

# Climate Change and the Oil Sector

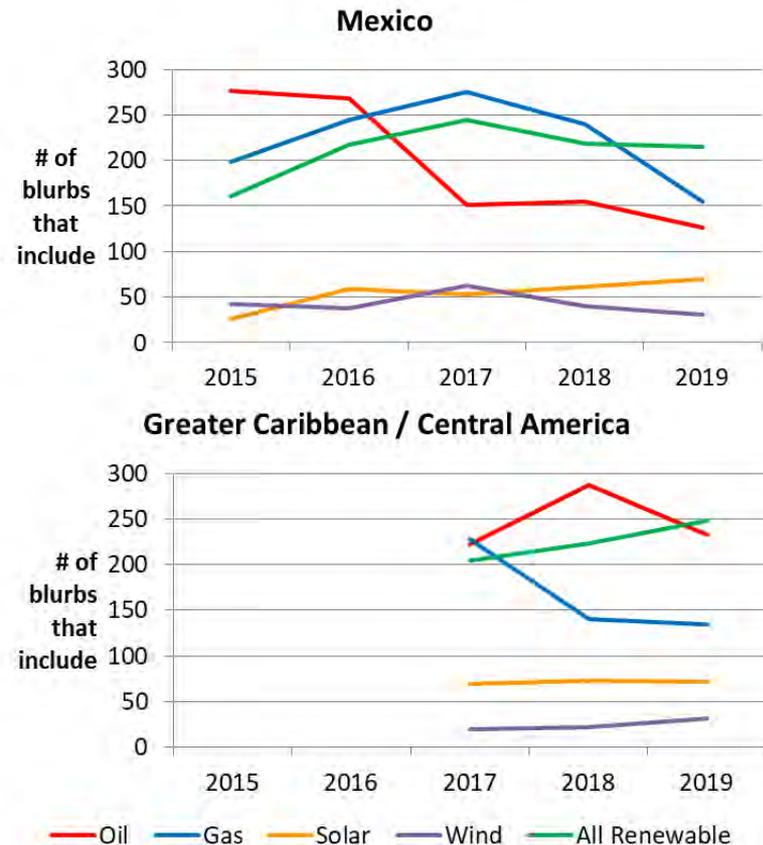
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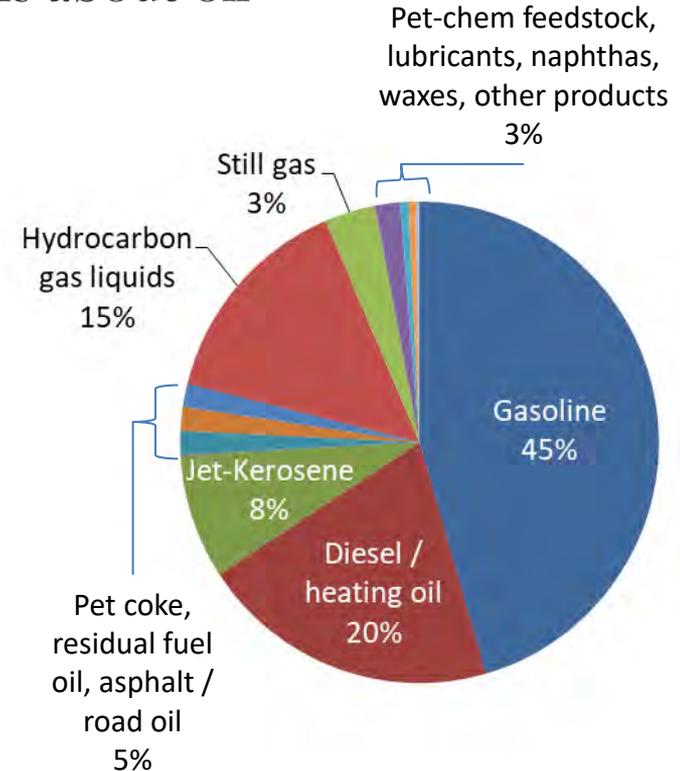
# Climate change concerns and the energy transition have reached a tipping point

- Climate change concerns are moving from an HSE / ESG issue to a CFO issue
  - Aspects of a generational shift like smoking
- Key technology cost trends support power sector decarbonization, electrified transport
  - Solar PV and batteries in particular
- Limited international coordination is partly offset by surging action at the city, state, and corporate levels.



## Difficult truths about oil

- Transportation is the main use, but petroleum is in everything.
  - 20% of US oil is used to make things, imported plastics push to the total much higher
- Oil demand will persist even with net zero carbon
  - Size and shape of future demand is up for debate
- Oil wells naturally decline, so new development and investment is need to maintain supply.
  - Oil companies will still be needed
- Oil supply options cover a wide range of capital cost and development requirements.
  - Some will be challenged by growing uncertainty



