beyond 2030 is highly uncertain because the policy framework does not have details on how the Cap will evolve to reach the goal of net zero emissions in the oil and gas sector by 2050.
- If allowable oil and gas emissions stay fixed at the proposed 2030 level (134 Mt CO<sub>2</sub>e per year), Canadian GDP will decline by an average of 1.2 per cent (\$44 billion) per year from 2030 to 2050. This impact lessens overtime as technological efficiencies enable higher production under the Fixed Cap over the 20-year forecast.
- If allowable oil and gas emissions decline to zero by 2050 (including 25 Mt of compliance offsets), Canadian GDP will decline by an average of 1.8 per cent (\$70 billion) per year from 2030 to 2050. This impact is stable overtime as the technological efficiencies enabling higher production are offset by the Declining Cap over the 20-year forecast.
- In both the Fixed Cap or Declining Cap scenario, the economic consequences of production cuts will be concentrated in oil producing provinces such as Alberta, Newfoundland and Labrador and Saskatchewan.
- In Saskatchewan, average annual GDP is forecast to be 3.6 per cent (\$5.4 billion) lower than baseline in the Fixed Cap scenario, and 7.0 per cent (\$10.9 billion) lower in the Declining Cap scenario. Average annual oil and gas production will decline by 17 and 43 per cent, respectively, in the Fixed and Declining Cap scenarios versus our baseline forecast. Cumulative investment in the sector will decline by similar magnitudes (24 to 46 per cent) from 2030 through 2050.

- Compared to the baseline forecast, average annual Saskatchewan government revenue falls by \$1.1 (3.3 per cent) and 2.0 billion (6.3 per cent) in the Fixed and Declining Cap scenarios. Reduced royalties account for one-quarter to one-fifth per cent of this decline.
- We also estimate the cumulative direct compliance costs of the Cap and the related Methane 75 regulation in Saskatchewan to be between \$13.8 to 15.6 billion from 2027 to 2050. However, this estimate ignores the potential costs of major new carbon capture and direct air capture technologies that would need to be installed under the Declining Cap scenario. Long-term costs of these technologies remain too uncertain to estimate with precision.

93. More details of the CBOC's Study, and the Tribunal's observations, are set out in Appendix 2.

94. The consequences of what are described as CBOC's key findings, and the conclusions drawn by the Tribunal, are expressed in submissions received by the Tribunal.

95. Steel Reef Infrastructure Corp. provided the following comments<sup>54</sup>:

- As a midstream oil and gas enterprise, Steel Reef's operations and growth plans will be negatively impacted by any reduction in production or overall industry activity and growth. The uncertainty associated with government policy and regulation can limit the growth of the upstream industry, severely impacting our ability to attract investment and execute growth plans.
- As was the case with the original 2018 Regulation, the draft amendments continue to regulate aspects of the oil and gas sector in a highly detailed and prescriptive fashion that mirrors the responsibilities of the provincial regulator. This limits the ability of provincial regulators to develop a framework and regulatory requirements that are technically and economically optimal and that best reflect the unique characteristics of oil and gas resource development within their province. The uncertainty associated with this dual regulatory environment further impacts investor confidence and certainty, ultimately negatively impacting sector growth and our ability to attract investment.

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<sup>54</sup> Steel Reef Infrastructure Corp., submission to the Tribunal, p. 2.

96. Harvard Resources Inc. described its concerns.<sup>55</sup>

- The implementation of the Cap and Methane 75 will have significant negative effects on our company's operated production and on our investment levels.
- Implementing these regulations will result in Harvard and other operators being forced to shut-in oil production as it will no longer be economic to produce the wells. This will have a significant negative impact on our economic contribution to the Provincial and Federal economies.
- Penalizing operators for emissions when there is **no solution** available to reduce these emissions is not an incentive to change operating procedures.

## Navius Research Inc.

97. Navius' energy modelling considers climate and energy policies and the economic impacts of those policies. Navius is independent: it has provided services to, amongst others, the federal government and the government of Saskatchewan.

98. The Tribunal asked Navius to provide an analysis employing a Saskatchewan-centric calibrated model. Navius customized its modelling tools to reflect unique elements of Saskatchewan's energy sector. It divided the sector into five primary oil production types and modelled three policy scenarios:

- Current Policy: This policy scenario consists of legislated policies at the federal and provincial level. This scenario serves as the policy counterfactual.
- Methane 75: This policy scenario implements Methane 75 in addition to Current Policy
- Emissions Cap: This policy scenario includes Methane 75 and the Emissions Cap in addition to Current Policy.

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<sup>55</sup> Harvard Resources Inc. submission to the Tribunal, p. 1.

99. Navius provided the Navius Study to the Tribunal, and supplemented the Navius Study with the explanatory Navius Slides. The Navius Study is attached as Schedule 3 and the Navius Slides are attached as Schedule 4.

100. Navius has articulated a number of key insights. The next five paragraphs of this Report are taken directly from the Navius Study (with minor modifications to incorporate some of the terms defined in this Report).

101. Insight 1: Methane 75 and the Emissions Cap create material reductions in oil and gas sector emissions, but the sector will incur additional compliance costs that may affect sector activity.

- Abatement actions under Methane 75 will reduce vented and leaked emissions in Saskatchewan's oil and gas sector by 11.0 Mt CO<sub>2</sub>e in 2030, relative to Current Policy. The incremental levelized compliance cost of the policy is \$356 million per year (2023\$) in 2030, at an average abatement cost of \$30.6 per tCO<sub>2</sub>e.
- The price for allowances under the Emissions Cap, which represents the marginal cost of abatement in the sector, is \$148 per tCO<sub>2</sub>e in 2030, \$177 per tCO<sub>2</sub>e in 2040, and \$693 per tCO<sub>2</sub>e in 2050 (2023\$). The average abatement cost in Saskatchewan under the Emissions Cap will be lower than the allowance price, due to lower cost abatement options, such as those required under Methane 75.

102. Insight 2: Achieving compliance with Methane 75 and the Emissions Cap will impact Saskatchewan's oil and gas production, investment and employment.

- Oil production under Methane 75 will be 2-4% below Current Policy between 2030 and 2050. Production under the Emissions Cap is similar to Methane 75 in 2030 but declines further as the policy brings the sector closer to net-zero emissions in 2050 – 7-11% below Current Policy in 2040, and 28-39% below Current Policy in 2050.

- Oil and gas investment under Methane 75 is equal to that of Current Policy in 2030 due to compliance investments offsetting reduced production capital. Investment is higher under the Emissions Cap in 2030, thanks to additional investment in CCUS technology. However, oil and gas investment in both scenarios is consistently below Current Policy after 2030.
- Emissions Cap impacts after 2030 are based on the assumption that emissions allowances decline linearly to achieve net zero emissions by 2050. ECCC indicate in the December 2023 Regulatory Framework that the policy will be aligned with net zero emissions by 2050 but does not indicate how that would be achieved.

103. Insight 3: Reduced oil and gas production under Methane 75 and the Emissions Cap leads to lower government revenue and slower economic growth in Saskatchewan

- In 2030, royalty and production tax revenue is 3% below Current Policy under Methane 75 and 5% below Current Policy under the Emissions Cap. Under the Emissions Cap, the revenue gap grows to 14% below Current Policy in 2040 and 56% below Current Policy in 2050.
- GDP growth is positive in all scenarios but lower growth under both Methane 75 and the Emissions Cap results in \$0.3 billion less cumulative GDP relative to Current Policy between 2025 and 2030. Between 2025 and 2050, the difference in cumulative GDP relative to Current Policies is \$11.9 billion under Methane 75 and \$35.4 billion under the Emissions Cap.

104. Insight 4: Oil prices are an important factor in driving production outcomes. Under the Canada Net Zero sensitivity, production outcomes are driven more by a lower global oil price than either the Methane 75 or Emissions Cap policies. In 2030 and 2040, production outcomes are similar in all three scenarios when assuming a low oil price.

105. Insight 5: The availability of emerging technologies, such as CCUS and DAC, is important for maintaining lower compliance costs for facilities under the Emissions Cap. The price of Emissions Cap allowances increases three-fold in 2030 and 2035 if CCUS is not available. Further, the availability of DAC has the potential to lower compliance costs in later years (2045 and 2050), which could help the sector mitigate some production shut-in as the Emissions Cap level approaches net-zero emissions.

106. The Tribunal observes that Navius has a much more optimistic view of the impacts of Methane 75 than do the MER and the CBoC. This appears to be a consequence of (i) Navius' choice of allowing for a 5-year payback period for investments in methane abatement (whereas the review by the MER suggests that the oil and gas sector typically operates on 1 to 2 year payback periods) and (ii) Navius' choice of breakeven pricing, which appears to soften the potential for shut-in production in comparison to the MER's assessment of facility economics applying industry-derived netbacks (that is, the net cash flow from a barrel of oil).

107. Navius' use of top-down analysis for Methane 75 production impacts tends to mute the dynamics of facility types, which is a key factor in the MER's shut-in (bottom-up) analysis. An example is less efficient single well batteries versus more efficient multi-well batteries. In reference to Methane 75, Navius stated that, "this analysis represents a conservative estimate of production impacts".<sup>56</sup>

108. As well, the Navius model assumes implementation of technology with earlier success and at a greater pace, than do the on the ground experts that actually carry out oil and gas production (as reflected in submissions received by the Tribunal from industry participants).

109. The Tribunal has greater confidence (in terms of applicability to a Saskatchewan focused analysis) in the Saskatchewan wellhead-specific data employed by the MER, than in national statistics.

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<sup>56</sup> Navius Study, p. 32



110. More details of the Navius submission, and the Tribunal’s observations, are set out in Appendix 3.

## Dr. Jack Mintz

111. Dr. Jack Mintz is the President’s Fellow in the School of Public Policy at the University of Calgary. Dr. Mintz is a renowned expert in natural resource economics and tax policy.

112. The Tribunal asked Dr. Mintz to assess the impact of the Federal Initiatives on the Saskatchewan economy, based on his review of the work by Navius and the CBoC. The submission from Dr. Mintz is attached as Schedule 10.

113. Dr. Mintz makes the following observation in respect of compliance costs arising from the Federal Initiatives:

Overall, I believe that compliance costs have been underestimated by both models but for different reasons. The Conference Board assumes too low of a credit price that is central to its forecasted compliance costs. Navius is too optimistic with CCUS adoption. Both did not have access to site-by-site data that would enable a bottoms-up approach to determining compliance costs.<sup>57</sup>

114. Dr. Mintz describes Saskatchewan as having a small open economy. He notes that as a consequence, using a model based on the national or global economy is inappropriate. He states the following:

Since Saskatchewan is a small open economy, a much different scenario evolves. The increase in energy costs will cause capital demand to fall as in the previous case. However,

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<sup>57</sup> Dr. Jack Mintz, “A Note on the Economic Impact of the Federal Oil and Gas Cap and Methane Regulations on the Saskatchewan Economy, dated August 27, 2024, p. 6.

instead of the interest rate falling ... capital imports will decline or more capital will be exported abroad. Other industries in Saskatchewan will not benefit from a lower cost of capital.

Therefore, a policy that raises energy costs will have a more negative impact on Saskatchewan's economy as a small open economy compared to one that is not as open.<sup>58</sup>

115. Dr. Mintz makes the same observation<sup>59</sup> about labour markets in a small open economy. If there is a lower demand for labour in the oil and gas sector, employees will move to other provinces (or potentially to the United States). Other businesses will not benefit from lower wages. The impact on employment will be much greater, as Saskatchewan would depopulate.

116. Dr. Mintz has commented on the shift of production, as follows:

Competitiveness raises other issues particularly the shift of production in Saskatchewan to other jurisdictions, particularly the United States, Latin America and OPEC countries. There are good reasons to believe that many Saskatchewan businesses may lose competitiveness to the U.S. because of the overall impact of carbon policies including the methane and oil and gas emission cap regulations.<sup>60</sup>

117. As described in an earlier part of this Report, the MER forecasts that if the Federal Initiatives are not introduced, production of oil and gas in Saskatchewan will increase.

