careers in energy™
Division of Energy Safety Canada

# Canada's Energy Workforce

## Scenario Assumptions for National and Regional Labour Market Outlooks to 2035

**Updated: May 2026**

Funded in part by the Government of Canada's Sectoral Workforce Solutions Program | Canada

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# Introduction

Careers in Energy's (CIE) national and regional labour market outlook reports provide an overview of Canada's energy workforce projections to 2035 across established and emerging energy sectors.

To produce workforce projections, CIE's labour market modelling system requires industry investment and/or production data for each of the in-scope energy sectors. (Figure 1).

At the outset of the scenario development work supporting CIE's 2026 outlooks, the global energy industry was facing significant disruption and uncertainty, driven in part by the war in the Middle East. At the same time, Canada was at an inflection point, shaped by a strained relationship with the United States (US), prompting increased focus on diversifying its energy markets.

To provide a timely update on the significant changes in Canada's energy landscape since 2024, CIE evaluated a single scenario to project potential workforce requirements through 2035. This streamlined approach delivers up-to-date national and regional labour market outlooks that support near- and medium-term workforce planning. In addition, the outlooks establish a benchmark for Canada's energy labour market in the current business, regulatory, policy and geopolitical environment, while identifying key indicators to monitor that may signal investment and activity for consideration in future outlooks.

This report dives deeper into the scenario assumptions underpinning the national and regional outlook reports.

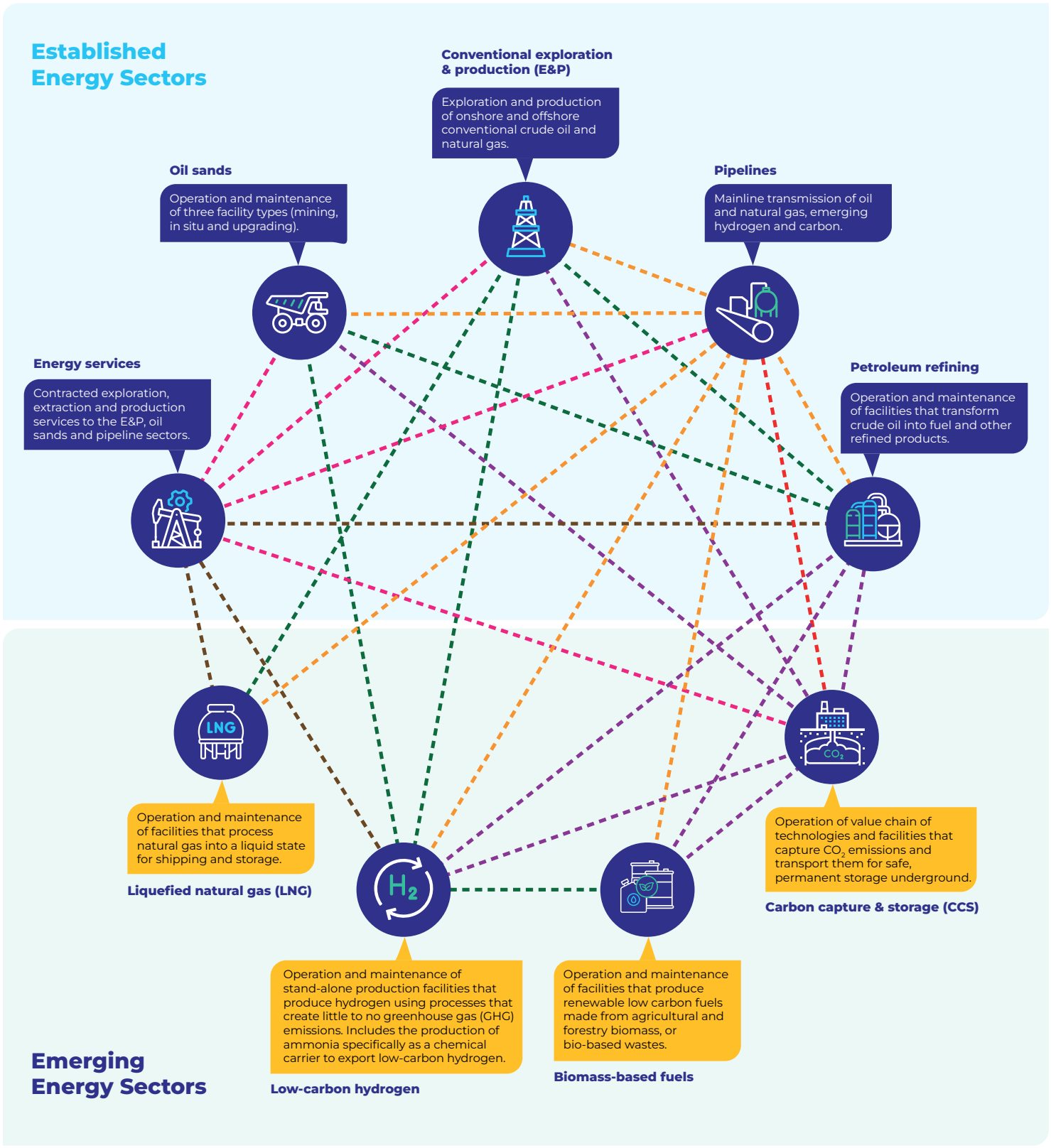
The scenario was developed with input from CIE's Energy Scenarios Working Group, which includes representatives from the in-scope sectors. Additional industry consultations, along with a review of secondary sources such as the Canada Energy Regulator and Environment and Climate Change Canada, were used to refine investment and production assumptions.

