



The Economic Impact of Canadian Oil and Gas

CAPP CANADA'S OIL & NATURAL GAS
PRODUCERS

Note to Reader – Disclaimer Statement

- This presentation includes data compiled from multiple third-party sources. Sources are indicated at the bottom of the applicable slide. Although we believe this data to be reliable, we do not guarantee the accuracy of data from third parties. The data in this presentation may be updated from time to time following the release of updated data.
- Readers are cautioned that different methodologies may be used to gather and present certain data in this presentation. Results may differ depending on the specific sources and methodologies used.
- This presentation may contain forecasts or future estimates. Such forecasts and estimates are based on information available at the time and are not guarantees of future results.
- The information in this presentation is intended for general informational purposes only. Readers should not rely on this presentation to make business or investment decisions.

Updates From Last Publication

- Slide 4: Canadian metrics updated with 2024 estimates.
- Slide 5: Indices updated to December 31, 2023.
- Slide 7: Well count has been revised to 5,400 for 2023.
- Slide 10-12: New slides showing 2024 estimates.
- Slides 13-14: Prices updated to December 31, 2023.
- Slide 15: Production includes NGLs.
- Slide 16-17: Updated to include 2024 estimates.
- Slide 18: New slide.
- Slide 19-22: Updated to include 2024 estimates.

Summary of the Economic Impact of Canadian Oil and Gas

- Conditions for the Canadian upstream oil and gas industry have been challenging since the 2014/15 downturn; however, the situation has drastically improved post-COVID with the commodity price recovery and improved pipeline takeaway, which have resulted in record-high revenue levels in 2022 and 2023.
- The start to 2024 is shaping up to be slightly weaker compared to the last couple of years. Revenue is estimated at \$162 billion (down 13% YOY). CAPEX spending should be more resilient and similar to 2023, with the equivalent of 67% of industry revenue, or \$108 billion, estimated to be spent on operating expenditures (OPEX) and capital expenditures (CAPEX); mostly this is spent in Canada.
- Despite the weaker outlook for 2024, the estimate for total revenue is still nearly two times greater than during the 2020 pandemic. The industry's improved health has transferred to the bottom line of provincial governments. The industry paid a record \$33 billion in oil and gas royalties to provincial governments in 2022. In 2023 and 2024, around \$20 billion is expected each year.
- Over the past few years, cost inflation has erased most of the industry's previous gains in reducing operating costs. Managing these costs continues to be an area of focus.
- The economic impact of Canada's upstream oil and gas sector is significant. In 2022, the sector comprised over 5% of Canada's GDP. The oil and gas extraction sub-industry is the largest goods-producing industry in Canada. It is 2X the size of the next largest sub-industries—residential building construction and engineering and other construction activities.
- When direct, indirect, and induced jobs are considered, the oil and gas sector employs about 800,000 people in Canada. These are well-paying jobs; the average direct oil and gas worker's total compensation is 2.3X higher than the Canadian average.

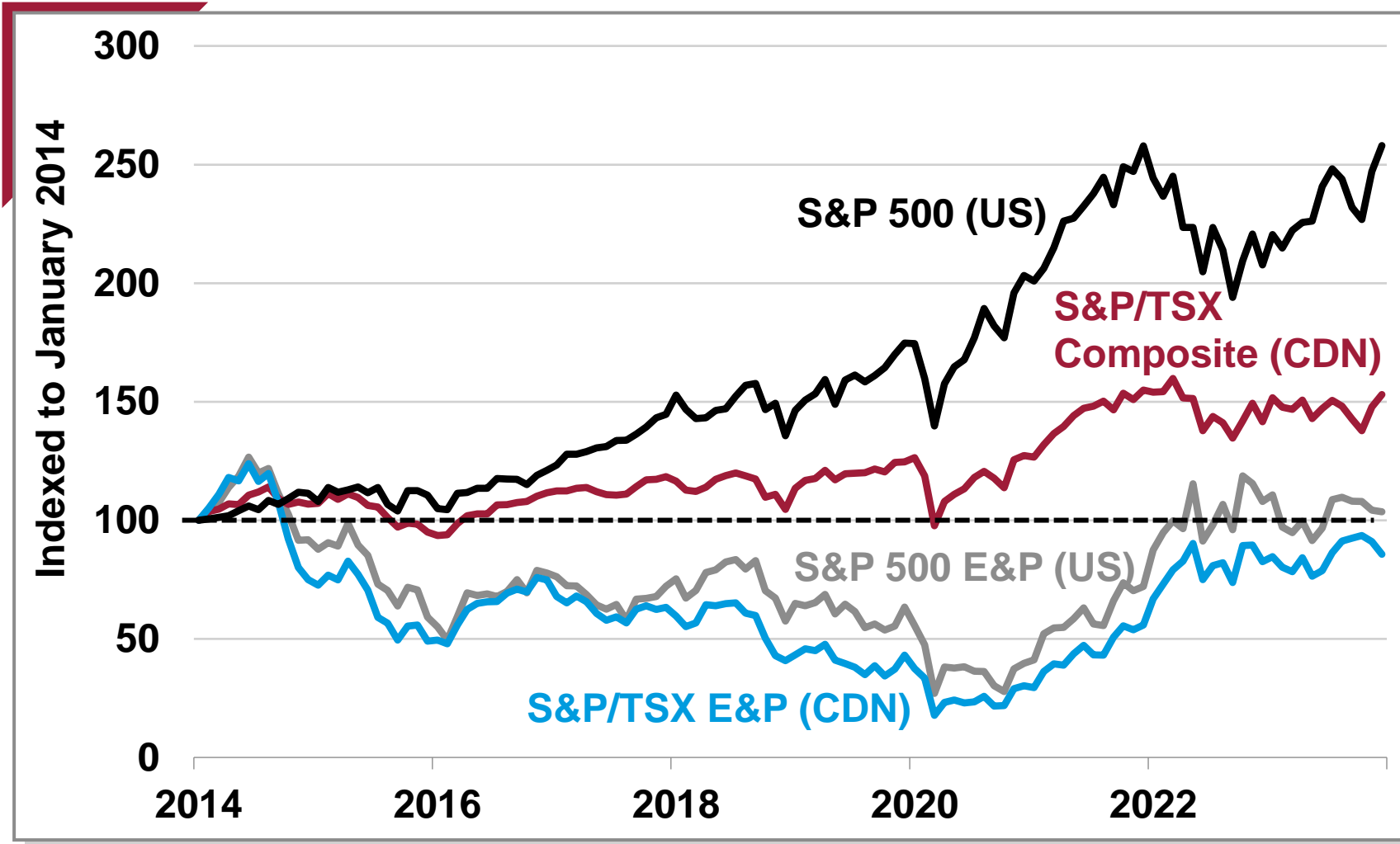
Canadian Oil and Gas Metrics (2024e)

\$162 billion
Revenue

\$68 billion
OPEX

\$40 billion
CAPEX

Monthly Equity Indices Performance Comparison | 2014 to December 2023

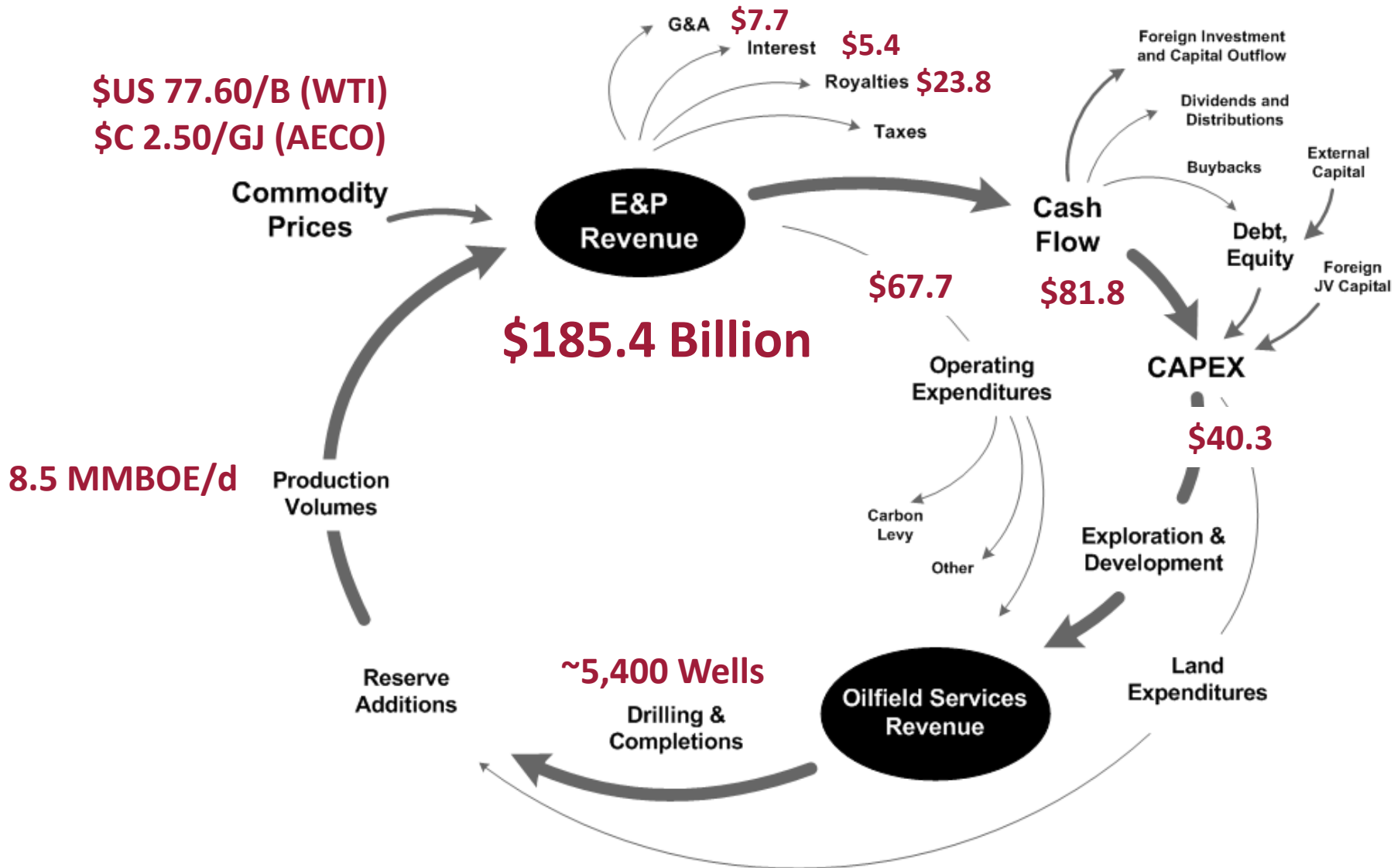


Source: Bloomberg, Yahoo

- The oil and gas sector has underperformed vs. the broad market since the 2014/15 downturn.
- Canadian oil and gas equities have fared worse than US equities. In 2018, a shortage of pipeline capacity caused massive Canadian oil price discounts, and the Alberta government forced production curtailment to stabilize prices. This and other issues like pipeline politics and GHG policy uncertainty have contributed to underperformance.
- At the end of 2023, Canadian oil and gas finished the year up 3.9% from 2022. It had nearly recovered to its early 2014 level.

