



Leading Energy Services,
Supply, Manufacturing
and Innovation

5th Annual Saskatchewan Oil and Gas Supply Chain Forum

Gary Mar
President and CEO

October 3, 2019

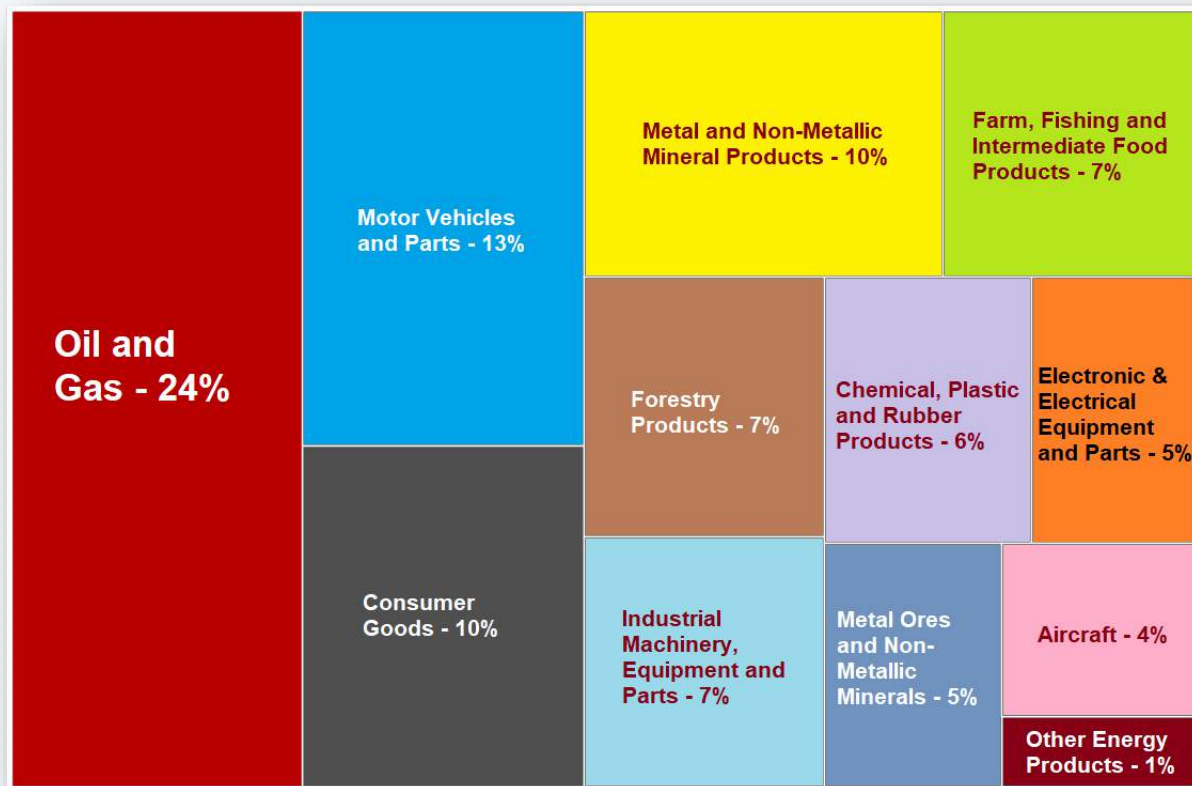
About PSAC

- **National trade association**
- **Representing service, supply and manufacturing sectors**
- **18 business subsectors, over 250 products and services**
- **Over 450,000 workers across Canada**



Canadian Exports by Industry

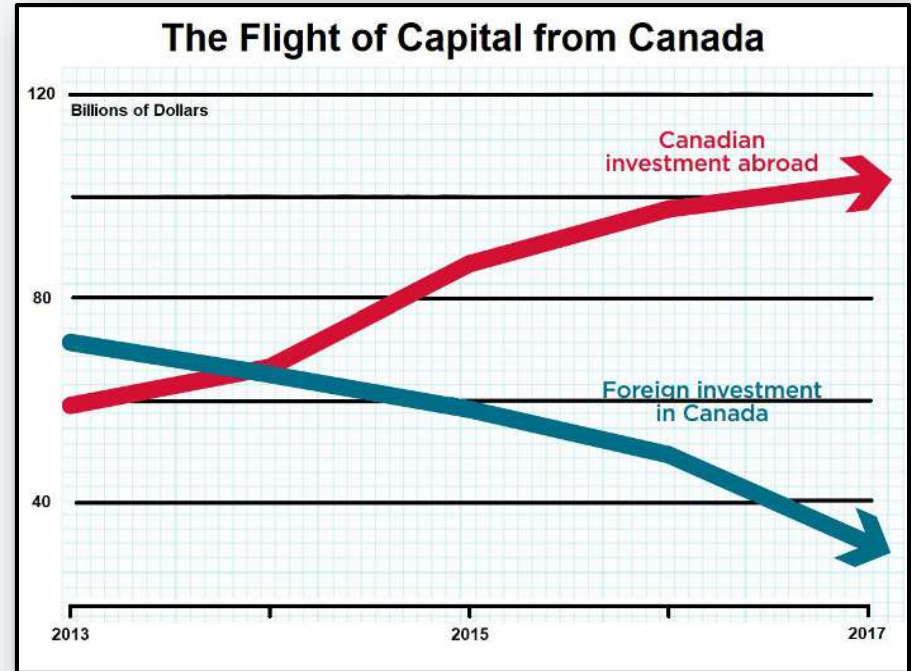
Source: Infographic by Stewart Muir - Resource Works
<https://www150.statcan.gc.ca/t1/tbl1/enhvr.action?pid=1210013401>



Capital is fleeing Canada

The Fraser Institute reports:

“Canadians have increasingly looked to other countries to invest, with the amount Canadians invest abroad rising 74 per cent from 2013 to 2017. At the same time, foreign direct investment—investment from other countries into Canada—dropped a staggering 55.1 per cent from 2013 to 2017.”