118. Submissions received by the Tribunal and responses to the RIAS reflect the consequences Dr. Mintz observed, through the lens of participants in the sector.

119. The Explorers and Producers Association of Canada commented as follows:

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<sup>58</sup> Mintz, p. 7.

<sup>59</sup> Ibid.

<sup>60</sup> Mintz, p. 10.

- The conventional oil and natural gas sector (which produces lower emissions intensity products, is already reducing emissions, attracts more capital and employs significantly more Canadians across a much greater geographic than other subsectors)

will be disadvantaged by the proposed policy and see a disproportionate share of shut-ins. .... The policy will therefore lead to a higher emissions intensity oil and natural gas sector with a substantial cost to conventional oil and gas companies and workers as well as the Canadian economy more broadly.<sup>61</sup>

120. Cenovus Energy Inc. provided the following commentary<sup>62</sup>:

- The draft regulations, and their Regulatory Impact Analysis Statement (RIAS), set unclear compliance expectations and propose prescriptive actions that will unnecessarily increase costs to achieving significant methane emission reductions. Furthermore, they are punitive, technically challenging and would make shutting in production the most economically rational choice rather than reducing emissions from some assets. Government should instead focus on creating fair, practical and achievable policy that takes into consideration market-driven incentive programs to promote early-action on methane emissions.
- The excessively prescriptive and overreaching nature of the draft regulations will compel economically inefficient investments and the shut-in of resource production, unnecessarily driving up costs between five to 10 times higher than they could otherwise be, for little to no additional emissions reduction benefit.
- The federal government lacks the technical expertise to effectively design such highly prescriptive regulations and should instead work closer with industry to set economically achievable targets and leave the technical details for industry, provincial governments and their regulators to design.

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<sup>61</sup> The Explorers and Producers Association, submission in response to the RIAS.

<sup>62</sup> Cenovus Energy Inc., submission in response to the RIAS.

## Additional Matters

121. *The Saskatchewan First Act* and OC 154/2024 authorized the Tribunal to make recommendations. The Tribunal has chosen to not make express recommendations. The Tribunal has, in this Report, provided its assessment and conclusions arising from its examination of the matters described in its mandate.

122. The Tribunal wishes to thank those entities and organizations who made submissions to the Tribunal. The Tribunal also wishes to thank the MER, Navius, the CBoC and Dr. Mintz.

## APPENDIX 1

### MINISTRY OF ENERGY AND RESOURCES – ADDITIONAL COMMENTARY

123. The following sets out additional detail from the MER submission, and the Tribunal’s comments and observations.

124. The MER forecasts, on a site by site basis, where investments would occur in order to comply with the Federal Initiatives, and which sites would elect to shut-in production, through a production class by production class lens<sup>63</sup>. MER is the only organization with facility-level data. The CBoC and Navius used top-down estimates based on industry averages with publicly available data. The Tribunal believes that the bottom-up analysis on compliance costs provided by the MER merits significant consideration. The estimated effect on the sector on a facility by facility basis provides valuable insight. The MER’s production impacts are summarized in the following table:

Production Class	2023 Oil Production (bbl/day)	2023 Shut-In Oil Production** (bbl/day)	2023 Shut-In Oil Production (%)
1 - Lloydminster	188,738	18,084	10%
2A - Kindersley Heavy	32,644	2,298	7%
2B - Kindersley Non-Heavy	55,022	10,546	19%
3 - Swift Current	41,739	1,821	4%
4 - Estevan	135,327	5,281	4%
<b>Total</b>	<b>453,471</b>	<b>38,030</b>	<b>8%</b>

125. The MER also calculated the investment required by all sites that met the economic threshold:<sup>64</sup>

<sup>63</sup> The MER Slides dated July 2024, p. 9.

<sup>64</sup> The MER Slides dated July 2024, p. 10.

Emissions Source	Total CAPEX (\$ million)	Total OPEX (\$ million)
Venting	\$ 69	\$ 3
Fugitives	\$ 32	\$ 10
Flaring	\$ 88	\$ 5
Pneumatics	\$ 90	\$ 3
Compressors	\$ 84	\$ 1
<b>Total</b>	<b>\$ 363</b>	<b>\$ 22</b>

126. The MER then estimated the actual reductions that would be achieved through compliance actions (investment) and shut-in of production, respectively. The MER reached the following conclusions:<sup>65</sup>

	2023 Emissions (kilo tonnes CO <sub>2</sub> e)		
	CO <sub>2</sub>	CH <sub>4</sub>	Total
<b>Total Emissions</b>	9,612	15,020	24,733
<b>Shut-in Emissions Reduction</b>	238	7,319	7,557
<b>Compliance Action Emissions Reduction</b>	-735**	6,517	5,782
<b>Remaining Emissions</b>	10,110	1,183	11,394

127. The MER concludes that there are two sources of production impacts: (i) shut-in of production where it is uneconomic to comply and (ii) reduced investment in future drilling.

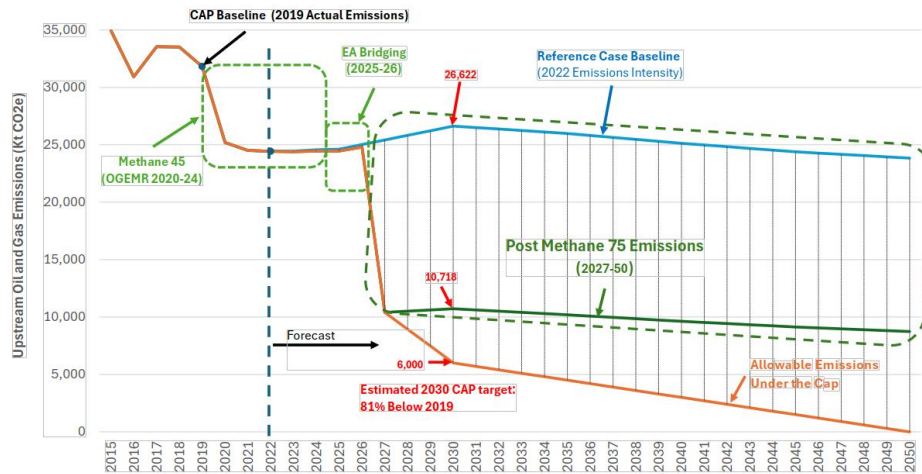
128. The MER then forecasts<sup>66</sup> the impacts out to 2050 under the following five categories:

- % of 2023 shut-in oil production
- % emissions reductions due to investment (by emissions source)
- % of emissions reductions due to shut-in (by emissions source)
- CAPEX and OPEX abatement costs by emissions source (\$/tonneCO<sub>2</sub>e)
- Opportunity loss from shut-in production (\$/tonneCO<sub>2</sub>e)

<sup>65</sup> The MER Slides dated July 2024, p. 11.

<sup>66</sup> The MER Slides dated July 2024, p. 13.

129. The potential inability of Saskatchewan industry to achieve the targets imposed by the Federal Initiatives was described by the Tribunal in this Report. The MER has illustrated its forecast of emissions, through the following diagram:<sup>67</sup>



130. The MER then utilized two compliance scenarios based on the following:

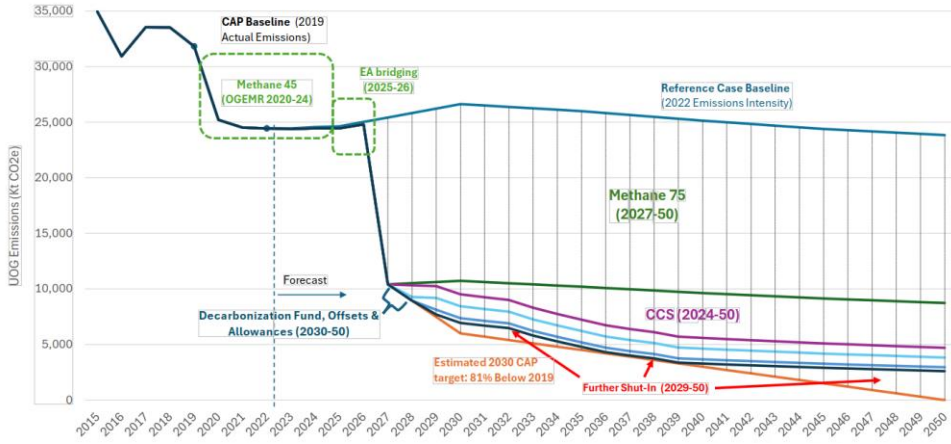
- Varying the application and capture efficiency of CCUS;
- Fixing purchase of allowances under the cap-and-trade scheme;
- Fixing access to flexible compliance per the regulatory framework; and
- Varying shut-in production to achieve remaining emissions reductions.

The MER then determined the costs to industry and production impacts relative to the baseline, and thereafter used the outputs of the model to assess impacts on GDP, employment, investment and royalty/tax revenues.

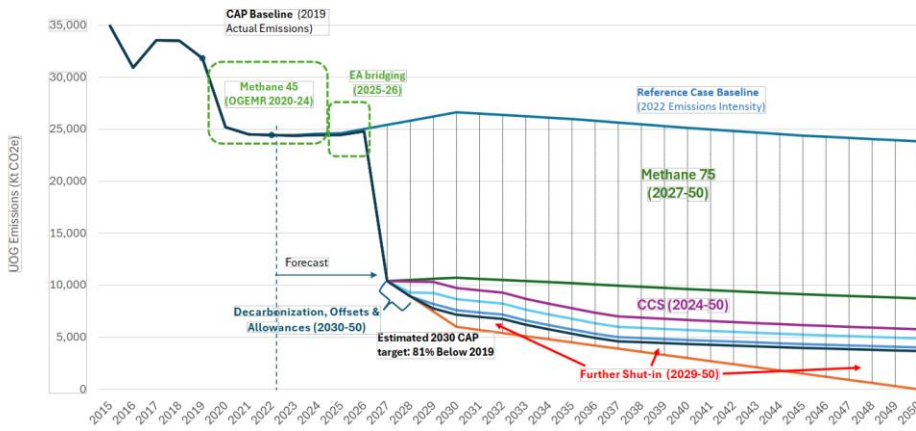
131. The Tribunal has concluded, based on the information it reviewed, that if the Federal Initiatives are implemented Saskatchewan oil and gas production will diminish. The MER's depiction of the reductions under scenario 1 is shown in the following diagram.<sup>68</sup>

<sup>67</sup> The MER Slides dated July 2024, p. 20.

<sup>68</sup> The MER Slides dated July 2024, p. 24.



132. The MER's forecast of the reduction in production under scenario 2 is shown in the following diagram.<sup>69</sup>



133. The overall production impacts estimated by the MER, are summarized as follows.<sup>70</sup>

<sup>69</sup> The MER Slides dated July 2024, p. 25.

<sup>70</sup> The MER Slides dated July 2024, p. 26.