The Fiscal Pulse

The Fiscal Pulse | Total Canadian Upstream Oil and Gas Industry | 2023 Estimates

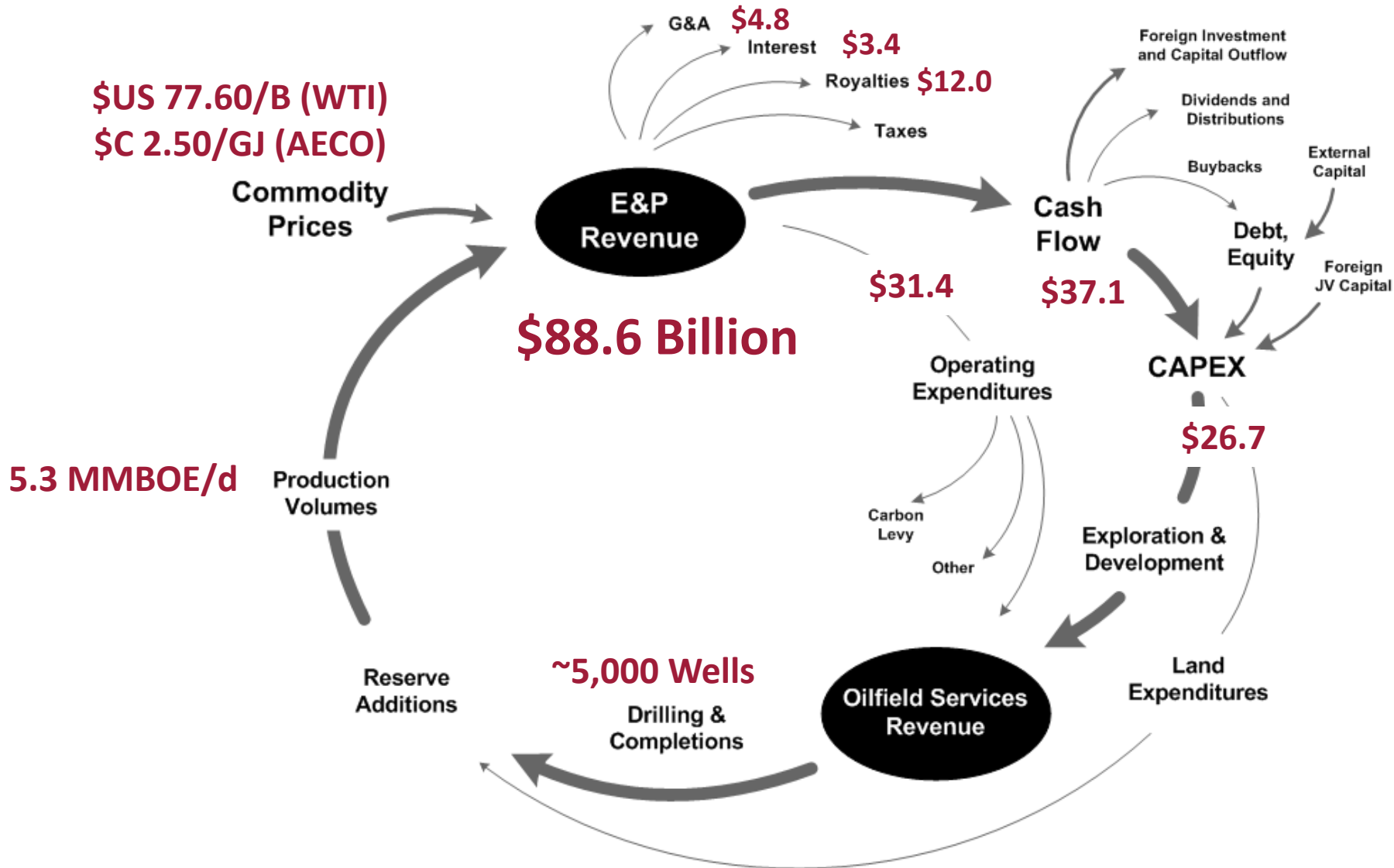


- This capital flow diagram represents an accounting of Canada's upstream oil and gas economy for 2023 (estimates).
- It shows how capital associated with 8.5 MMBOE/day of oil and gas production is accounted for.
- Total revenues are estimated to be \$185 billion in 2023, down 20% from the record \$232 billion in 2022; 58% of revenue, or \$107 billion (operating expenditures + CAPEX) is mostly spent in Canada.

Source: ARC Energy Research Institute, Bloomberg (WTI and AECO)

All dollar values in billions of Canadian dollars unless otherwise noted.

The Fiscal Pulse | Conventional Crude Oil, Liquids and Natural Gas | 2023 Estimates

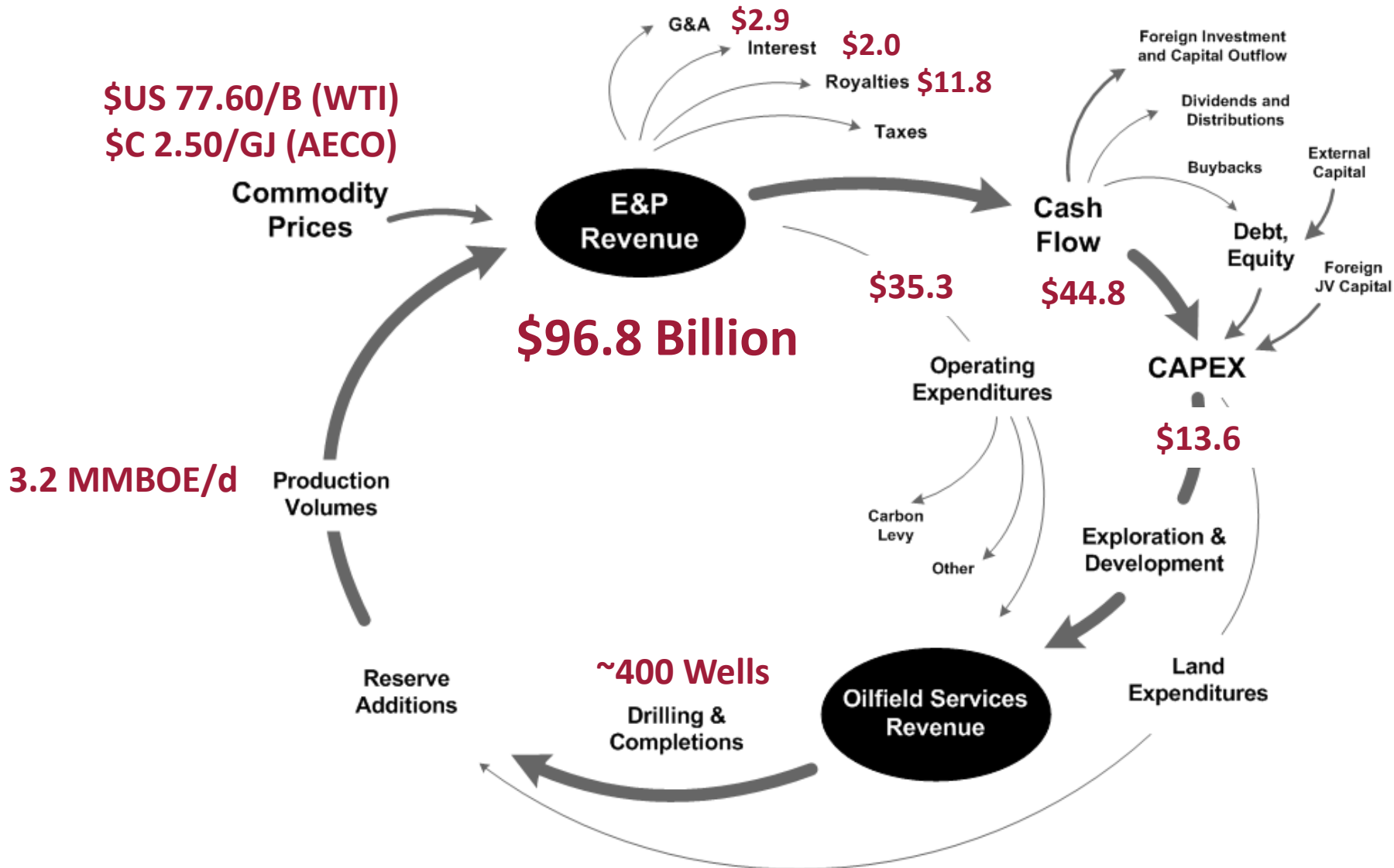


- In 2023, conventional production made up just under half of the total industry revenue.
- Conventional oil and gas capital expenditures (CAPEX) is expected to be \$27 billion, or about 2X oil sands CAPEX in 2023.
- The high decline rates of the existing wells require constant re-investment just to keep production flat.
- During the \$100/B oil price era (pre-2014) annual CAPEX spending exceeded \$40 billion some years, an amount greater than peak oil sands spending of ~\$33 billion.

Source: ARC Energy Research Institute, Bloomberg (WTI and AECO)

All dollar values in billions of Canadian dollars unless otherwise noted.

The Fiscal Pulse | Oil Sands Only | 2023 Estimates

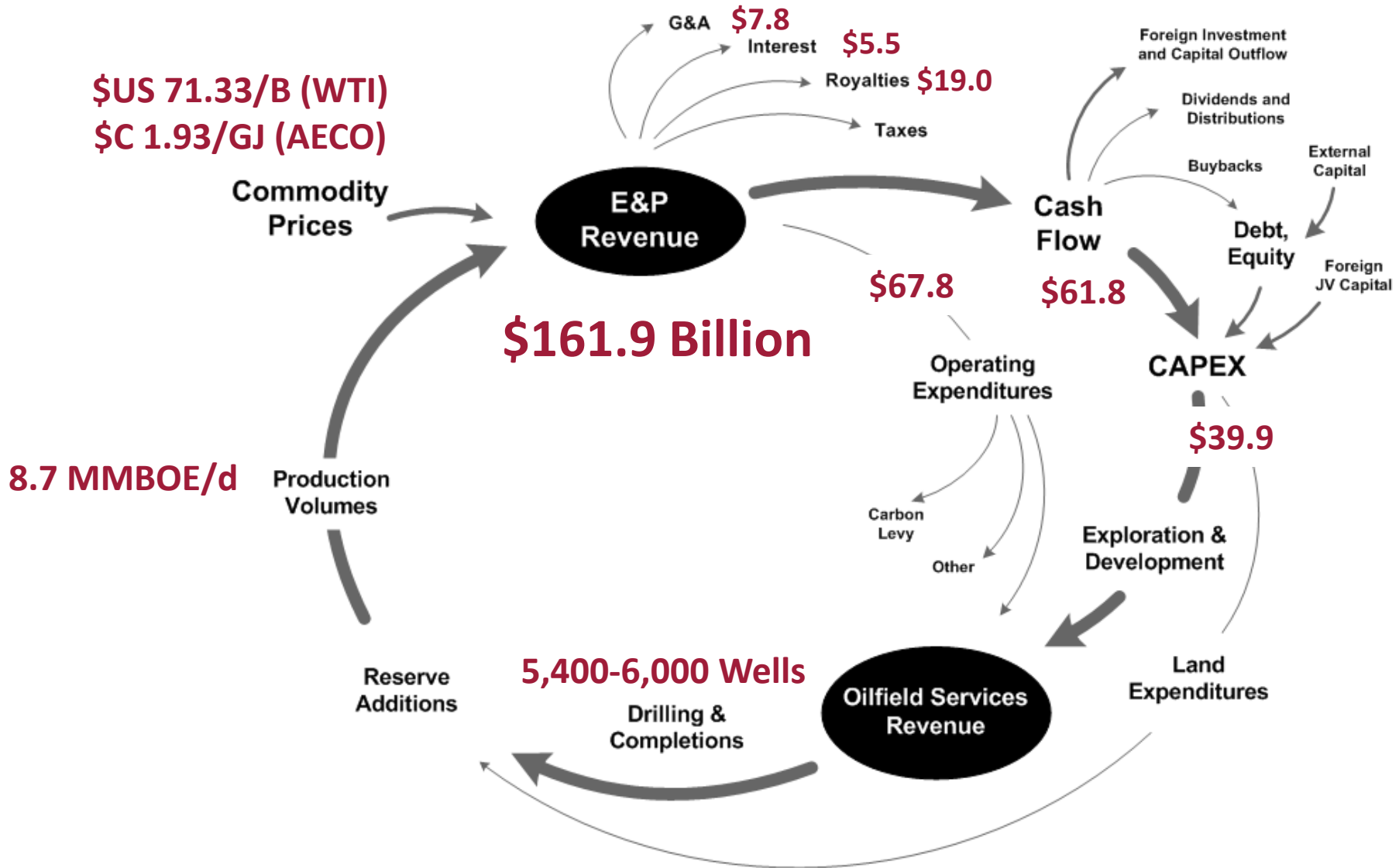


- In 2023, oil sands are estimated to account for over half of the upstream industry's total 2023 revenue.
- The oil sands capital spending is expected to be about half the conventional amount, at \$14 billion for 2023.
- During the boom years of the oil sands construction (pre-2014) annual spending was over \$30 billion for some years.
- Greenfield construction of oil sands ended last decade. Today, the CAPEX is mostly for production maintenance.

Source: ARC Energy Research Institute, Bloomberg (WTI and AECO)

All dollar values in billions of Canadian dollars unless otherwise noted.

