Canadian Natural Gas in the U.S. – Myths, Realities, Opportunities

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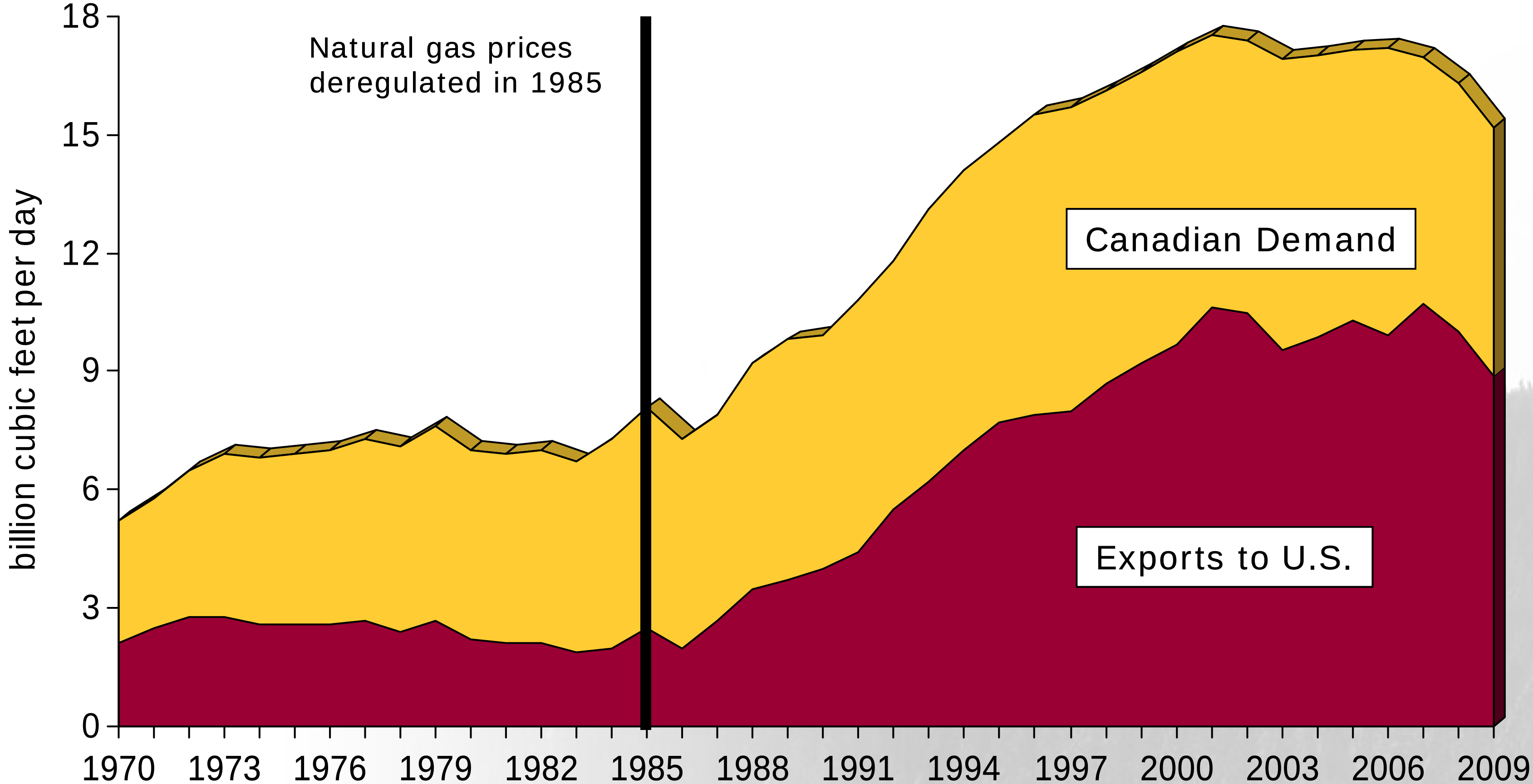
Canada’s Energy Supply to U.S.