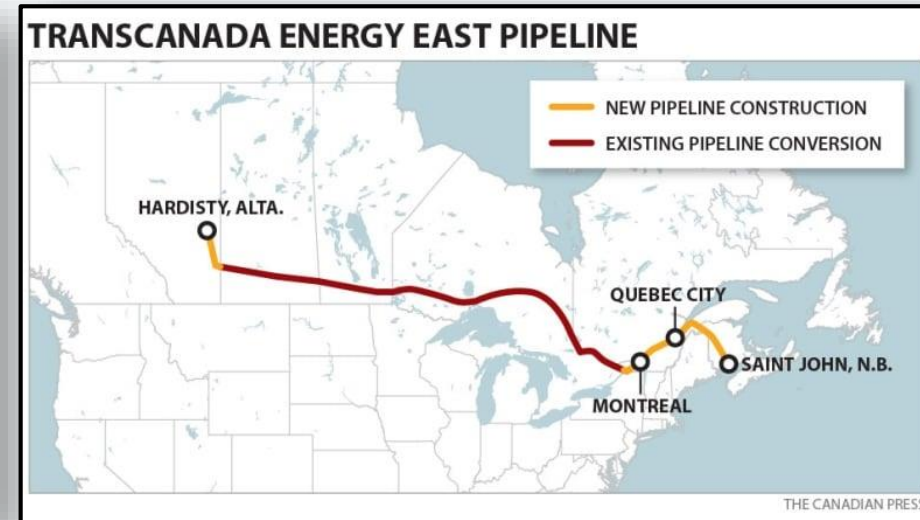
Pipelines cancelled

- Northern Gateway, Energy East



Source: BOE Report

<https://boereport.com/2016/01/13/b-c-supreme-court-hands-another-setback-to-northern-gateway-pipeline>

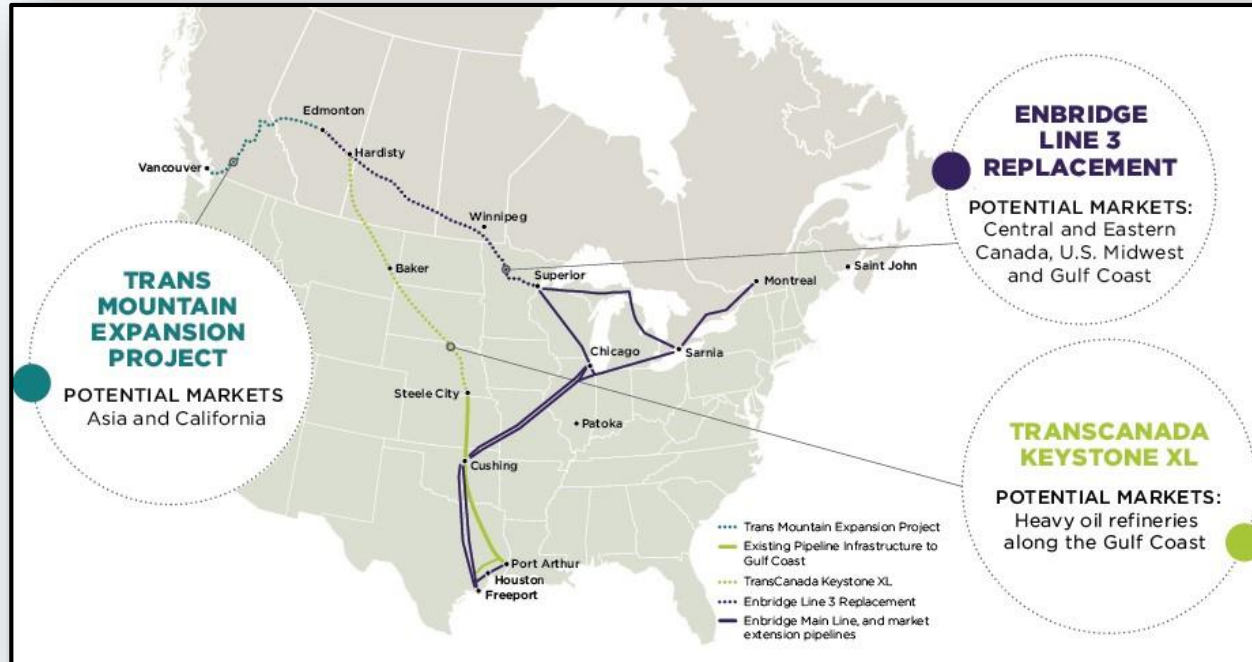


Source: CBC

<https://www.cbc.ca/news/canada/new-brunswick/energy-east-pipeline-completion-date-pushed-back-to-2020-1.3019311>

Pipelines delayed

- Line 3, TMX, Keystone XL



Source: CAPP, 2017

Canada is losing \$ billions



***Loss to Canada:
\$80 Million per day
\$92 Billion (2008–2020e)***



Source: Canada Action, 92 Billion
https://www.canadaaction.ca/oil_discount

Why are we losing billions?

Canadians are realizing foreign groups sabotaged our energy economy — for no good reason

Former B.C. justice minister says the reality is more people in the province support Trans Mountain pipeline than oppose it



Thousands of people march together during a protest against the Kinder Morgan Trans Mountain pipeline expansion in Burnaby, B.C. *THE CANADIAN PRESS/Darrin Dick*

Source: Financial Post

<https://business.financialpost.com/opinion/canadians-are-realizing-foreign-groups-sabotaged-our-energy-economy-for-no-good-reason>

Corbella: Researcher exposes money trail behind U.S.-based campaign to kill the oilsands

LICIA CORBELLA Updated: January 17, 2019



Pipelines crusader Vivian Krause has uncovered evidence of U.S.-based efforts to keep Alberta bitumen in the ground. *SHAUGH BUTTS/POSTMEDIA*