	2030		2040		2050	
	High CCUS	Lower CCUS	High CCUS	Lower CCUS	High CCUS	Lower CCUS
Forecast Production (no M75 or Cap)*	498,000		473,000		450,000	
Shut-In Production M75	40,000 (8%)		38,000 (8%)		37,000 (8%)	
Shut-In Production M75 and the Cap	86,000 (17%)	97,000 (19%)	53,000 (11%)	108,000 (23%)	177,000 (39%)	235,000 (52%)

134. The MER projected the compliance costs that will arise from Methane 75, noting that as the compliance actions considered constraints of existing technologies. The MER estimated the total compliance costs by site, as follows<sup>71</sup>:

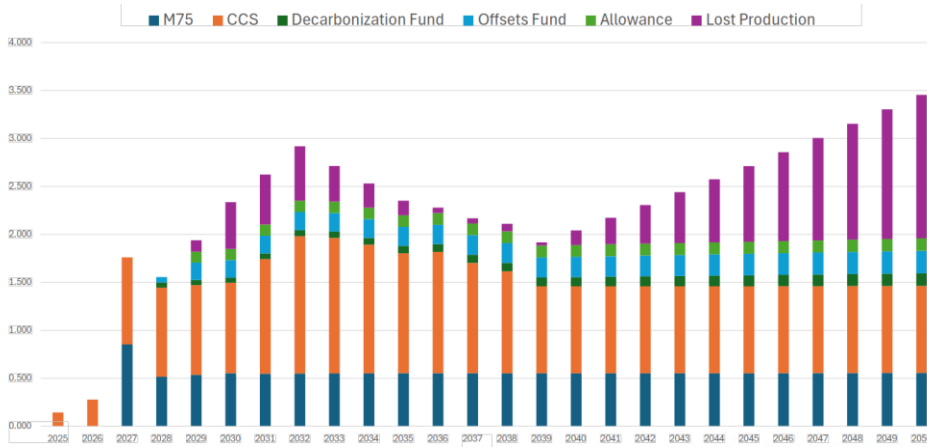
Emissions Source	Total CAPEX* (\$ million)	Total OPEX* (\$ million)
Venting	\$ 1,128	\$ 52
Fugitives	\$ 55	\$ 17
Flaring	\$ 144	\$ 8
Pneumatics	\$ 90	\$ 3
Compressors	\$ 84	\$ 1
<b>Total</b>	<b>\$ 1,501</b>	<b>\$ 82</b>

135. The scenario 1 (of high use of CCUS) and scenario 2 (of lower CCUS), and the breakdown of annual compliance costs are reflected in the following graphs:<sup>72</sup>

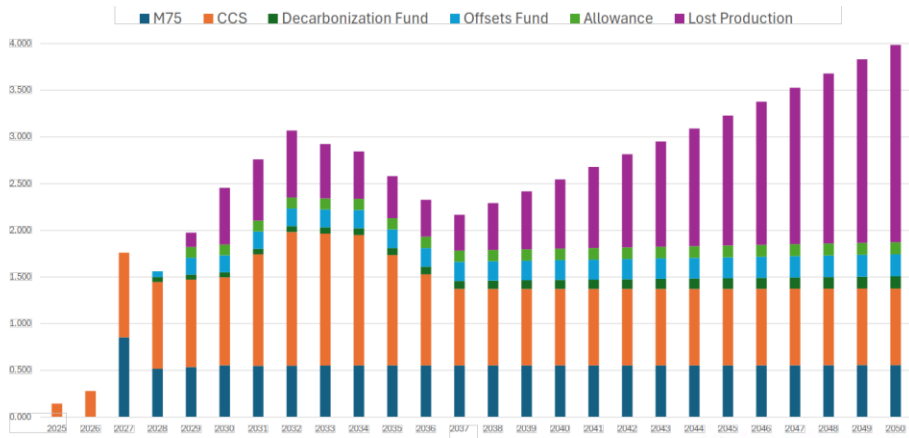
Scenario 1-High CCUS: Breakdown of Annual Compliance Costs (B\$)

<sup>71</sup> The MER Slides dated July 2024, p. 8.

<sup>72</sup> The MER Slides dated July 2024, pp. 27 and 28.



Scenario 2-Lower CCUS: Breakdown of Annual Compliance Costs (B\$)



136. The MER’s summary of its assessment of the compliance costs is as follows:<sup>73</sup>

**Total Compliance Costs of Methane 75 and the Emissions Cap (\$Billions, nominal)**

	Up to 2030		2031 to 2040		2041 to 2050		Total
	High CCUS	Lower CCUS	High CCUS	Lower CCUS	High CCUS	Lower CCUS	
<b>M75 Compliance Costs</b>	\$2.46		\$5.52		\$5.54		\$13.53
<b>Cap Compliance Costs</b>	\$5.55	\$5.71	\$18.14	\$20.40	\$22.44	\$27.62	\$46.13 - \$53.74
<b>Total Compliance Costs</b>	<b>\$8.02 - \$8.18</b>		<b>\$23.66 - \$25.93</b>		<b>\$27.99 - \$33.16</b>		<b>\$59.66 - \$67.27</b>

<sup>73</sup> The MER Slides dated July 2024, p. 29.

137. The Tribunal has noted that the significant effect of the Federal Initiatives on revenues payable to the Province. The MER considered the effect of the Federal Initiatives on royalties and taxes. The MER’s estimates are as follows:<sup>74</sup>

*Reduced Royalty and Corporation Capital Tax Resource Surcharge (CCT/RS) Impacts of Methane 75 and the Emissions Cap (\$Millions, nominal)\**

	Up to 2030		2031 to 2040		2041 to 2050		Total
	High CCUS	Lower CCUS	High CCUS	Lower CCUS	High CCUS	Lower CCUS	
M75 and Cap Royalty Impact	\$376	\$401	\$1,042	\$1,586	\$2,244	\$3,309	\$3,663 - \$5,297
M75 and Cap CCT/RS Impact	\$104	\$111	\$326	\$500	\$788	\$1,161	\$1,218 - \$1,772
Total Royalty/Tax Impact**	\$480 - \$512 (17% to 19% in 2030)		\$1,368 - \$2,086 (11% to 23% in 2040)		\$3,032 - \$4,470 (39% to 53% in 2050)		\$4,881 - \$7,069 (16% to 23%)

138. The Tribunal concluded that the combination of reduction in investment in the oil and gas sector, the reduction in what would otherwise be the GDP level, and the direct loss of employment, are all significant consequences of the Federal Initiatives. The MER’s assessment of such matters, under its high CCUS scenario, is as follows:<sup>75</sup>

**Scenario 1: High CCUS: 4.0 MtCO<sub>2</sub> at 80% Capture Efficiency**

	2030	2040	2050	Total Impact
Oil and Gas Sector Investment (2017 \$B)	-1.7 (-41%)	-1.6 (-33%)	-2.2 (-41%)	-43.3 (-36%)
Provincial GDP (2017 \$B)	-4.0 (-4.2%)	-3.8 (-3.3%)	-5.3 (-4.0%)	-103.9 (-3.6%)
Oil and Gas Sector Related Employment	-14,160 (-19%)	-24,480 (-31%)	-31,500 (-37%)	-
Direct	-2,360	-4,080	-5,250	-
Indirect	-4,720	-8,160	-10,500	-
Induced	-7,080	-12,240	-15,750	-

and under its lower CCUS scenario is as follows:<sup>76</sup>

<sup>74</sup> The MER Slides dated July 2024, p. 30.

<sup>75</sup> The MER Slides dated July 2024, p. 31.

<sup>76</sup> The MER Slides dated July 2024, p. 32.

Scenario 2 – Lower CCUS: 3.0 MtCO<sub>2</sub> at 65% Capture Efficiency

	2030	2040	2050	Total Impact
Oil and Gas Sector Investment (2017 \$B)	-1.7 (-42%)	-1.7 (-37%)	-2.4 (-44%)	-45.8 (-38%)
Provincial GDP (2017 \$B)	-4.1 (-4.3%)	-4.2 (-3.7%)	-5.8 (-4.3%)	-109.8 (-3.8%)
Oil and Gas Sector Related Employment	-14,400 (-20%)	-25,620 (-32%)	-33,540 (-40%)	-
Direct	-2,400	-4,270	-5,590	-
Indirect	-4,800	-8,540	-11,180	-
Induced	-7,200	-12,810	-16,770	-

139. The Tribunal has observed that the Saskatchewan oil and gas sector has features that are different from those in many other Canadian jurisdictions. One consequence is that the Federal Initiatives are likely to have a disproportionate (negative) impact on Saskatchewan.

140. One example noted by the MER relates to the requirements under the Federal Initiatives in respect of venting-casing gas and storage tanks. The MER points to the following issues:<sup>77</sup>

- Saskatchewan has intermittent and low volume flow rates that are difficult to collect and combust
- Saskatchewan has wells that will be considered uneconomic with additional investment
- Venting that moves to combustion could be subject to compliance obligations under OBPS

141. Based on the information it reviewed, the Tribunal concluded that the RIAS underestimated the costs of compliance, and that the MER figures appear more realistic. The MER notes the following:<sup>78</sup>

- Saskatchewan compliance costs are estimated at \$4.2 billion.
- The RIAS only considers the direct cost of meeting the regulations and assumes all facilities will comply.

<sup>77</sup> The MER Slides May 2024, p. 26.

<sup>78</sup> The MER Slides dated May 2024, pp. 30 and 31

- Under the RIAS, Saskatchewan has a similar reduction (90 Mt) to Alberta (105 Mt).
- Current venting that moves to combustion could be subject to compliance costs under OBPS. Such costs were not included in RIAS.
- This is the most likely compliance path for Saskatchewan facilities (existing and new) since collection of gas is unlikely.

142. The MER summarizes its view of the implications of the Emissions Cap design<sup>79</sup>:

- The emissions cap is a de facto cap on production.
- Demand for emissions allowances likely to exceed supply:
  - Ambitious assumptions about “technically achievable”;
  - No consideration of economic feasibility or deployment timelines;
  - Compliance flexibility pathways not robust;
  - CER Canada Net Zero production forecast accuracy concerns.
- Thus, the price signal under the emissions cap is likely to exceed federal suggestion of \$50 per tonne (incremental to carbon pricing).
- Use of NIR emissions intensities to allocate emissions allowances will disproportionately affect Saskatchewan conventional oil production.

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<sup>79</sup> The MER Slides dated May 2024, p. 39.

## APPENDIX 2

### CONFERENCE BOARD OF CANADA – ADDITIONAL COMMENTARY

143. The following is the Tribunal’s more detailed description of the CBoC Study and the CBoC Slides. Not all of the CBoC’s submissions have been repeated in this Appendix: the entire CBoC Study and the CBoC Slides are attached as Schedules 5 and 6.

144. The CBoC Study notes that the federal government has not provided information as to how policies will evolve beyond 2030, and that there are uncertainties concerning the technical and economic feasibility of Methane 75. To address those uncertainties, the CBoC developed two policy scenarios:

#### Fixed Cap scenario

- Methane 75: Each jurisdiction is assumed to achieve the planned 75 per cent reduction in methane emissions.
- Cap: The 134 Mt CO<sub>2</sub>e legal upper bound comes into force in 2030 and remains unchanged to 2050, as does the 25 Mt of compliance flexibility.
- Production cuts: The technically achievable emissions reductions under the regulatory framework do not meet the legal upper bound and thus production cuts are required for regulatory compliance in 2030.
- Intensity: We assume emission intensity reductions through 2030 consistent with recent historical improvements, expected methane emission reductions under Methane 75, and future capacity from known CCUS projects. In the longer term, we assume significant deployment of additional CCUS capacity. Consequently, continued improvements in emissions intensity after 2030 reduce the magnitude of production cuts relative to our baseline.

#### Declining Cap scenario

- Methane 75: All jurisdictions are assumed to achieve the 75 per cent emissions reduction except Saskatchewan, where only a 60 per cent reduction in methane emissions is assumed to be economically feasible. Saskatchewan is then assumed to be responsible for any shortfall in emissions reductions required to meet the Cap’s the legal upper bound and any implied production cuts to oil and gas

production needed to comply with the Cap in 2030 are assumed to be made in the province.

- Cap: The legal upper bound of 134 Mt CO<sub>2</sub>e takes effect in 2030 and is gradually lowered to 25 Mt CO<sub>2</sub>e by 2050. This decline assumes that the Cap will reach zero by 2050, while compliance flexibility remains constant at 25 Mt CO<sub>2</sub>e throughout the forecast period.
- Production cuts: Since the Declining Cap scenario starts from higher emissions in 2030 due to lower anticipated reductions from the Methane 75 regulation, it requires larger production cuts starting in 2030 to comply with the cap. In addition, we assume that the additional reductions needed to stay under the cap will come from Saskatchewan, as we assume that Saskatchewan will only achieve a 60 per cent reduction in methane emissions. Therefore, more production cuts will be required in Saskatchewan to comply with the cap in 2030 compared to the Fixed Cap scenario.
- Intensity: Although we expect lower near-term methane abatement, we assume annual emission intensity reductions consistent with the net-zero CER forecast through 2045. This more optimistic outlook relies on significantly increased deployment of abatement technologies, including those not yet commercially scaled, such as direct air capture. Given the long forecast horizon of more than 25 years, this outlook is reasonable but remains highly uncertain.

