



# THE EVOLUTION OF OIL AND GAS EVALUATION

ARC FINANCIAL CORP.

April 23, 2025

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# TODAY'S SPEAKERS



**Brian Boulanger**

Chief Executive Officer and Director

Brian joined ARC in 1997 and has become a trusted advisor to many of ARC's portfolio companies over his almost 25 years of experience with ARC. He has a Bachelor of Commerce in Business Administration from the Ivey Business School at Western University, is a CFA Charterholder and an Institute of Corporate Directors Certified Director.



**Jake Durante**

Vice President

Jake joined ARC in 2018 with prior experience at a global public accounting firm. He has a Bachelor of Commerce from the University of Victoria, a Masters of Professional Accounting from the University of Saskatchewan and is a Chartered Professional Accountant.



**Robyn Fiell**

Investment Analyst

Robyn joined ARC in 2024 with prior experience at a global investment bank where she focused on mergers, acquisitions and divestitures in the oil and gas sector. She has a Bachelor of Science in Geological Engineering from Queen's University.

# ARC FINANCIAL CORP. | UNIQUELY POSITIONED IN ENERGY



## 30+ Year Energy Private Equity Firm

- Founded in 1989 and privately owned, ARC is **Canada's largest** energy focused private equity manager with a **30+ year history**
- Eleven funds representing >\$6 B of committed capital; ~\$270 MM of GP capital
- >180 investments (96% Cdn<sup>(1)</sup>)



## Company Building and Growth Equity

- Provide growth equity to **build high-performing businesses** addressing the world's energy and sustainability needs
- **Infrastructure development teams** differentiates deal capture
- **Canadian funding gap** provides ARC advantaged deal flow, little competition



## ESG Focused for Over Two Decades

- **25% reduction in GHG emissions intensity** of oil and gas portfolio production since 2018
- Driving ARC's goal to reduce overall emissions intensity across the portfolio by 40 to 45% by 2030 and to **achieve net-zero by 2050**



## In-House ARC Energy Research Institute

- Provide insights on **investment macro trends** for ARC and key stakeholders and hosts the **popular ARC Energy Ideas Podcast**
- Build **deep relationships** with industry leaders and governments in Canada

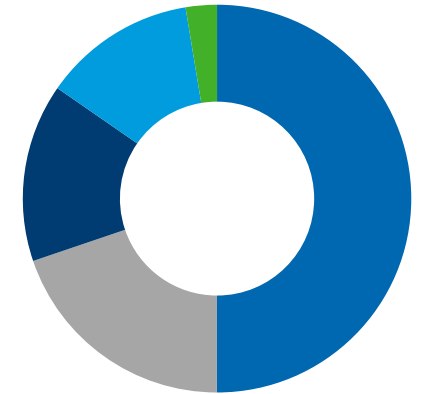
(1) Based on country of incorporation.

# ARC FINANCIAL CORP. | FUNDS UNDER MANAGEMENT

Fund	Vintage	Status
ARC Energy Fund 1	1997	Fully Liquidated
ARC Energy Fund 2	1999	Fully Liquidated
ARC Energy Fund 3	2001	Fully Liquidated
ARC Energy Fund 4	2004	Fully Liquidated
ARC Energy Fund 5	2006	Fully Liquidated
ARC Energy Fund 6	2008	Realizing
ARC Energy Fund 7	2012	Realizing
ARC Energy Fund 8	2015	Realizing
ARC Energy Fund 9	2018	Active
ARC Energy Transition Fund	2023	Active / Fundraising
ARC Fund 11 – <i>Oil &amp; Gas</i>	2023	Active / Fundraising

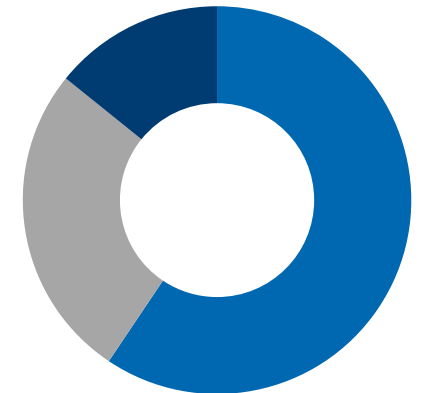
## INVESTOR COMPOSITION<sup>(1)</sup>

Endowments & Foundations	50%
Family Offices	20%
Pensions	15%
Fund of Funds	13%
Other	2%



## INVESTOR GEOGRAPHY<sup>(1)</sup>

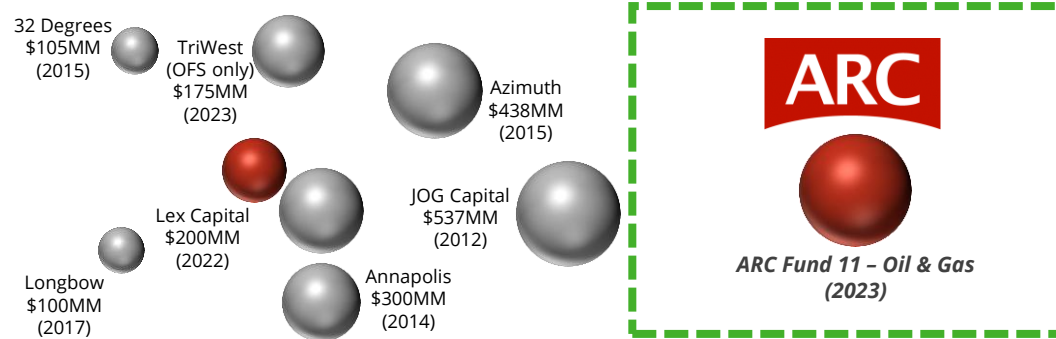
United States	60%
Canada	26%
International	14%



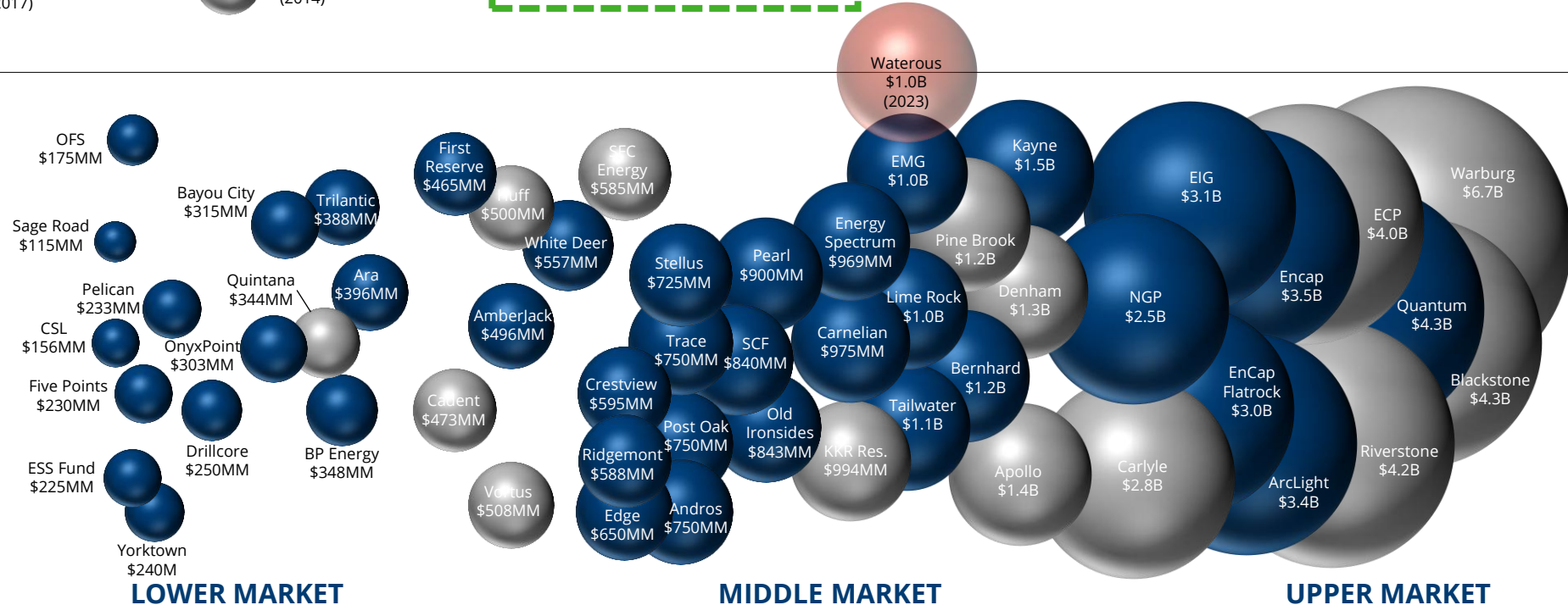
(1) Based on capital commitments across all ARC Energy Funds.



# LIMITED PRIVATE EQUITY COMPETITION IN CANADA



- ARC and platform teams see virtually all Canadian Oil & Gas deals
- 84% of capital in Funds 7 – 9 invested in proprietary ARC opportunities



Bubble size reflective of Fund size; Red & Blue: PE funds active in O&G; Grey: PE funds no longer active in O&G or with non-PE style strategy

# ARC ENERGY RESEARCH INSTITUTE | DIFFERENTIATED IN-HOUSE RESEARCH

## —CONTEXT | VISION | INSIGHT—

The Institute's proprietary research informs ARC and its stakeholders' investment strategy and decisions

- ARC Financial
- Portfolio Companies
- Investors
- Policy Makers
- Public Forums

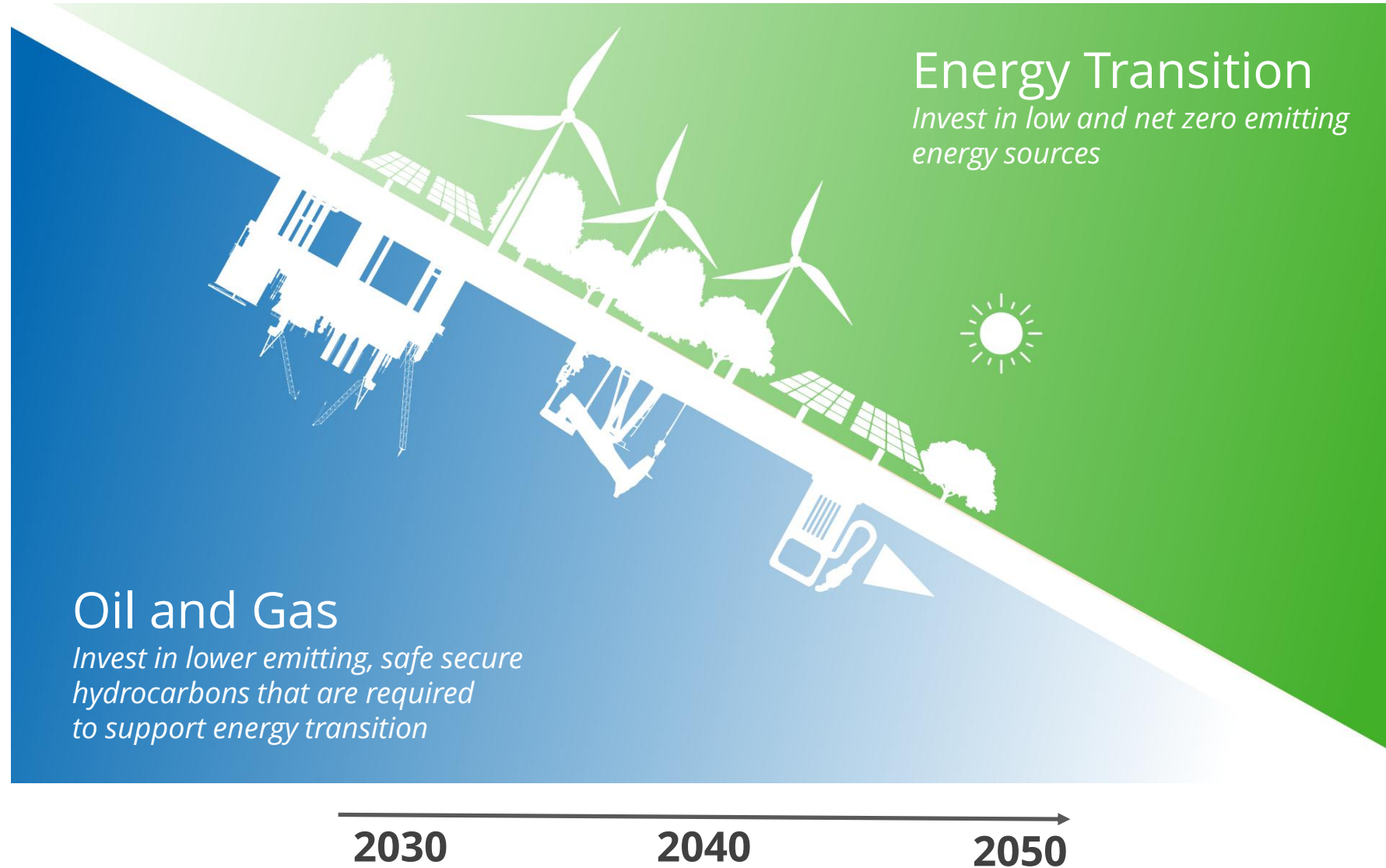


Scan here to listen to the  
*ARC Energy Ideas* podcast



***A unique approach to researching, collaborating and communicating allows the Institute to help decision-makers demystify the complexities of energy systems***