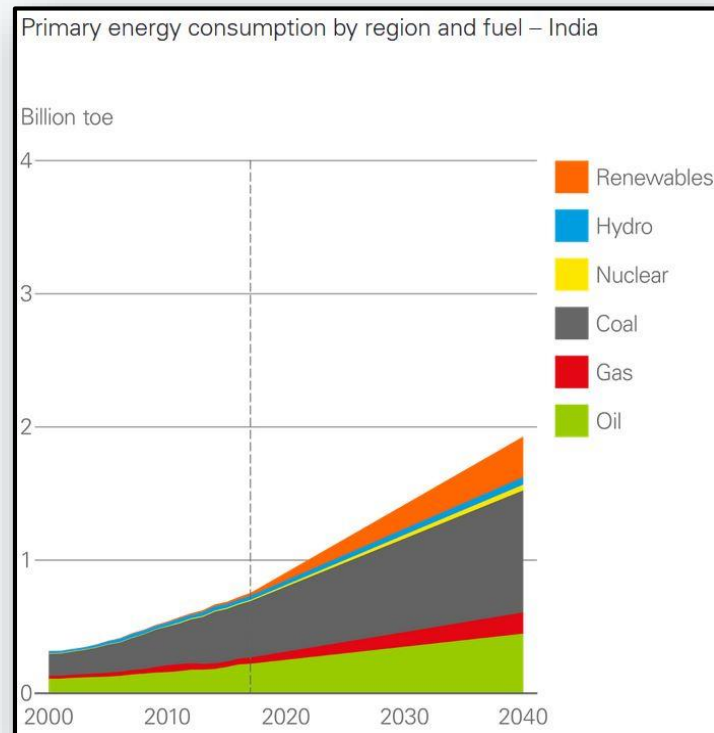
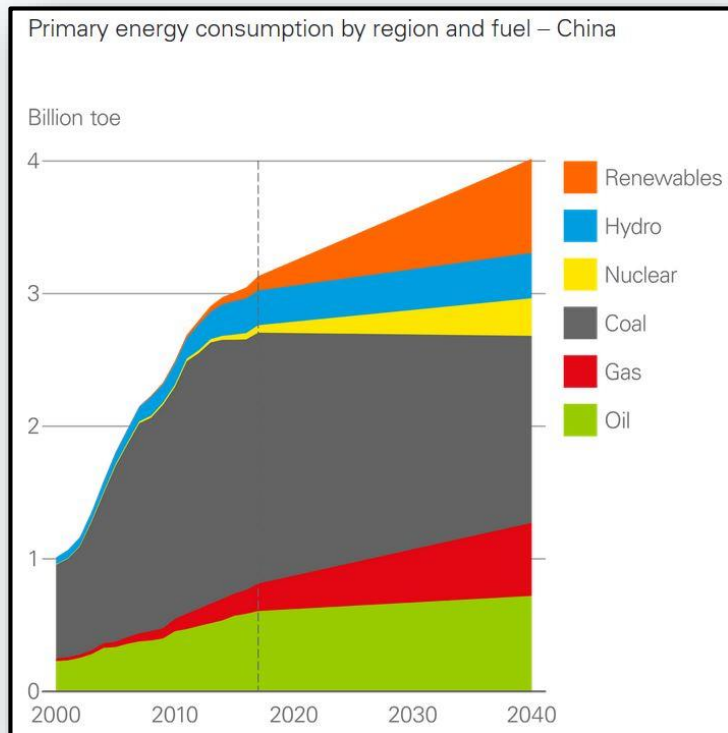
Source: Calgary Herald

<https://calgaryherald.com/news/local-news/corbella-vivian-krause-should-become-a-household-name-across-canada>

Global energy demand will grow by 27% by 2040

Source: International energy Agency (IEA) 2008 World Energy Outlook

Source: BP Report: Energy demand by region
<https://www.bp.com/global/corporate/energy-economics/energy-outlook/demand-by-region.html>



Global News

THE WALL STREET JOURNAL.

U.S. Edition | February 2, 2019 | Print Edition | Video

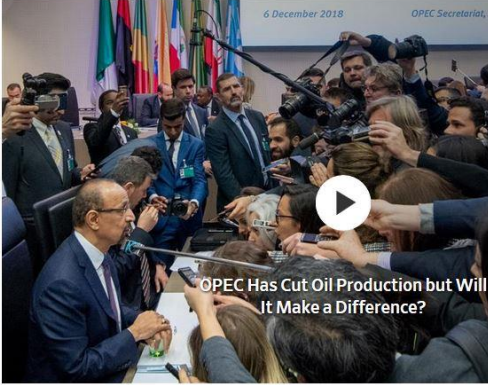
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MARKETS | COMMODITIES | OIL MARKETS

U.S. Becomes Net Exporter of Oil, Fuels for First Time in Decades

Fracking boom briefly propels U.S. to symbolic milestone of 'energy independence'

6 December 2018 OPEC Secretariat

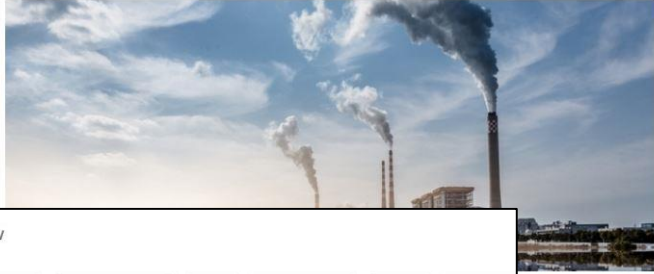


OPEC Has Cut Oil Production but Will It Make a Difference?

The cartel is struggling to convince markets that it can stabilize oil prices. WSJ's Sarah Kent takes a look.

China Oil Imports Up 30% In December, Gas Imports Hit Record

By Irina Slav - Jan 14, 2019, 9:30 AM CST



Reuters reports,

port quotas before
million bpd. That's the
n bpd of crude oil,
ember import rate.
ver 10 percent on
r 2017.
e customs data,
be no repeat of the
e coal consumption
outages leaving


REUTERS World Business Markets TV

Budget 2019 India Election Brexit Imprisoned in Myanmar Reuters Investigates Tech The Wider Image Sports Breakingview

MONEY NEWS NOVEMBER 20, 2018 / 5:02 PM / 2 MONTHS AGO

India's crude oil imports rise to highest level in at least 7 years

2 MIN READ



U.S. Oil and Natural Gas Production at Record Levels

Source: *Forbes: U.S. Crude Oil Production, Export Hit Record Levels*
<https://www.forbes.com/sites/judeclemente/2019/03/07/u-s-crude-oil-production-exports-hit-record-levels/#49466726378>

U.S. Crude Oil Production, Exports Hit Record Levels



Jude Clemente Contributor

Energy

I cover oil, gas, power, LNG markets, linking to human development.