145. The Fixed Cap scenario assumes that all provinces achieve the mandated 75 per cent reduction in methane emissions. Under the Declining Cap scenario, Saskatchewan achieves only a 60 per cent reduction in methane emissions, resulting in a greater level of production cuts being required to comply with the Emissions Cap. For the reasons expressed in this Report, the Tribunal believes that Saskatchewan achieving only a 60 per cent reduction is the more likely outcome. And, while the CBoC is correct in that there is significant uncertainty related to the future level of the Emissions Cap, on balance based on the publicly available material, it seems likely that the Emissions Cap will need to become more stringent in order to achieve net-zero emissions in the oil and gas sector – making the Declining Cap scenario more likely.

146. The macroeconomic implications to Saskatchewan of the Federal Initiatives are summarized by the CBoC:<sup>80</sup>

In the Fixed Cap scenario

- GDP is 3.6% below trend, on average, from 2030 to 2050
- Employment is down by 2.6% versus baseline

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<sup>80</sup> CBoC Slides, p. 24.

- Investment in the Oil and Gas sector falls by over one-quarter from baseline
- [Saskatchewan] government revenue falls by over \$1bn/yr (3.3%) versus baseline, of which about 20% is from lower royalties

In the Declining Cap scenario

- GDP is 7% below trend, on average, from 2030 to 2050
- Employment is down by 3.9% versus baseline
- Output in the Oil and Gas sector falls by 43%
- Investment in the Oil and Gas sector falls by nearly half (47%) from baseline
- [Saskatchewan] government revenue falls by nearly \$2bn/yr (6.3%) versus baseline, of which about 25% is from lower royalties

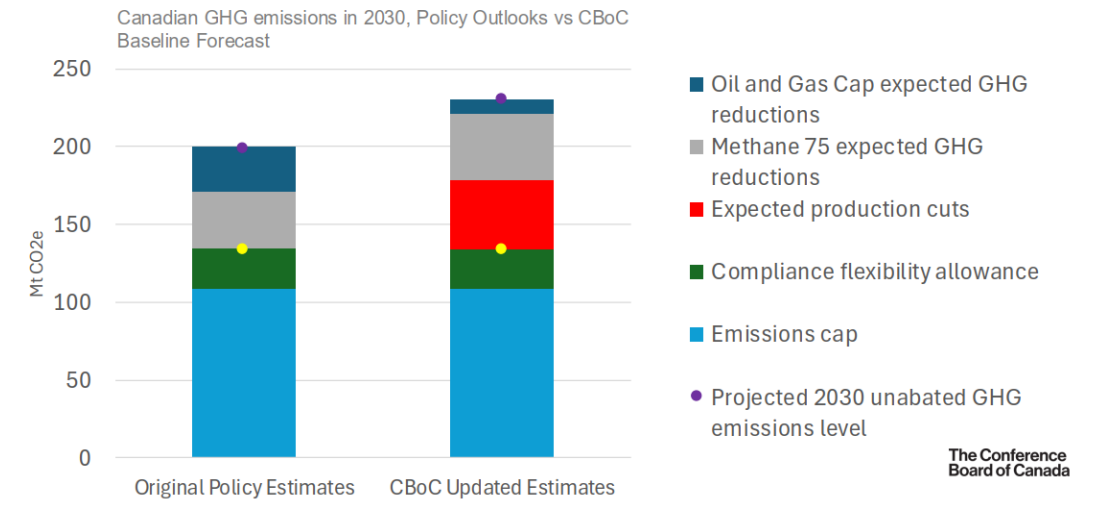
147. The reduction in Saskatchewan's GDP forecast by the CBoC is significant. Saskatchewan's GDP is to fall by \$5.4 billion (3.5 per cent) to \$10.9 billion (7.0 per cent) on average per year versus the baseline applied by the CBoC.

148. The Tribunal considered the assertion by the federal government that lower baseline emissions in 2030 and greater technological reductions in GHG intensity avoid production cuts. The CBoC Study reached the opposite conclusion: production cuts will occur. The CBoC illustrated this in the following diagram:<sup>81</sup>

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<sup>81</sup> CBoC Slides, p. 8.





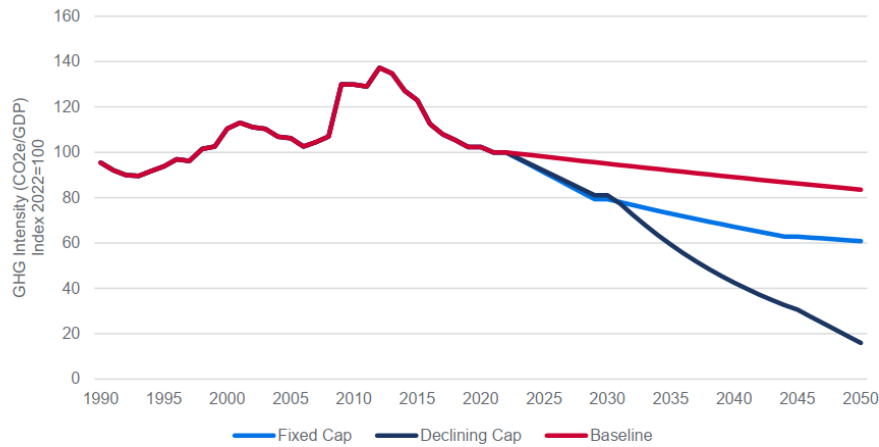
149. The bar on the left side of the chart, which reflects the original policy estimates from the federal government, shows no expected production cuts. The bar on the right side of the chart, which are the CBoC forecasts, shows significant production cuts.

150. The CBoC Study notes that it has predicted a higher level of output, and therefore GHG emissions, in 2030 than the forecasts baseline used in the federal regulatory framework. In both scenarios production cuts are required to meet the legal upper bound for emissions in 2030. Chart 3 of the CBoC Study illustrates the GHG intensity under the baseline and the scenarios, as follows:<sup>82</sup>

<sup>82</sup> CBoC Study, p. 8.

**Chart 3: GHG intensity declines sharply from baseline in both scenarios, but emissions intensity declines the most in the Declining Cap scenario, reflecting a tighter cap.**

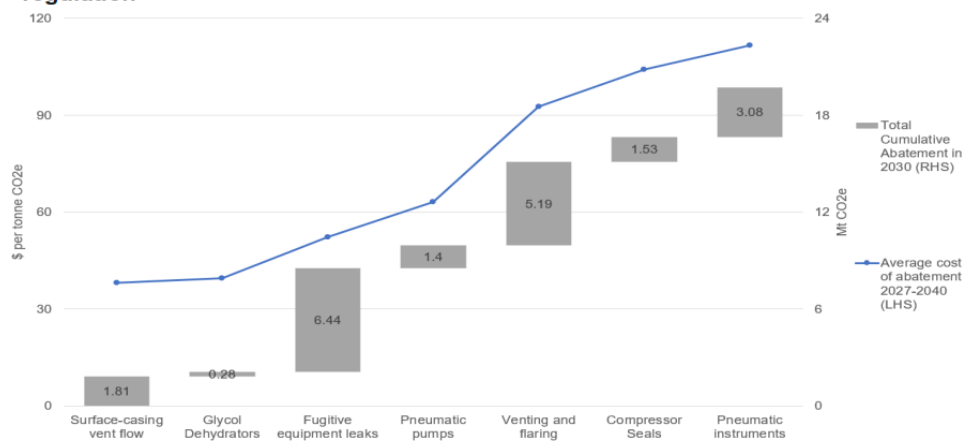
(GHG intensity (CO<sub>2</sub>e/GDP) in the oil and gas sector, Canada, historic and forecast, Index 2022=100)



Sources: Statistics Canada, Conference Board of Canada

151. In respect of the costs of abatement, Chart 4 of the CBoC Study summarizes the seven policies prescribed by Methane 75, the expected emissions reductions, and the estimated costs per tonne of CO<sub>2</sub>e abated by each technology:<sup>83</sup>

**Chart 4: Abatement and costs by technology pathway proposed in the Methane 75 regulation**



Sources: Environment and Climate Change Canada, Conference Board of Canada.

152. The CBoC Study considered the direct costs (to Saskatchewan) of the Federal Initiatives: (i) the cost of purchasing carbon offsets; and (ii) the cost of additional GHG abatement

<sup>83</sup> CBoC Study, p. 9.

technologies. Under the Fixed Cap scenario the majority of the direct compliance costs are expected to occur from 2027 through 2030. The costs total \$2.9 billion in the Fixed Cap scenario and just over \$2.3 billion in the Declining Cap scenario. This reflected in Table 1 of the CBoC Study:<sup>84</sup>

**Table 1: Direct compliance costs for Methane 75 and the Cap in Saskatchewan and Canada**  
(\$ 2023 millions)

Policy	Saskatchewan			Canada		
	2027–2030	2031–2040	2041–2050	2027–2030	2031–2040	2041–2050
<b>Methane 75</b>						
<b>Fixed Cap Scenario</b>						
<b>Declining Cap Scenario</b>	\$2,902	\$4,658	\$4,658	\$6,951	\$11,158	\$11,158
	\$2,321	\$3,727	\$3,727	\$6,370	\$10,227	\$10,227
<b>Cap</b>						
<b>Fixed Cap Scenario</b>						
Carbon credits expenditures	\$162.5	\$1,625	\$1,625	\$1,250	\$12,500	\$12,500
Additional GHG abatement technologies	-	unknown	unknown	-	unknown	unknown
<b>Declining Cap Scenario</b>						
Carbon credits expenditures	\$162.5	\$1,625	\$1,625	\$1,250	\$12,500	\$12,500
Additional GHG abatement technologies	-	unknown	unknown	-	unknown	unknown

Source: Conference Board of Canada.

153. The CBoC Study notes that the technology that Canada’s Energy Regulator has used to estimate the costs for direct air capture, such technology “is not yet available on the scale needed to achieve significant GHG reductions”.<sup>85</sup>

154. The Tribunal has concluded that expected cuts in oil and gas production in Saskatchewan, to meet the legal upper bound in 2030, will have a significant impact on the Saskatchewan

<sup>84</sup> CBoC Study, p. 10.

<sup>85</sup> CBoC Study, p. 11.

economy. Table 6 of the CBoC Study illustrates these concerns. It pictures show the forecasted economic impacts versus the baseline forecast, in respect of Saskatchewan, as follows:<sup>86</sup>

**Table 6: Forecasted economic impacts versus baseline forecast in Saskatchewan of Methane 75 and the Oil and Gas Cap, Fixed Cap Scenario, 2030-2050**

	Annual		Cumulative	
GDP (2023\$b)	-\$5.4	-3.6%	-\$113.8	-3.5%
Investment (2023\$b)	-\$1.2	-4.9%	-\$25.1	-4.7%
Oil and Gas Sector* (2023\$b)	-\$1.0	-24.9%	-\$21.4	-23.7%
Oil and Gas Sector Output (1000's boe/d)	-99.0	-17.4%	-2,079.2	-17.4%
Employment (person - year, 1000's)	-19	-2.6%	-405	-2.5%
Government revenue* (current \$b)	-\$1.1	-3.3%	-\$22.1	-3.3%
Royalty revenue (current \$b)	-\$0.2	-4.0%	-\$3.2	-3.5%

\* Includes oil and gas extraction (NAICS 211) and coal mining (NAICS 2121), the latter of which account for approximately 1.4 per cent of the sector output.  
Source: Conference Board of Canada

155. This table reflects that significant reduction in production begins in 2030. The cumulative GDP is 3.5 per cent lower than under the baseline scenario. This equates to \$114 billion in reduced economic activity (as compared to the baseline outlook). Output and investment in Saskatchewan's oil and gas sector falls by 17 per cent and 25 per cent, respectively. Saskatchewan government revenue is lower from 2030 to 2050 by 3.3 per cent, which equates to a cumulative reduction of \$22 billion compared to the baseline.