# ARC FINANCIAL'S EVOLVING ENERGY FOCUS





# ARC FUND 11 – OIL & GAS | INVESTMENT STRATEGY

## Investment Characteristics

### The Foundation

- Targeting 2.5X – 3.0X multiple and 25% – 35% IRR (gross)
- Experienced management teams
- Short J-curve/cycle time
- Limited infrastructure investment required
- Established resource in place



## Targeted Asset Profiles

### Harvest Free Cash Flow (Primary Focus)

#### Asset Attributes

- Attractive entry price
- Manageable ARO
- Near-term free cash flow

#### Value Creation

- Optimize costs
- Extend reserve life
- Improve declines
- Maximize free cash flow



### Differentiated Growth (Secondary Focus)

#### Asset Attributes

- Core position/path at entry
- Type-curve predictability
- Bypassed pay/strong analogs

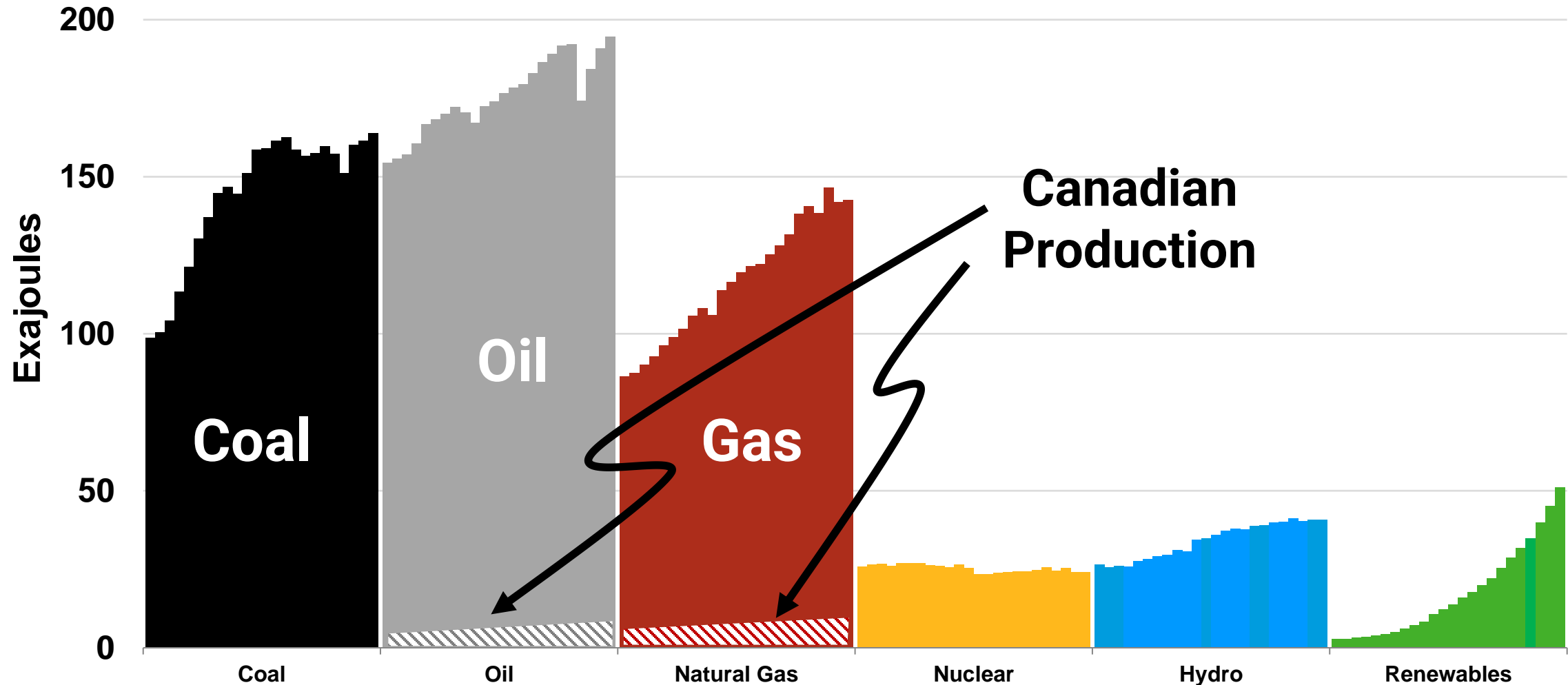
#### Value Creation

- Step-change in production
- Grow reserves/resource
- Improve capital efficiencies
- Operational excellence