TWEET THIS

- Up 140% since the shale revolution took flight in 2008, the U.S. has seen a meteoric rise in crude oil production
- U.S. crude and product exports should be consistently outpacing imports starting in 2020

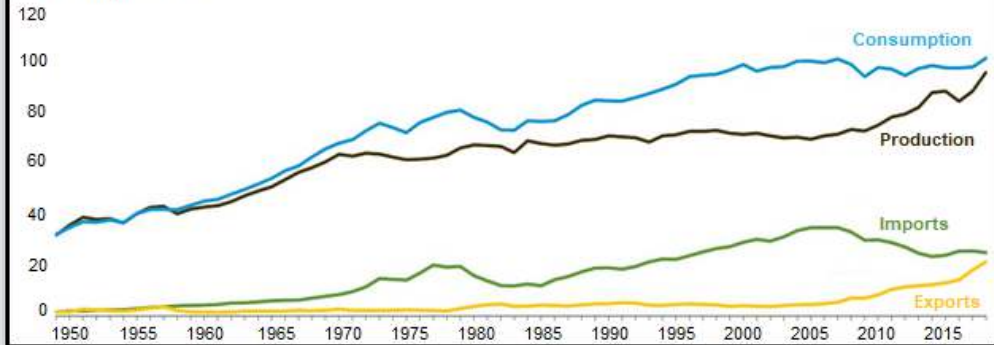


Petroleum tanker, the Louisiana, in Port of Tampa, Hillsborough County, Florida, USA. Supertankers transfer oil from Gulf of Mexico to this smaller ship, which transports oil to the region. Built in 2016, this tanker has a gross tonnage of almost 30,000. GETTY

INCREASING: Consumption, Production and Exports
DECREASING: Imports

Figure 1.1 Primary Energy Overview
(Quadrillion Btu)

Overview, 1949-2018



Source: U.S. EIA – April 2019 Monthly Energy Review, Fig 1.1
<https://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf>



Changing the Narrative

PSAC Public Relations



PSAC is raising awareness of the national supply chain for oil and gas that benefits all Canadians, and highlighting manufacturing jobs.

PSAC speaks on BNN about the national supply chain for oil and gas in Canada



PSAC at the Vaughan Chamber of Commerce in ON



PSAC speaks to local businesses in Ontario about the benefits of Canada's oil and gas supply chain to all Canadians including manufacturing jobs.



Canadian Oil & Gas Industry Outlook

PSAC Oilfield Service Activity Outlook Sections

- Operating costs, conventional and oil sands
- Drilling
- Wells, pipelines, and facility closure/decommissioning



2019 Commodity Price Assumptions

Original Forecast (November 2018)

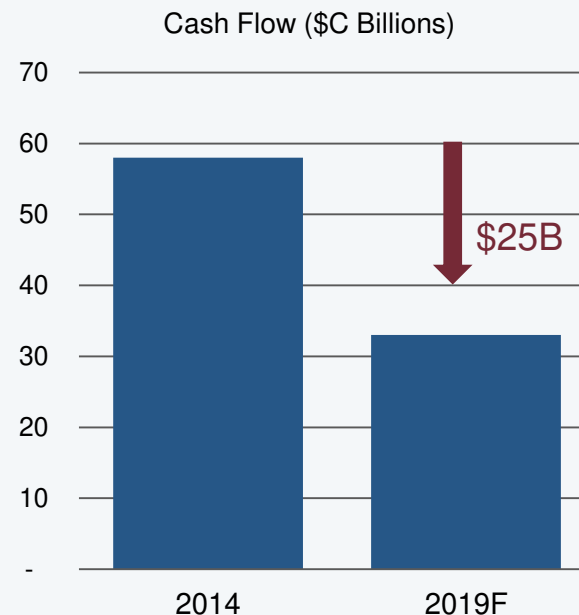
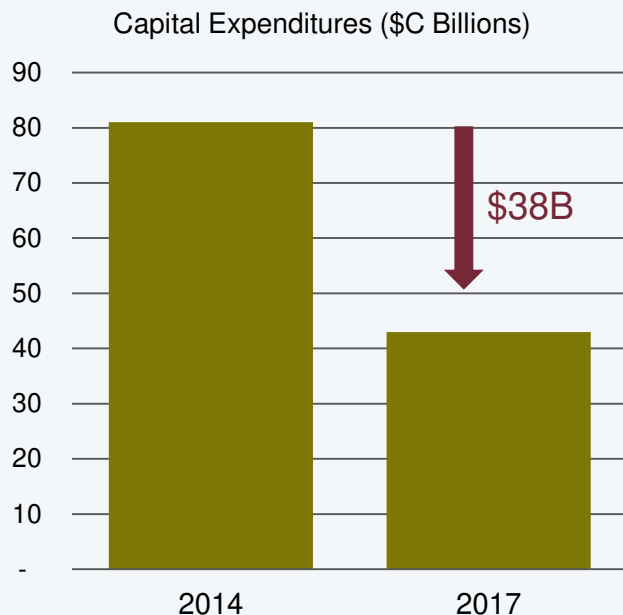
- Average gas price (AECO) CDN \$1.45/mcf
- Average oil price (WTI) US \$69.00/ barrel
- Dollar (CAD\$ vs USD\$) \$0.80

Revised Forecast (July 2019)