156. There are similar significant Saskatchewan consequences under the Declining Scenario. Table 7 of the CBoC Study is as follows:<sup>87</sup>

<sup>86</sup> CBoC Study, p. 20.

<sup>87</sup> CBoC Study, p. 21.

**Table 7: Forecasted economic impacts versus baseline forecast in Saskatchewan of Methane 75 and the Oil and Gas Cap, Declining Cap Scenario, 2030-2050**

	Annual		Cumulative	
GDP (2023\$b)	-\$10.9	-7.0%	-\$229.9	-7.0%
Investment (2023\$b)	-\$2.2	-8.8%	-\$45.6	-8.6%
Oil and Gas Sector* (2023\$b)	-\$2.0	-47.2%	-\$41.8	-46.2%
Oil and Gas Sector Output (1000's boe/d)	-243.8	-42.9%	-5,118.8	-42.9%
Employment (person - year, 1000's)	-29	-3.9%	-618	-3.9%
Government revenue* (current \$b)	-\$2.0	-6.3%	-\$43.3	-6.7%
Royalty revenue (current \$b)	-\$0.5	-12.5%	-\$11.4	-13.7%

\* Baseline includes mining activities. Analysis assumes full impact on upstream oil and gas sector.  
Source: Conference Board of Canada

157. The macroeconomic impacts in Saskatchewan are reflected in Table A2, as follows:<sup>88</sup>

**Table A2: Initial impacts from Production Cuts in Saskatchewan (2030)**

Deviations from baseline forecast in 2030 and FY 2030/31

	Fixed Cap scenario	Declining Cap
GDP (%)	-4.2	-6.7
Oil and Gas Sector (%)	-25.3	-41.4
Investment (%)	-5.0	-8.1
Oil and Gas Sector (%)	-28.0	-45.1
Unemployment rate (percentage points)	0.7	0.9
Employment (%)	-2.0	-2.6
Government revenue (%)	-3.4	-5.4

\* Government finances are reported in nominal terms in this table and throughout the report.  
Source: Conference Board of Canada

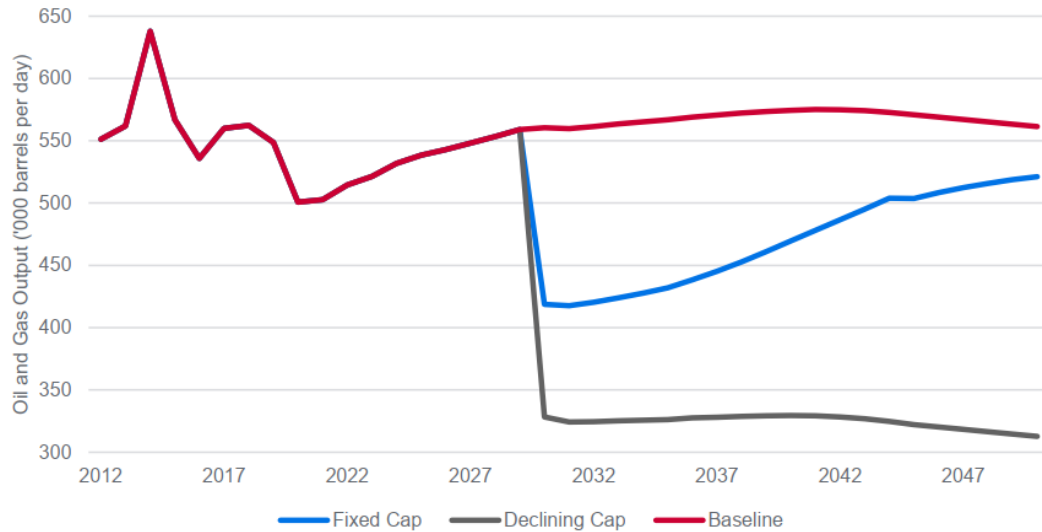
158. Significantly, oil and gas output in Saskatchewan never returns to baseline scenarios. This is illustrated in Chart 7:<sup>89</sup>

<sup>88</sup> CBoC Study, p. 30.

<sup>89</sup> CBoC Study, p. 17.

**Chart 7: Oil and gas output in Saskatchewan does not return to baseline levels across the forecast in either scenario.**

(Oil and gas output, thousands of barrels of oil per day equivalent, Saskatchewan, 2012-2050)



Note: Natural gas in billions of cubic feet converted to thousands of barrels of oil equivalent using a conversion factor of 185.  
Source: Conference Board of Canada, Canada Energy Regulator, Rigzone.com

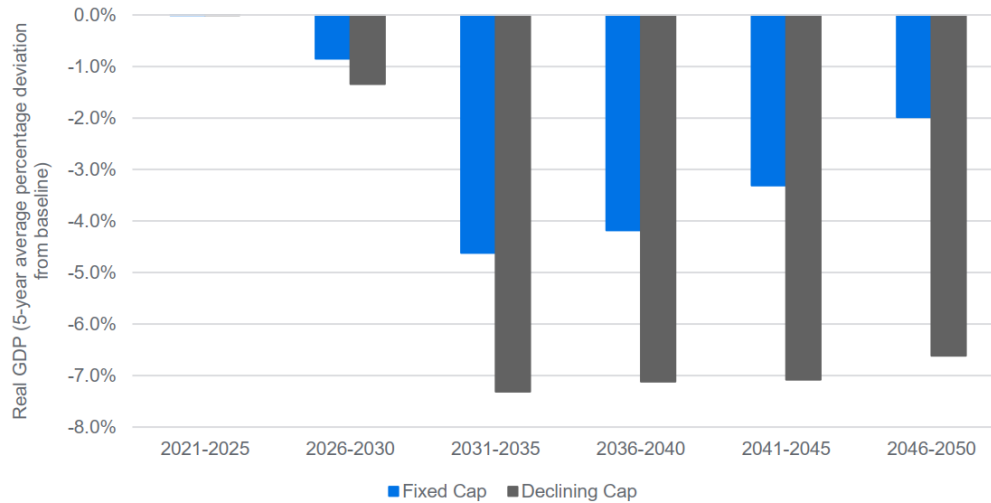
159. Each scenario illustrates significant declines in total economic activity. GDP is \$5.4 billion (3.6 per cent) to \$10.9 billion (7.0 per cent) lower annually compared to the baseline scenario. Under the Declining Cap scenario oil and gas production does not recover, resulting in a \$11.7 billion gap in GDP by 2050. Under the Fixed Cap scenario the gap is \$2.8 billion in 2050.

160. This is shown in Chart 8, as follows:<sup>90</sup>

<sup>90</sup> CBoC Study, p. 18.

**Chart 8: Saskatchewan's GDP declines by an average of 3.6 and 7.0 per cent from 2030 to 2050 relative to baseline.**

(Real GDP, 5-year average percentage deviation from baseline, Saskatchewan, 2021–2050)

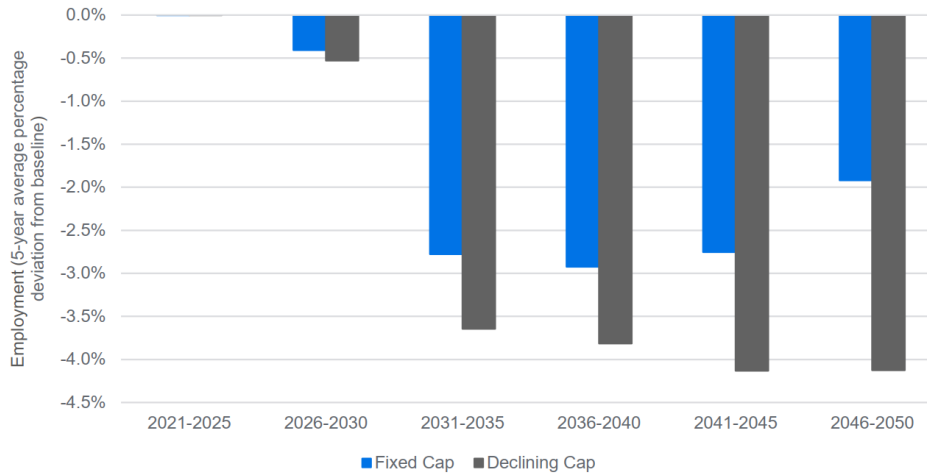


161. The reduction in employment is equally dramatic. The CBoC Study forecasts that annual employment in Saskatchewan will decline (from the baseline) by between 19,000 (2.6 per cent) and 29,000 (3.9 per cent) in the Fixed Cap scenario and the Declining Cap scenario, respectively. This is reflected in Chart 9:<sup>91</sup>

**Chart 9: Employment is on average 2.6 and 3.9 per cent below baseline from 2030 to 2050 in the Fixed Cap and Declining Cap scenarios, respectively.**

(Employment, 5-year average percentage deviation from baseline, Saskatchewan, 2021–2050)

<sup>91</sup> CBoC Study, p. 19.



Source: Conference Board of Canada

162. Just as is the case with GDP, the initial decline in 2030 is similar under both scenarios. Under the Declining Cap scenario there is a permanent loss of assets and increased outmigration, resulting in an employment decline by 2050 (relative to the baseline) of 34,000.

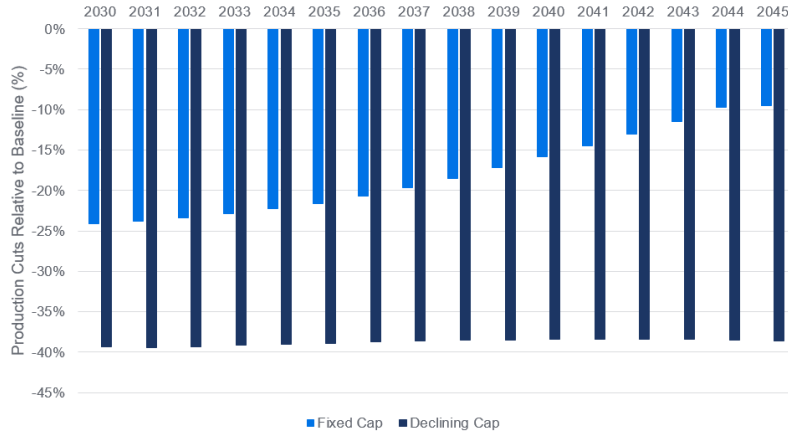
163. The direct compliance costs in Saskatchewan are estimated to be between \$13.8 to \$15.6 billion from 2027 to 2050. These estimates do not account for potential costs of major new carbon capture and direct air capture technologies that would need to be installed under the Declining Cap scenario. The CBoC Study notes that long-term costs of CCUS, DAC and other emerging technologies remain too uncertain to estimate with precision.

164. The Saskatchewan production shocks (output cuts versus baseline) are reflected in the CBoC Slides, as follows:<sup>92</sup>

Saskatchewan production shocks  
(output cuts vs baseline)

<sup>92</sup> CBoC Slides, p. 12.





Note: Demand shock applied through exports to Real Domestic Product: Oil and gas extraction & Coal mining (NAICS 211 + 2121)

The Conference Board of Canada

165. The CBoC Slides forecasts the direct compliance costs, as follows:<sup>93</sup>

#### Direct Compliance Cost Estimates in \$K

Policy	2027-2030	2031-2040	2041-2050
<b>Methane 75</b>			
Fixed Cap Scenario	\$2,902	\$4,658	\$4,658
Declining Cap Scenario	\$2,321	\$3,727	\$3,727
<b>Oil and Gas Cap</b>			
<b>Fixed Cap Scenario</b>			
Carbon credits expenditures	\$162.5	\$1,625	\$1,625
Additional GHG abatement technologies	-	-	-
<b>Declining Cap Scenario</b>			
Carbon credits expenditures	\$162.5	\$1,625	\$1,625
Additional GHG abatement technologies	-	unknown	unknown

Note: All values are in millions of constant 2023 dollars.