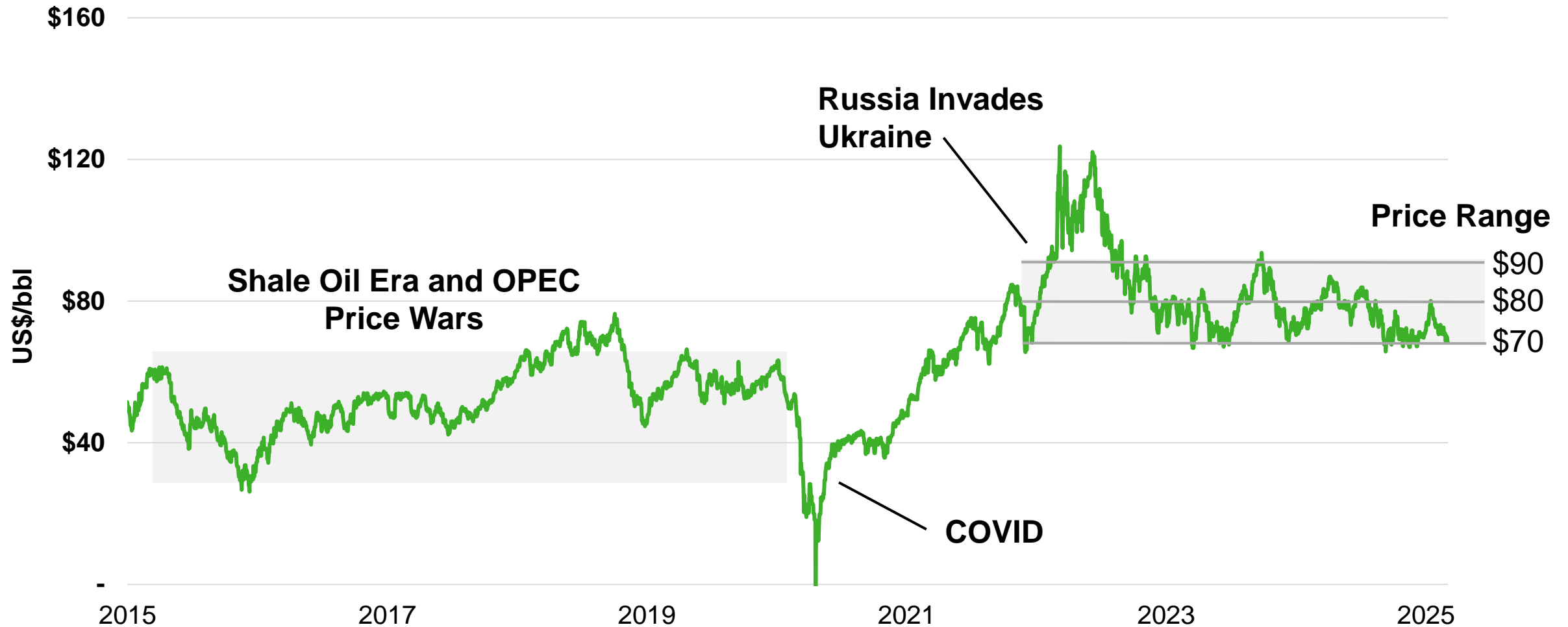


# OIL AND GAS MARKET BACKDROP

# WORLD ENERGY | CONSUMPTION BY SOURCE

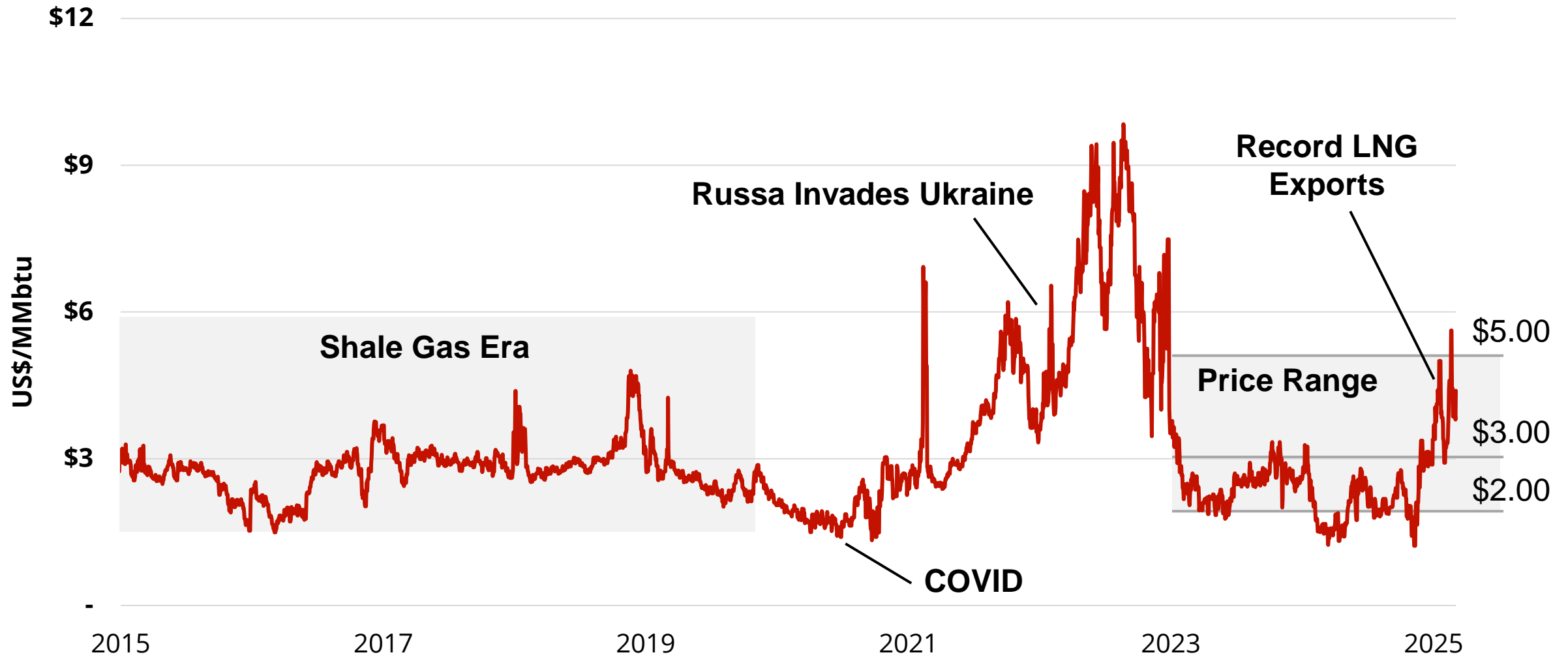


# WTI CRUDE OIL PRICE | DAILY 2015 TO CURRENT

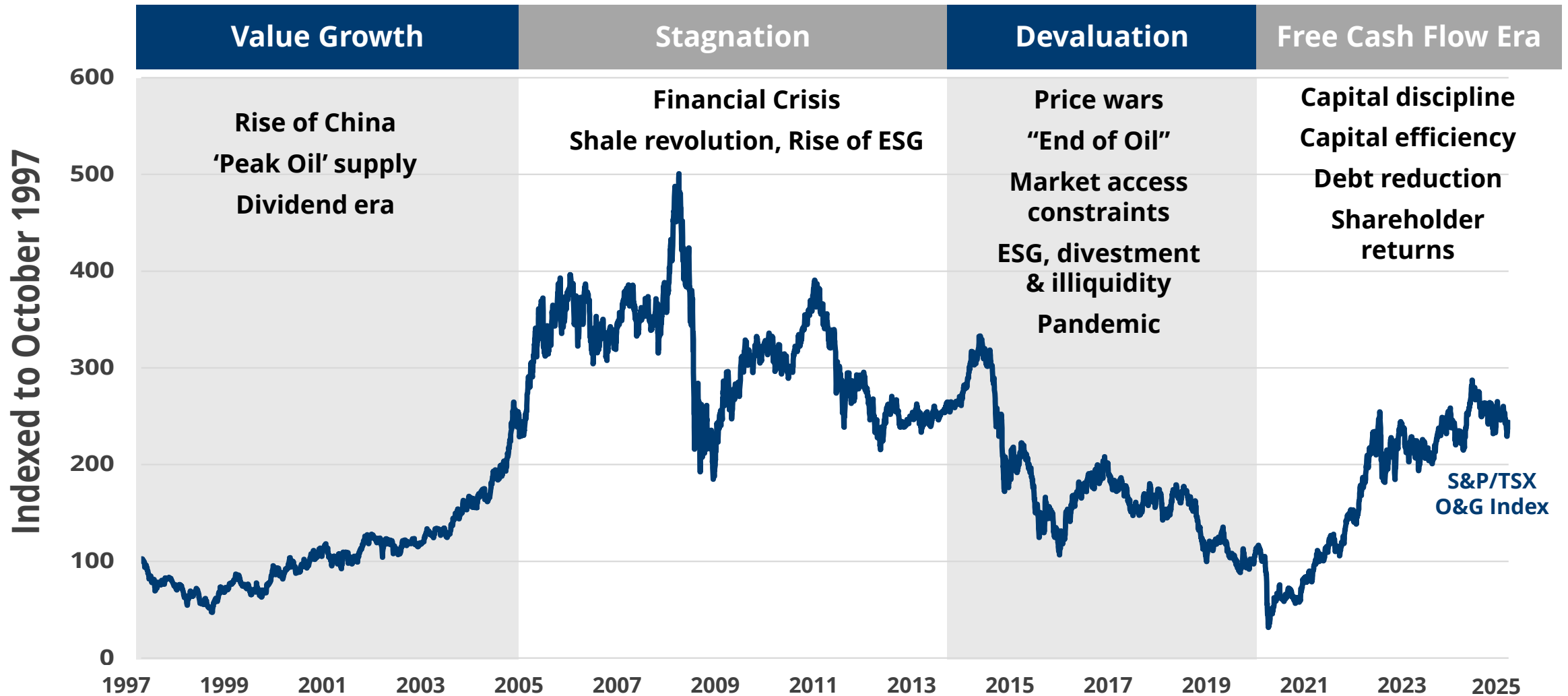




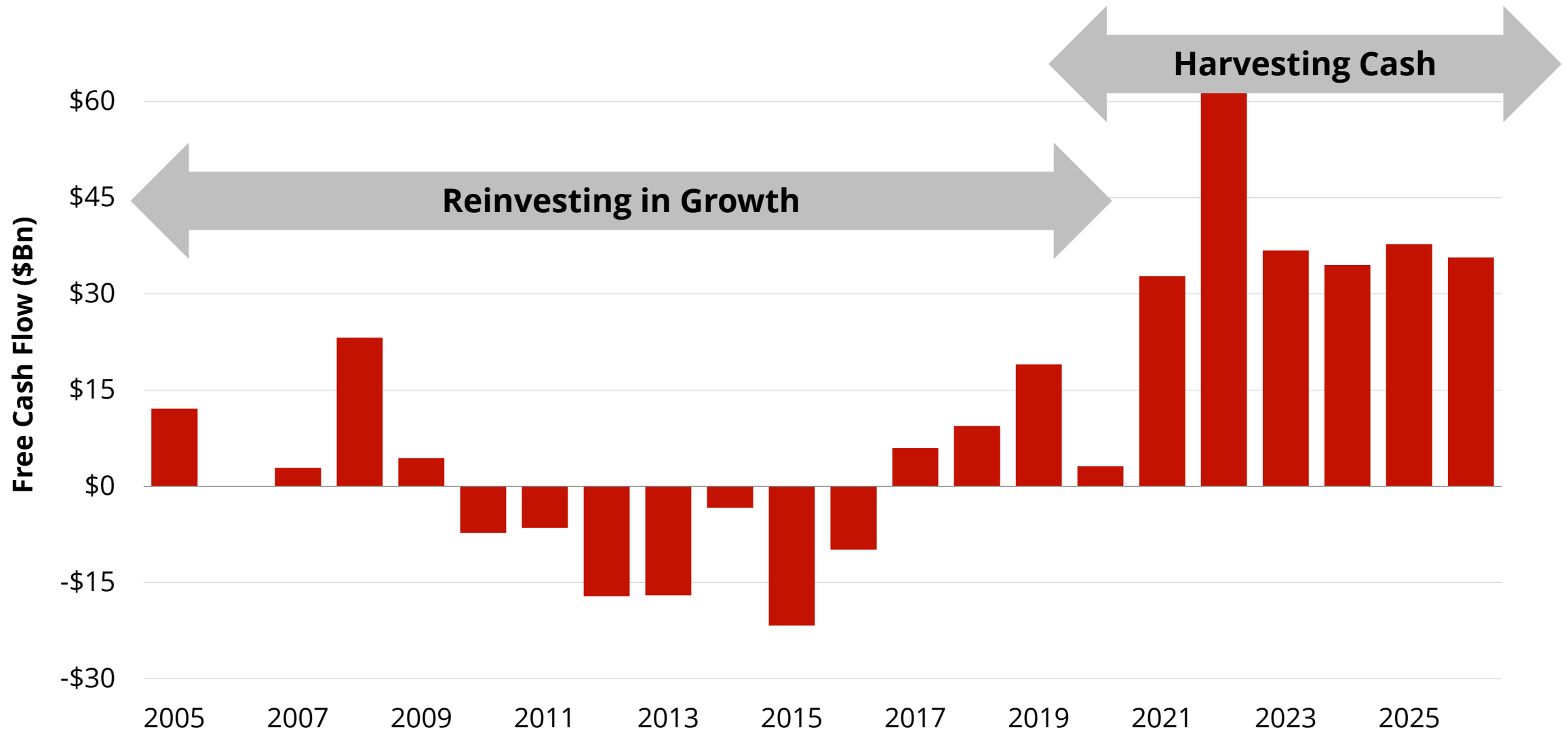
# HENRY HUB NATURAL GAS PRICE | DAILY 2015 TO CURRENT



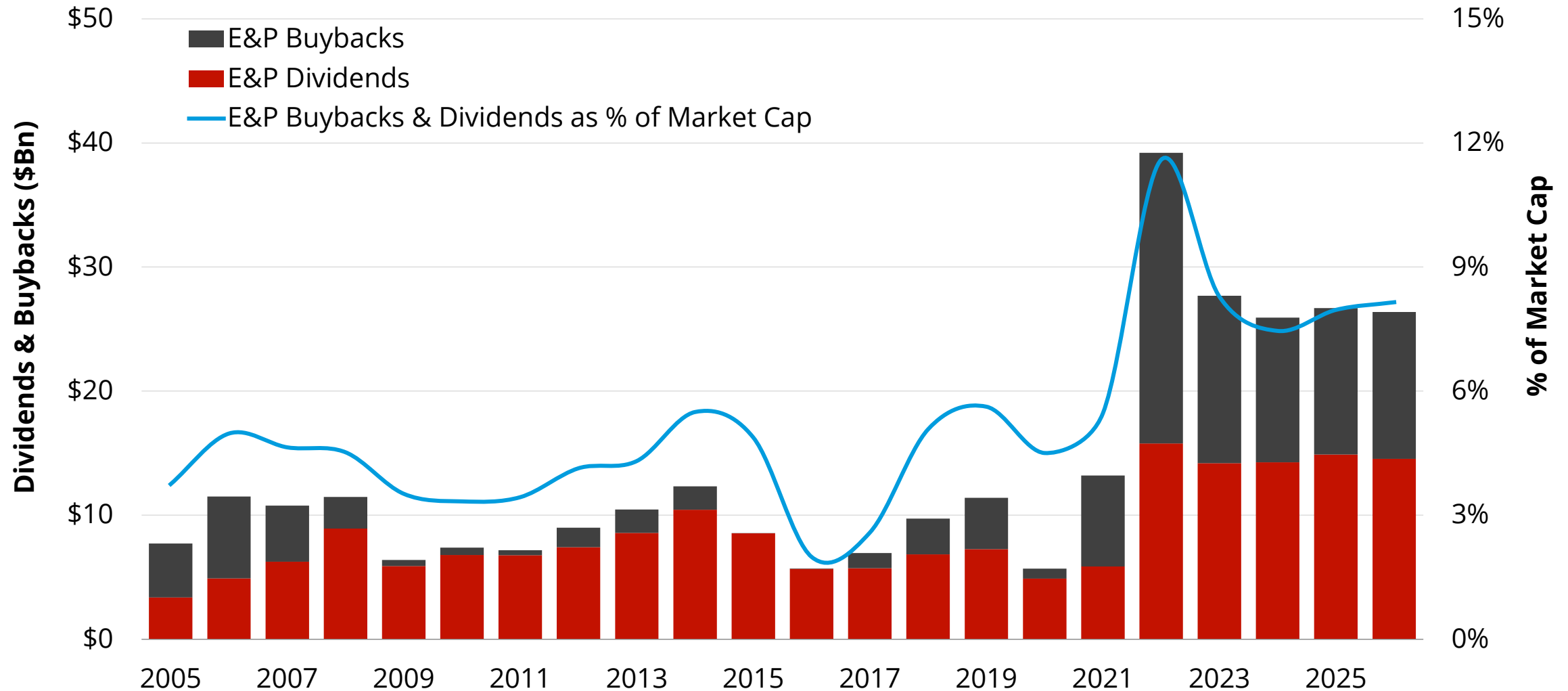
# SIGNIFICANT MACRO FACTORS | S&P/TSX O&G INDEX



## CANADIAN E&amp;P SECTOR | FREE CASH FLOW THROUGH TIME

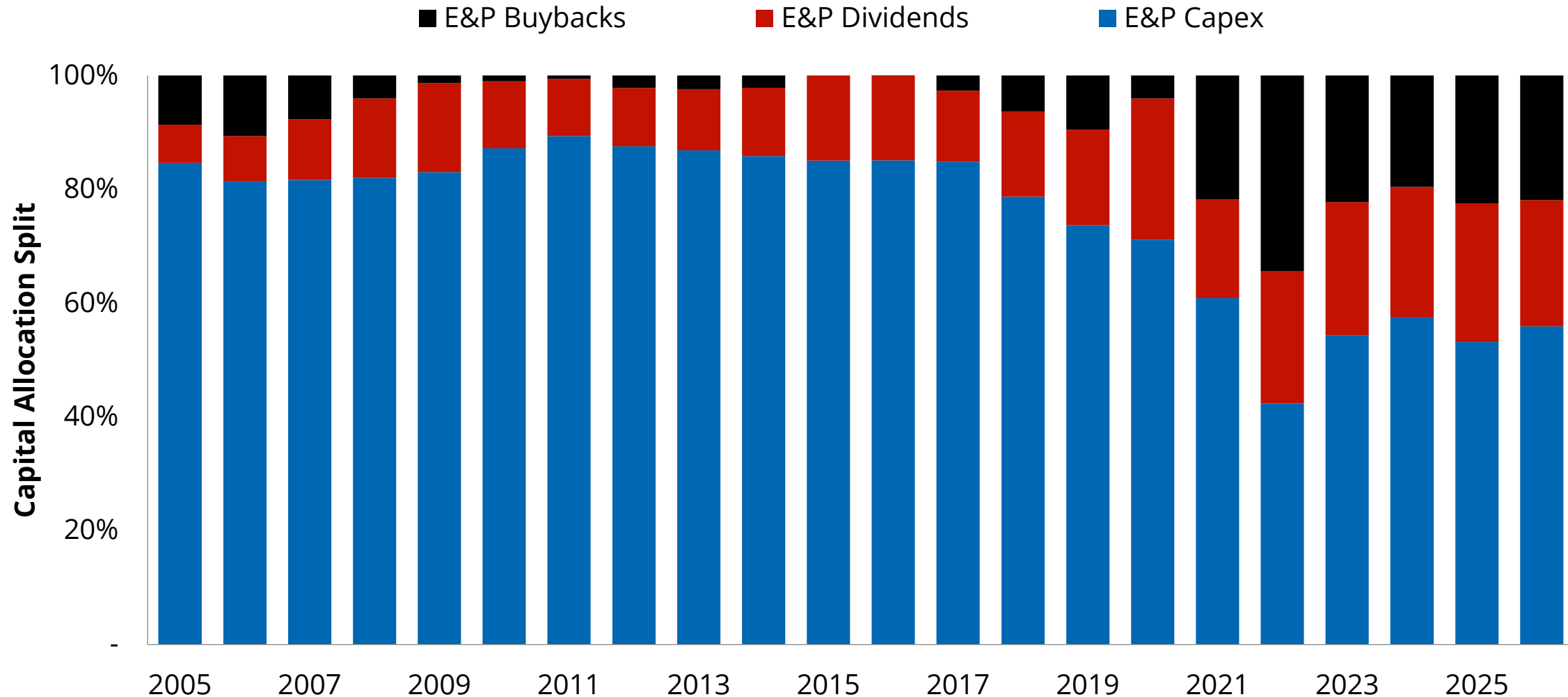


# CANADIAN E&P SECTOR | BUYBACKS AND DIVIDENDS





# CANADIAN E&P SECTOR | SHIFT FROM GROWTH TO HARVEST





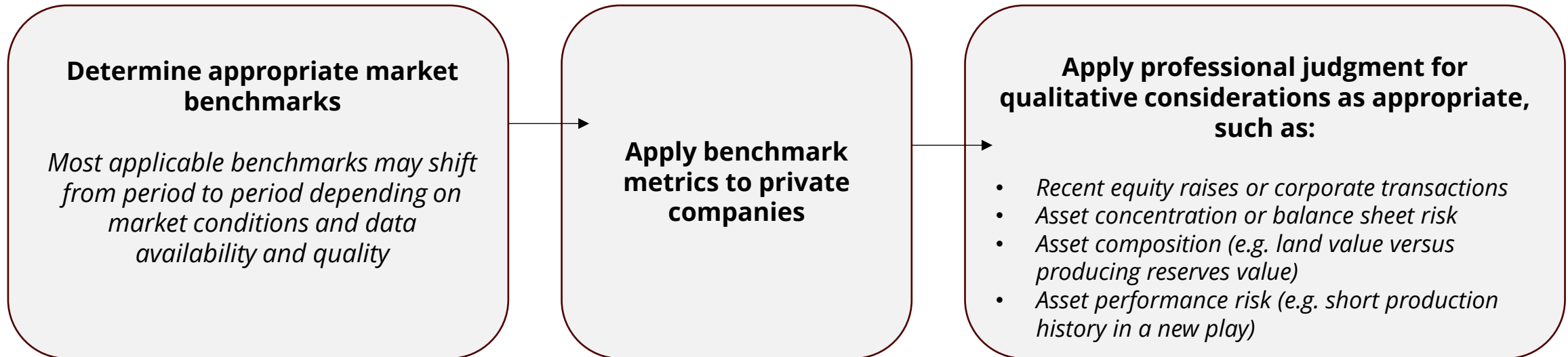
# OIL AND GAS EVALUATION

# OIL AND GAS EVALUATION | APPROACH TO VALUE

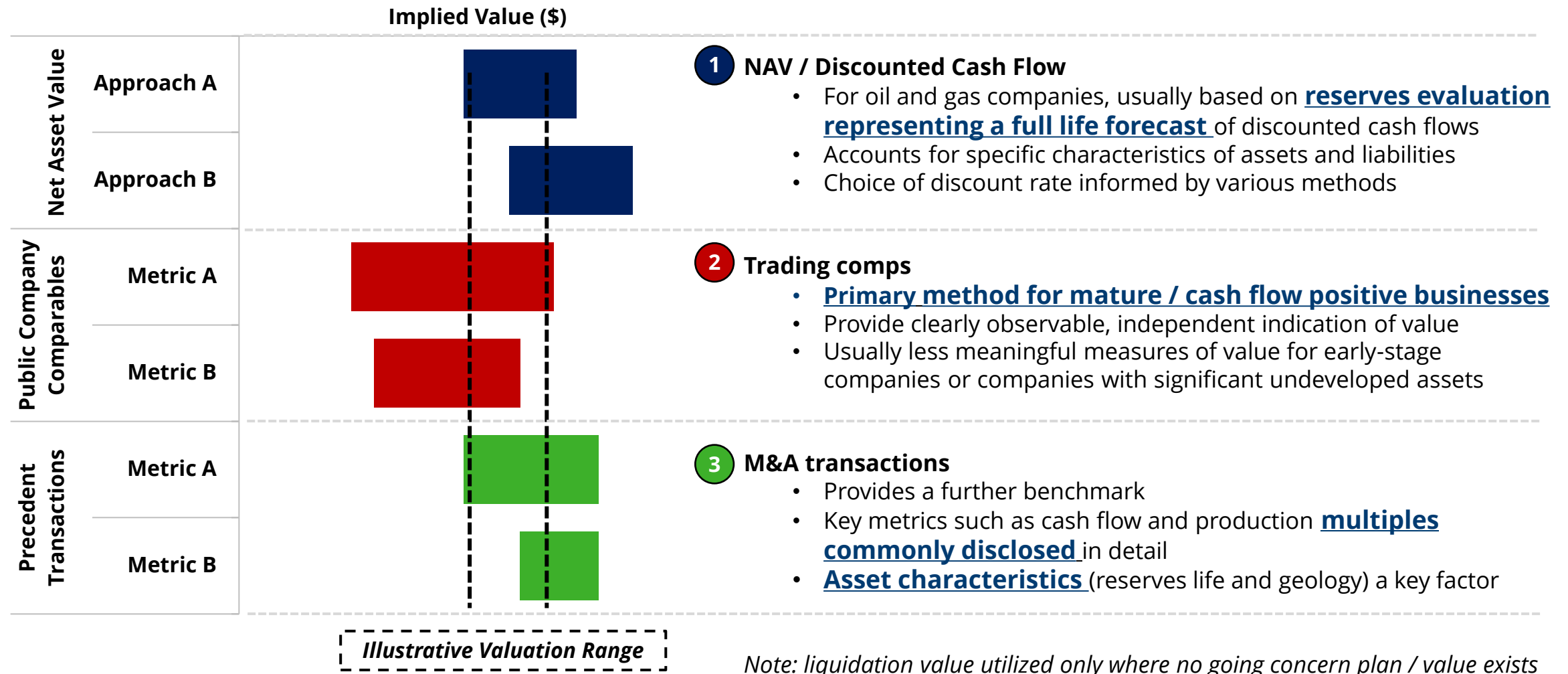
## FAIR VALUE

“the amount of consideration that would be agreed upon in an arm’s length transaction between knowledgeable, willing parties who are under no compulsion to act, as at the measurement date”

## TYPICAL VALUATION PROCESS

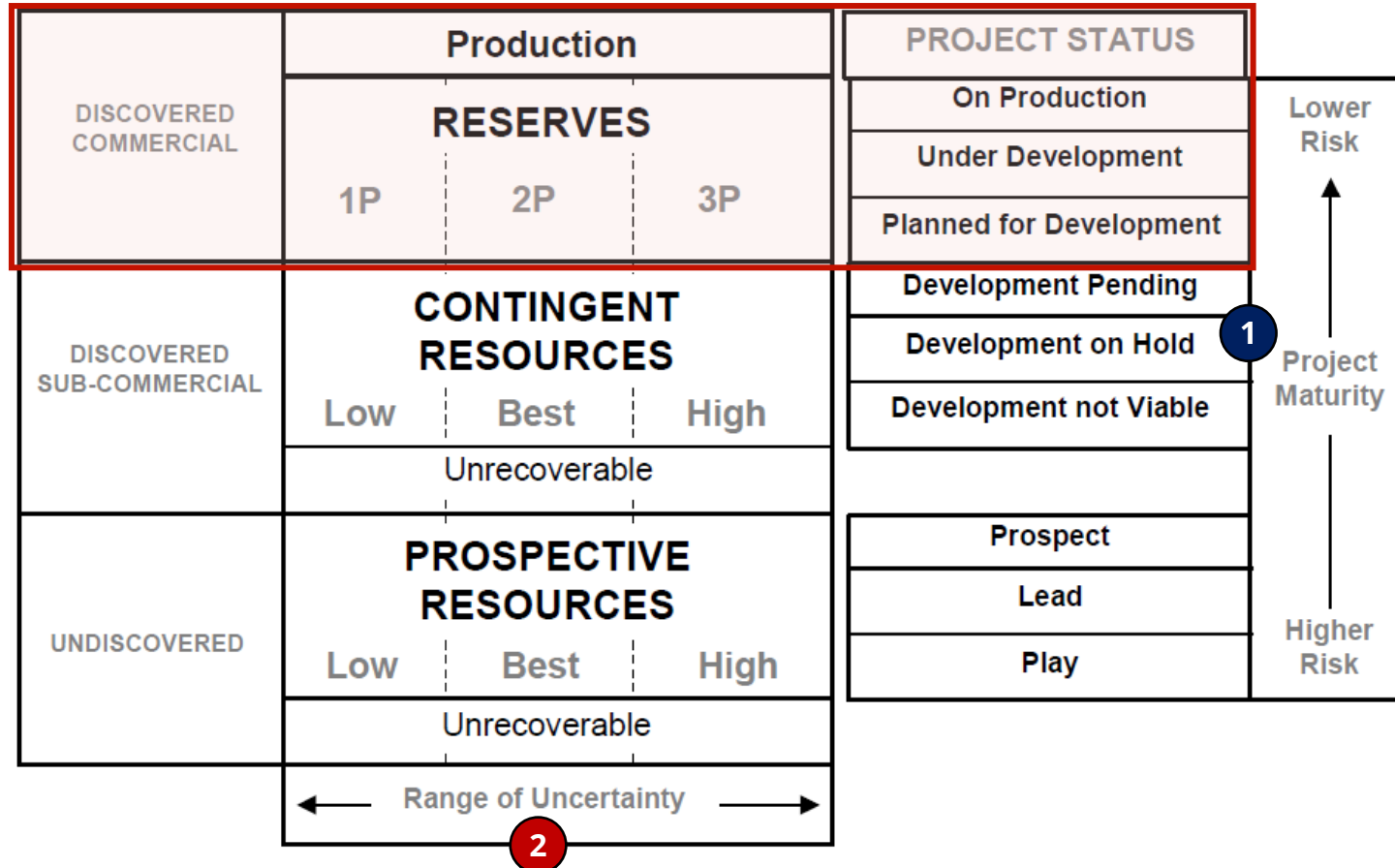