CAPP

- **Canada is the largest supplier of energy to the United States**
- **Canada is the world’s 3rd largest natural gas producer**
- **Canada is the world’s 7th largest crude oil producer**
- **Canada is the 5th largest energy producer in the world**
- **Canadian energy production almost doubled since 1980**
    - Oil and gas accounted for 90% of the increase
    - Natural gas accounted for half of the increase

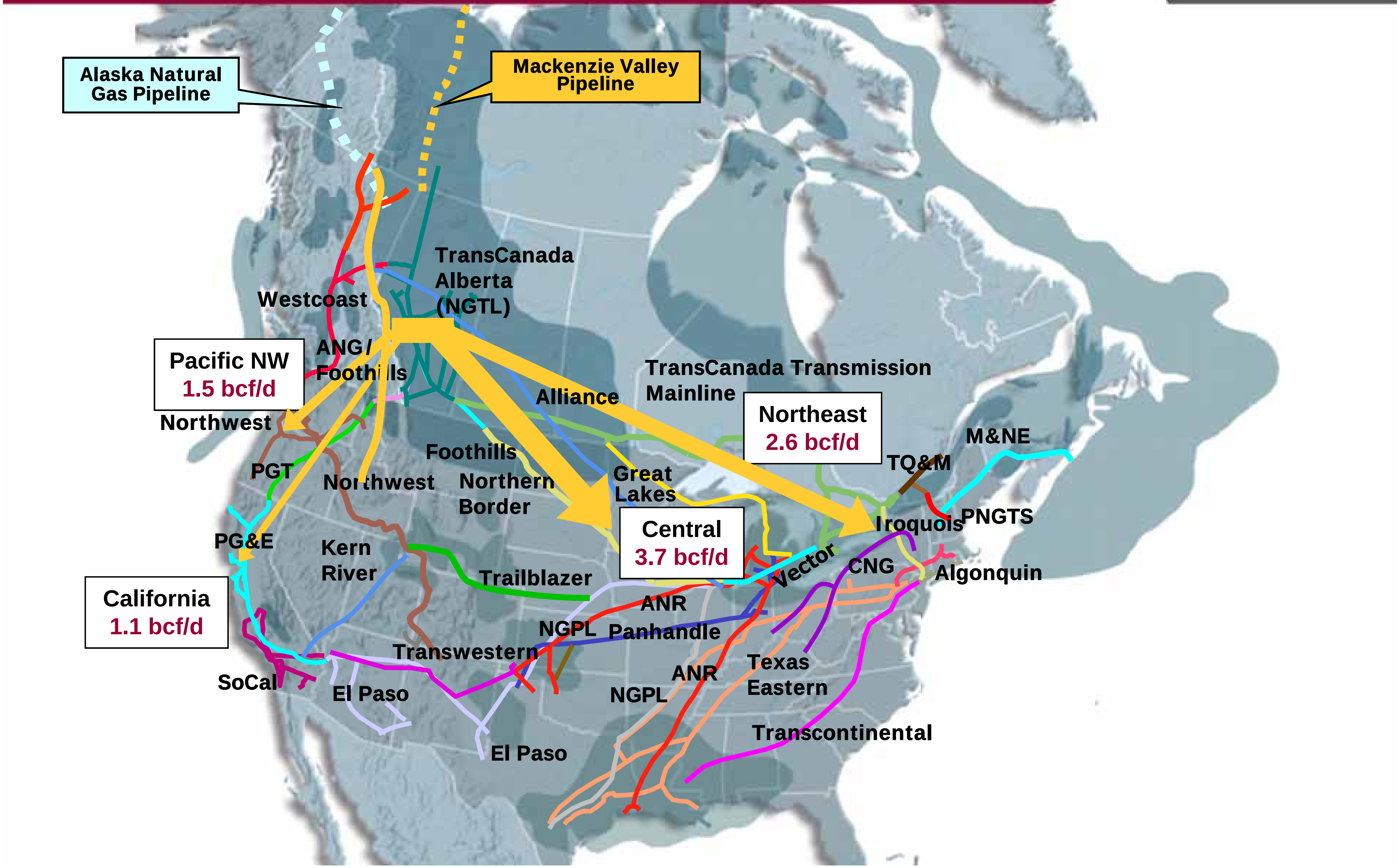
2009	Canadian Natural Gas	Canadian Petroleum
Ranking of importers to U.S.	#1	#1
Share of U.S. consumption	14%	13%
Share of U.S. imports	87%	20%

Canadian Natural Gas - Canadian Demand and Exports to U.S.