The Fiscal Pulse | Total Canadian Upstream Oil and Gas Industry | 2024 Estimates

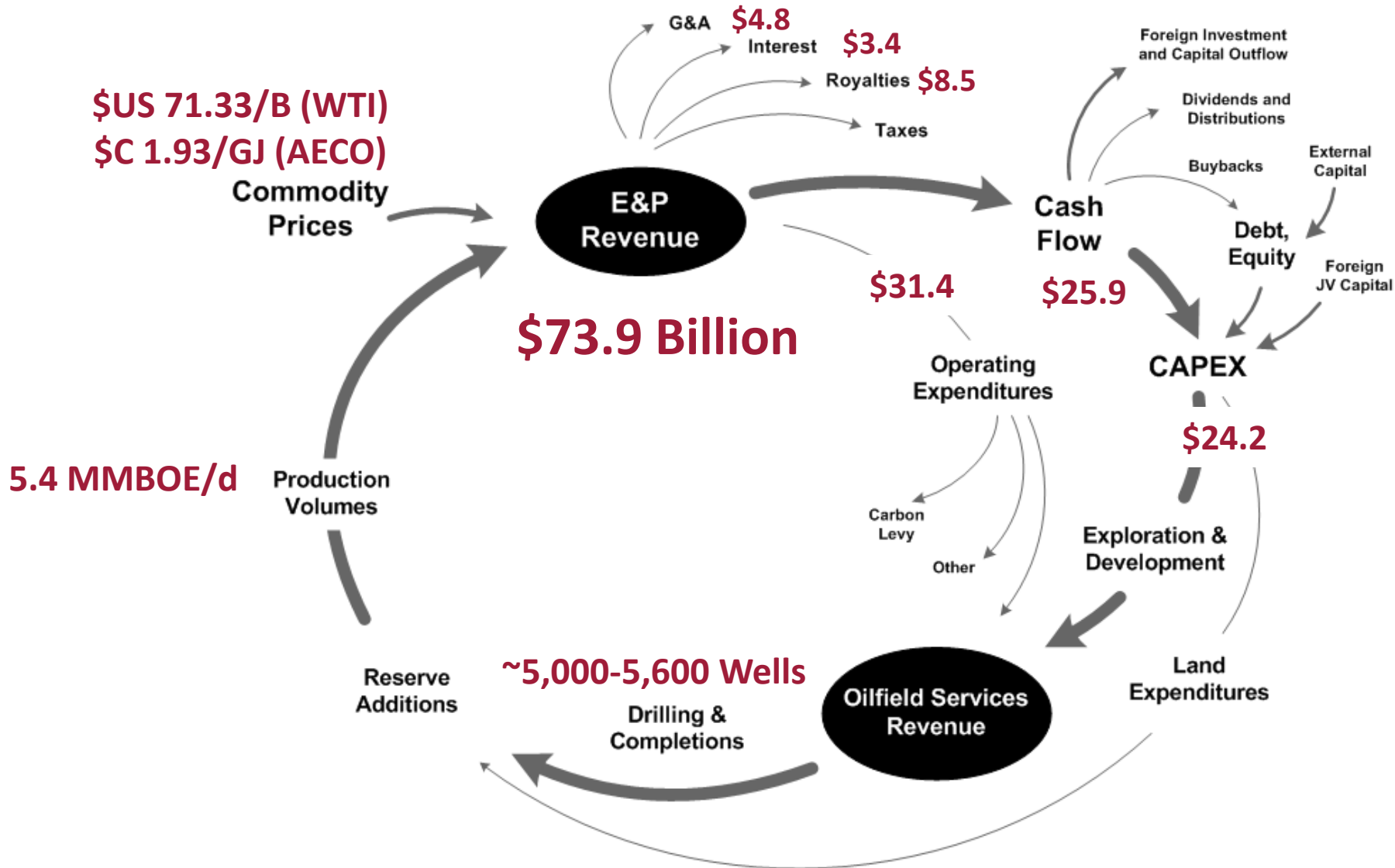


- This capital flow diagram updates the metrics for 2024.
- It shows how capital associated with 8.7 MMBOE/day of oil and gas production is accounted for.
- Total revenues are estimated to be \$162 billion in 2024, down 13% from \$185 billion in 2023.
- While revenue is down, spending is expected to be similar to 2023 with 67% of revenue, or \$108 billion (operating expenditures + CAPEX) that is mostly spent in Canada.
- Annual commodity price expectation averages for 2024 are based on the futures market (as of January 2, 2024).

Source: ARC Energy Research Institute, National Bank Energy and FX Commentary (January 2, 2024)

All dollar values in billions of Canadian dollars unless otherwise noted.

The Fiscal Pulse | Conventional Crude Oil, Liquids and Natural Gas | 2024 Estimates

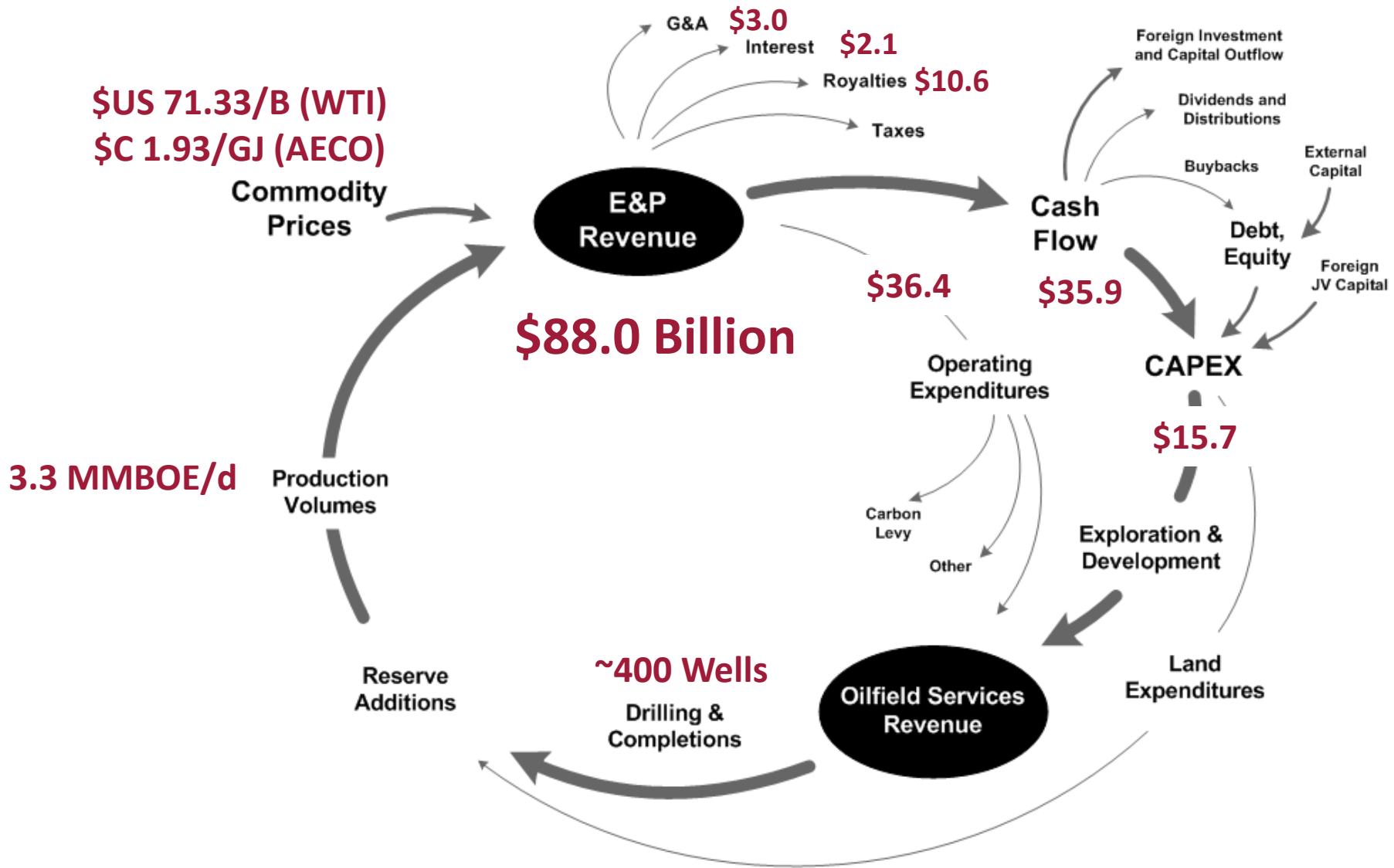


- In 2024, conventional production is estimated to make up just under half of the total industry revenue.
- Due to the lower commodity price outlook assumption, conventional oil and gas is forecast to spend an estimated \$24 billion on CAPEX or most of the cash flow generated.
- The high decline rates of the existing wells require constant re-investment just to keep production flat.
- During the \$100/B oil price era (pre-2014) annual CAPEX spending exceeded \$40 billion some years, an amount greater than peak oil sands spending of ~\$33 billion.

Source: ARC Energy Research Institute, National Bank Energy and FX Commentary (January 2, 2024)

All dollar values in billions of Canadian dollars unless otherwise noted.

The Fiscal Pulse | Oil Sands Only | 2024 Estimates

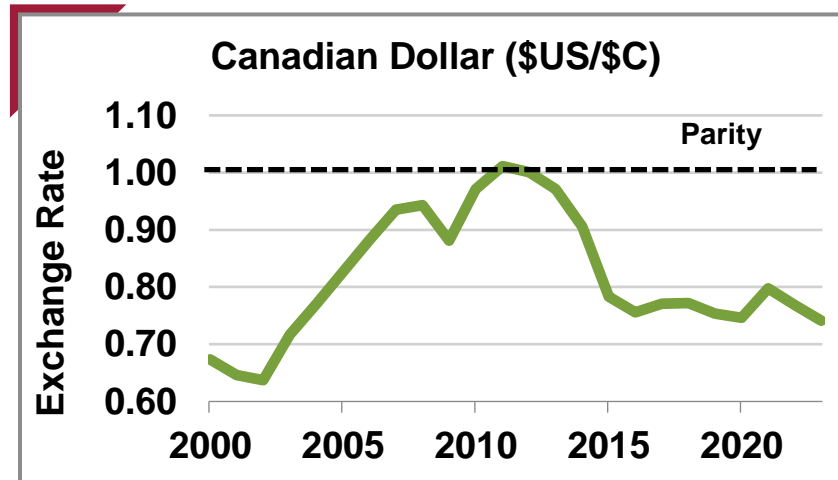
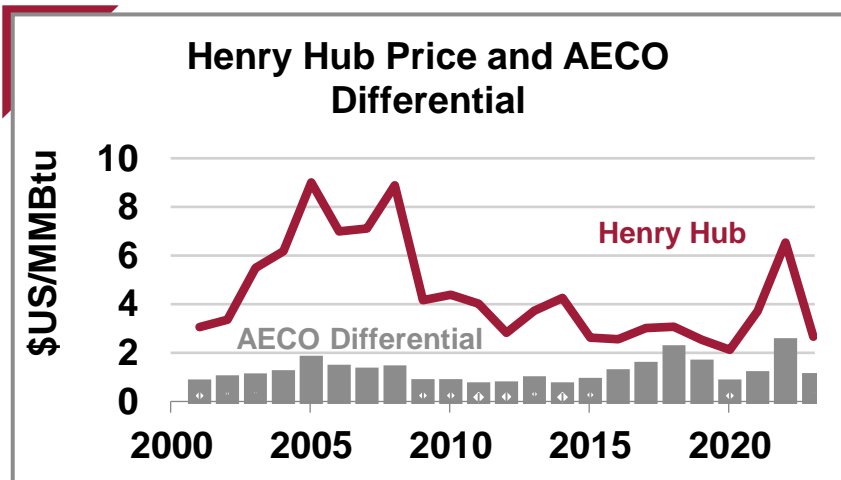
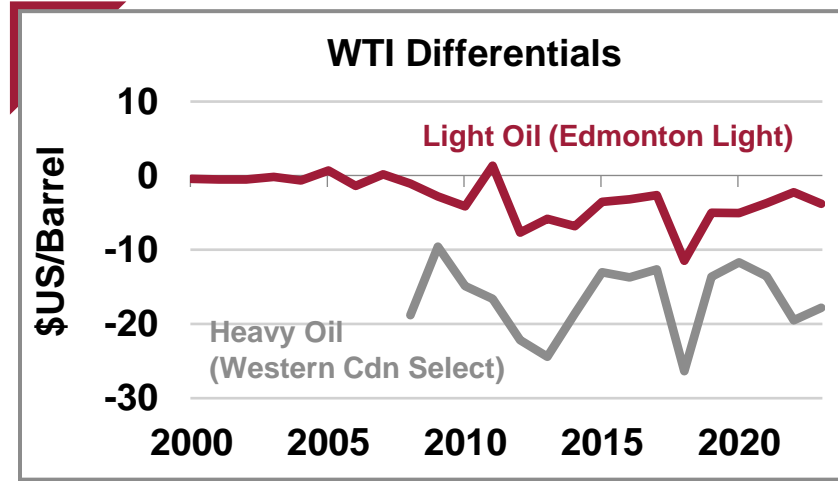
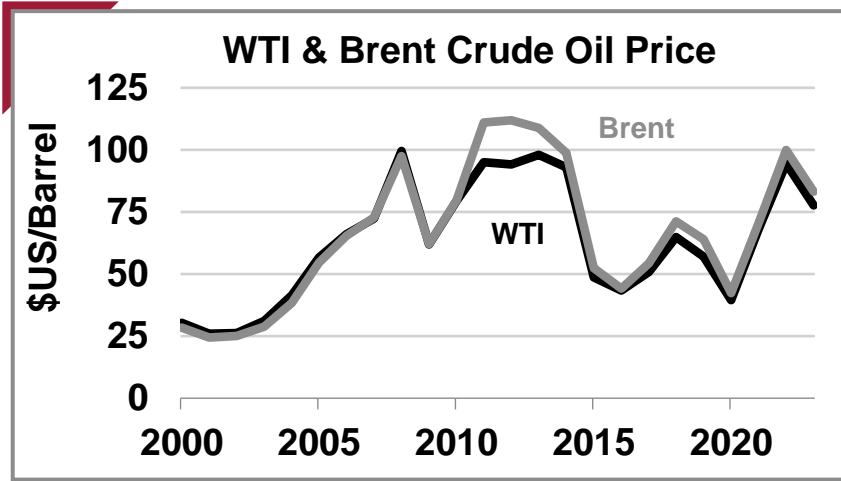


- In 2024, oil sands are estimated to account for over half of the upstream industry’s total 2024 revenue.
- Oil sands capital spending is expected to be about two-thirds the conventional amount, at \$16 billion for 2024.
- During the boom years of the oil sands construction (pre-2014) annual spending was over \$30 billion for some years.
- Greenfield construction of oil sands ended last decade. Today, the capex is mostly for production maintenance.