# OIL AND GAS EVALUATION | **APPROACH TO VALUE**





# OIL AND GAS RESERVES | DEFINITIONS



**“Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, from a given date forward”**

**Reserves are defined by project maturity and forecast certainty**

- 1 Project maturity** = developed (PDP) or undeveloped (PUD)
- 2 Forecast certainty** = proved (1P), probable (2P) or possible (3P), as defined by probability of achieving forecast production

# OIL AND GAS RESERVES | PUBLIC REPORTING

## CANADIAN INDEPENDENT RESERVES EVALUATORS

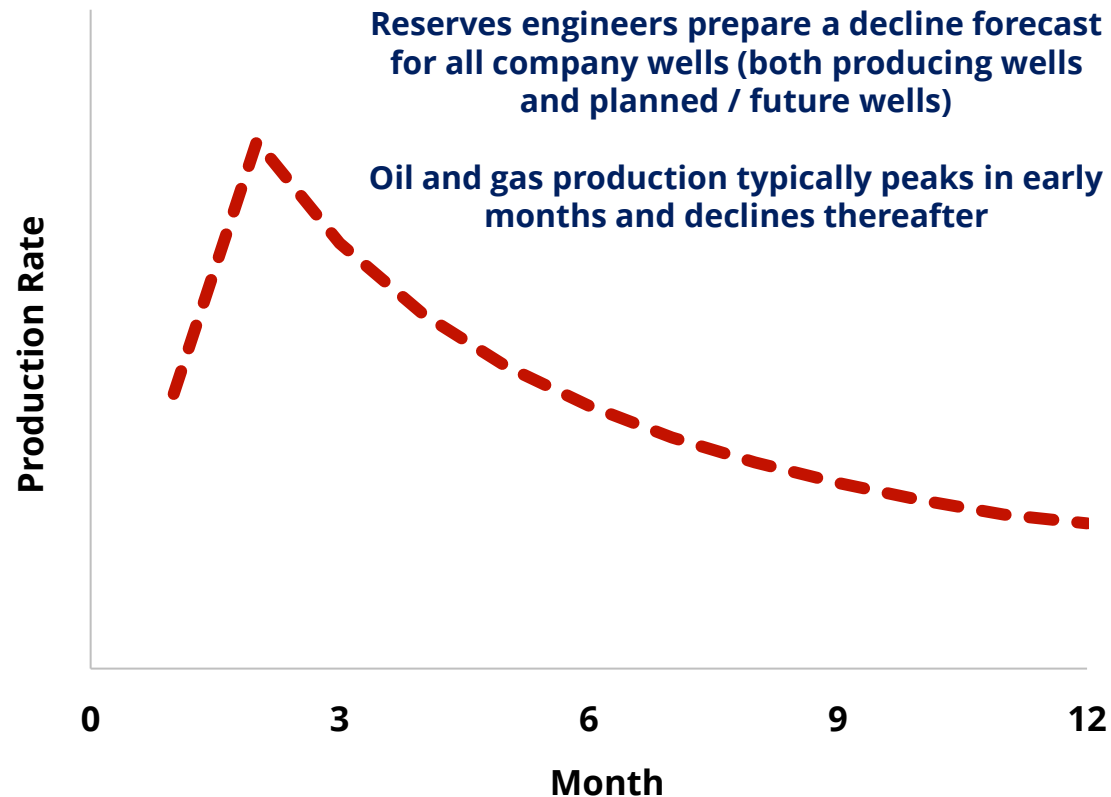


- Securities agencies such as the SEC and CSA define rules for publicly traded companies around reserves information disclosure
- Canadian publicly traded oil and gas companies must disclosure in accordance with CSA's **National Instrument (NI) 51-101**
- Independent qualified evaluators (i.e. external consultants) must be employed to evaluate or audit, annually, at least 75% of each company's properties based on proved plus probable future net revenue