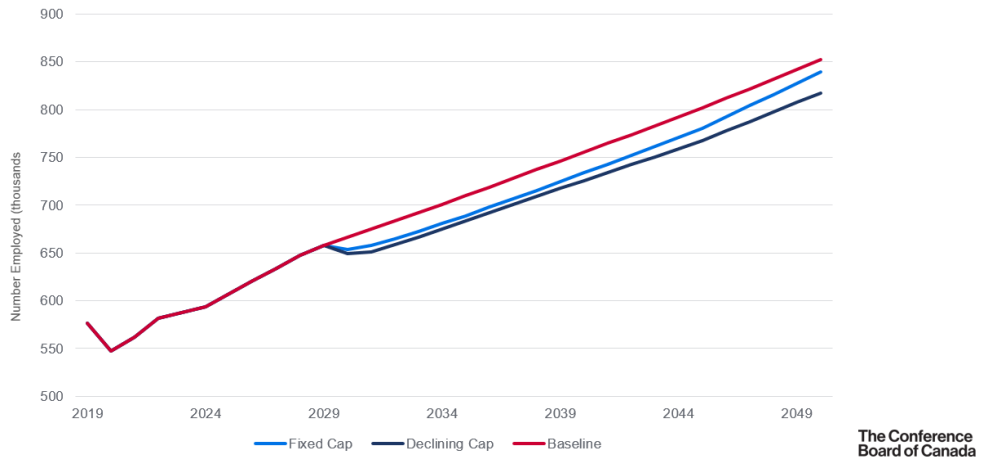
The Conference Board of Canada

166. The effect on employment in depicted in the CBoC Slides is as follows:<sup>94</sup>

Employment in Saskatchewan down by 19K - 29K (2.6% -3.9%) on average per year

<sup>93</sup> CBoC Slides, p. 17.

<sup>94</sup> CBoC Slides, p. 28.



## APPENDIX 3

### NAVIUS RESEARCH INC. – ADDITIONAL COMMENTARY

167. The Navius Study covers three core areas:

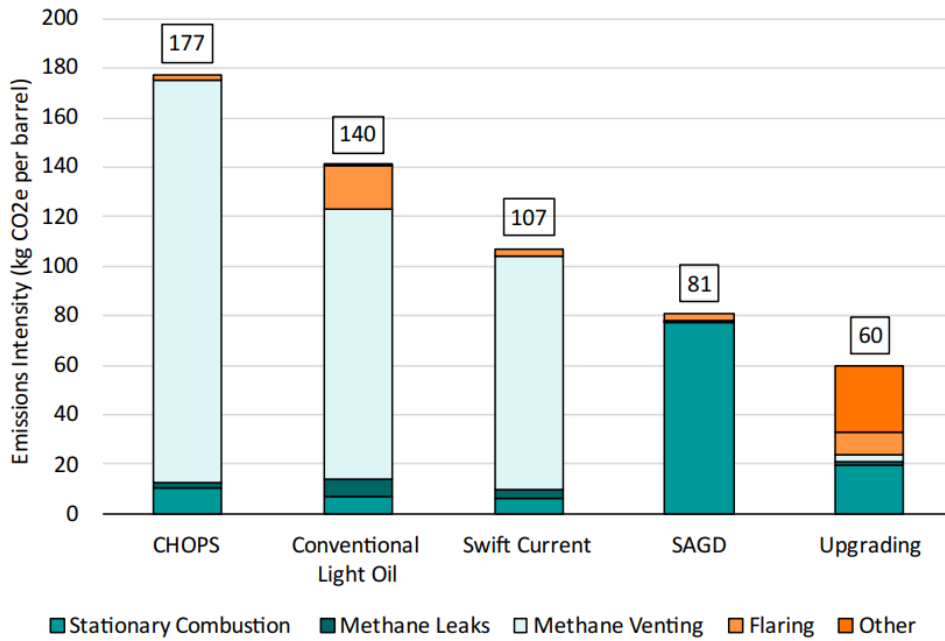
- Emissions abatement includes the actions that Saskatchewan’s oil and gas sector takes to achieve compliance under Methane 75 and the Emissions Cap in 2030, 2040 2050.
- Oil and gas economics discusses the impact that Methane 75 and Emissions Cap compliance has on sector output, investment and employment.
- Provincial economy explores the effects of Methane 75 and the Emissions Cap on Saskatchewan’s macroeconomy, including GDP, investment, exports and government revenue.

168. Navius acknowledged that Saskatchewan’s upstream oil and gas sector is comprised of different facilities and production types, each with its own emissions profile. The Navius Study analysis allocates facilities to one of five oil production types (or one of two natural gas production types). The following figure illustrates the 2020 emissions intensity of the upstream oil production types in Saskatchewan:<sup>95</sup>

Figure 1: Emissions intensity in key upstream oil sectors in Saskatchewan in 2020, Reference Case

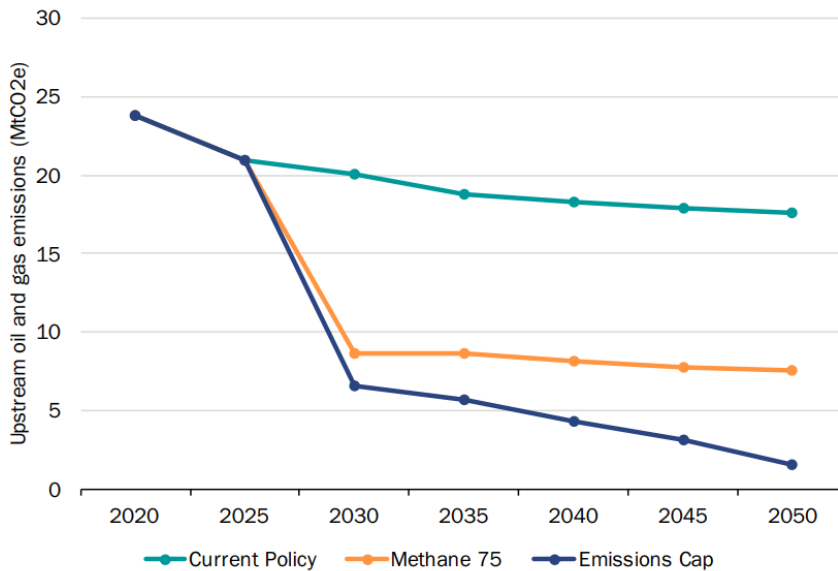
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<sup>95</sup> Navius Study, p. 8.



169. Navius observes that Methane 75 and the Emissions Cap both lead to lower emissions from the oil and gas sector, illustrated, as follows:<sup>96</sup>

Figure 2: Annual direct upstream oil and gas emissions in Saskatchewan, Reference Case



<sup>96</sup> Navius Study, p. 9.

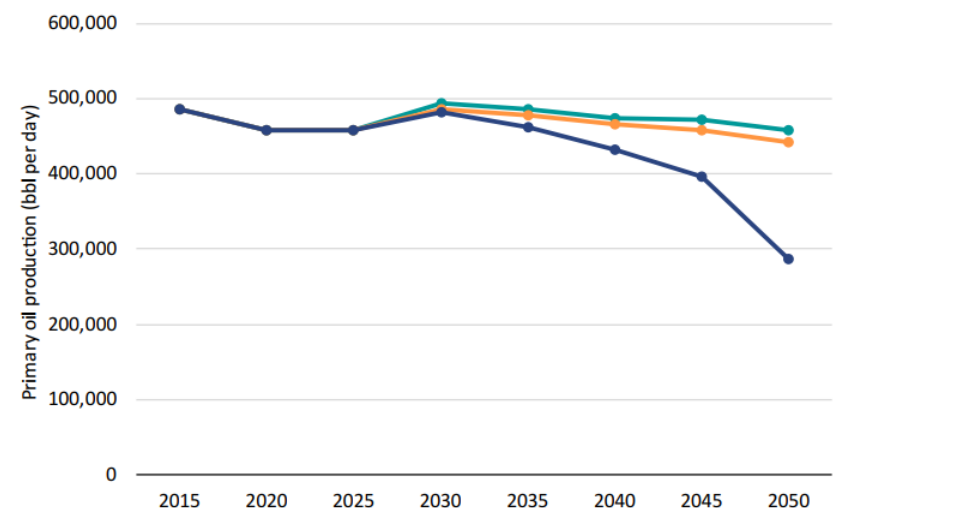
170. The Tribunal notes that the assumptions used by Navius as to the availability of technology may be optimistic. The consequences of technology not being available at scale to incorporate are significant. For example, the Navius Study notes that the price of Emissions Cap allowances is three times higher in 2030 and 2035 when CCUS is not available.<sup>97</sup>

171. The Navius Study has forecasted the effect of the Federal Initiatives on Saskatchewan’s oil and gas production, as follows:

- Methane 75 will lead to a 9 thousand barrels per day (kbpd) reduction (2%) in oil and gas production by 2030, and a 16-17 kbpd (3-4%) reduction by 2050, relative to Current Policy
- The Emissions Cap in 2030 will lead to a 13-15 thousand barrels per day (3%) reduction in oil and gas production by 2030; 33-51 kbpd reduction (7-11%) by 2040; and 126-176 kbpd reduction (28-39%) by 2050, relative to Current Policy.

This is reflected in Figure 3 of the Navius Study:<sup>98</sup>

Figure 3: Total primary oil production in Saskatchewan, Reference Case



172. The Tribunal has posited that the unique features of the Saskatchewan oil and gas sector result in different consequences than in other jurisdictions. One feature is that the Saskatchewan industry is not concentrated in several areas of the province. The Navius Study notes that the

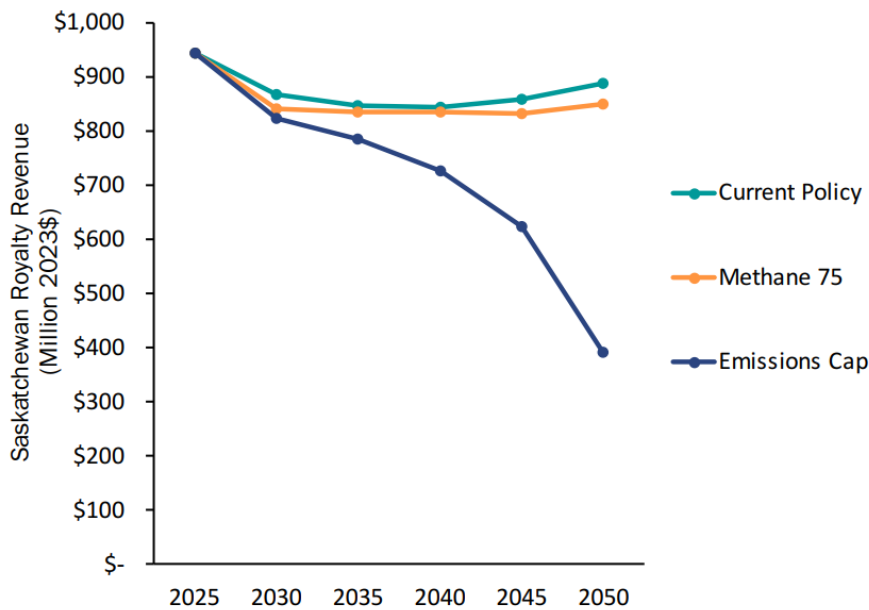
<sup>97</sup> Navius Study, p. 10.

<sup>98</sup> Navius Study, p. 11.

production losses under Methane 75 will likely be concentrated in regions where there are wells with relatively high venting and leaked emissions and relatively low production rates.