Source: ARC Energy Research Institute, National Bank Energy and FX Commentary (January 2, 2024)

All dollar values in billions of Canadian dollars unless otherwise noted.

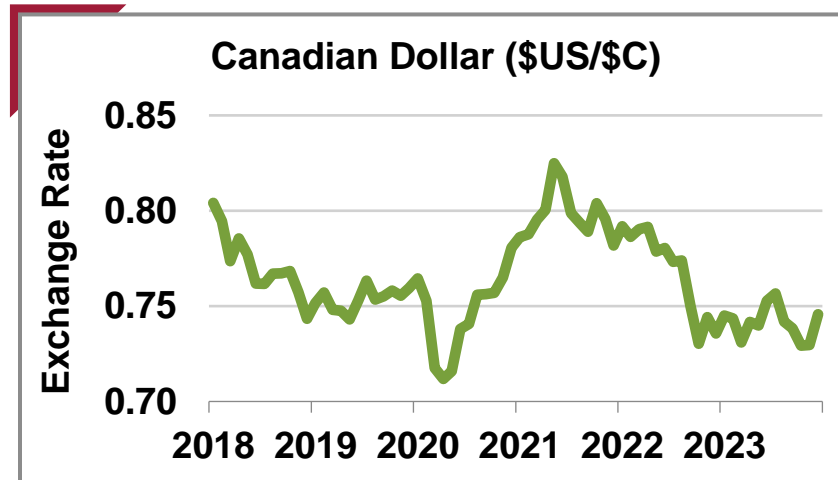
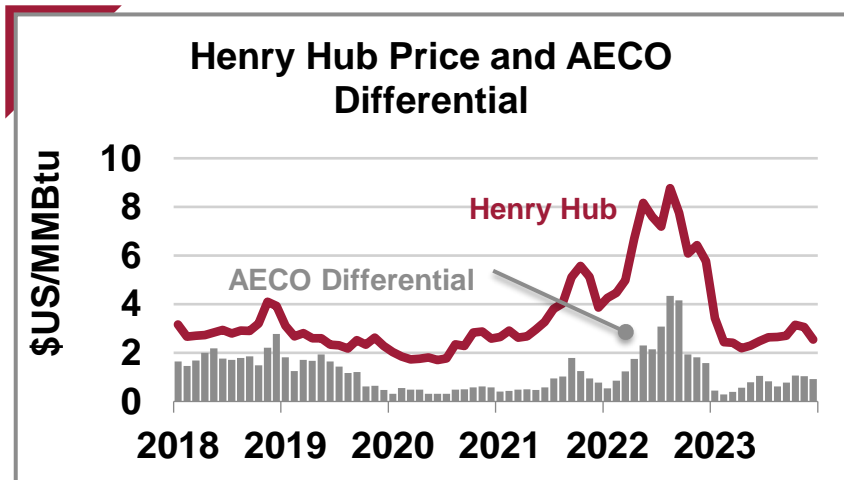
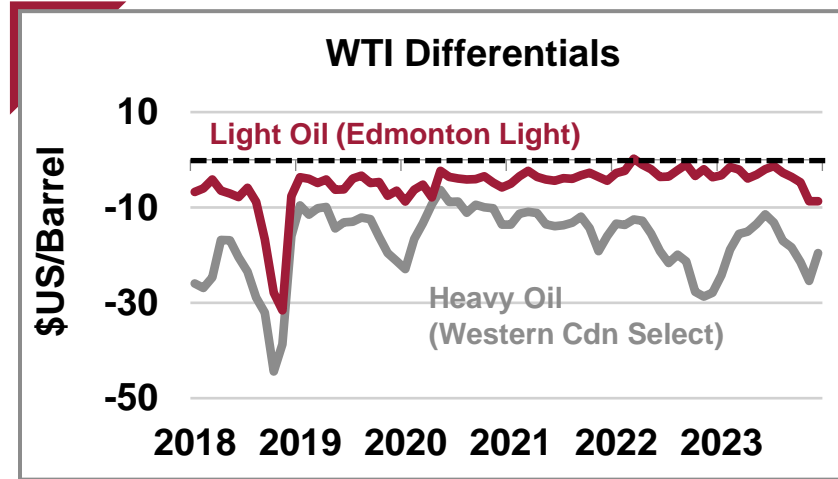
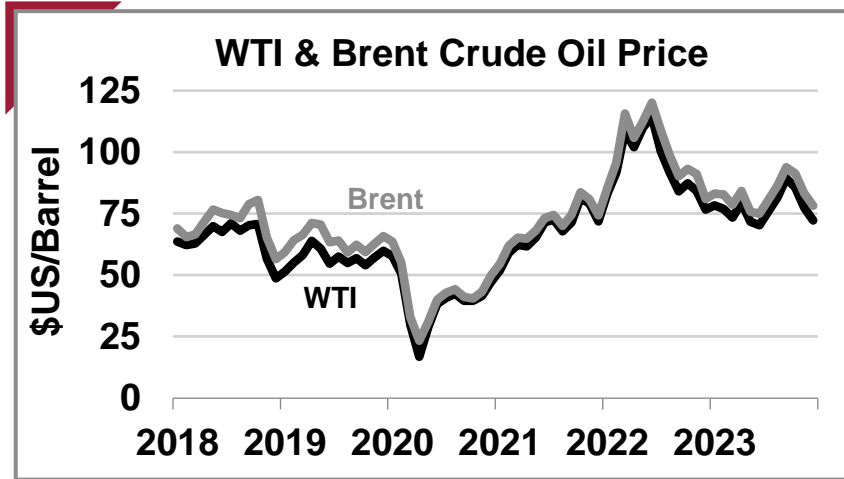
Commodity Prices and Differentials | Annual | 2000 to December 2023



- In 2018, oil price discounts became extreme due to a lack of pipeline takeaway capacity.
- Discounts are more normal now, with new pipeline capacity and more moderate production growth.
- Canadian natural gas prices (AECO) were heavily discounted in the 2017 to 2019 period, and again in the summer of 2022. That has improved with additional egress capacity added to Western Canadian natural gas infrastructure.
- Oil and gas revenue is realized in US dollars—a weaker Canadian currency has helped boost revenue in Canadian dollars.

Source: Bloomberg

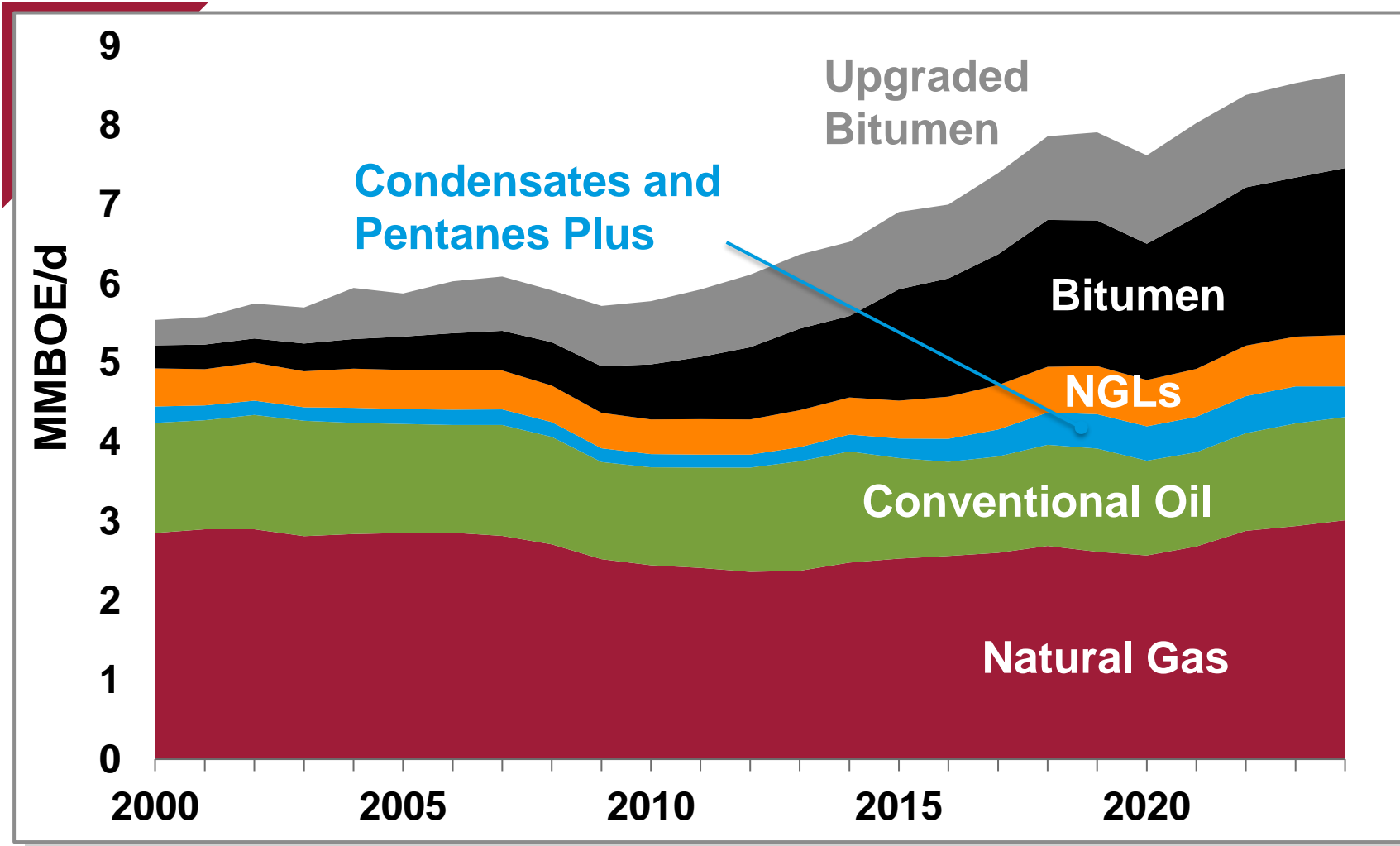
Commodity Prices and Differentials | Monthly | 2018 to December 2023



- The monthly data helps show the trends more clearly.
- WTI oil price traded above \$90/B in September 2023 and exited the year close to \$72/B. The annual average for 2023 was just under \$78/B.
- The Canadian dollar averaged close to \$US/\$C 0.74 in 2023, almost 3 cents less than 2022.
- A weaker Canadian dollar boosts the industry's profitability. Companies sell their products in US dollars and pay expenses in discounted Canadian dollars.