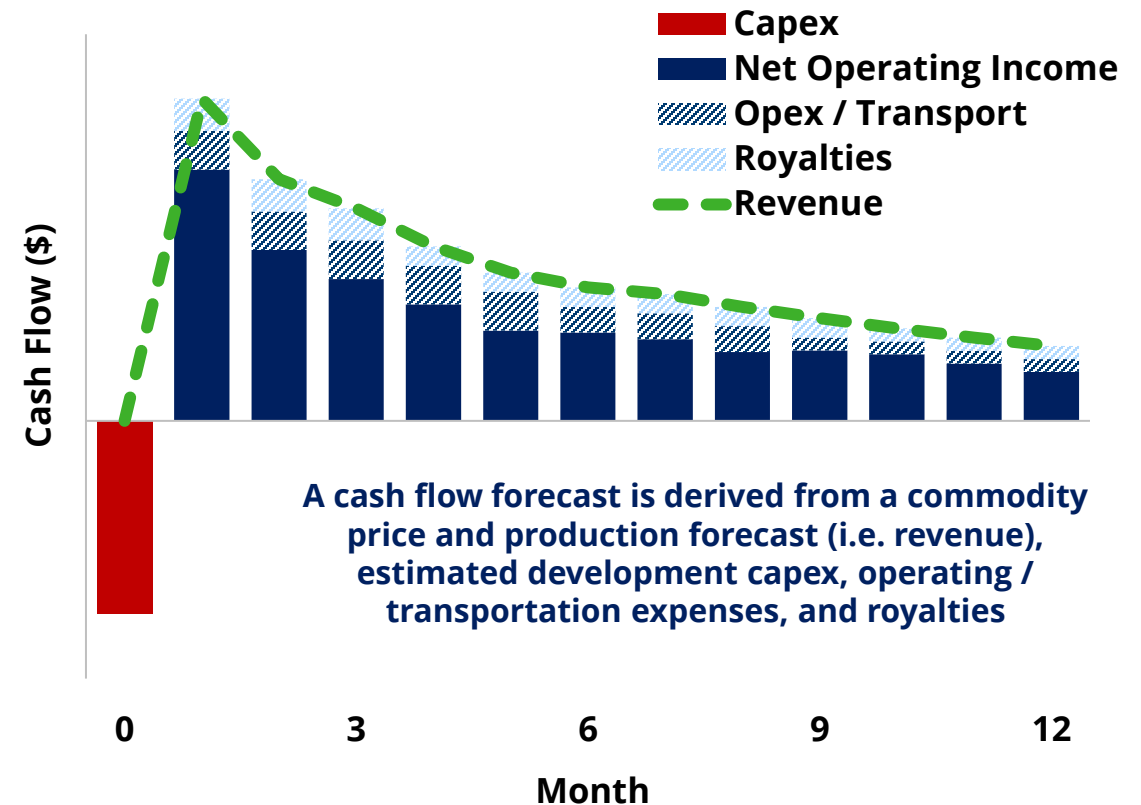
***Reserves represent the core asset value of an upstream oil and gas company***

# OIL AND GAS RESERVES | ENGINEERING FORECAST

## PRODUCTION "TYPE CURVE"



## ECONOMIC FORECASTING



*Fundamental engineering analysis drives excel valuation model*

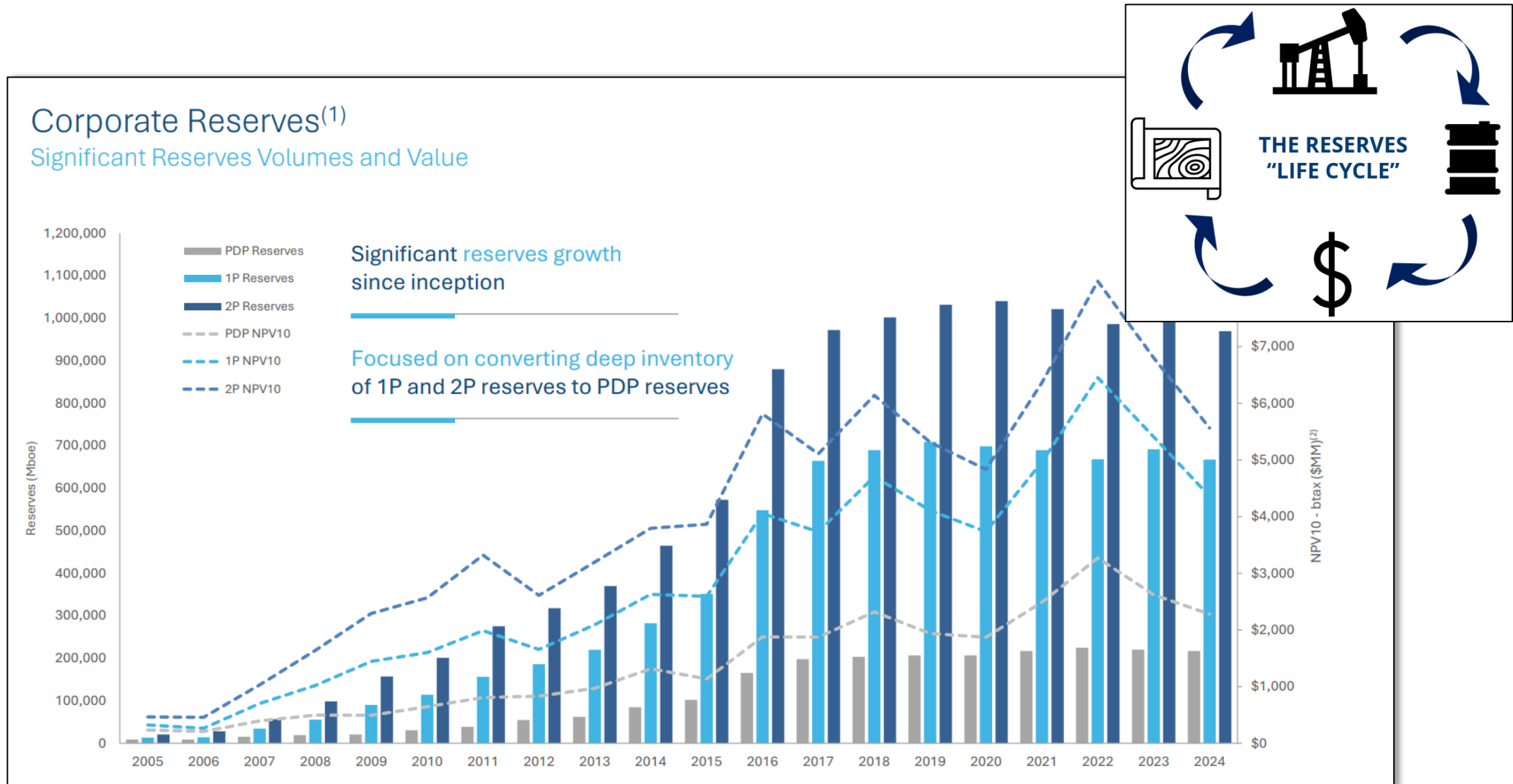
# OIL AND GAS RESERVES | PUBLIC DISCLOSURE

Reserves Category	Light Crude Oil and Medium Crude Oil		Conventional Natural Gas		Shale Gas		NGLs <sup>(1)</sup>		Total Oil Equivalent	
	Gross (Mbbbls)	Net (Mbbbls)	Gross (MMcf)	Net (MMcf)	Gross (MMcf)	Net (MMcf)	Gross (Mbbbls)	Net (Mbbbls)	Gross (Mboe)	Net (Mboe)
Proved										
Developed Producing	5,131	4,158	7,391	6,983	1,063,766	971,025	36,879	29,119	220,536	196,278
Developed Non-Producing	9	9	0	0	4,064	3,794	147	122	833	763
Undeveloped	9,320	7,564	2,860	2,598	2,425,192	2,162,833	56,522	44,277	470,517	412,746
Total Proved	14,460	11,731	10,251	9,581	3,493,022	3,137,653	93,547	73,517	691,886	609,787
Total Probable	10,088	7,688	5,666	5,273	1,438,587	1,248,201	51,213	38,810	302,011	255,410
Total Proved Plus Probable	24,549	19,419	15,917	14,854	4,931,609	4,385,854	144,760	112,327	993,897	865,197

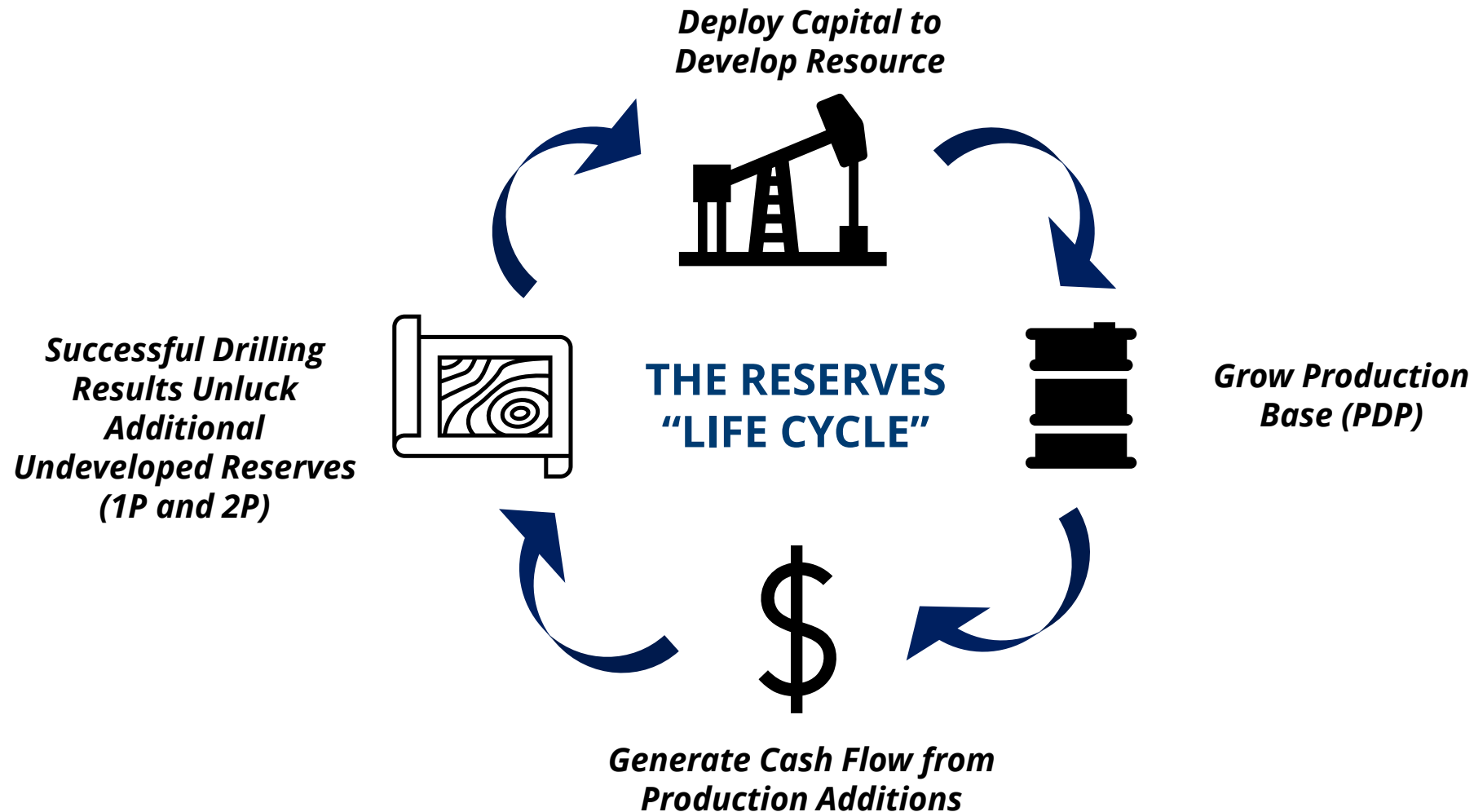
Reserves Category	Before Income Taxes Discounted At (%/year)					Unit Value Discounted at 10%/year (\$/boe) <sup>(1)</sup>
	0% (\$000s)	5% (\$000s)	10% (\$000s)	15% (\$000s)	20% (\$000s)	
Proved						
Developed Producing	4,481,835	3,353,987	2,620,064	2,140,711	1,810,682	13.35
Developed Non-Producing	17,265	12,118	9,029	7,027	5,650	11.83
Undeveloped	8,818,786	4,755,389	2,776,525	1,701,682	1,068,585	6.73
Total Proved	13,317,886	8,121,493	5,405,617	3,849,420	2,884,917	8.86
Total Probable	7,274,926	2,993,370	1,429,800	765,411	447,752	5.60
Total Proved Plus Probable	20,592,812	11,114,863	6,835,417	4,614,831	3,332,669	7.90



# OIL AND GAS RESERVES | PUBLIC DISCLOSURE

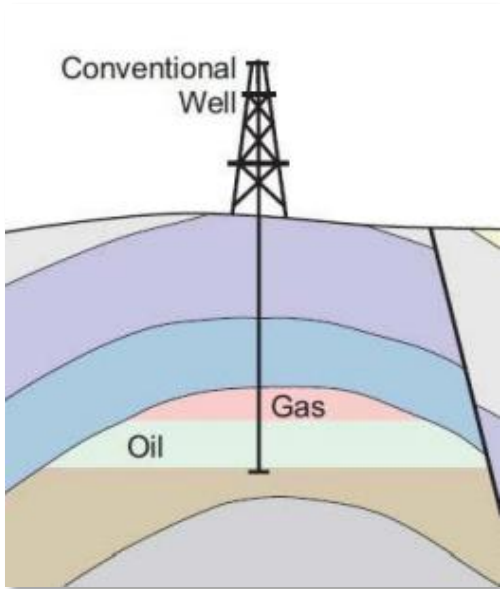


# OIL AND GAS RESERVES | GROWTH AND CONVERSION



# OIL AND GAS EVALUATION | ASSET CHARACTERISTICS

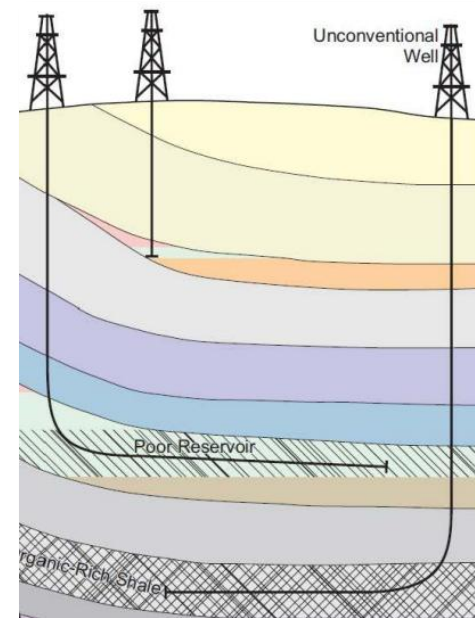
## CONVENTIONAL



- Porous reservoir that occur in discrete pools
- Does not require frac'ing to produce
- More developed to date and higher decommissioning
- Shorter cycle times / cheaper development, but lower recoveries
- **Generally low decline, free cash flow generating assets with less growth**