While the scenario assumptions and industry projections presented in CIE's national and regional outlook reports provide a foundation for discussing Canada's energy workforce, they should not be interpreted as predictions. Rather, the projections reflect a set of assumptions as of **March 2026**, enabling analysis of possible workforce outcomes. Over the forecast period, factors such as regulations, policies, geopolitical developments, and technological change will evolve, impacting Canada's energy industry in unforeseen ways.

***The global energy landscape is undergoing a shift. Geopolitical conflict has underscored the fragility of energy supply chains and elevated energy security as a global priority. As a net energy exporter with long-term reserves, strong operational performance, and growing public support for exports, Canada is increasingly viewed as a reliable supplier of energy to markets seeking alternatives to traditional sources. At the same time, continued investment in low-carbon energy, innovation and emissions-reduction technologies demonstrates the industry's commitment to balancing affordability, reliability and environmental responsibility.***

- Vineeta Maquire, President and CEO, Energy Safety Canada

## Figure 1: Sector scope of Careers in Energy's labour market modelling system




**Legend**

- **Transport product:** required to transport product to customer
- **Transport $CO_2$:** specific to CCS
- **Feedstock:** produces raw materials required for energy source production
- **Feedstock production:** key role in producing feedstock
- **Emissions reduction:** energy source or technology that support reducing emissions
- **Contracted service:** equipment, technology and workforce required for production process

## One Scenario: Current Measures

To deliver a timely update reflecting significant changes in Canada's energy landscape since 2024, CIE evaluated a single scenario to project potential workforce requirements to 2035.

- **Current Measures**, based on investment and development leading to energy production and carbon sequestration *most likely* to occur based on announced plans, policies and programs as of March 2026.

This scenario assumes Canada's carbon tax to be $95/tonne in 2026 and $170/tonne post-2030 (nominal) as per announced federal policy.

### Scenario assumptions for Canada

Tables 1 and 5 provide a summary of projected investment and development details leading to changes in Canada's energy production (Figures 2, 3 and 4) across in-scope sectors and carbon sequestration.

**Table 1: Canada's outlook scenario assumptions to 2035**

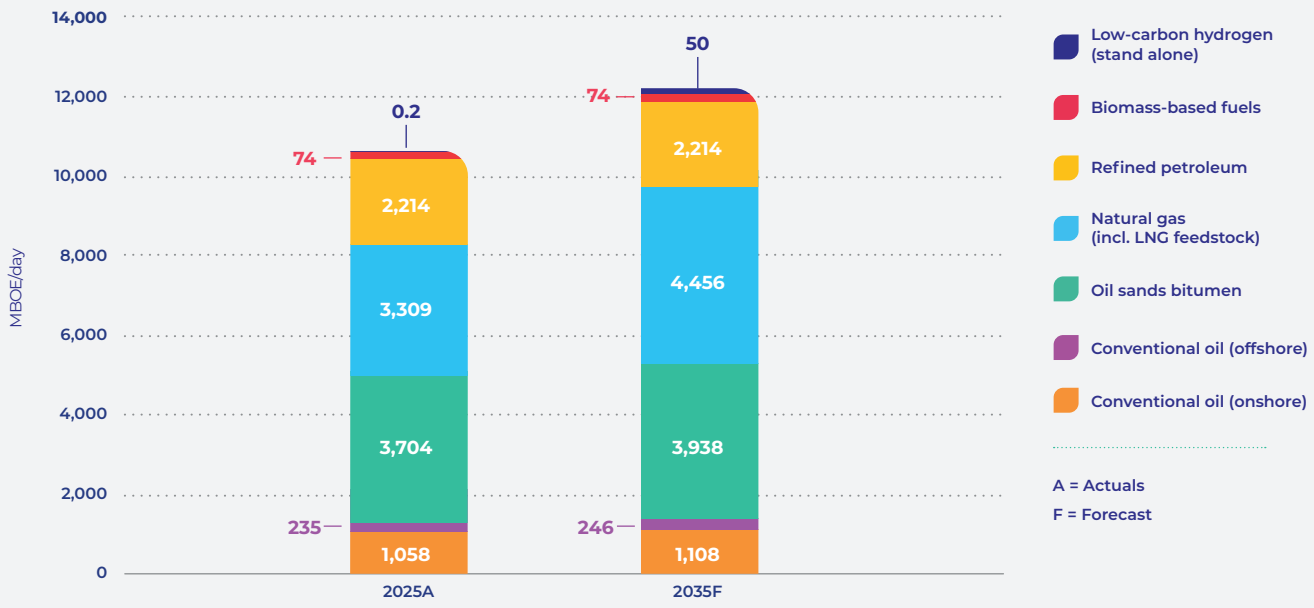
| Sector | Current Measures |
|---|---|
| **Conventional oil* and natural gas**<br><br>*includes heavy, light, condensates, offshore | Capital expenditures (CAPEX) increases by 24% over the forecast period.<br><br>Production forecasts for conventional oil and for natural gas diverge.<br><br>Conventional oil production growth slows as pipeline capacity constraints return.<br><br>• West White Rose and Bay du Nord projects offshore projects offset production declines from other offshore projects.<br><br>Natural gas production increases significantly due to growing demand from traditional markets, both domestically and exports to the US, and from international markets.<br><br>• Steady demand for liquefied petroleum gas (LPG) and the expansion of Canada's liquefied natural gas (LNG) export sector.<br>• Two low-carbon hydrogen production plants, using natural gas for feedstock.<br><br>Production increases realized:<br><br>• Oil: +5%<br>• Natural gas: +35% |
| **Oil sands** | Production increases tempered as pipeline capacity constraints return.<br><br>The trajectory of CAPEX and production increases varies across facility types:<br><br>• In-situ: +12% CAPEX; +11% production<br>• Mining: +35% CAPEX; +1% production<br>• Upgrading: +4% CAPEX; 0% production<br><br>Production growth achieved through brownfield expansion and optimization. |
| **Petroleum refining** | Production of petroleum products remains relatively flat over the forecast period.<br><br>Anticipate focused investment on reducing emissions generated by the refining process including the use of Carbon capture and storage (CCS) technology and low-carbon hydrogen as feedstock. |
| **Biomass-based fuels** | The sector is highly integrated with the US and has experienced substantial disruption due to US policy changes, most notably the Inflation Reduction Act's Section 45Z Clean Fuel Production Credit, which has put Canadian producers at a disadvantage in shared markets.<br><br>As a result, biomass-based fuel production remains flat over the forecast period. |