Source: Bloomberg

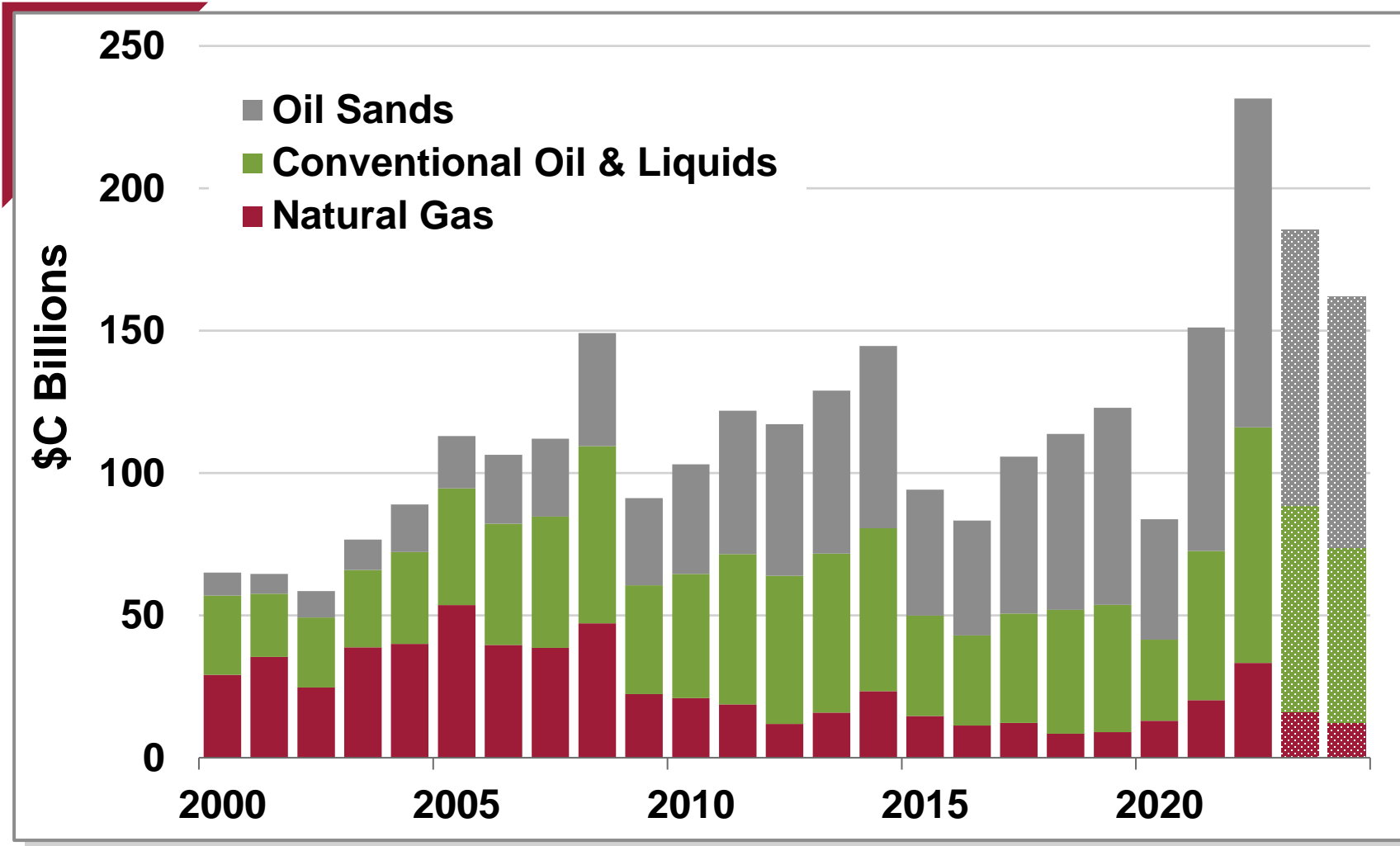
Total Annual Canadian Oil and Gas Production by Type | 2000 to 2024e



- Canada's total production is projected to reach an all-time high in 2024 at 8.7 MMBOE/d (including NGLs).
- Canada's resilient production bounced back faster from COVID than most others, including in the United States.
- The resiliency of production is partly due to the industry's drive to be more operationally and cost-efficient since the 2014/15 downturn, but also driven by lower base declines associated with oil sands production.

Source: CAPP, Canada Energy Regulator. Note: Natural gas liquids (NGLs) include ethane, butane and propane.

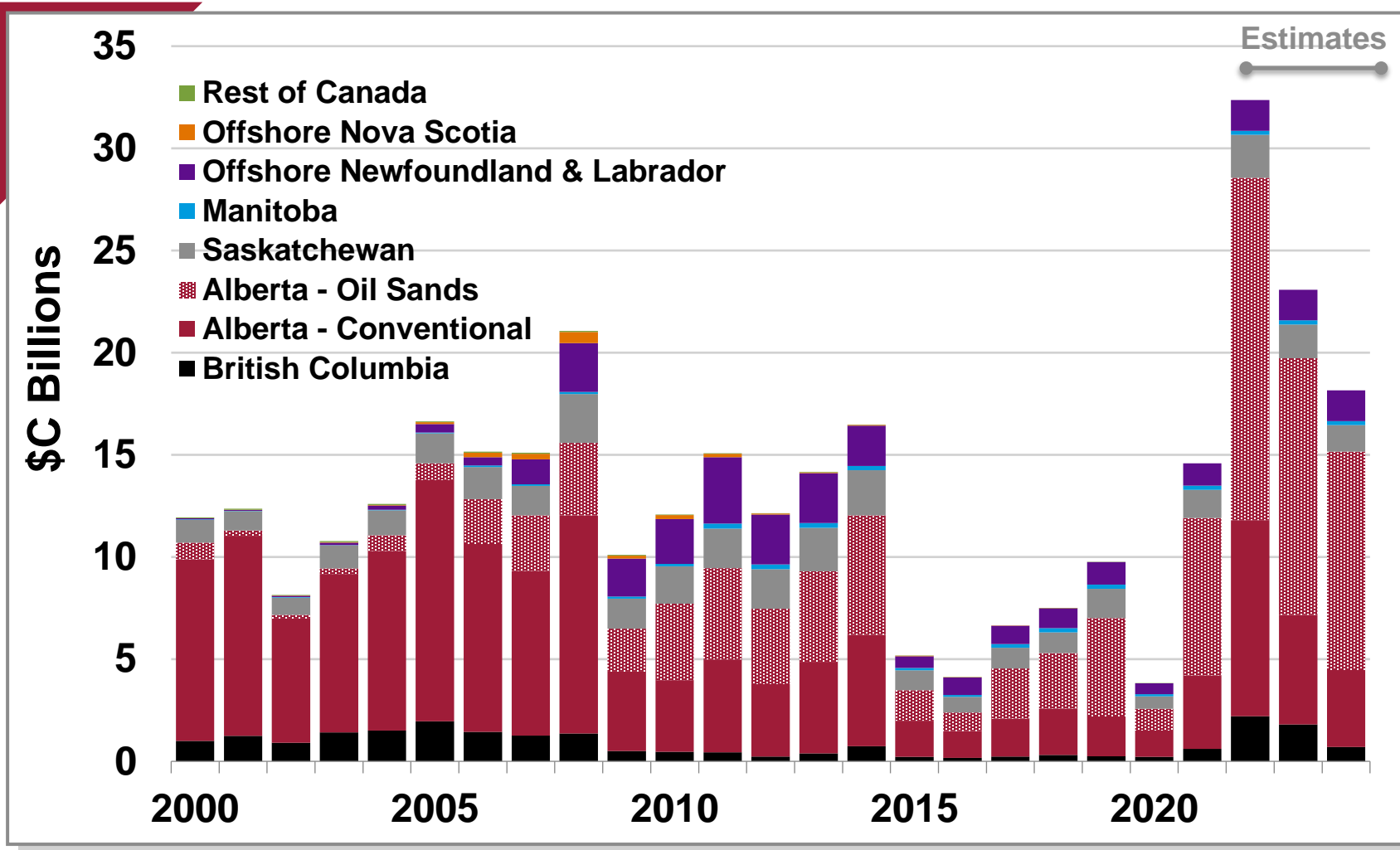
Annual Canadian Oil and Gas Upstream Total Revenues | 2000 to 2024e



- Canadian oil and gas upstream revenues are mostly dependent on oil prices.
- While marketed natural gas production is expected to be at an all-time high in 2024, low gas prices reduce the revenue impact. In the early 2000s, gas revenue was greater, while marketed natural gas volume was just slightly lower than now, and gas prices were 2X to 3X higher.

Source: CAPP, Canada Energy Regulator. Note: Conventional crude oil and liquids includes condensate, pentanes plus and NGLs.

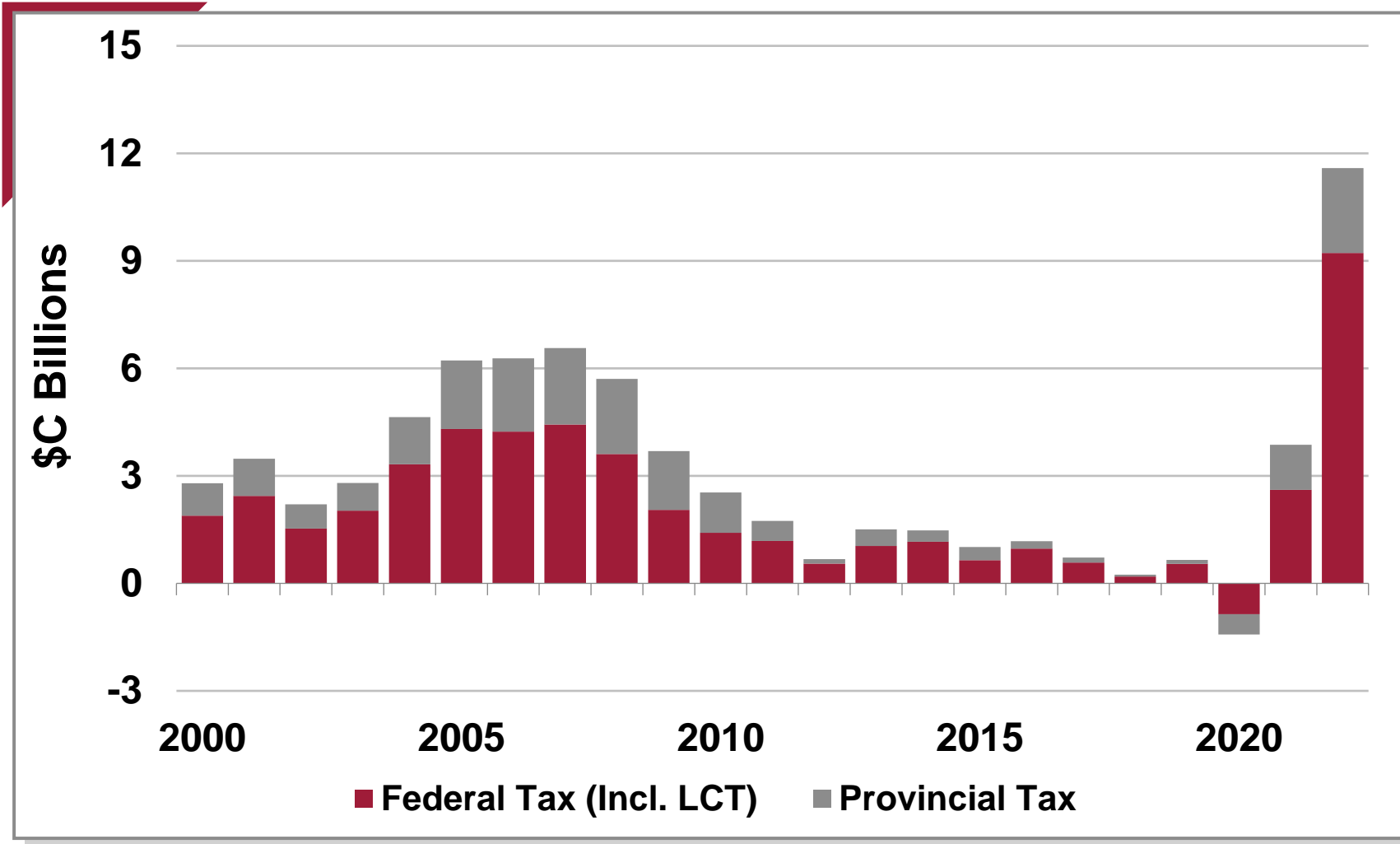
Annual Canadian Oil and Gas Royalties by Province | 2000 to 2024e



- The improved fiscal health of the industry has transferred to the bottom line of the provinces.
- For 2022 (FY 2023 starting in April 2022 and ending in March 2023), a total of \$24 billion in royalties was collected for Alberta, which was the highest ever for the province.
- Recent high oil prices pushed some oil sands projects into 'post-payout' status meaning they will pay a higher royalty rate earlier than expected.

Source: CAPP (2000-2021). Years 2000 to 2021 are calendar year basis. *Provincial government budgets. Years 2022, 2023 and 2024 are based on fiscal year endings.