**Valuation generally accounts for only developed, producing assets**

## UNCONVENTIONAL



- Expansive deep, trapped reservoirs
- Require frac'ing to produce
- Discovered during shale revolution - less developed to date
- Longer cycle times / higher cost, but significantly higher recoveries
- **Generally long-life assets with strong growth potential**

**Valuation generally represents current production stream and some portion of future undeveloped resource**

# OIL AND GAS EVALUATION | ASSET CHARACTERISTICS

## CONVENTIONAL

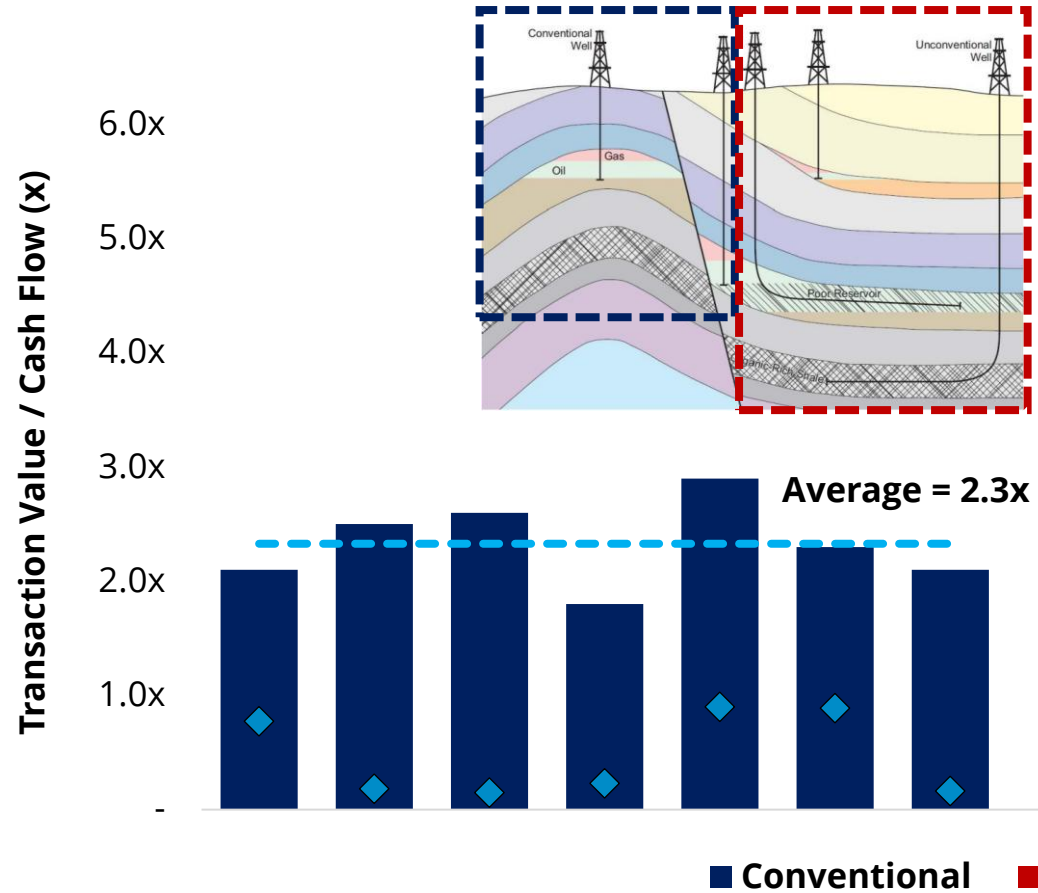


## UNCONVENTIONAL

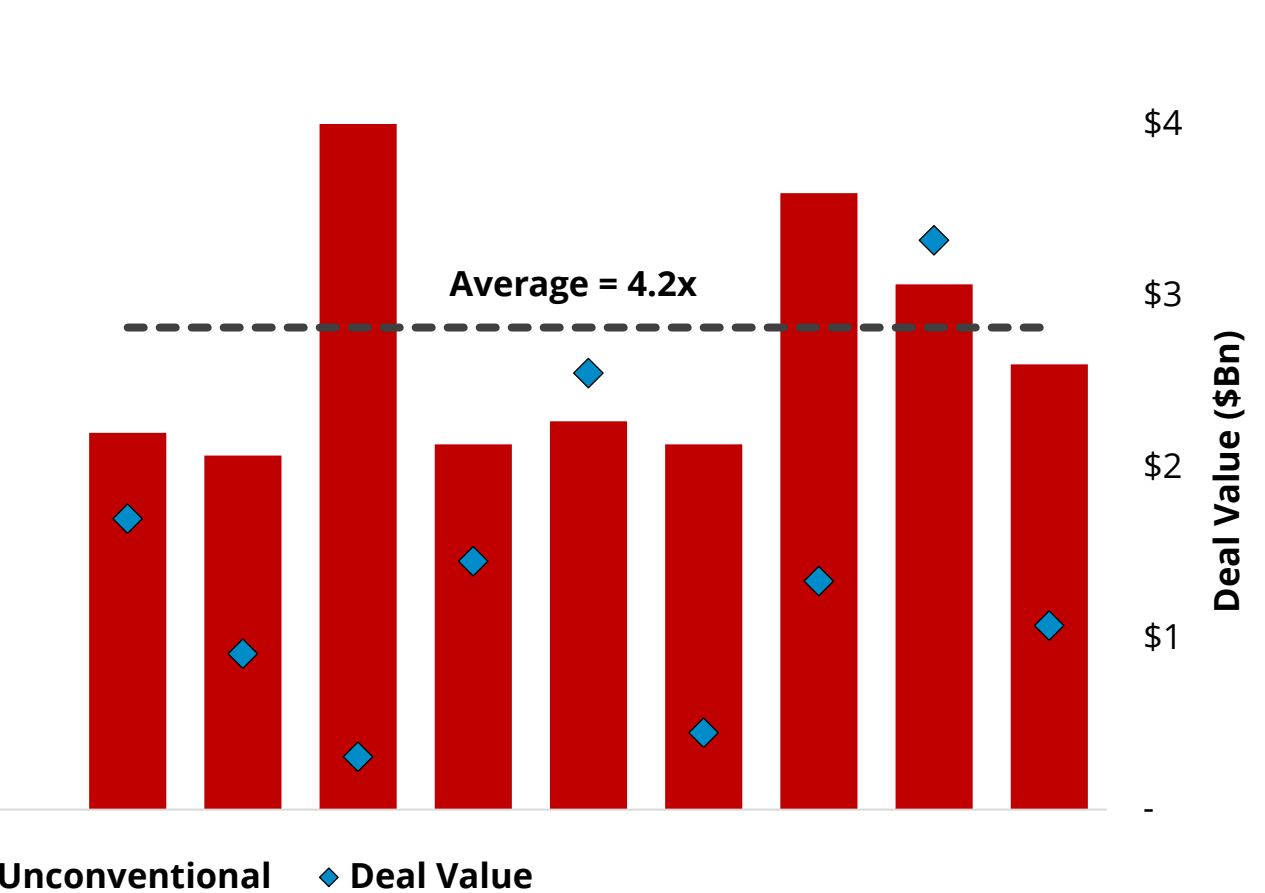


# OIL AND GAS EVALUATION | M&A TRANSACTION VALUATIONS (2023+)

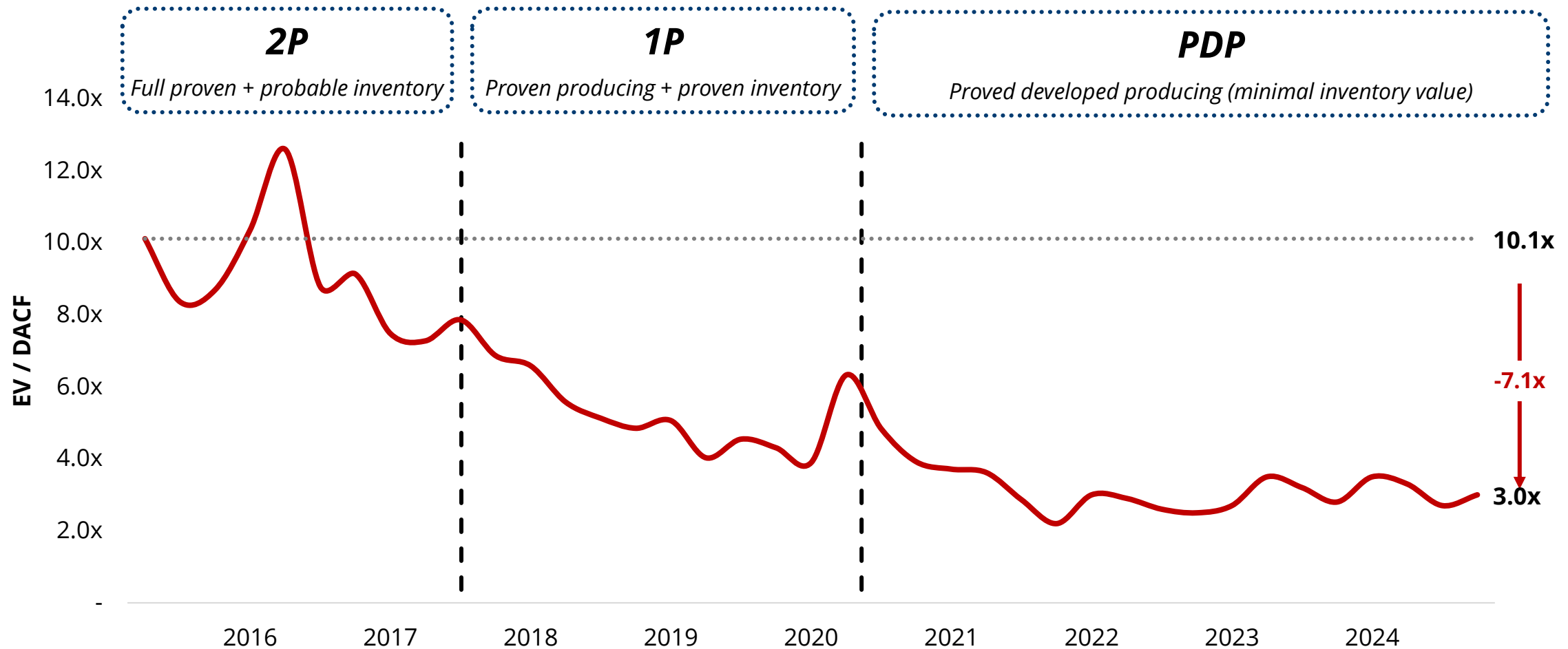
## Conventional (>\$100MM)