## Table 1: Canada's outlook scenario assumptions to 2035 (continued)

| Sector | Current Measures |
|---|---|
| **Low-carbon hydrogen** | Just under 1 megatonnes (MT), or 50 thousand barrels per day oil equivalent (MBOE/day) production from stand-alone low-carbon hydrogen plants (or ammonia plants that convert low-carbon hydrogen for export).<br>Three sizable projects are projected to advance, including two large production plants under construction to supply low-carbon hydrogen for industrial use and one targeting exports, currently in assessment and permitting phases. |
| **LNG** | Just under 45 million tonnes per annum (MTPA) of LNG for export are in operation by 2035.<br>• Includes LNG Canada which is currently operating, Woodfibre LNG and Cedar LNG, both under construction, as well as another 28 MTPA of capacity by 2035. |
| **CCS** | Annual capacity to capture and sequester $CO_2$ increases by 433% to approximately 16 megatonnes of carbon dioxide equivalent (MT $CO_2e$) by 2035.<br>• Current sequestration is approximately 4 MT $CO_2e$ captured. |

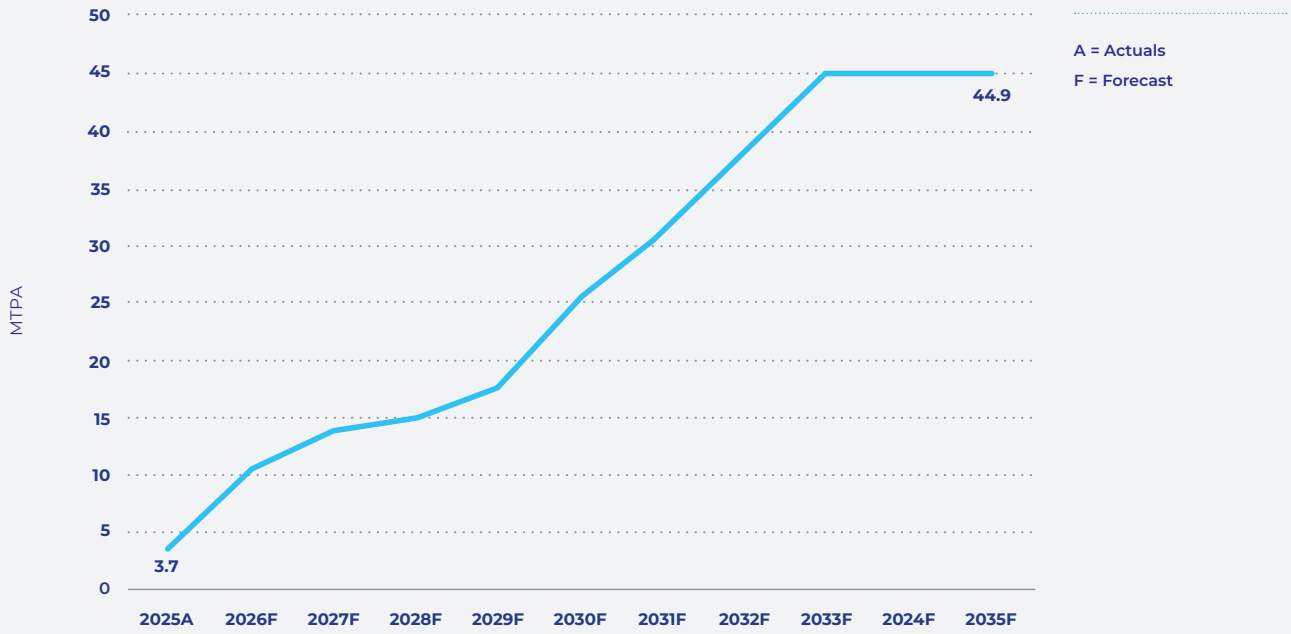
## Figure 2: Canada's production by energy sector, 2025 and 2035

In thousands of barrels of oil equivalent per day (MBOE/day))