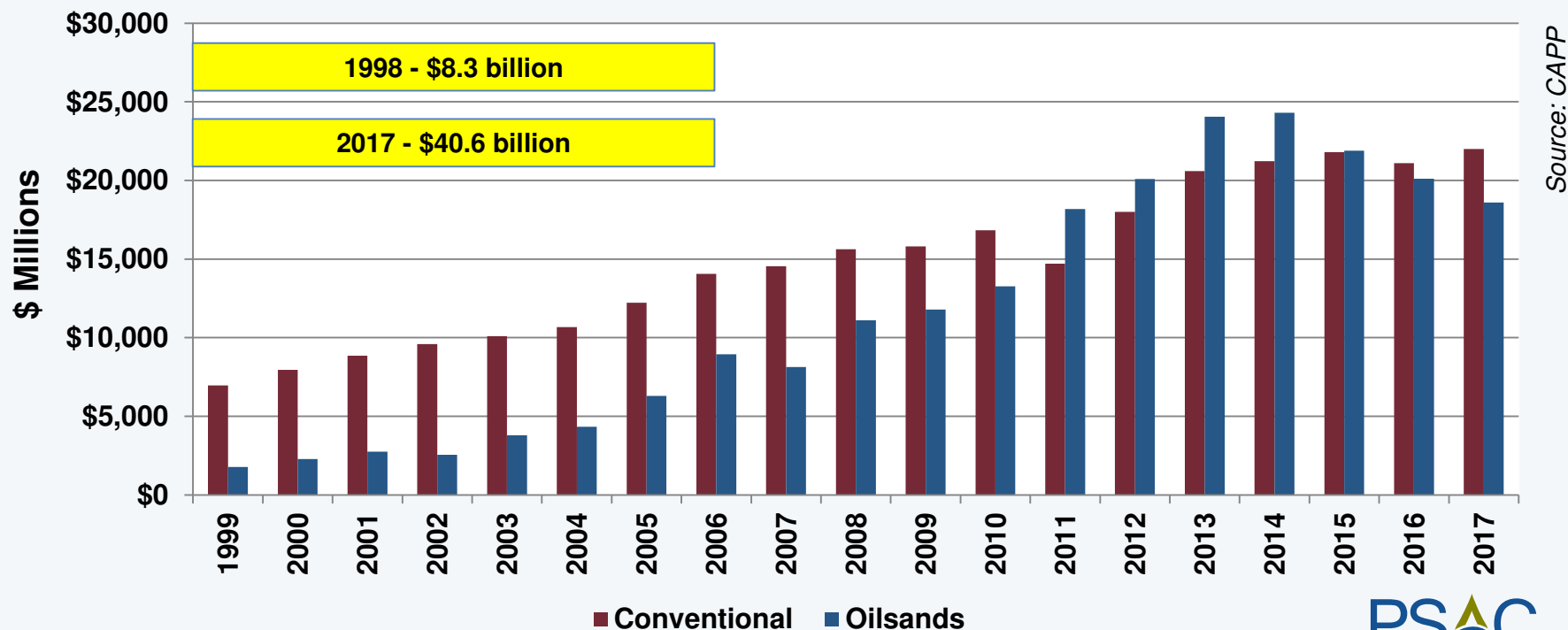
- Average gas price (AECO) CDN \$1.60/mcf ↑
- Average oil price (WTI) US \$57.00/ barrel ↓
- Dollar (CAD\$ vs USD\$) \$0.76 ↓