## Unconventional (>\$100MM)



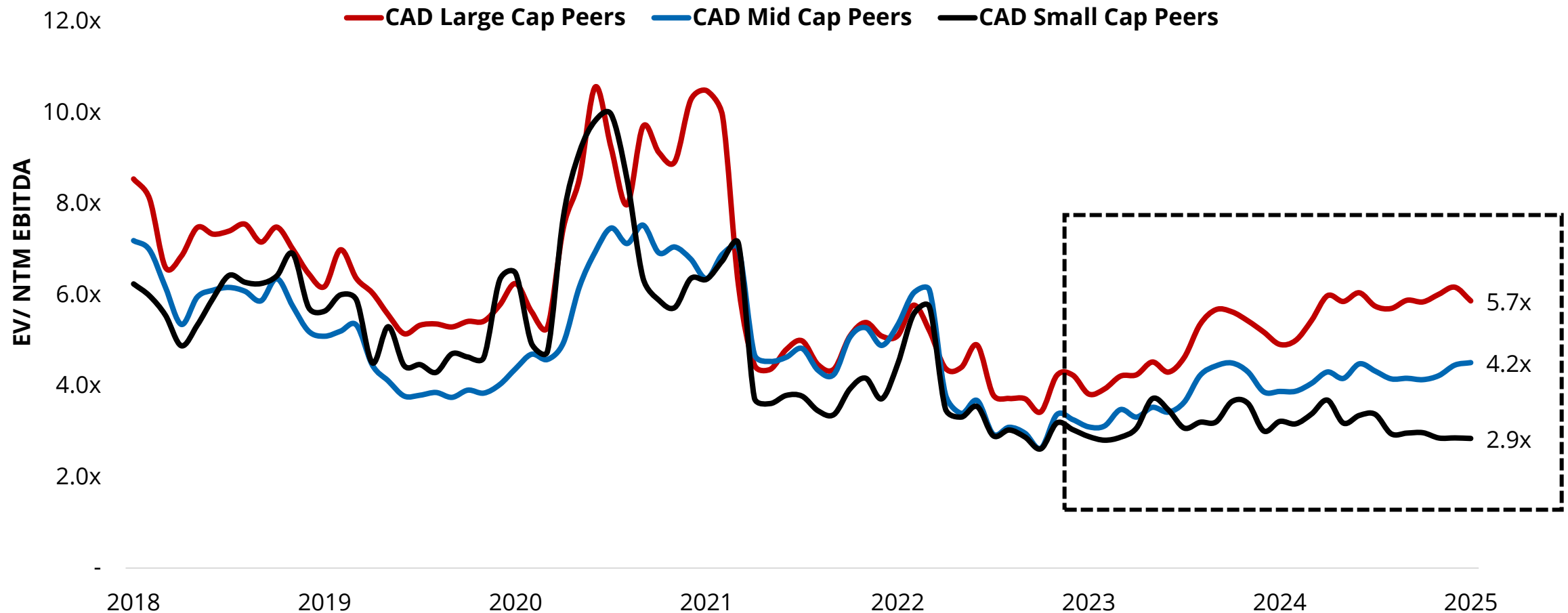
# OIL AND GAS EVALUATION | JUNIOR & INTERMEDIATE PEER MULTIPLES



**Significant multiple compression across Canadian intermediate & junior peers since 2015**



# OIL AND GAS EVALUATION | CANADIAN PUBLIC PEER MULTIPLES



***Small and mid cap valuation discount to larger peers has widened***

Source: Scotiabank; Factset as at March 26, 2025

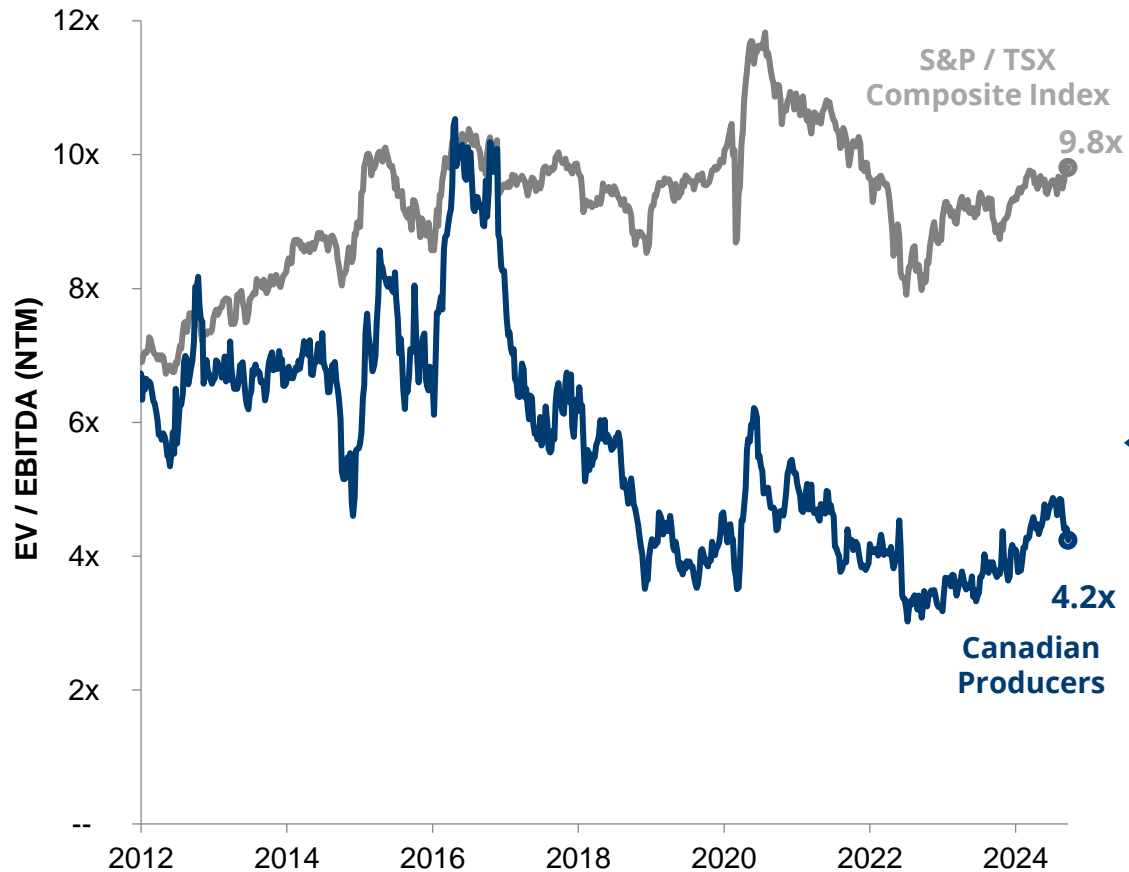
Note: Canadian Large Cap Peers represented are ARX, CNQ, CVE, IMO, SU, TOU; Canadian Mid Cap Peers represented are AAV, ATH, BIR, BTE, CJ, HWX, IPCO, KEL, MEG, NVA, OBE, PEY, POU, SCR, SOIL, TVE, VRN, WCP; Canadian Small Cap Peers represented are BNE, CEI, GXE, HAM, HME, IPO, JOY, KEC, LCX, LGN, PNE, RBY, ROK, SDE, SGY, YGR



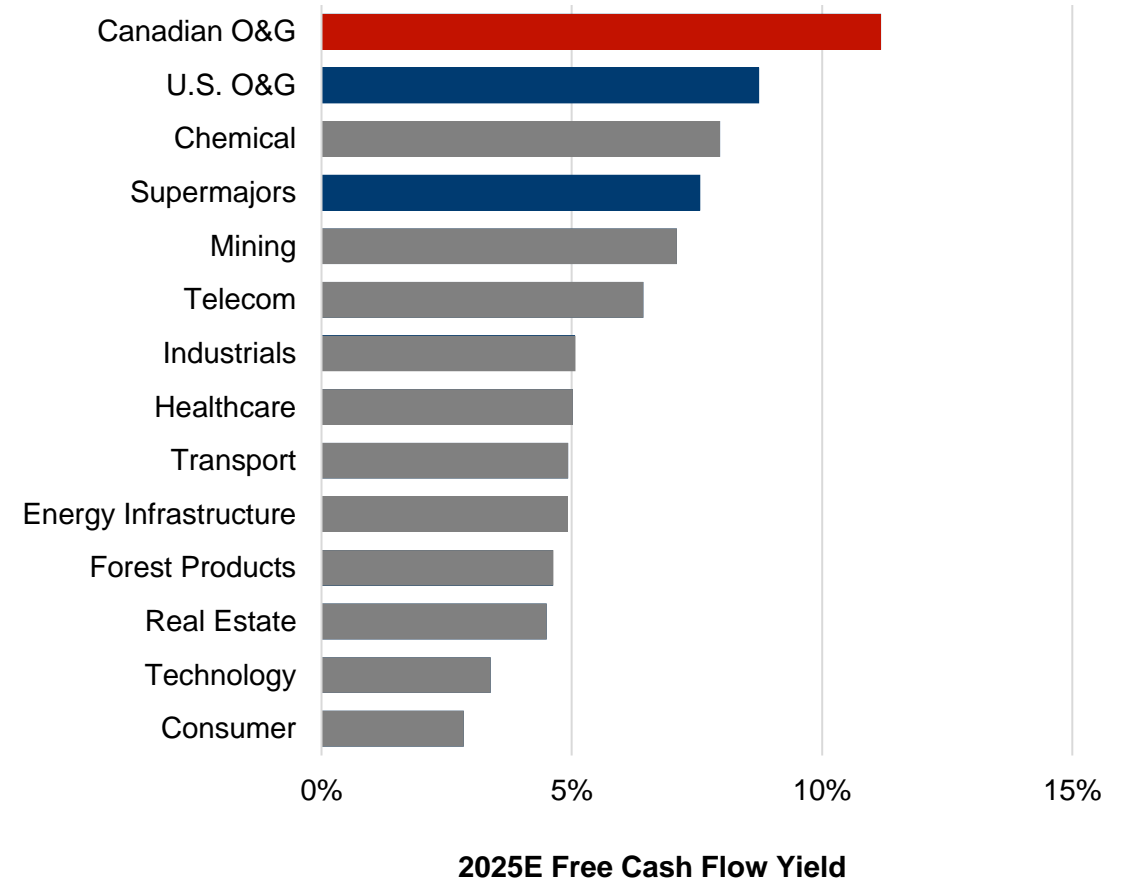
# CONCLUDING THOUGHTS

# THE CANADIAN OIL & GAS OPPORTUNITY

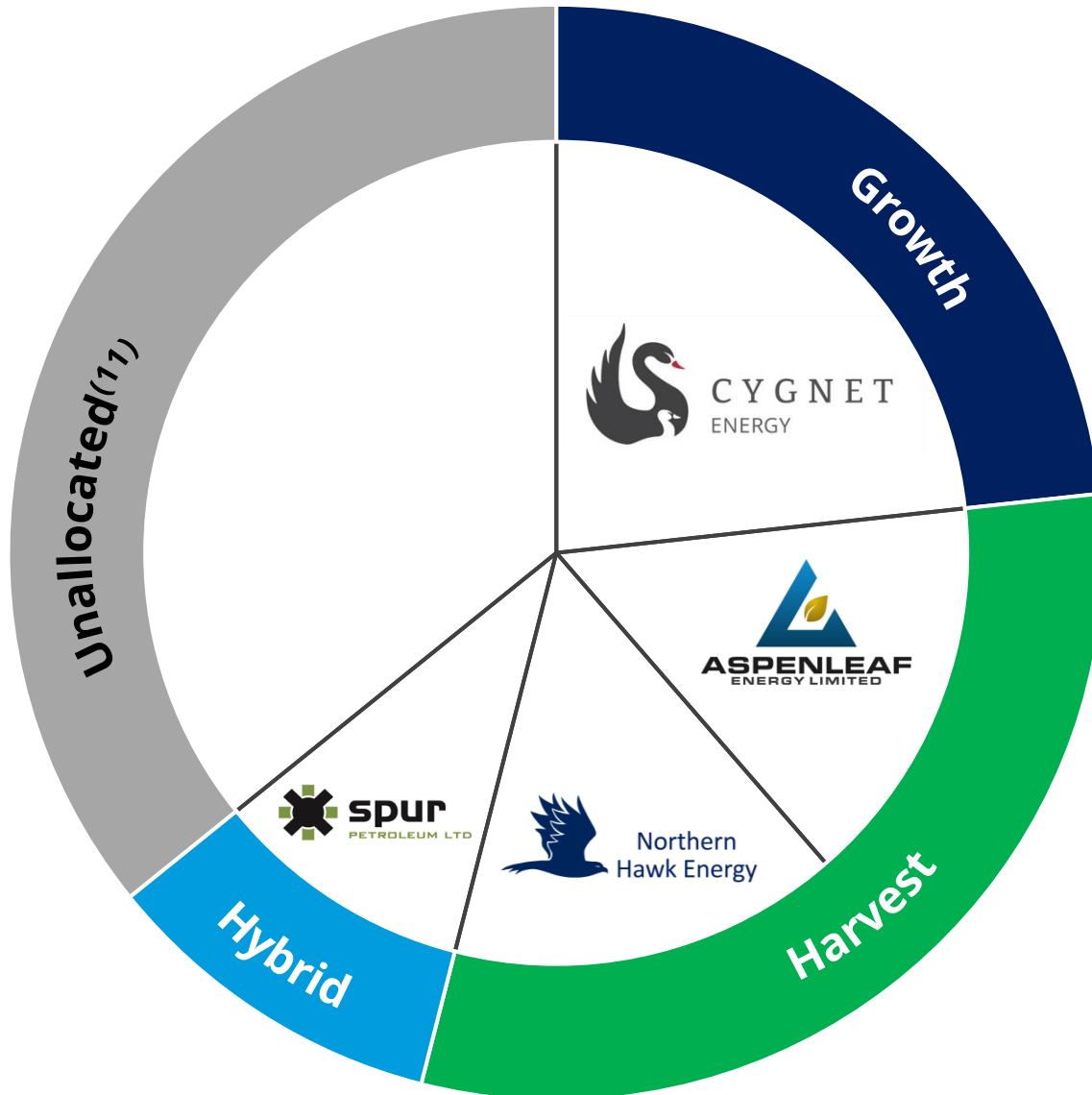
## Historically Low Valuations



## Superior Cash Flow Yields



# ARC FUND 11 | OIL AND GAS PORTFOLIO



- Forecasting multiple near-term catalysts:



- Initial cash distributions to the Fund projected in H2 2025



- Projecting strong production growth over next 3 years



- High free cash flow asset with robust distribution projections over next 5 years