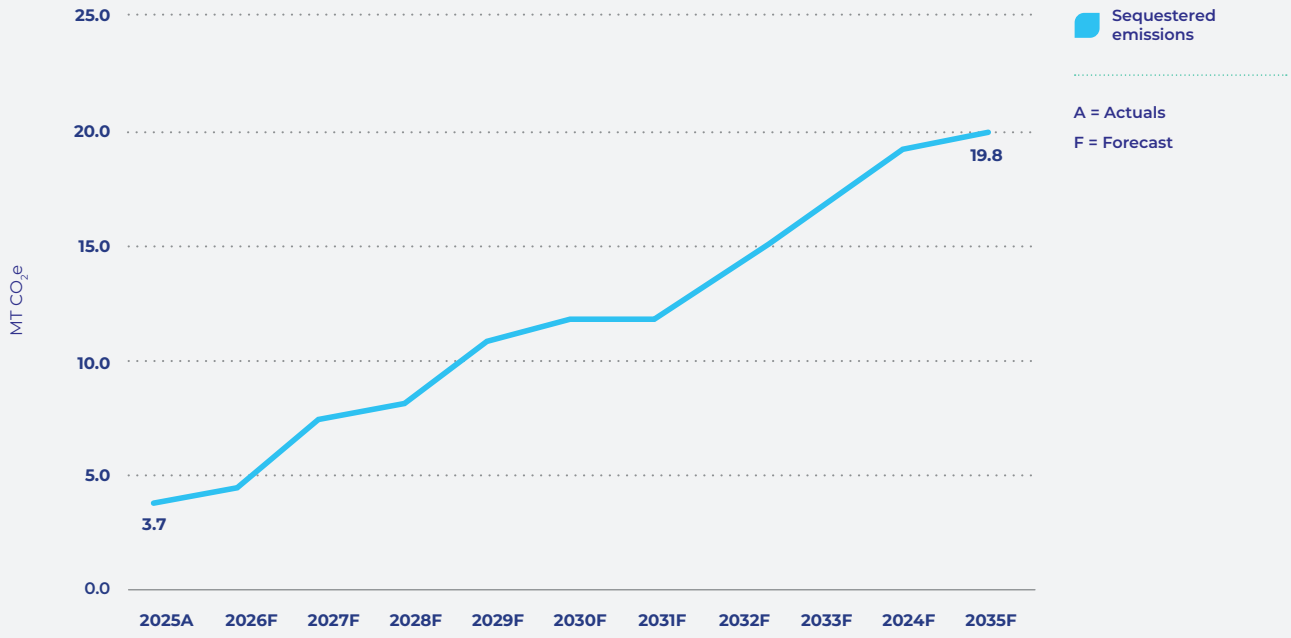
## Figure 3: Canada's LNG exports, 2025 and 2035

In megatonnes per annum (MTPA)




## Figure 4: Canada's oil and gas and industrial $CO_2$ sequestration, 2025 and 2035

In megatonnes of carbon dioxide equivalent (MT $CO_2e$)



## Scenario assumptions for Western Canada

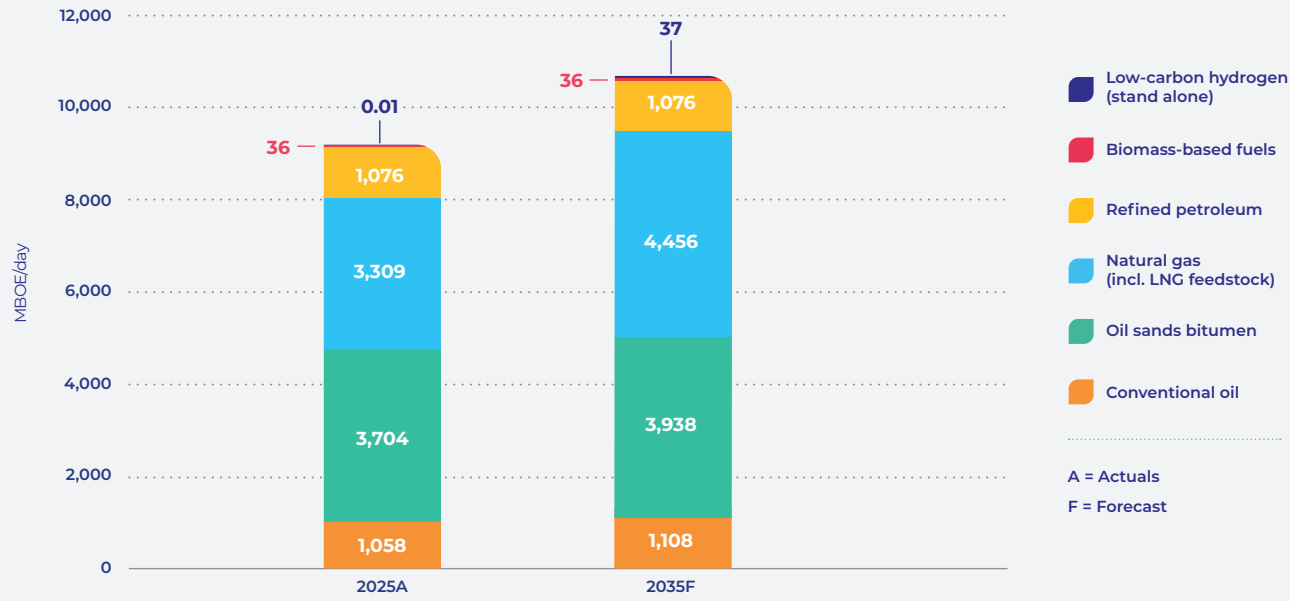
The Western region includes British Columbia (BC), Alberta (AB), Saskatchewan (SK) and Manitoba (MB). Tables 2 and 5 provide a summary of projected investment and development details leading to changes in Western Canada's energy production (Figures 5, 6 and 7) across in-scope sectors and carbon sequestration.