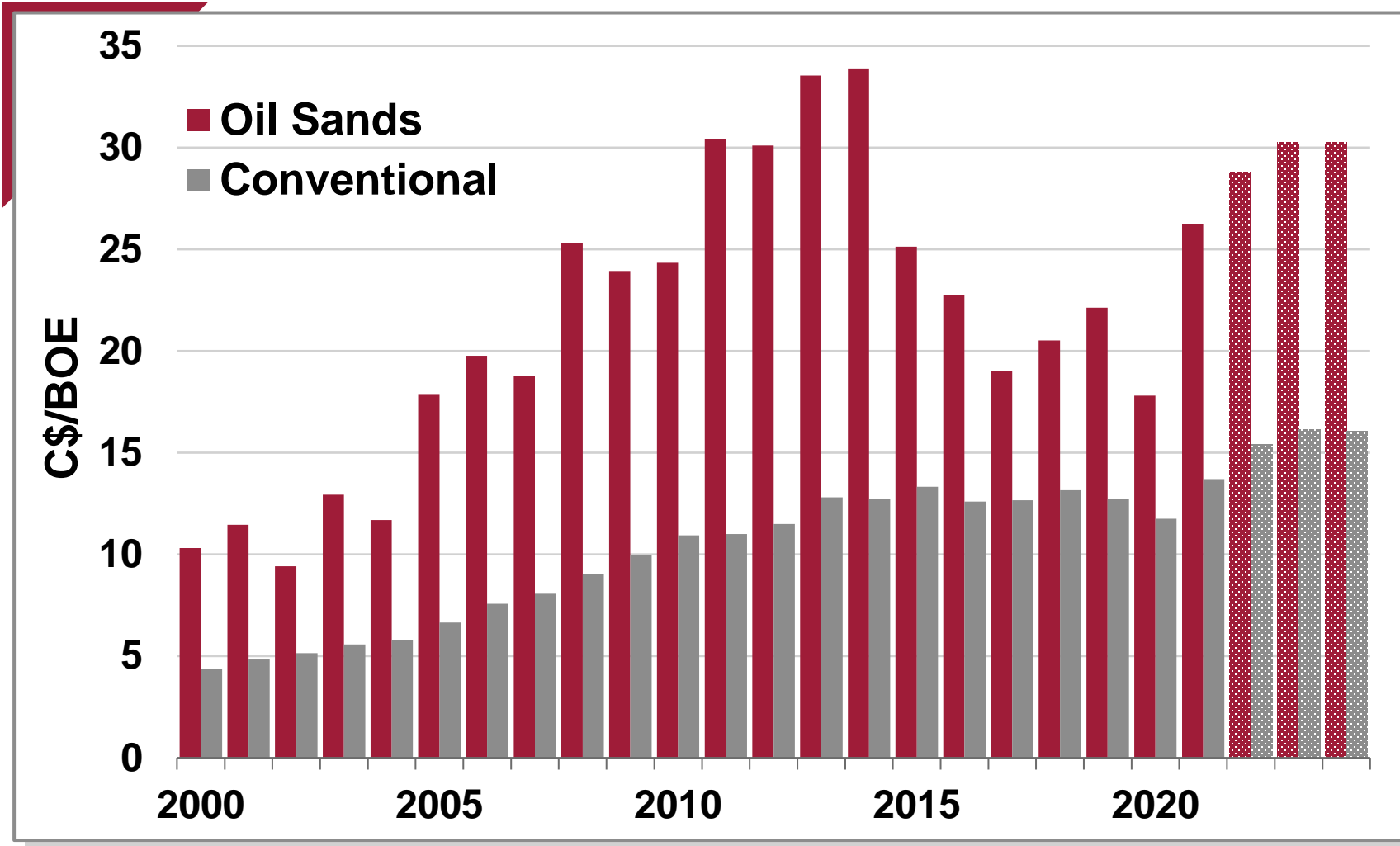
Annual Canadian Oil and Gas Income Taxes | 2000 to 2022



- Canada’s upstream oil and gas industry is an important contributor to government revenues through federal and provincial corporate income taxes.
- In 2022, Canada’s oil and gas industry paid the federal and provincial governments nearly \$12 billion of income taxes.
- Since 2021, shareholders have demanded that oil and gas companies shift away from growth to a focus on profitability. As a result of this structural trend, the industry is expected to pay more taxes over the next decade.

Source: Statistics Canada Table: 25-10-0065-01, LCT (large corporations tax)

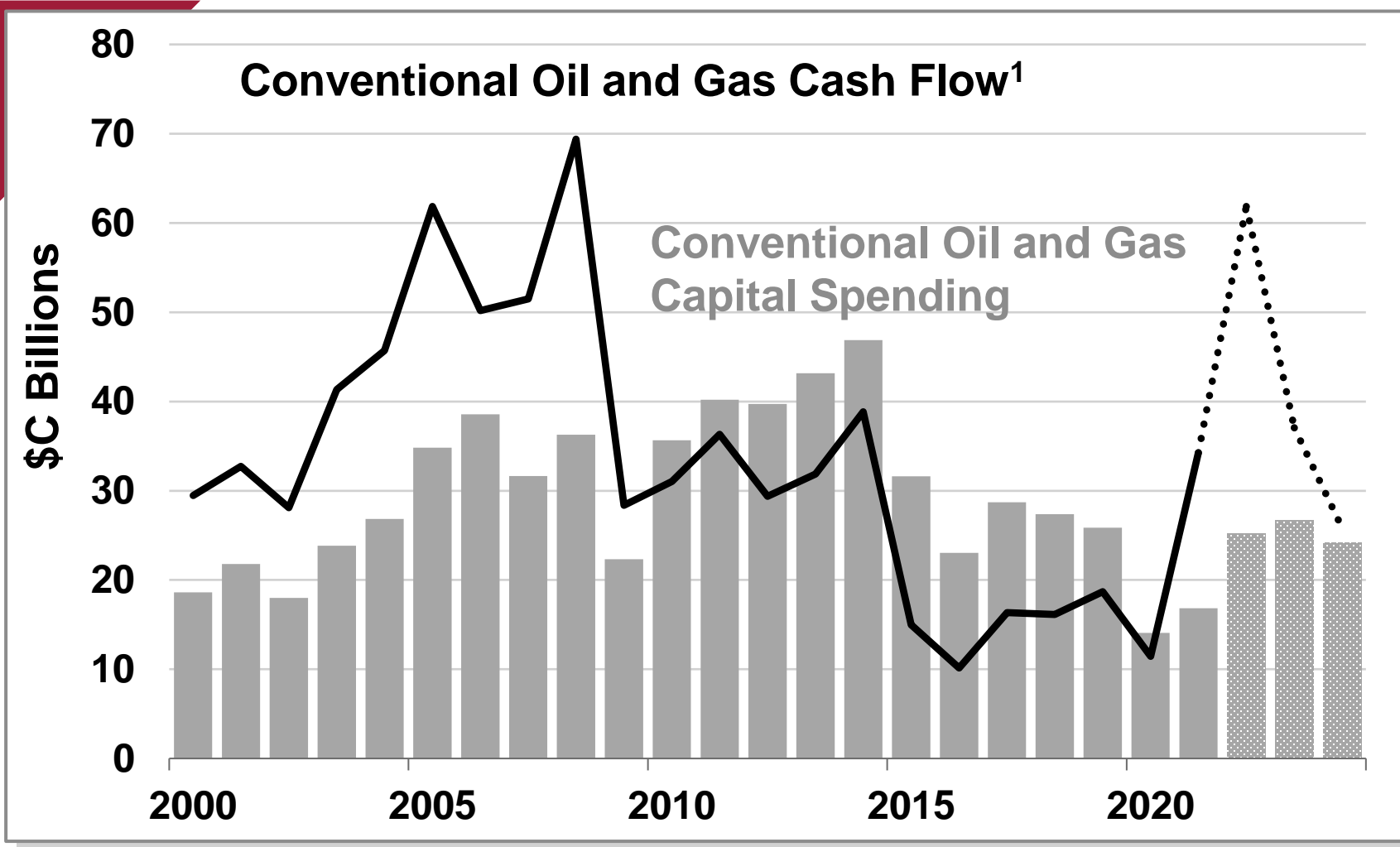
Annual Operating Costs per BOE | 2000 to 2024e



- After the 2014 downturn, oil sands operators made significant cuts to their operating costs per barrel.
- Conventional operating costs declined but to a lesser extent. However, post-COVID, much of the gain in reducing operating costs has been eroded by cost inflation for goods and services.
- Managing cost inflation is an ongoing issue for the industry.

Source: CAPP, (2022, 2023 and 2024 are estimates assuming a 10%, 5% and 0% increase for 2022, 2023 and 2024 respectively)

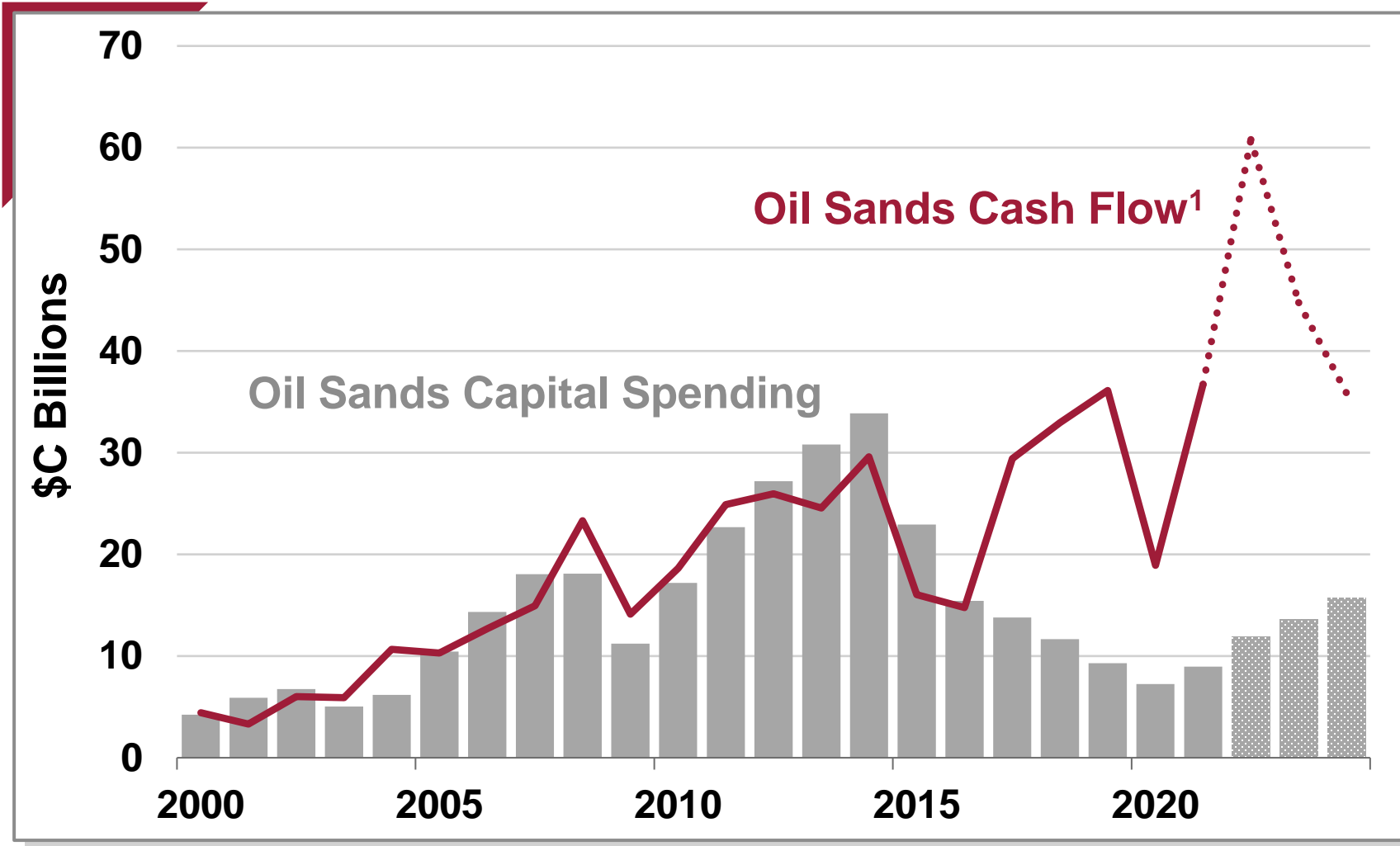
Cash Flow and Capital Spending | Conventional Oil and Gas | 2000 to 2024e



- 2000 to 2010 – the conventional industry’s growth was constrained, and it did not spend all the cash flow generated.
- That changed in 2010. For the next 10 years, the industry had access to external debt and equity, allowing it to spend above cash flow.
- Now, the focus has shifted from growth to shareholder returns. Consequently, capital spending was lower than cash flow in 2021 to 2023.
- Assuming the January 2, 2024 futures pricing and expected CAPEX remain true, conventional producers would need to reinvest most of their cash flow in 2024.

Source: CAPP ¹Cash flow is pre-tax, before capex is deducted.