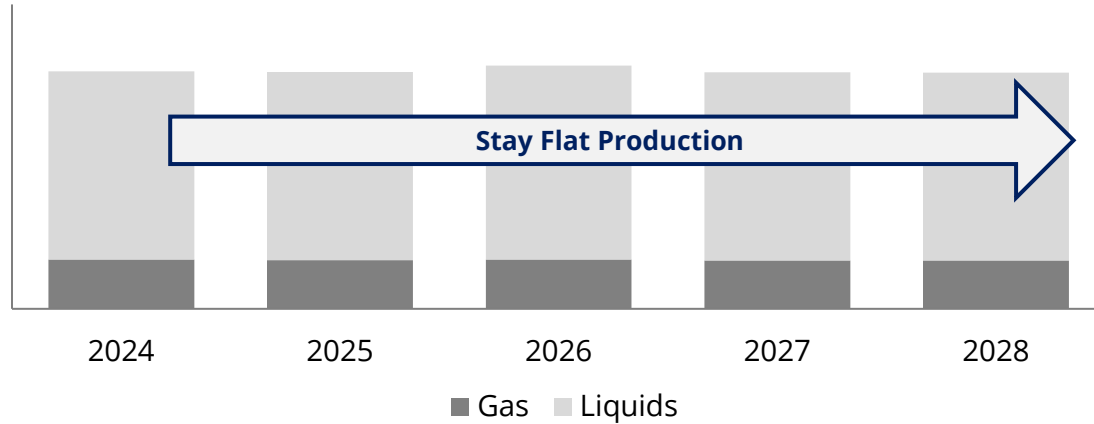


- Meaningful growth and dividends

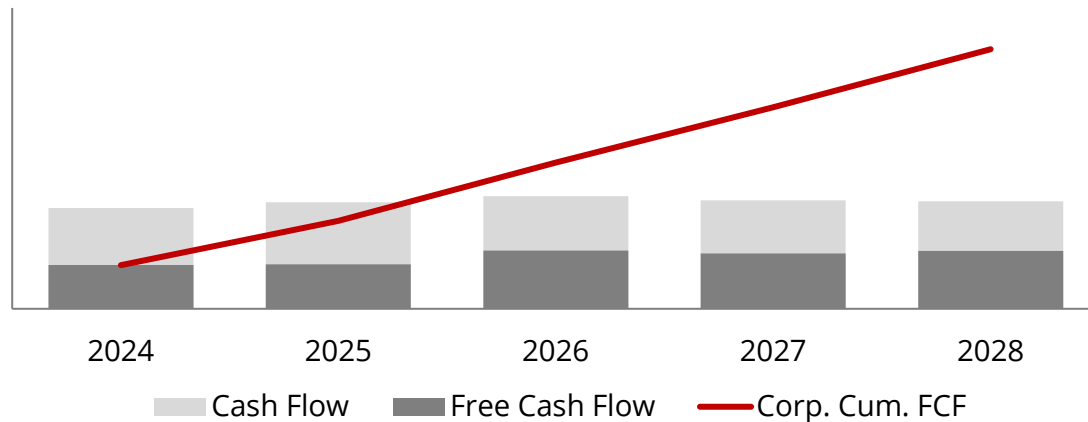
***Existing portfolio projected to generate a double digit annual free cash flow yield over the next 5 years***

# COMPANY 1 | HARVESTING FREE CASH FLOW

## Est. Production (BOE/D)



## Est. After Tax Cash Flow (\$MM)



## Investment Highlights

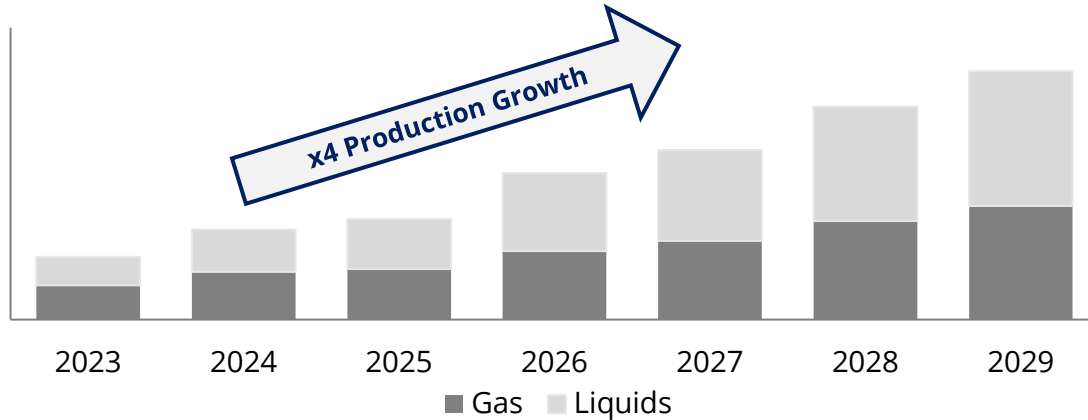
- De-risked business plan positioned to harvest cash flow
- Proven management team
- Attractive entry multiple of ~2.0x EV/DACF<sup>(13)</sup>

## Potential Return Profile | MOIC (X)

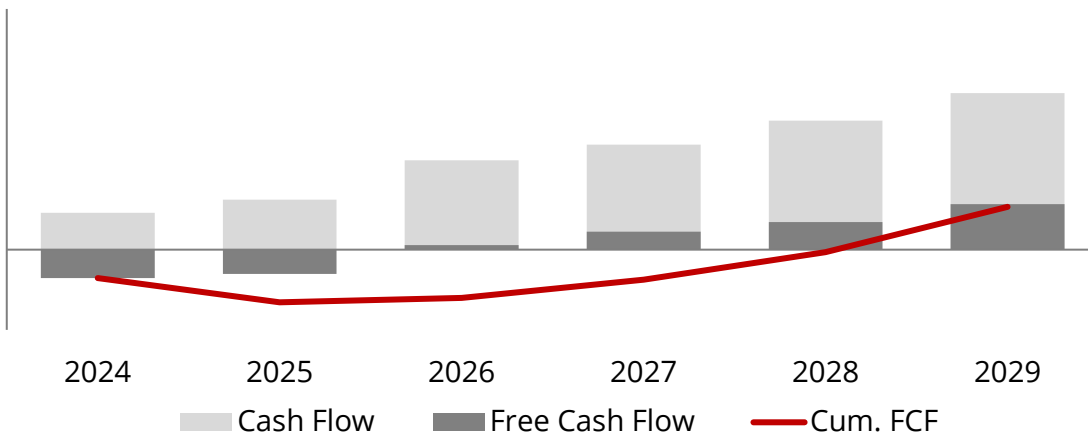
	\$65	\$70	\$75	\$80
1.5X	1.5X	1.7X	2.0X	2.2X
2.0X	1.8X	2.0X	2.3X	2.5X
2.5X	2.0X	2.3X	2.6X	2.8X
3.0X	2.3X	2.6X	2.8X	3.1X

# COMPANY 2 | DIFFERENTIATED GROWTH

## Est. Production (BOE/D)



## Est. After Tax Cash Flow (\$MM)



## Investment Highlights

- Purpose management team with demonstrated success at all points along development cycle
- Formed from low decline assets in coveted unconventional resource plays
- Strong growth potential to reach sustainable production plateau

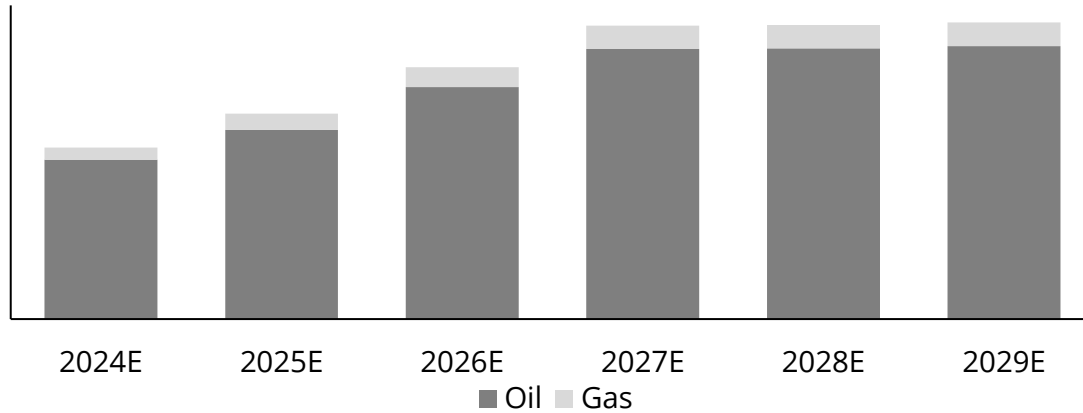
## Potential Return Profile | MOIC (X)

	\$65	\$70	\$75	\$80
3.5X	1.7X	1.9X	2.2X	2.5X
4.0X	1.9X	2.2X	2.4X	2.8X
4.5X	2.3X	2.4X	2.6X	3.1X
5.0X	2.4X	2.6X	2.9X	3.3X
5.5X	2.6X	2.8X	3.1X	3.6X

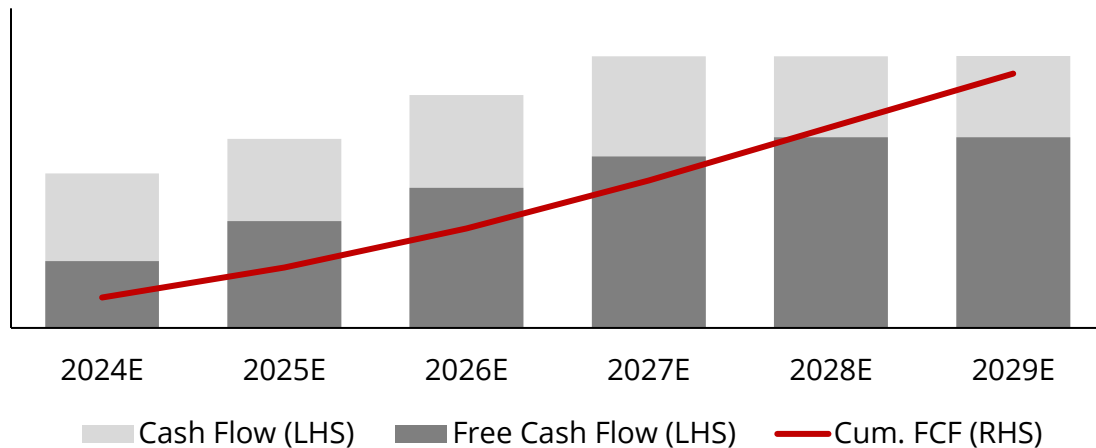


# COMPANY 3 | ASSETS WITH GROWTH AND YIELD

## Est. Production (BOE/D)



## Est. After Tax Cash Flow (\$MM)



## Investment Highlights

- Exposure to a preeminent team in a highly economic oil play
- Half cycle break-even at <\$US 35 WTI with base dividend and capex protected at \$US 50 WTI
- Derisked inventory base supports meaningful growth

## Potential Return Profile | MOIC (X)

	\$65	\$70	\$75	\$80
4.0X	1.8X	2.1X	2.3X	2.6X
4.5X	2.0X	2.2X	2.5X	2.8X
5.0X	2.1X	2.4X	2.7X	2.9X
5.5X	2.2X	2.5X	2.8X	3.1X

# DEFINITIONS

AERI – ARC Energy Research Institute

ARO – Asset Retirement Obligation

BOE – Barrel of oil equivalent

C&I – Commercial and industrial

CCS – Carbon Capture and Storage

CCUS – Carbon Capture Utilization and Storage

E&P – Exploration and Production

ET – Energy Transition

FCF – Free cash flow

Full Cycle – Full cycle incorporates land/entry costs and infrastructure costs in an economic evaluation, aligning more closely with the concept of the return on capital for the full investment

Half Cycle – Half cycle considers only the economics of the cost to drill and produce a well. It effectively aligns with the concept of marginal cost, as it treats land or other entry costs, and in some cases infrastructure, as sunk costs. It facilitates comparisons of different plays and company performance within plays on a forward looking basis where the timing, method and cost of entry may have been very different

GORR – Gross overriding royalty

IEA Future Scenarios:

- STEPS (Stated Policies Scenario): Shows the trajectory implied by today's policy settings.
- APS (Announced Pledges Scenario): Assumes that all aspirational targets announced by governments are met on time and in full, including their long-term net zero and energy access goals.
- NZE (Net Zero Emissions by 2050 Scenario): Maps out a way to achieve a 1.5°C stabilization in the rise in global average temperatures, alongside universal access to modern energy by 2030.

IRR – Internal rate of return

Mcf – Thousand cubic feet (quantity of natural gas)

MID – Midstream

MOIC – Multiple on Invested Capital

NMF – Not meaningful

NTM – Next twelve months

O&M – Operations and Maintenance

OFS – Oilfield service

PCP – progressing cavity pump

Type Curve – A representative production profile of a well for a specific play and/or area, typically arrived at through an average of comparable well results. A type curve production and decline profile facilitates forecasting, reserve estimation, and capital budgeting and other economic analysis

WCS – Western Canadian Select is a widely used pricing benchmark for medium to heavy (210 API) crude streams produced in western Canada and priced at the Hardisty terminal in south eastern Alberta

WCSB – Western Canadian Sedimentary Basin is a vast sedimentary basin underlying 1,400,000 square kilometers (540,000 square miles) of western Canada, including southwestern Manitoba, southern Saskatchewan, Alberta, northeastern British Columbia and the southwest corner of the Northwest Territories

Well IRR – The internal rate of return of the cash flow profile of drilling and producing a single well, typically using a type curve profile



## CONTACT US

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