**Table 2: Western Canada's outlook scenario assumptions to 2035**

| Sector | Current Measures |
|---|---|
| **Conventional oil* and natural gas**<br><br>*includes heavy, light, condensates, offshore | CAPEX increases by 27% over the forecast period due to:<br>• Increased oil takeaway capacity as Trans Mountain Pipeline to West Coast is now operational.<br>• Increased demand for natural gas to domestic and international markets.<br>• US demand continues to grow<br>• LNG and NGL exports<br>• Power generation, heating and hydrogen production<br>As a result of additional investment, production increases are realized:<br>• Oil: +5%<br>• Natural gas: +35% |
| **Oil sands** | Additional takeaway capacity via Trans Mountain Pipeline.<br>The trajectory of CAPEX and production increases varies across facility types:<br>• In-situ: +12% CAPEX; +11% production<br>• Mining: +35% CAPEX; +1% production<br>• Upgrading: +4% CAPEX; production remains flat<br>Production growth achieved through brownfield expansion and optimization. |
| **Petroleum refining** | Petroleum refineries are located in 3 of 4 provinces included in the Western region—BC, AB and SK.<br>Production of petroleum products remains relatively flat over the forecast period.<br>Anticipate focused investment on reducing emissions generated by the refining process including the use of CCS technology and low-carbon hydrogen as feedstock. |
| **Biomass-based fuels** | The sector is highly integrated with the US and has experienced substantial disruption due to US policy changes, most notably the Inflation Reduction Act's Section 45Z Clean Fuel Production Credit, which has put Canadian producers at a disadvantage in shared markets.<br>As a result, biomass-based fuel production remains flat over the forecast period.<br>There are biomass-based fuels operations across all 4 provinces included in the Western Outlook. |
| **Low-carbon hydrogen** | 0.7 MT (37 MBOE/day) production from stand-alone low-carbon hydrogen plants (or ammonia plants that convert low-carbon hydrogen for export).<br>Two large production plants are under construction to supply low-carbon hydrogen for industrial use. |
| **LNG** | All of Canada's LNG export facilities are on BC's West Coast.<br>Just under 45 MTPA of LNG for export are in operation by 2035.<br>• Includes LNG Canada which is currently operating, Woodfibre LNG and Cedar LNG, both under construction, as well as another 28 MTPA of capacity by 2035. |
| **CCS** | All the expansion of CCS operations included in the national outlook is in the Western region.<br>Annual capacity to capture and sequester $CO_2$ increases by 433% to approximately 16 MT $CO_2$e by 2035.<br>• Current capacity is approximately 4 MT $CO_2$e captured. |

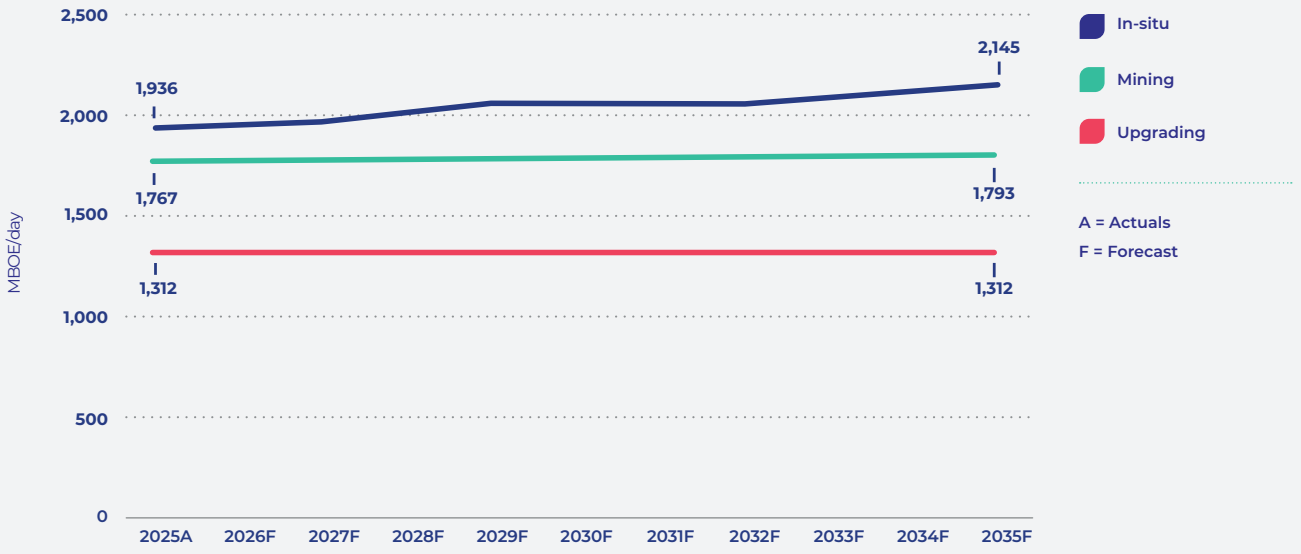
## Figure 5: Western Canada's production by energy sector, 2025 and 2035

In thousands of barrels of oil equivalent per day (MBOE/day)