Capital and Cash Flow: 2014 versus 2019

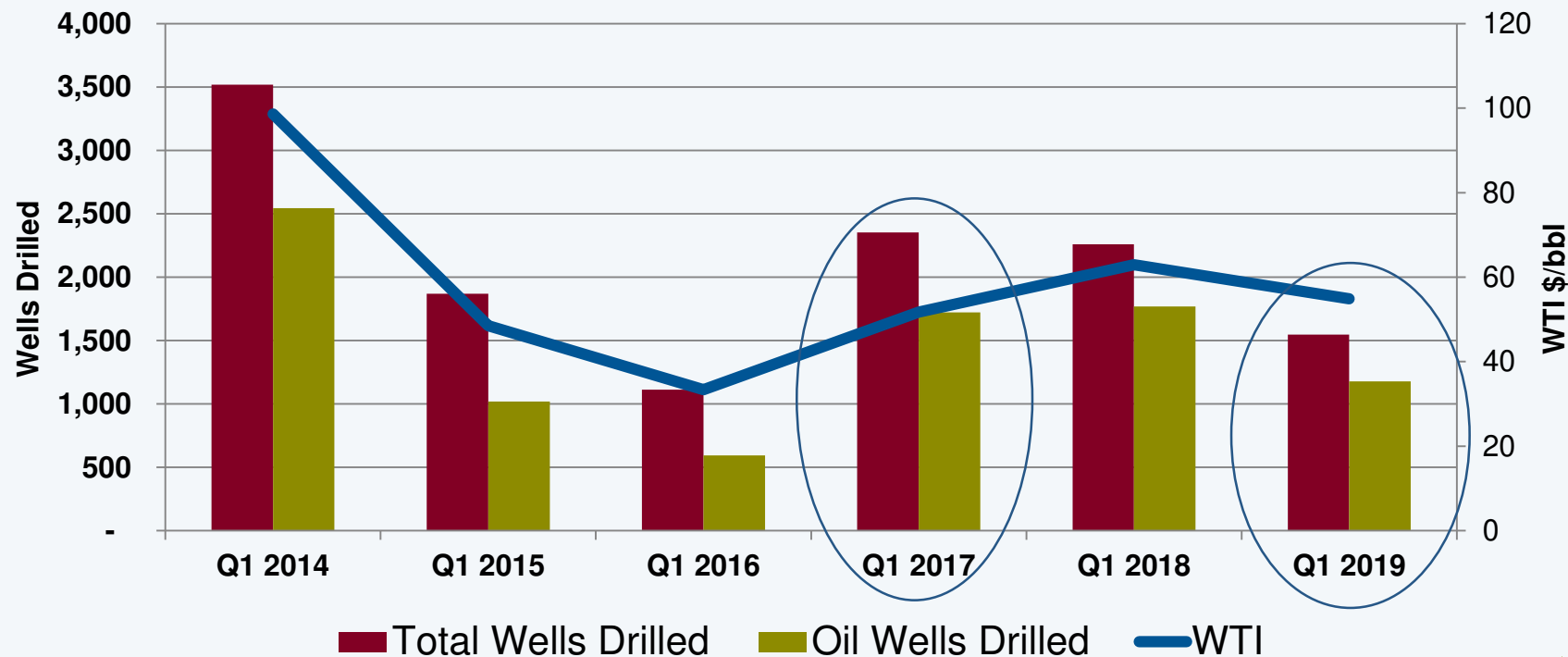
projected



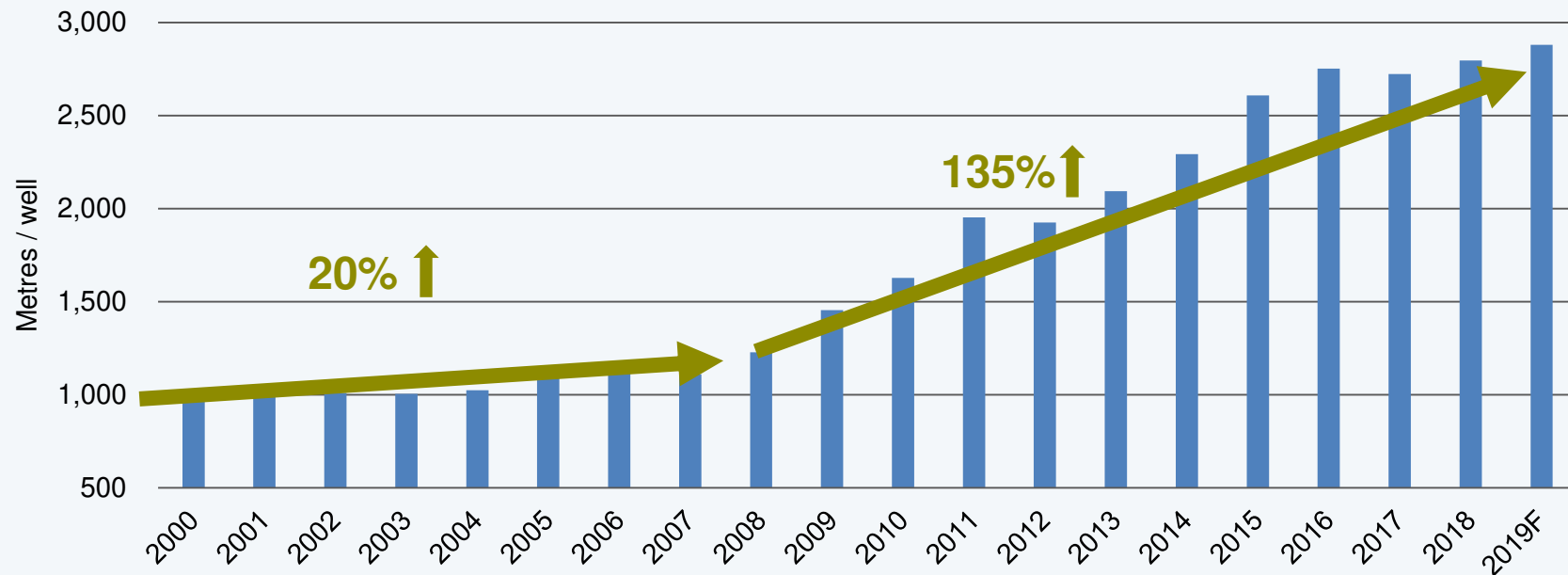
Production Operating Costs (1999 – 2017)