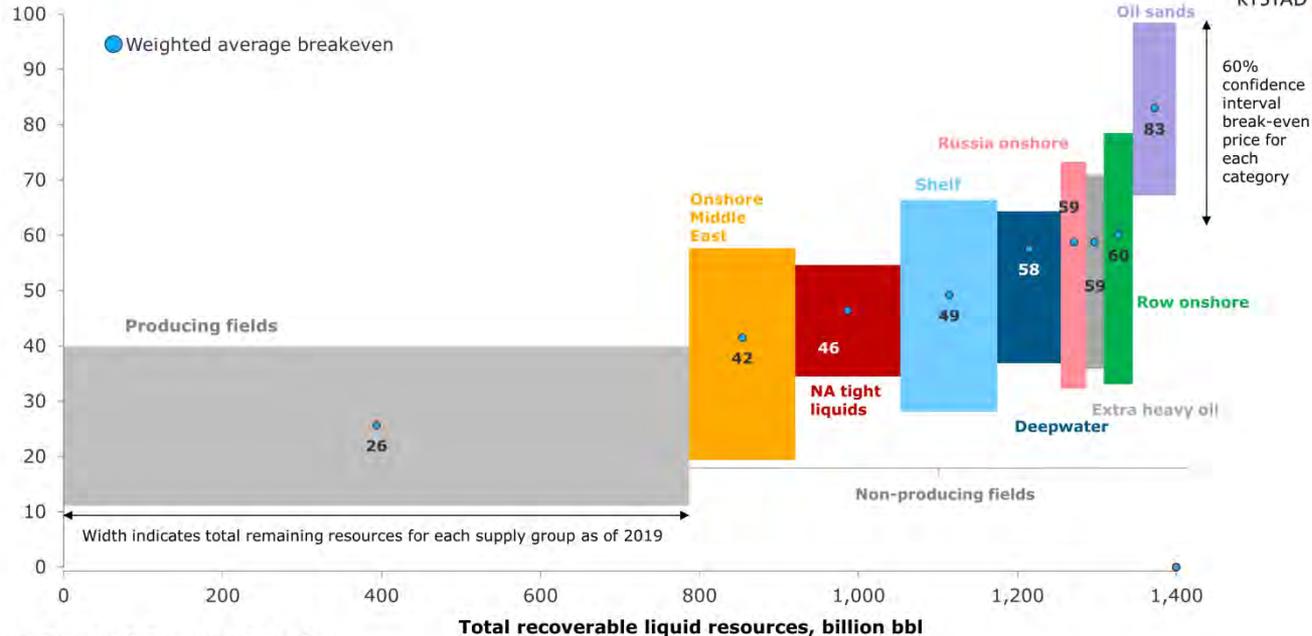
## Oil development takes time and money

### Global liquid supply curve

Real Brent Break-even price, USD/bbl



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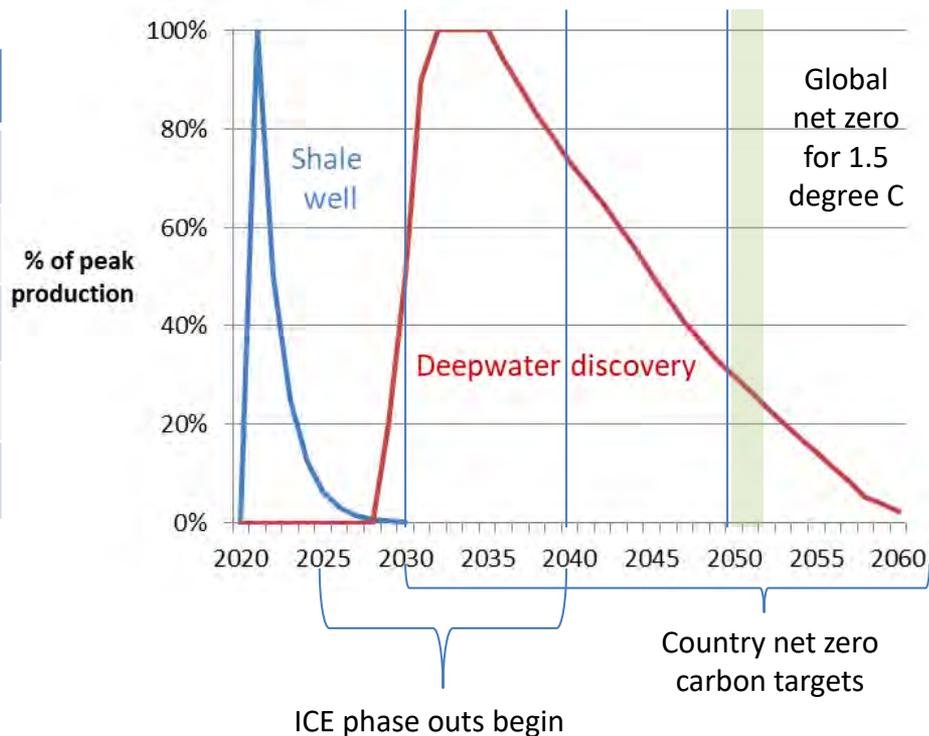


Source: Rystad Energy UCube



# Two extremes: comparing a shale oil well and a deepwater discovery

	Shale well	Deepwater
Development	Fast	Slow
Depletion	Fast	Slow
Scale	Small	Very large
Capital	Low	High
Price sensitivity	High	Low



## Implications for future oil development

- Oil markets are entering a new era of extreme uncertainty in demand, price, regulation, and consumer sentiment.
- Complex, long-term and high capital cost developments that start today will begin producing in the midst of this structural market shift.
- Investor pressure may already be shifting capital allocations and increasing internal carbon prices for final investment decisions.
- Countries like Brazil, Mexico, and Guyana with proven deepwater developments will see continued investment in known resources with access to infrastructure.
- Countries or regions with offshore potential but no infrastructure yet will have an increasingly difficult time attracting investment.
- Tight oil plays may see increasingly volatile capital flows as investors respond to price swings.

# About Energy Narrative

Energy Narrative provides information services and strategic market analysis across the energy value chain.

## The Weekly Brief

The Weekly Brief:  
Greater Caribbean

The Weekly  
Brief: Mexico

The Weekly Brief:

**Andean**

The Weekly Brief:

**Brazil**

The Weekly Brief:  
**Southern Cone**

## Analysis & Insights

- ▲ **Assess** the future competitive landscape
- ▲ **Challenge** assumptions and biases
- ▲ **Educate** Board and C-level management
- ▲ **Support** strategic planning processes
- ▲ **Screen** global market opportunities
- ▲ **Develop** market entry strategies