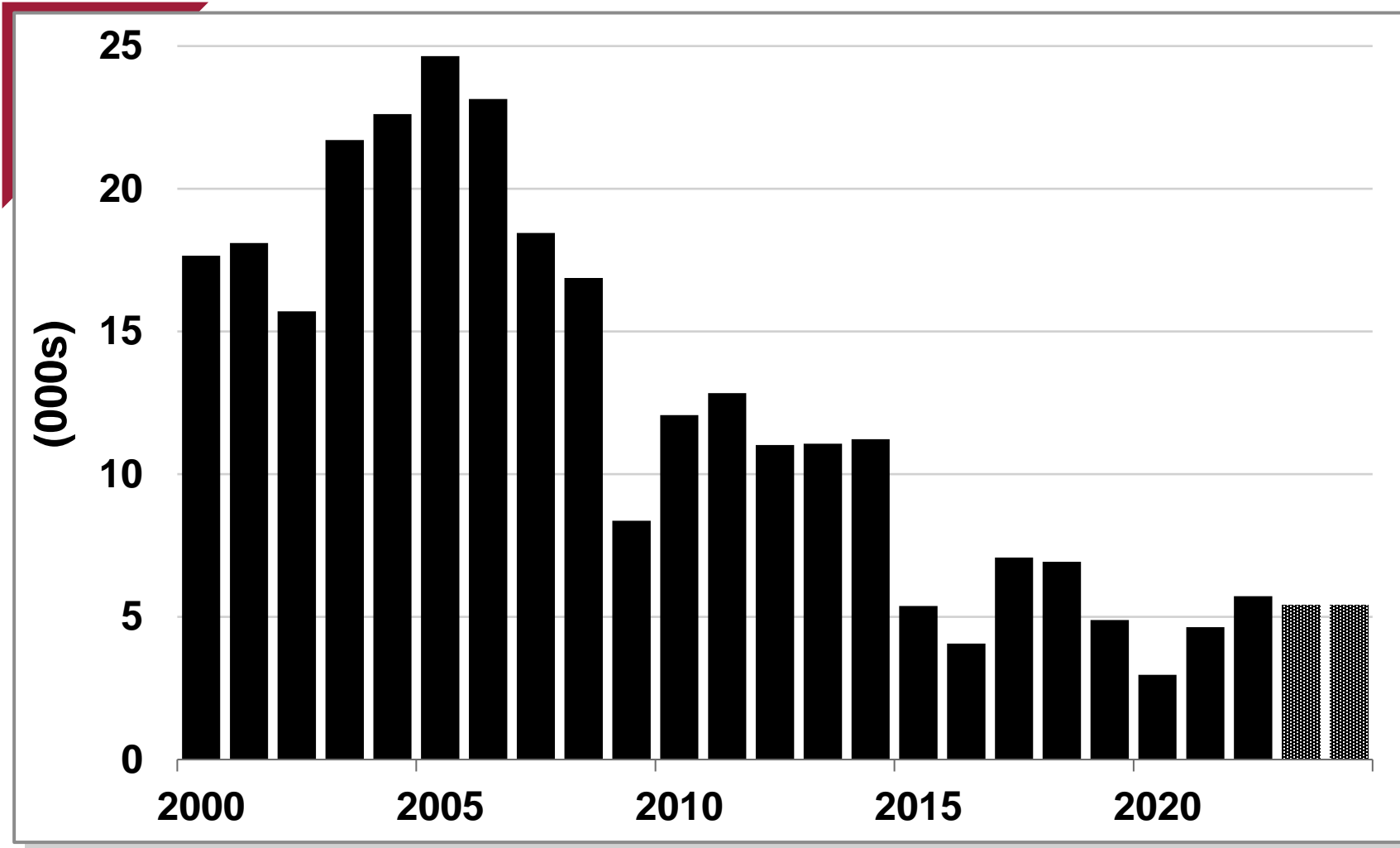
Cash Flow and Capital Spending | Oil Sands | 2000 to 2024e



- Capital spending on oil sands projects peaked in 2014. The collapse in oil prices caused many projects to be shelved and multinationals started to exit the sector.
- Today, no greenfield projects are progressing. CAPEX spending is on brownfield expansions and maintenance of existing assets that need relatively low amounts of capital. Consequently, oil sands generate more free cash flow (after CAPEX is deducted) than conventional, which requires higher levels of CAPEX.
- Note: Cash flow is pre-tax. The split between conventional and oil sands is based on production ratio.

Source: CAPP ¹Cash flow is pre-tax, before capex is deducted

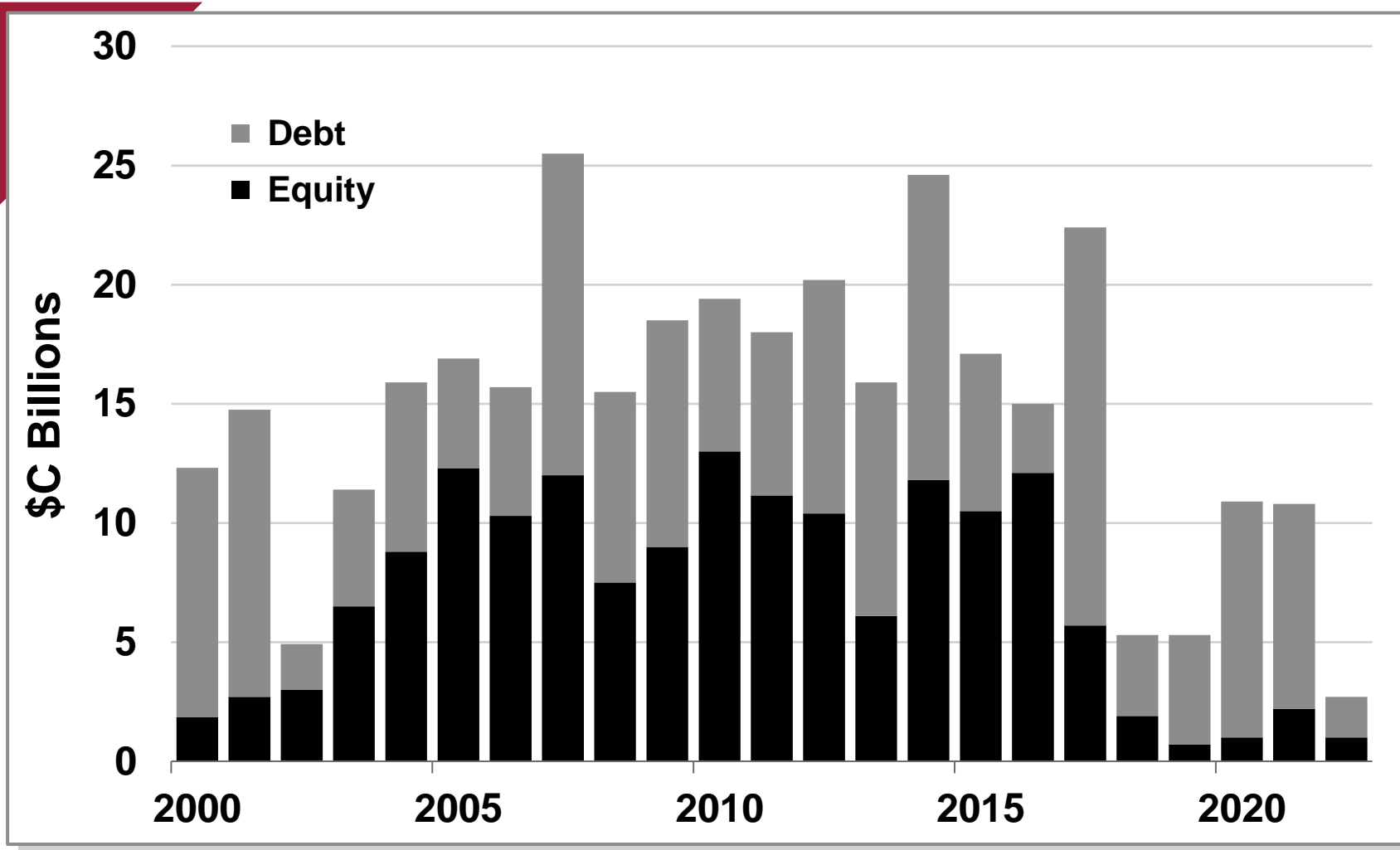
WCSB Oil and Gas Industry Activity | Wells Drilled (Rig-Released) | 2000 to 2024e



- In the era of shallow gas drilling and high natural gas prices, a record ~25,000 wells and ~30 million meters were drilled in 2005.
- Today, wells are much deeper and take longer to drill. In 2022, 5,723 wells were drilled covering 18 million meters.
- That equates to wells being on average approximately 2.6X longer today than in 2005.
- The 2023 estimate for wells drilled is ~5,400 wells; a 5% decrease from 2022.
- The preliminary estimate for 2024 is in the range of 5,400 (shown on the graph) to 6,000 wells drilled.

Source: Daily Oil Bulletin, CAPP. Note: Western Canadian Sedimentary Basin (WCSB) includes BC, Alberta, Saskatchewan and Manitoba.

Annual Canadian Oil and Gas Industry Financings | 2000 to 2022



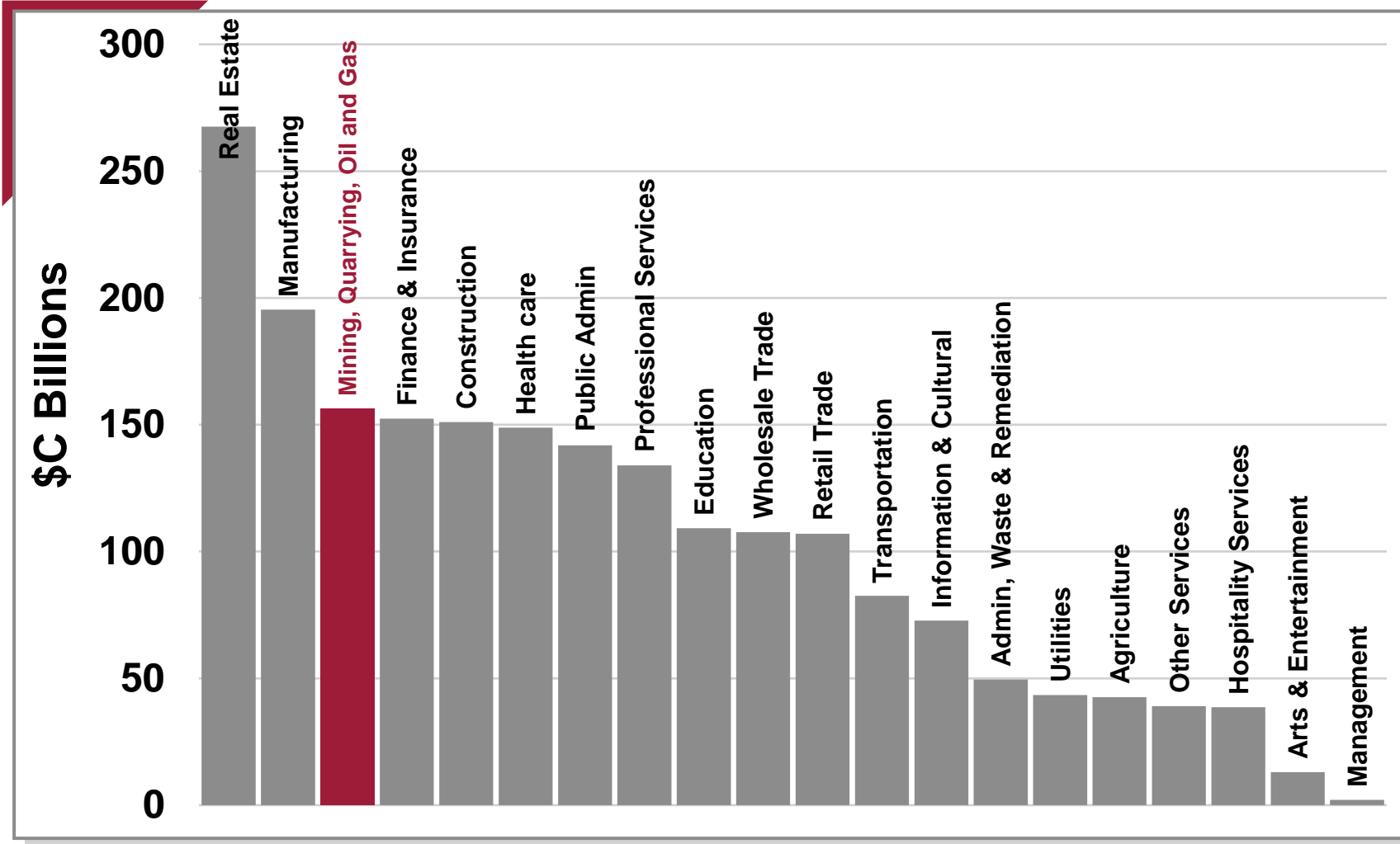
- While capital is constrained in the global oil and gas industry, the situation is heightened in Canada because of takeaway capacity issues, pipeline politics, and carbon policy uncertainty.
- In 2022, total debt financings fell to \$1.7 billion, and equity raised was only \$1.0 billion.
- In the first six months of 2023, a total of \$5.2 billion in equity and debt was raised, up 191% from the \$1.8 billion raised in the same time period in 2022.
- The industry is adapting to having less access to external capital than in the past, by reducing debt and relying on internally generated cash flow.