WTI price vs Wells Drilled – Q1 2014 to 2019

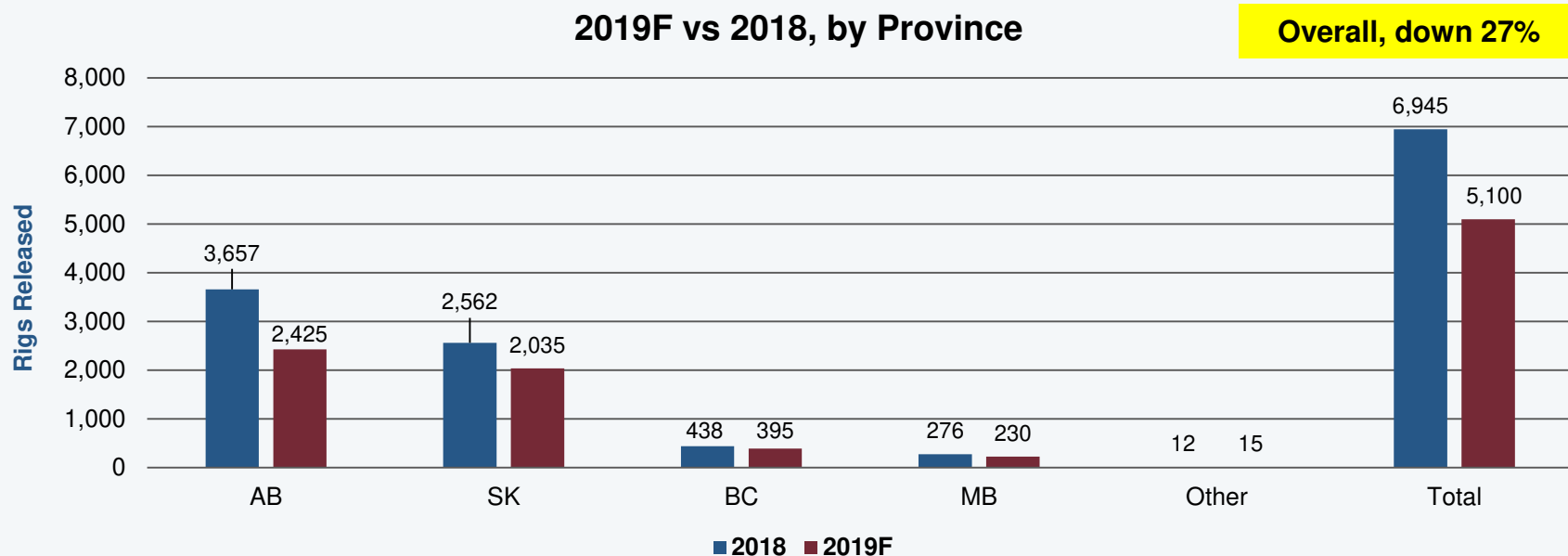


Average meterage per well



2019 Forecast vs 2018

actual, by province



Trends in Saskatchewan

SK1

2019F – 450 wells

2018 – 516 wells

Down 13% yr-over-yr

SK3

2019F – 640 wells

2018 – 759 wells

Down 16% yr-over-yr

SK2

2019F – 945 wells

2018 – 1,287 wells

Down 27% yr-over-yr



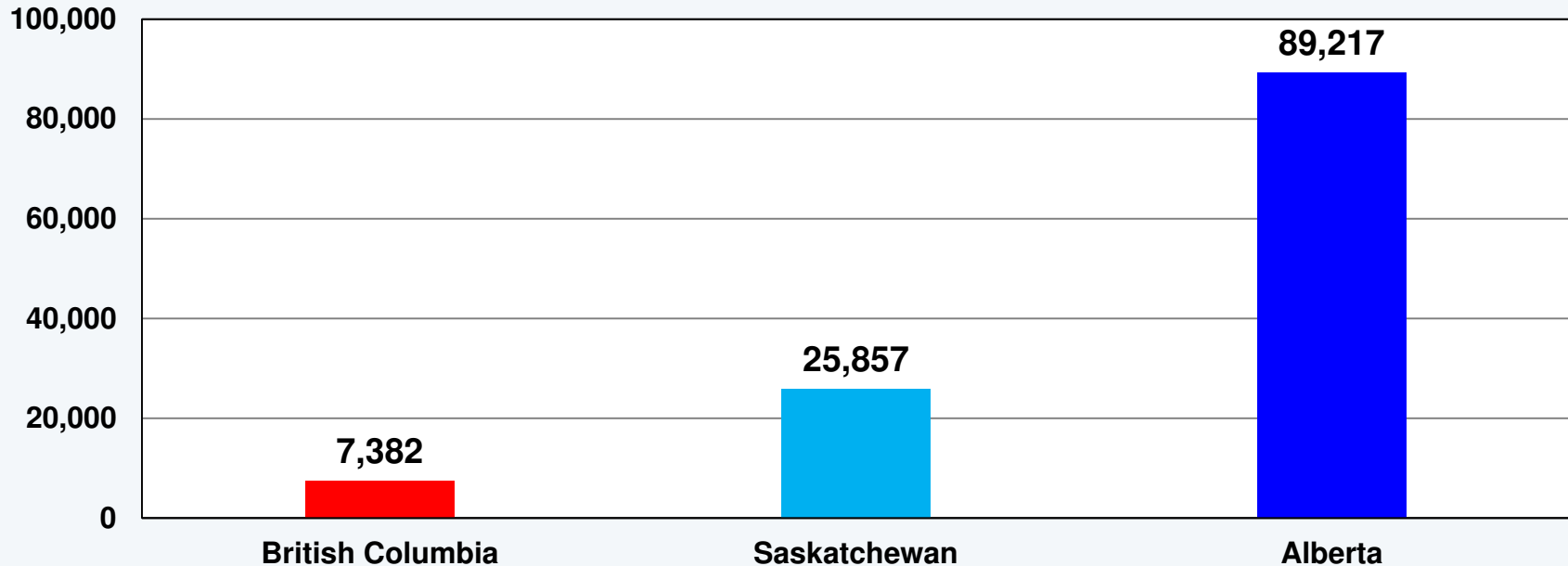


Closure Activity Forecast

**Decommissioning / Abandonment
Reclamation and Remediation
of Wellbores, Wellsites, Pipelines and
Facilities**

Inactive Well Base*

122,456 inactive wells in three provinces – November 2018



*Source: Globe and Mail November 23, 2018, provincial regulator data

2019 Forecast Closure Activity

Saskatchewan



Saskatchewan 2019 Closure Total (est.)