173. The Tribunal has concluded that the Federal Initiatives will result in reduced government revenue in Saskatchewan. Navius also forecasts that result, and reasons that it will occur primarily as a consequence of lower royalty and production tax revenue. This is illustrated in the Navius Study (Figure 5):<sup>99</sup>

Figure 5: Total royalty and production tax revenue in Saskatchewan, Reference Case



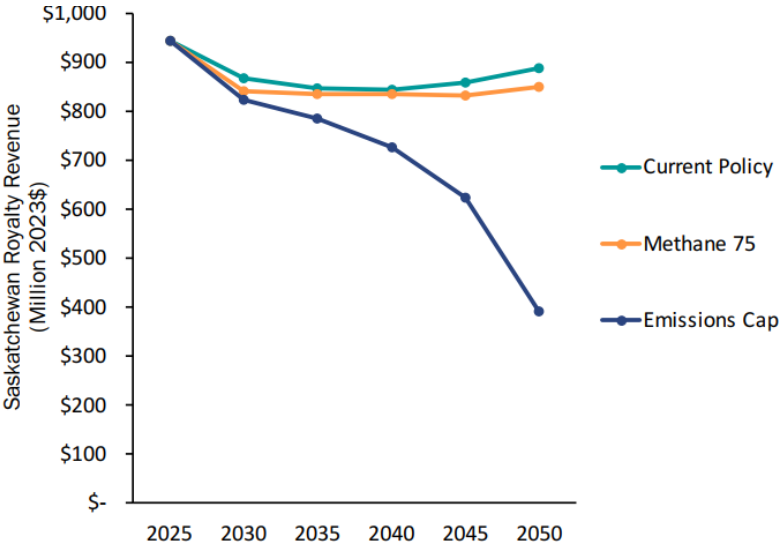
174. Navius suggest that as a consequence of Methane 75, annual provincial and federal government revenue in Saskatchewan will be \$0.1 billion (\$2023) below Current Policy between 2030 and 2050. Additionally, Navius forecasts that royalty and production tax revenue will be below the amounts under Current Policy by up to \$36 million.

175. Navius forecasts that as a consequence of the Emissions Cap, provincial and federal government revenue will be less than \$0.1 billion below Current Policy in 2030. That gap increases to \$0.5 billion in 2040 and \$2.1 billion in 2050. One-quarter of that total lost revenue is due to reduced royalty and production taxes.

<sup>99</sup> Navius Study, p. 14.

176. Figure 18 shows total resource royalties under the reference oil price.

Figure 18: Oil and gas royalty and production tax revenue, Reference Case<sup>100</sup>



177. Under Methane 75, annual royalty revenue in Saskatchewan is between \$8 and \$36 million lower than under Current Policy between 2030 and 2050. This impact is driven primarily by lower conventional light oil production. This decline in royalties represents a 3% decrease relative to Current Policy in 2030, and a 4% decrease by 2050.<sup>101</sup>

178. Under the Emissions Cap, annual royalty revenue in Saskatchewan is \$45 million below Current Policy in 2030, with the gap increasing to \$116 million in 2040 and \$495 million in 2050. This is caused by significantly decreased production across oil and gas sectors under the Emissions Cap. This decline in royalties represents a 5% decrease relative to Current Policy in 2030, and a 56% decrease by 2050.<sup>102</sup>

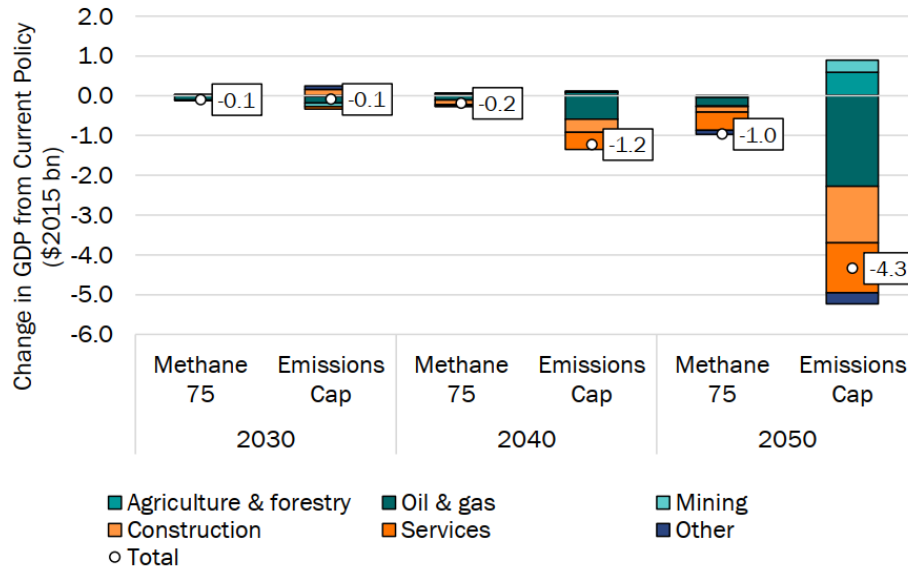
<sup>100</sup> Navius Study, p. 53.

<sup>101</sup> Navius Study, p. 53.

<sup>102</sup> Navius Study, p. 53.

179. The Tribunal has commented on the detrimental effect of the Federal Initiatives on the growth of Saskatchewan’s GDP. Navius illustrates its view of the decline, in its Figure 6:<sup>103</sup>

Figure 6: Change in annual GDP from Current Policy, Reference Case



180. Navius sets out the following conclusions:

- Under Methane 75, Saskatchewan’s economy is \$0.1 billion (0.1%) smaller relative to Current Policy between 2025 and 2030, and \$1.0 billion (0.7%) smaller between 2025 and 2050. Lower GDP growth is driven by slower growth in the oil and gas and construction sectors due to lower oil production and the link between oil sector output and construction activity.
- Under the Emissions Cap, Saskatchewan’s economy is \$0.1 billion (0.1%) smaller relative to Current Policy between 2025 and 2030, and \$4.3 billion (3.1%) smaller between 2025 and 2050. Growth slows mostly in the oil and gas sector, but the construction and services sectors also exhibit lower cumulative GDP by 2040 and 2050.

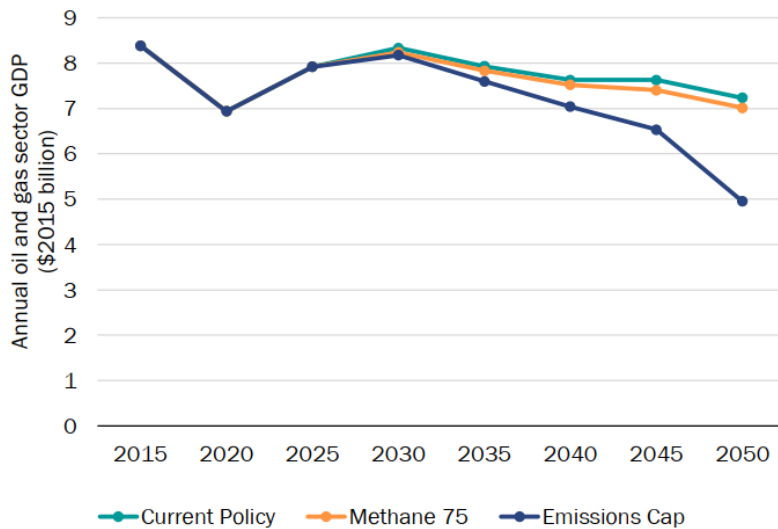
<sup>103</sup> Navius Study, p. 15.



181. Navius has forecasted the change in cumulative GDP by sector, as shown in its Table 3.<sup>104</sup>

Sector	2030			2050		
	Current Policy	Methane 75	Emissions Cap	Current Policy	Methane 75	Emissions Cap
Agriculture & forestry	10.4	10.4	10.3	17.1	17.1	17.7
Oil & gas	8.3	8.2	8.2	7.2	7.0	5.0
Mining	6.9	6.9	6.8	8.0	8.0	8.3
Construction	7.5	7.5	7.7	9.6	9.5	8.2
Services	46.5	46.5	46.4	81.9	81.4	80.6
Other	11.4	11.4	11.5	16.2	16.1	15.9
<b>Total</b>	<b>91.1</b>	<b>91.0</b>	<b>91.0</b>	<b>140.0</b>	<b>139.0</b>	<b>135.6</b>

182. Figure 21: Change in cumulative GDP from Current Policy, Reference Case<sup>105</sup>

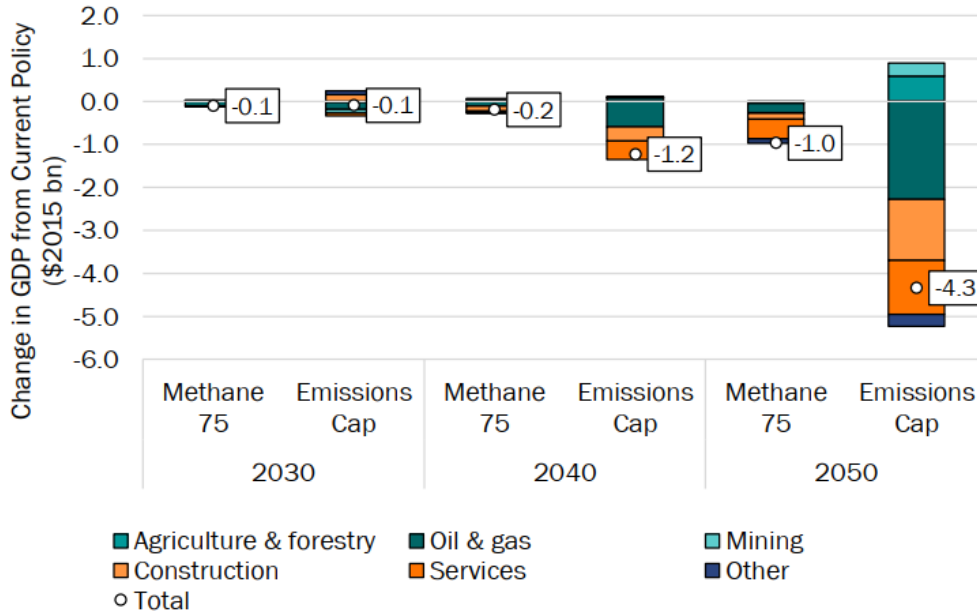


183. Figure 22: Change in annual GDP from Current Policy, Reference Case<sup>106</sup>

<sup>104</sup> Navius Study, p. 16.

<sup>105</sup> Navius Study, p. 56.

<sup>106</sup> Navius Study, p. 57.

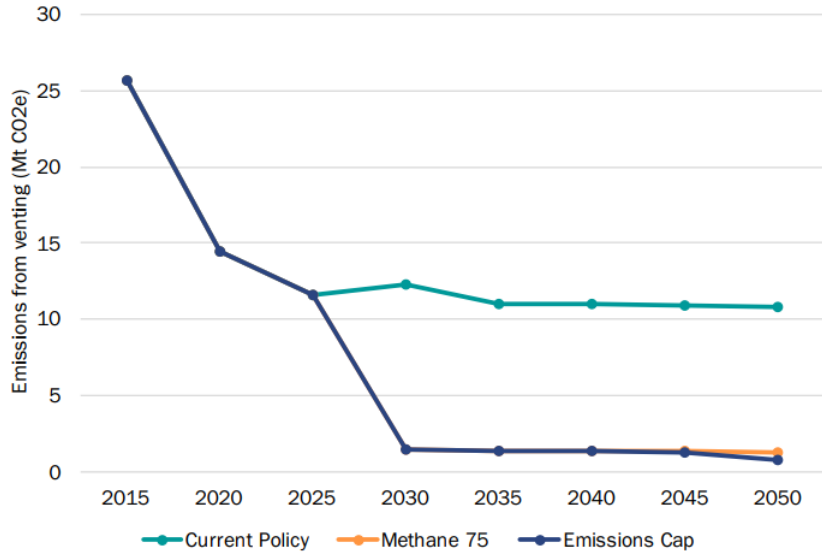


- Under Methane 75, Saskatchewan’s GDP growth slows y .02% per year relative to Current Policy between 2025 and 2030, and 0.13% per year between 2025 and 2050. Lower GDP growth is driven by slower growth in the oil and gas and construction sectors due to lower oil production and the link between oil sector output and construction activity.
- Under the Emissions Cap, Saskatchewan’s GDP growth slows y .02% per year relative to Current Policy between 2025 and 2030, and 0.13% per year between 2025 and 2050. Growth slows mostly in the oil and gas sector, but the construction and services sectors also exhibit lower cumulative GDP by 2040 and 2050.