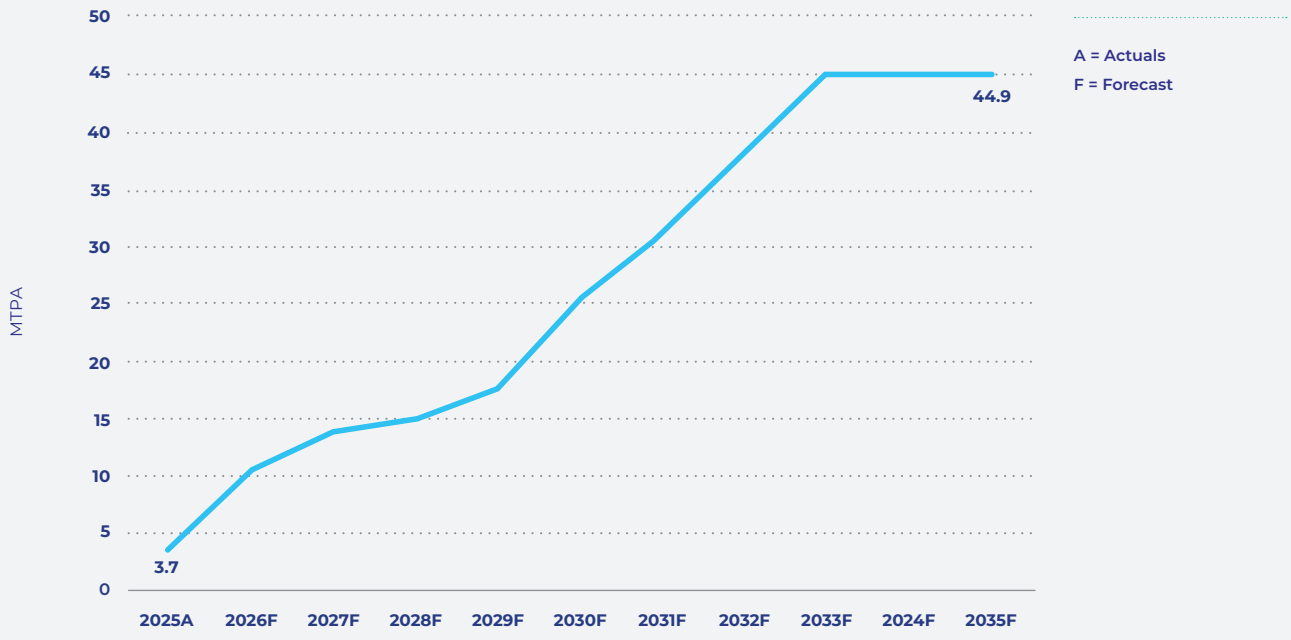

## Figure 6: Western Canada's oil sands production by operations type, 2025 and 2035

In thousands of barrels of oil equivalent per day (MBOE/day)



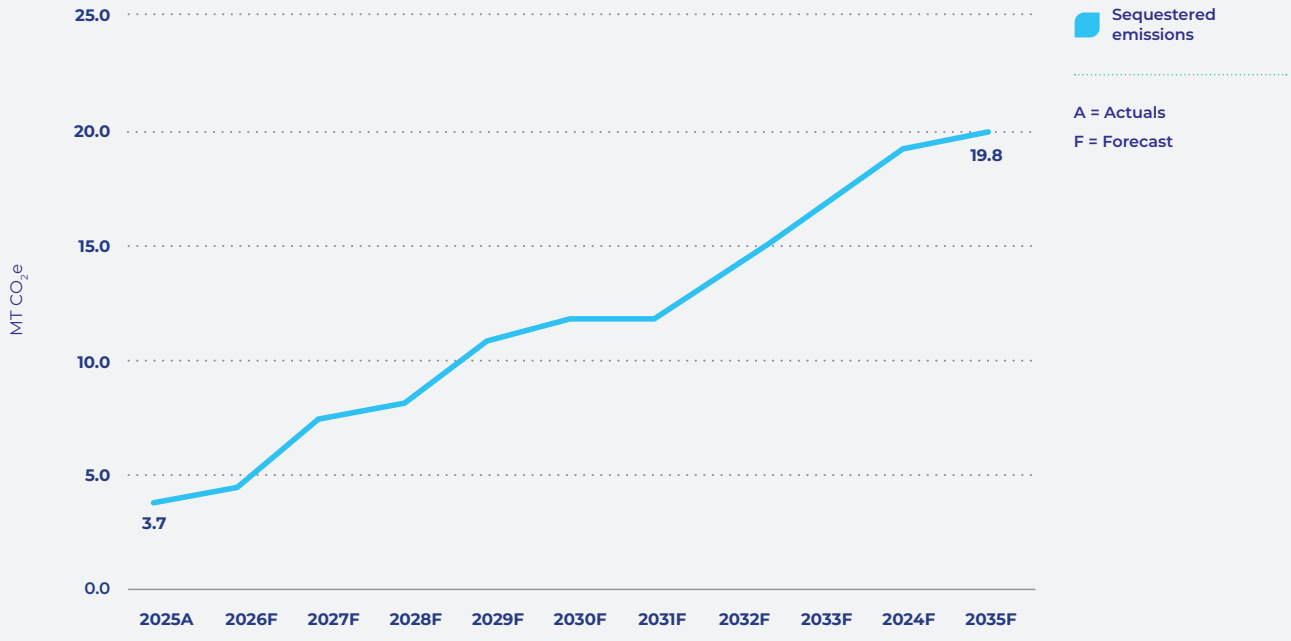
## Figure 7: Western Canada's LNG exports, 2025 and 2035

In megatonnes per annum (MTPA)




## Figure 8: Western Canada's oil and gas and industrial $CO_2$ sequestration, 2025 and 2035

In megatonnes of carbon dioxide equivalent (MT $CO_2e$)



## Scenario assumptions for Central Canada

The Central region includes Ontario (ON) and Quebec (QC). Tables 3 and 5 provide a summary of projected investment and development details leading to changes in Central Canada's energy production (Figure 8) across the region's in-scope sectors.