Source: Sayer Energy Advisors (Daily Oil Bulletin)



Economic Impact of Oil and Gas Industry

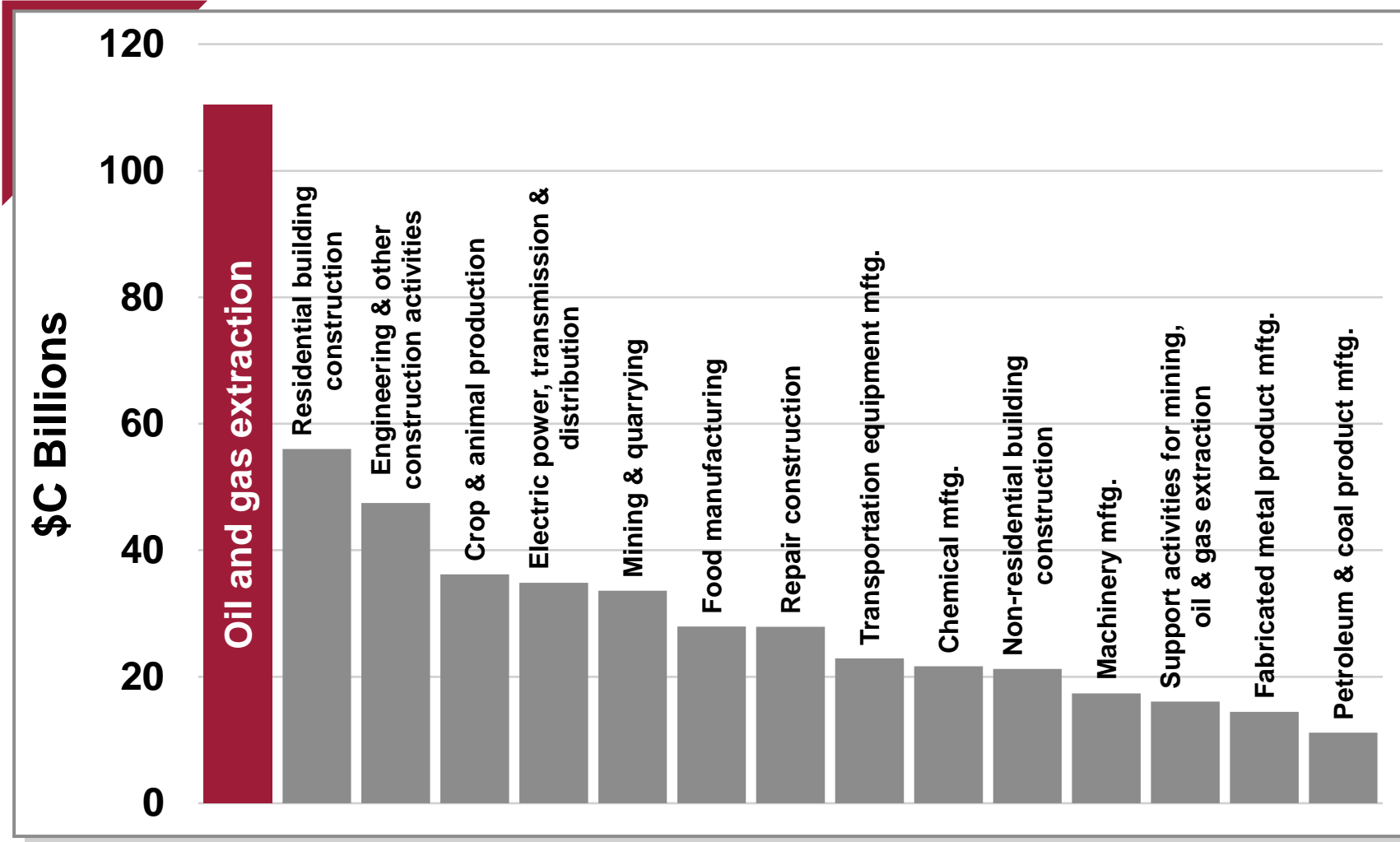
Canada's Gross Domestic Product (GDP) by Industry | 2022



- The mining, quarrying, and oil and gas industry is the third largest contributor to Canada's GDP.
- Collectively, the extractive industries account for 7.6% of total GDP—oil and gas is the largest of the three, contributing 5.4%.

Source: Statistics Canada. Table 36-10-0434-06

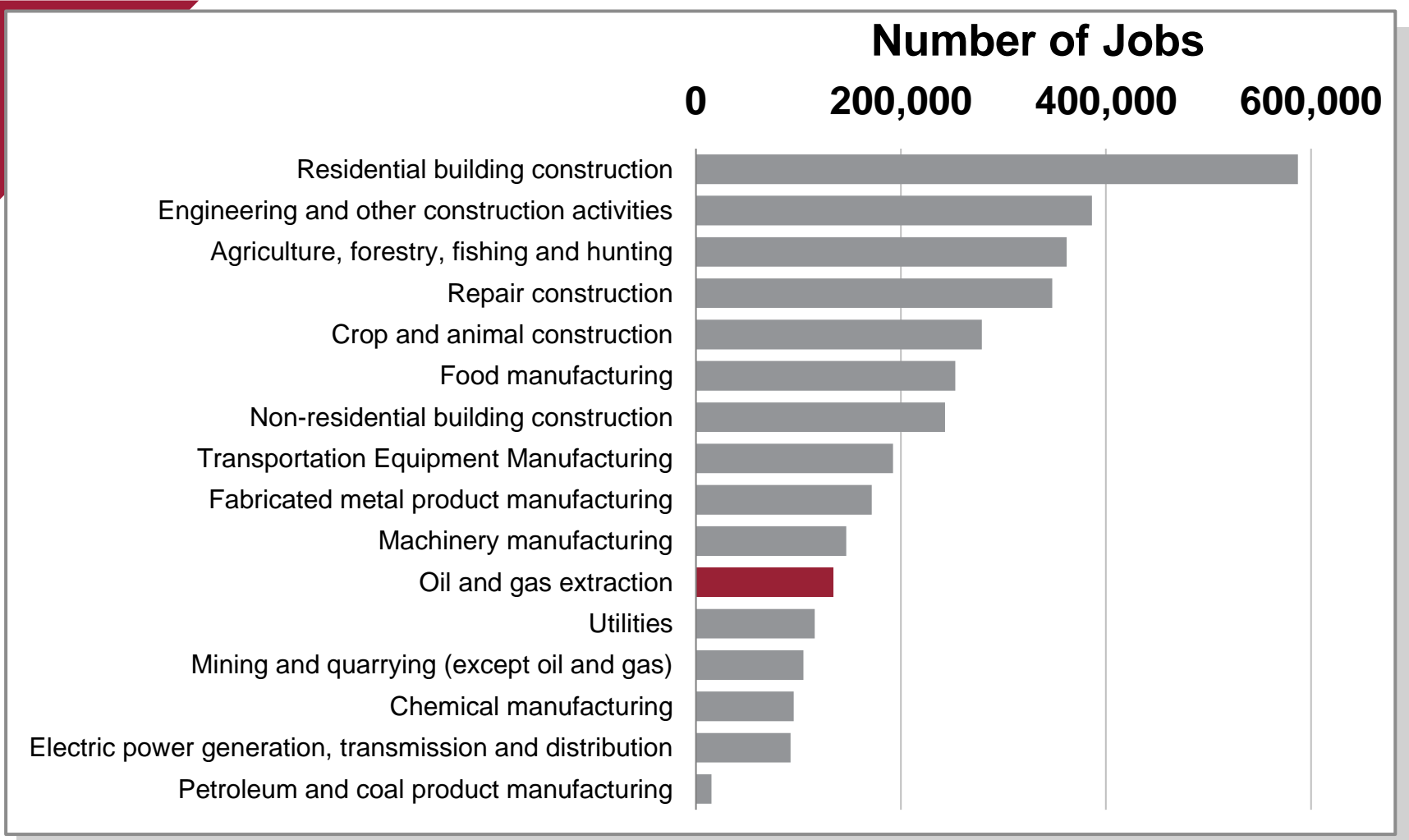
Canada's GDP | Largest 15 Goods-Producing Sub-Industries | 2022



- In 2022, the oil and gas extraction sub-industry accounted for \$110.5 billion or 5.4% of Canada's GDP.
- The oil and gas extraction sub-industry is the largest goods-producing industry in Canada.
- The oil and gas extraction sub-industry is 2X the size of the next largest sub-industries—residential building construction and engineering & other construction activities—and 3X the size of the crop & animal production industry.

Source: Statistics Canada. Table 36-10-0434-06.

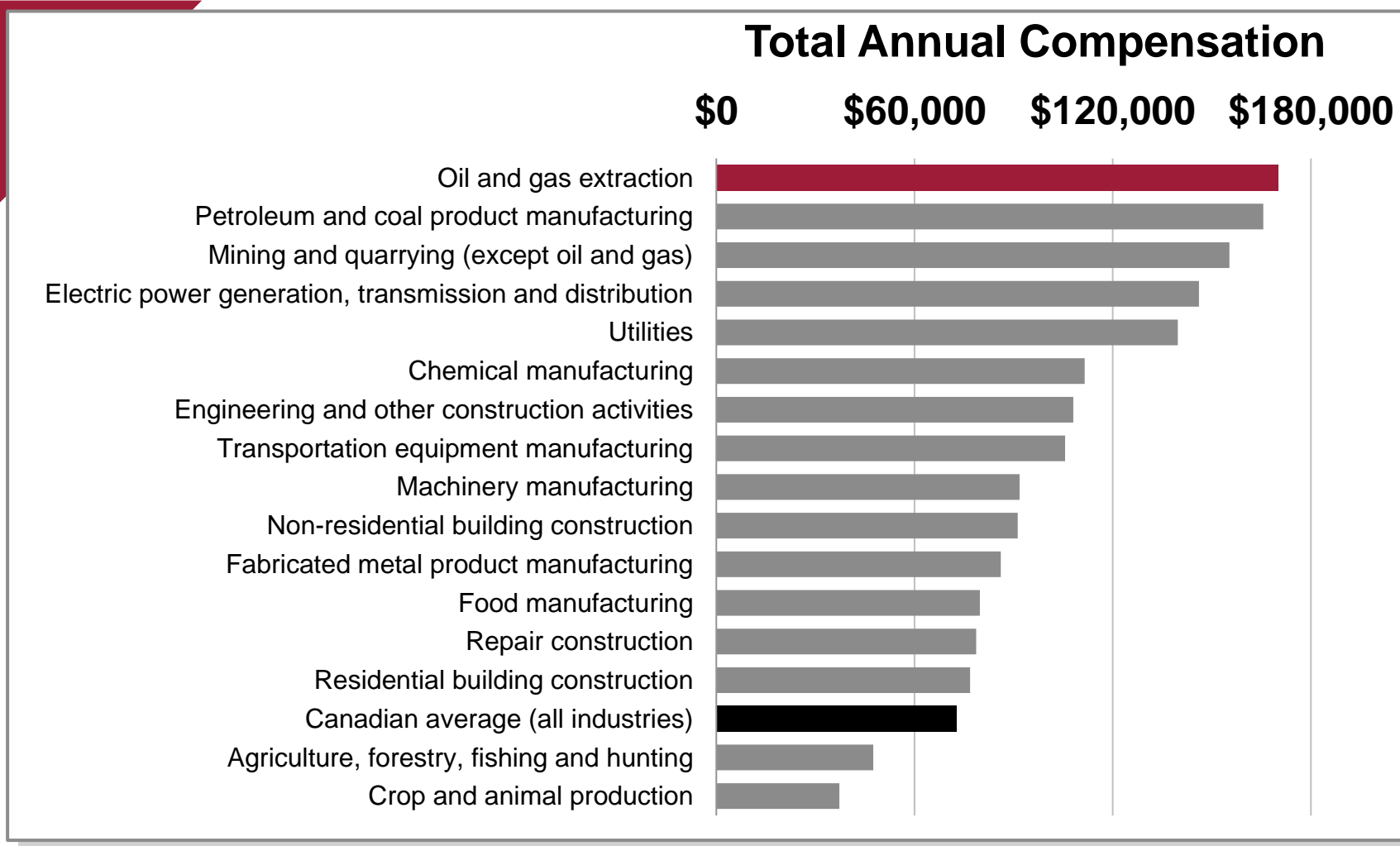
Number of Direct Jobs Per Goods-Producing Industry | 2022



- The upstream oil and gas industry provided 134,000 direct jobs in 2022.
- Statistics Canada estimates that every direct oil and gas job creates 2 indirect jobs and 3 induced jobs this would imply roughly 800,000 jobs are the result of the oil and gas extraction industry.

Source: Statistics Canada Table 36-10-0489-05; Government of Canada

Average Total Compensation Per Job by Goods-Producing Industry | 2022



- Jobs in the oil and gas industry are the highest paying amongst the country's largest goods-producing industries paying 2.3X more than the Canadian average total compensation.

Source: Statistics Canada, Table: 36-10-0489-05