184. Methane 75 significantly reduces the emissions intensity of Saskatchewan’s methane intensive oil and gas production, as reflected in the following graph:<sup>107</sup>

Figure 10: Emissions from venting in Saskatchewan’s oil and gas sector, Reference Case

<sup>107</sup> Navius Study, p. 39.



185. The following Figure 11 presents the impact of Methane 75 and other legislated policies on the change in emissions intensity of these sectors between 2020 and 2030.

Figure 11: Emissions intensity of methane-intensive oil production in Saskatchewan under Methane 75, Reference Case<sup>108</sup>

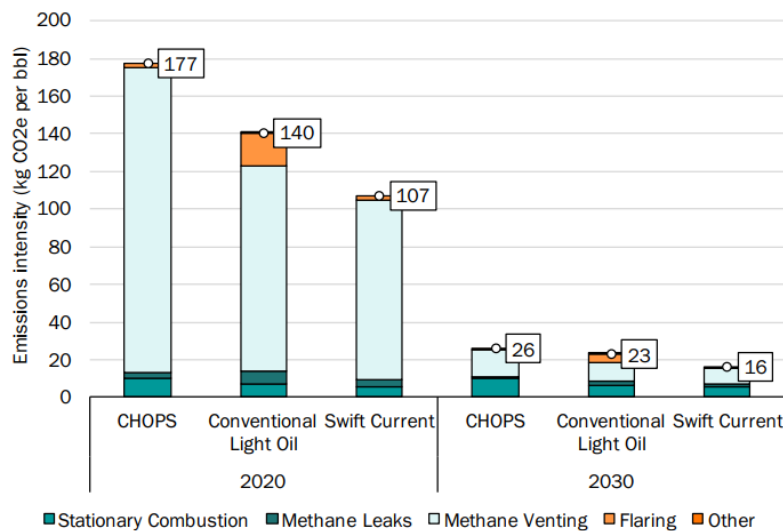
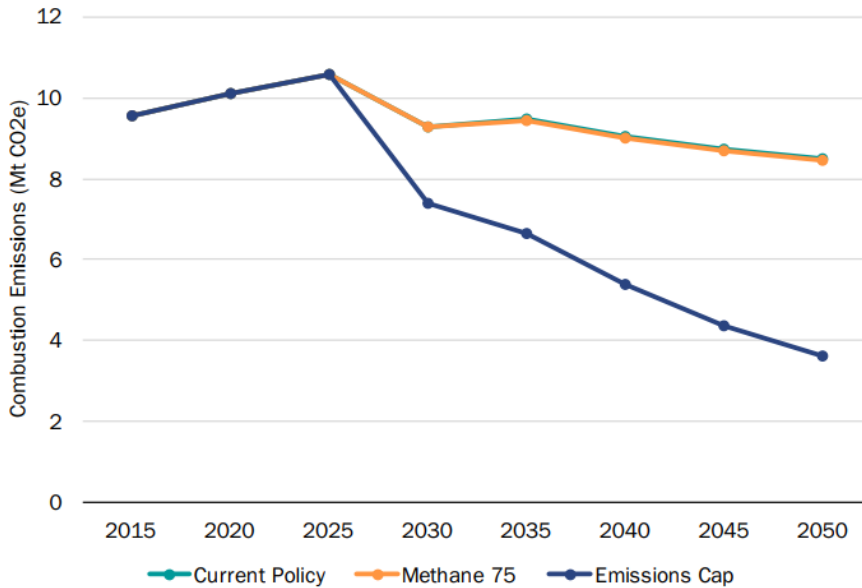


Figure 12: Combustion emissions in Saskatchewan’s oil and gas sector, Reference Case

<sup>108</sup> Navius Study, p. 40.

When available, CCUS drives the most reductions in combustion emissions under the Emissions Cap.<sup>109</sup>



Under the Navius analysis, the deployment of CCUS is the primary abatement method deployed by SAGD and upgrading facilities in Saskatchewan. The Tribunal has described its conclusion that it is questionable that CCUS will be implemented at the pace and with the breadth that underlies the Navius assumption. If the Tribunal is correct, then reaching the required emission levels will necessarily require a reduction in production.

186. Navius notes the following:<sup>110</sup>

If CCUS is assumed to not be available, SAGD and upgrading facilities do not have sufficient abatement options to comply with a net-zero emissions cap by 2050.

Table 9: Cost of methane abatement under Current Policy and Methane 75, Reference Case<sup>111</sup>

<sup>109</sup> Navius Study, p. 41.

<sup>110</sup> Navius Study, p. 42.

<sup>111</sup> Navius Study, p. 44.

Sector	Current Policy <sup>37</sup>	Methane 75	Policy impact
Total GHG abatement (Mt CO <sub>2</sub> e/yr in 2030) <sup>38</sup>	8.2	19.2	11.0
Total incremental levelized* compliance cost (\$2023 million/yr in 2030)	230	586	356
Average abatement cost (\$2023 per tonne CO <sub>2</sub> e)	28.0	30.6	2.5

\* levelized costs are the sum of annualized capital costs (17.5% discount rate) plus the net difference in operating and energy costs.

187. The price for allowances under the Emissions Cap, increases as the Emissions Cap becomes more stringent. The Table below summarizes the price of emissions allowances under the Emissions Cap.

Table 10: Price of emissions allowances under the Emissions Cap by sensitivity (2030\$ per tonne of CO<sub>2</sub>e)<sup>112</sup>

Sensitivity	2030	2035	2040	2045	2050
Reference Case	170	178	203	434	910
High Tech Cost	192	219	255	480	910
Low Tech Cost	110	137	170	509	1087
CNZ Oil Price	170	175	172	285	645
DAC available	170	182	204	414	488
No CCS available	559	545	550	580	809
Median price	170	180	203	457	859

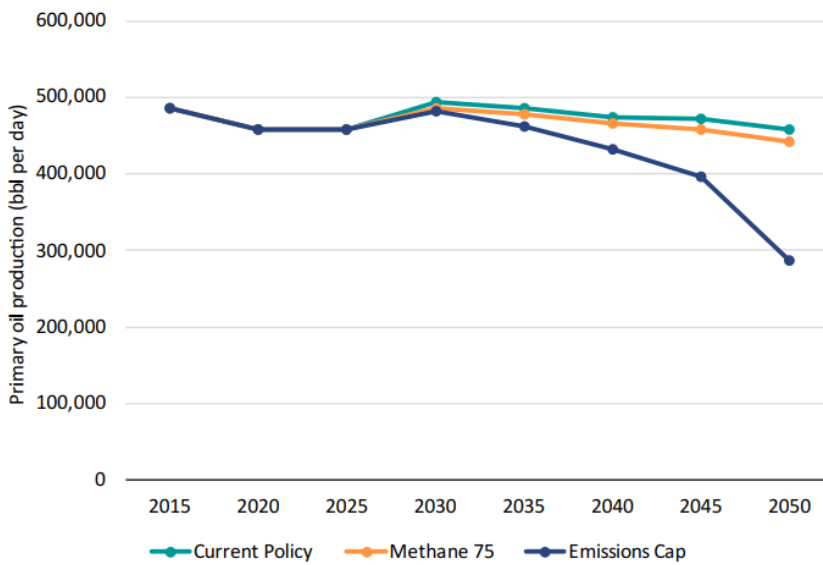
The price of Emissions Cap allowances is three times higher in 2030 and 2035 when CCUS is not available (Table 10).

188. The actions required by the sector to achieve compliance under Methane 75 and the Emissions Cap will negatively affect Saskatchewan’s oil and gas production. Figure 15 and Table 11 below present total primary oil production in Saskatchewan under each scenario.

<sup>112</sup> Navius Study, p. 45.

- Methane 75 will lead to a 9 thousand barrels per day (kbpd) reduction (2%) in oil and gas production by 2030, and a 16-17 kbpd (3-4%) reduction by 2050, relative to Current Policy
- The Emissions Cap in 2030 will lead to a 13-15 thousand barrels per day (3%) reduction in oil and gas production by 2030; 33-51 kbpd reduction (7-11%) by 2040; and 126-176 kbpd reduction (28-39%) by 2050, relative to Current Policy.

189. Figure 15: Total primary oil production in Saskatchewan, Reference Case<sup>113</sup>



190. Table 11: Impact of Methane 75 and Emissions Cap on primary oil production in Saskatchewan, Reference Case<sup>114</sup>

Production category	2025	2030	2035	2040	2045	2050
Total primary oil production under Current Policy	459	494	485	474	472	458
Change in oil production under Methane 75	0	-9	-7	-8	-13	-16
Change in oil production under Emissions Cap	0	-13	-24	-42	-74	-172

<sup>113</sup> Navius Study, p. 47.

<sup>114</sup> Navius Study, p. 47.

191. Navius forecasts that investment in the oil and gas sector will be negatively impacted by the Federal Initiatives:<sup>115</sup>

- Methane 75 will have an equivalent level of investment in 2030 as under Current Policy, with losses in production offset by additional investment in compliance actions, such as installing combustors at small sites and increased LDAR survey frequency. However, the sector will have \$0.2-0.3 billion (\$2023) less annual investment by 2040 and 2050 relative to Current Policy, due to a lower production output requiring less capital investment.
- The Emissions Cap will require \$0.4 billion more investment in the sector in 2030 relative to Current Policy to achieve compliance with the emissions cap. This investment is largely driven by additional compliance actions in industrial heat, including the deployment of CCUS facilities with an annual capture capacity of 2.1 Mt CO<sub>2</sub>e. However, by 2040 total investment in the sector falls below the Current Policy level, due to production shut in. Under the Emissions Cap, annual investment is \$0.7 billion below Current Policy in 2040 and \$3.6 billion below Current Policy in 2050.

192. Navius forecasts that the Federal Initiatives will result in lower employment in the oil and gas sector after 2030:<sup>116</sup>

- In 2030, the impacts of Methane 75 and the Emissions Cap on oil and gas jobs is marginal (~100 fewer full-time equivalent jobs). Lower production leads to fewer jobs in the sector but this effect is partially offset by the additional labour required to implement compliance actions under each policy, such as increased LDAR monitoring frequency.
- Methane 75 results in a small net reduction in employment in all model years after 2030, approximately 200 fewer full-time jobs than Current Policy. The Emissions cap leads to 600 fewer jobs in 2040 and 3,000 fewer jobs in 2050, relative to Current Policy.
- There is a regional nuance to where the job losses might occur. For example, production losses under Methane 75 will likely be concentrated in regions where there are wells with relatively high venting and leaked emissions and relatively low production rates. In contrast, new jobs will occur where production continues.

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<sup>115</sup> Navius Study, pp. 50 and 51.

<sup>116</sup> Navius Study, p. 51.

193. Saskatchewan exports a lower value of goods and services under Methane 75 and the Emissions Cap, relative to Current Policy, driven primarily by lower oil product exports. Annual oil exports are consistently \$0.2-\$0.4 billion below Current Policy under Methane 75. Under the Emissions Cap, oil exports are \$0.3 billion less than under Current Policy in 2030, \$0.9 billion less in 2040, and \$5.6 billion less in 2050 (2015\$).