**Table 3: Central Canada's outlook scenario assumptions to 2035**

| Sector | Current Measures |
|---|---|
| **Conventional oil* and natural gas**<br>*includes heavy, light, condensates, offshore | CAPEX is forecast to decrease by 58% over the forecast period, resulting in a decrease in the region's oil production and flat natural gas production.<br>• Oil: -40%<br>• Natural gas: flat production |
| **Petroleum refining** | Petroleum refineries are located in both ON and QC.<br>Production of petroleum products remains relatively flat over the forecast period.<br>Anticipate focused investment on reducing emissions generated by the refining process including the use of CCS technology and low-carbon hydrogen as feedstock. |
| **Biomass-based fuels** | The sector is highly integrated with the US and has experienced substantial disruption due to US policy changes, most notably the Inflation Reduction Act's Section 45Z Clean Fuel Production Credit, which has put Canadian producers at a disadvantage in shared markets.<br>As a result, biomass-based fuel production remains flat over the forecast period.<br>There are biomass-based fuels operations in both ON and QC. |
| **Low-carbon hydrogen** | There are small amounts of low-carbon hydrogen currently in production in the Central region, primarily for transportation refuelling and natural gas utility blending.<br>There is a slight increase in the production forecast, 0.01 MT (0.30 MBOE/day). |

Photo courtesy of Enbridge

## Figure 9: Central Canada's production by energy sector, 2025 and 2035

In thousands of barrels of oil equivalent per day (MBOE/day)

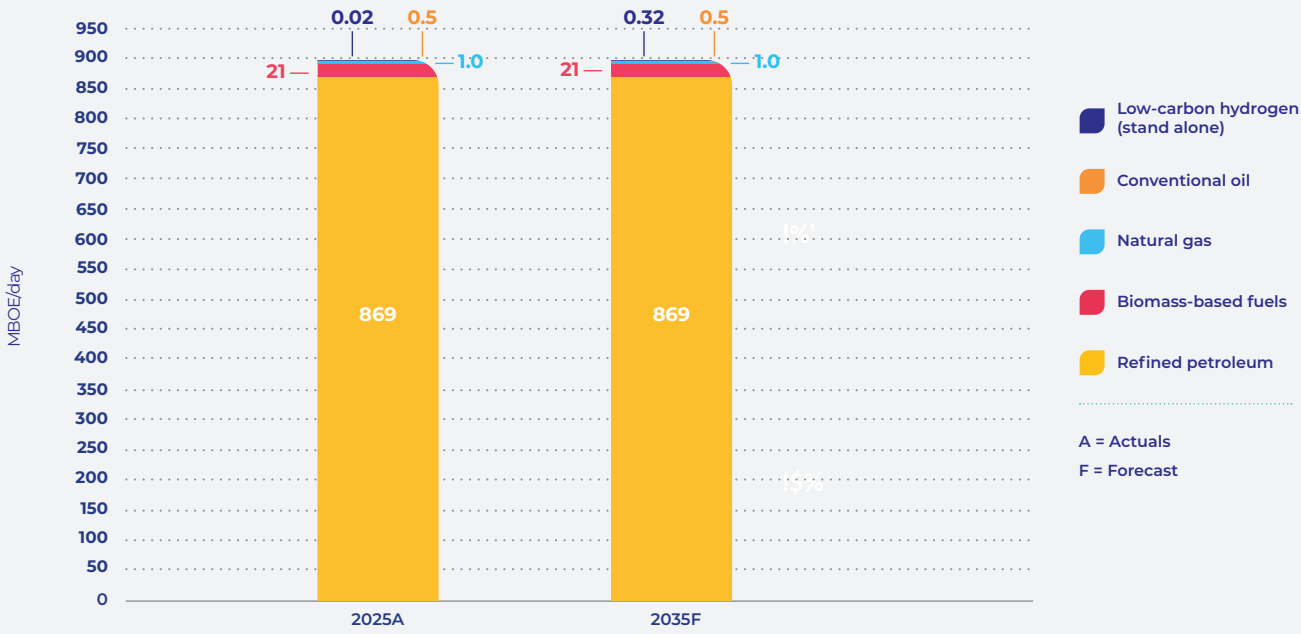



Photo courtesy of CAPP

## Scenario assumptions for Atlantic Canada

The Atlantic region includes New Brunswick (NB), Nova Scotia (NS), Prince Edward Island (PE) and Newfoundland and Labrador (NL). Tables 4 and 5 provide a summary of projected investment and development details leading to changes in Atlantic Canada's energy production (Figure 9) across the region's in-scope sectors.