Well decommissioning = 265, \$12 MMe

Rem / Rec = \$5 MMe

Total = \$17 MMe

2019 Forecast Closure Activity

Western Canada



Western Canada 2019 Closure Total

Well decommissioning = 5,673, \$267 MM

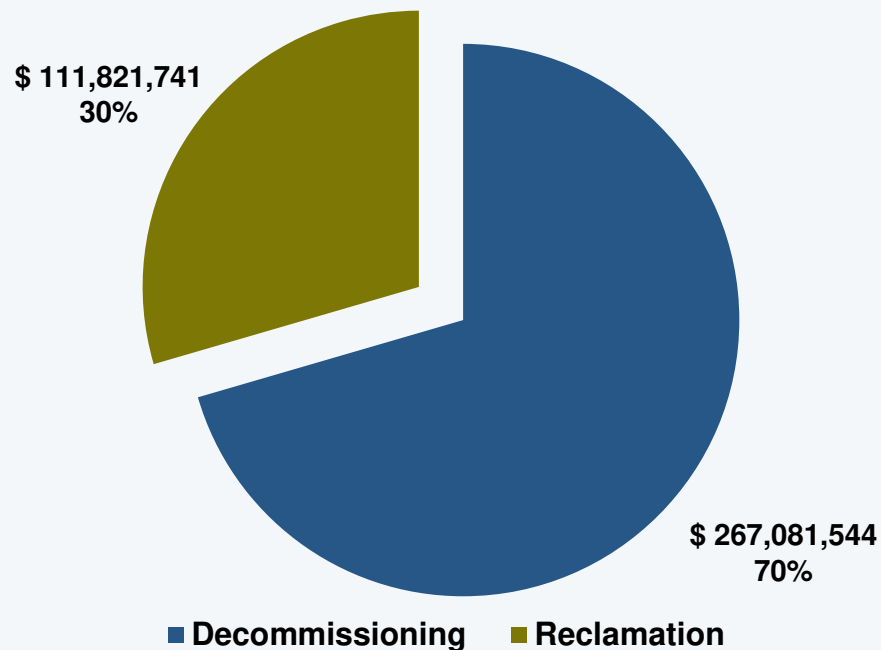
Rem/Rec = \$112 MM

Total = \$379 MM

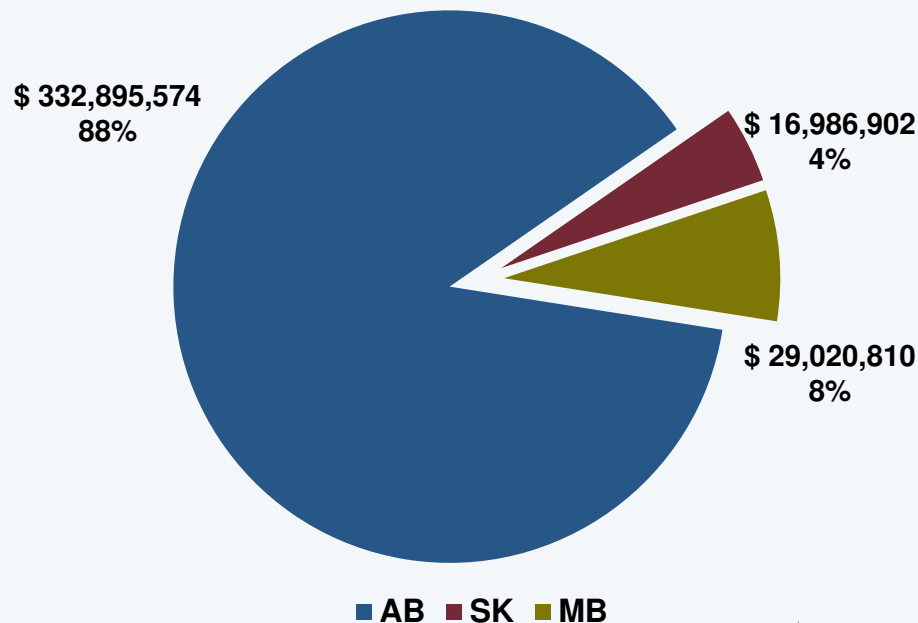
2019 Forecast Closure Activity

Western Canada

Closure Breakdown



Total Closure by Province



Final Remarks

- Activity in Canada down despite rising global demand
- Access to tide water = ceiling on oil and gas development
- Natural gas market remains challenged; NGLs - positive
- Uncertainty = limiting investment in Canadian O&G
- Canadians for Canada's Future - www.canadiansforcanadasfuture.ca
- Adopt and lead a “Canada first” mindset
- The world needs more Canadian Energy!!!!



Leading Energy Services,
Supply, Manufacturing and Innovation

Resources

Canada's Energy Export Guide & Database

Canada's Exportable Expertise

Oil & Gas Services, Supply, Manufacturing, and Technologies

SERVICES
 ENERGY
 WELL SITE
 SNUBBING
 BOPS EQUIPMENT PROCESSING
 TESTING MANUFACTURERS
 DRILLING FLUIDS
 & CHEMICAL SUPPLIERS
 ENVIRONMENTAL SUPPLY
 PERFORMING & RENTAL
 CONTRACTORS STORES
 OILFIELD STONGS
 CEMENTING & NATIONAL
 STIMULATION ASSOCIATION
 SUPPLY AND BOPS SNUBBING
 RENTAL STORES SPECIALIZED

TESTING
 PRODUCTION SERVICE
 CEMENTING &
 STIMULATION
 MANUFACTURING
 MANUFACTURING
 CASING PROTECTION
 CONTRACTOR CONDUCTOR
 FABRICATORS ENERGY
 ASSOCIATION
 SOCIATION
 SUPPLY & RENTAL STORES
 WELL SITE MANUFACTURING
 CEMENTING SERVICES
 STIMULATION
 DRILLING FLUIDS
 CONSTRUCTION
 RENTAL STORES

[https://canadiane](https://canadiane.com)

Canada     

Canada is renowned worldwide for its excellence and innovation in the oil and gas industry. Many countries have recognized Canada's leading positions in technology, process and ethical legislation, and are modelling their own regulations on what they see from Canada's various energy regulators.

Canadian firms, including pipeline operators and upstream exploration and production companies are active in dozens of oil and gas producing countries worldwide. Canada can offer a wide range of services and products in oil and gas from grass roots exploration, pipeline construction and operation, to end of production abandonment, reclamation and remediation as reflected on the list below:

Geology and Play Development Capabilities

- Geological consulting
- Coring of wells and reservoir delineation
- Core analysis
- Geological software development
- Geologic model development

Exploration Geophysics

- Geophysical techniques including prospecting and surveying (such as 4-D seismic techniques)
- Geophones and electronic detonators
- Geomatics and remote sensing
- Software data management systems
- Exploratory test wells (tested with current geophysical techniques)
- Geophysical downhole and seismic data interpretation and feedback into the geological model

Drilling, Well Completion & Stimulation, Pumping services

- Drilling and completion engineering and design including:
 - Well planning (directional placement & spacing)

- Niche Technologies & Services (i.e. Methane emission - fugitive gas capture, recovery and reuse), surface casing/vent flow services

exportguide.com/

- Advanced seismic detection & optimization
- Injection well thermo dynamic analysis
- Well life-cycle & risk mitigation engineering
- Drilling and coring of wells
- Drilling technologies and services (including engineering consulting & design, rat hole, drilling, multidirectional drilling)
- Drilling equipment and machinery (construction of equipment and components)
- Well Completion and Stimulation technologies and services (including consulting and design) e.g. hydraulic fracturing
- Well Completion and Stimulation equipment and machinery (e.g. pickers and isolation tools)
- Well Completion and Stimulation wireline/stickline and perforating services

- Wellbore logging & monitoring
- Fluids analysis (frac fluids, drilling mud, produced water)
- Sand control
- Inflow control devices
- Supply and rental stores
- Well cementing
- Coiled tubing services
- Rig and Access Mats

Community Partners





Leading Energy Services, Supply, Manufacturing and Innovation

Petroleum Services Association of Canada

Thank you

For more information, please visit

psac.ca