**Table 4: Atlantic Canada's outlook scenario assumptions to 2035**

| Sector | Current Measures |
|---|---|
| **Conventional oil* and natural gas**<br>*includes heavy, light, condensates, offshore | Significant CAPEX increases between 2028 and 2033 mainly due to investment in Bay du Nord offshore platform and tapers off again by 2035.<br>• Net regional oil production increases 5%.<br>  • West White Rose, with first oil expected in 2026, and Bay du Nord, operational by 2031, offset production declines from other offshore platforms.<br>• Some offshore exploration is likely to occur.<br>• Natural gas production in NB remains flat as it continues to address local and Northeastern US demand during the winter months. |
| **Petroleum refining** | NB is home to Canada's largest petroleum refinery.<br>Production of petroleum products remains flat over the forecast period.<br>Anticipate focused investment on reducing emissions generated by the refining process including the use of CCS technology and low-carbon hydrogen as feedstock. |
| **Biomass-based fuels** | The sector is highly integrated with the US and has experienced substantial disruption due to US policy changes, most notably the Inflation Reduction Act's Section 45Z Clean Fuel Production Credit, which has put Canadian producers at a disadvantage in shared markets.<br>As a result, biomass-based fuel production remains flat over the forecast period. |
| **Low-carbon hydrogen** | .22 MT (12 MBOE/day) of low-carbon hydrogen production is projected for the region using wind power and electrolysis, with a significant opportunity to export to European markets. |

## Figure 10: Atlantic Canada's production by energy sector, 2025 and 2035

In thousands of barrels of oil equivalent per day (MBOE/day)

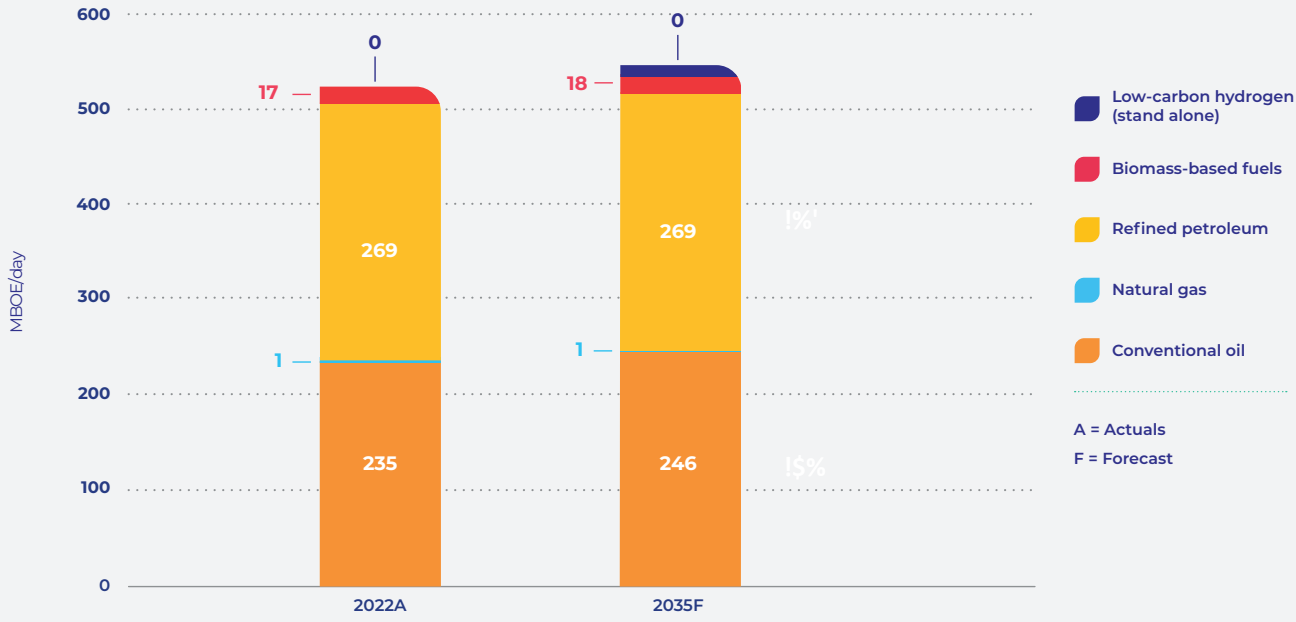



Photo courtesy of Irving Oil

Table 5 outlines national and regional outlook assumptions for conventional E&P and oil sands capital expenditures (CAPEX) and operating expenditures (OPEX) required to achieve the national and regional energy production forecasts provided above.

**Table 5: Conventional E&P and oil sands CAPEX and OPEX, 2025 and 2035**

| Region | Expenditure | In $2017 Millions | |
|---|---|---|---|
| | | 2025A | Current Measures (2035F; % change from 2025) |
| **National** | Conventional E&P CAPEX | $23,753 | $29,506 (+24%) |
| | Conventional E&P OPEX | $23,202 | $27,736 (+20%) |
| | Oil sands total CAPEX | $11,286 | $13,326 (18%) |
| | In situ CAPEX | $5,106 | $5,742 (+12%) |
| | Mining CAPEX | $3,757 | $5,072 (+35%) |
| | Upgrading CAPEX | $2,423 | $2,512 (+4%) |
| | Oil sands OPEX | $29,853 | $31,246 (+5%) |
| **Western** | Conventional E&P CAPEX | $22,326 | $28,381 (+27%) |
| | Conventional E&P OPEX | $22,214 | $26,289 (+21%) |
| | Oil sands total CAPEX | $11,286 | $13,326 (18%) |
| | In situ CAPEX | $5,106 | $5,742 (+12%) |
| | Mining CAPEX | $3,757 | $5,072 (+35%) |
| | Upgrading CAPEX | $2,423 | $2,512 (+4%) |
| | Oil sands OPEX | $29,853 | $31,246 (+5%) |
| **Central** | Conventional E&P CAPEX | $56 | $23 (-58%) |
| | Conventional E&P OPEX | $9 | $5 (-39%) |
| **Atlantic** | Conventional E&P CAPEX | $1,371 | $1,102 (-20%)<br>CAPEX projected to reach a high of $3,736 in 2032 as spending ramps up prior to Bay Du Nord coming onstream. |
| | Conventional E&P OPEX | $979 | $942 (-4%) |

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