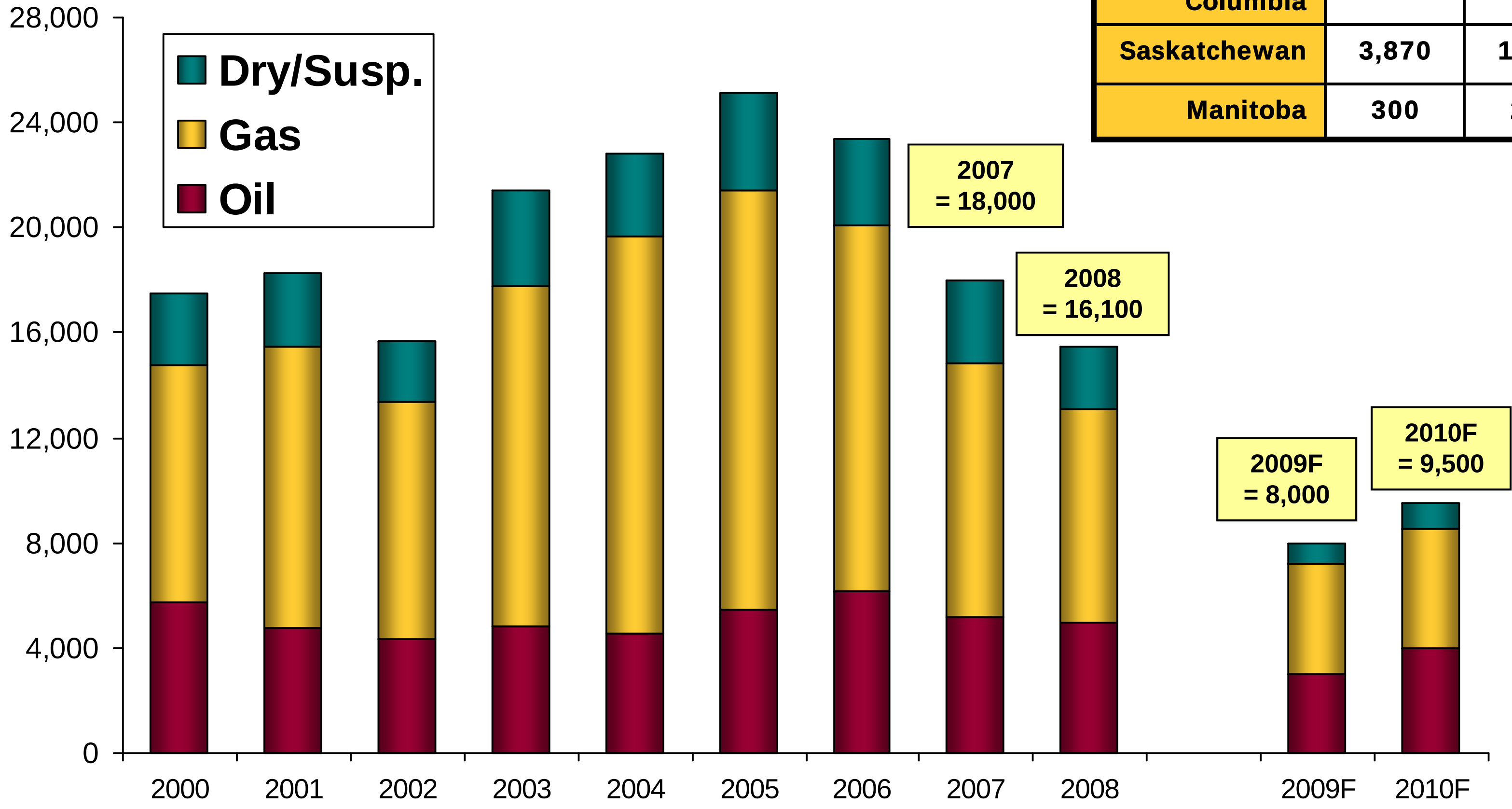
Source: CAPP Statistical Handbook

N.A. Natural Gas Pipelines & 2009 Cdn. Exports to U.S. (bcf/d)



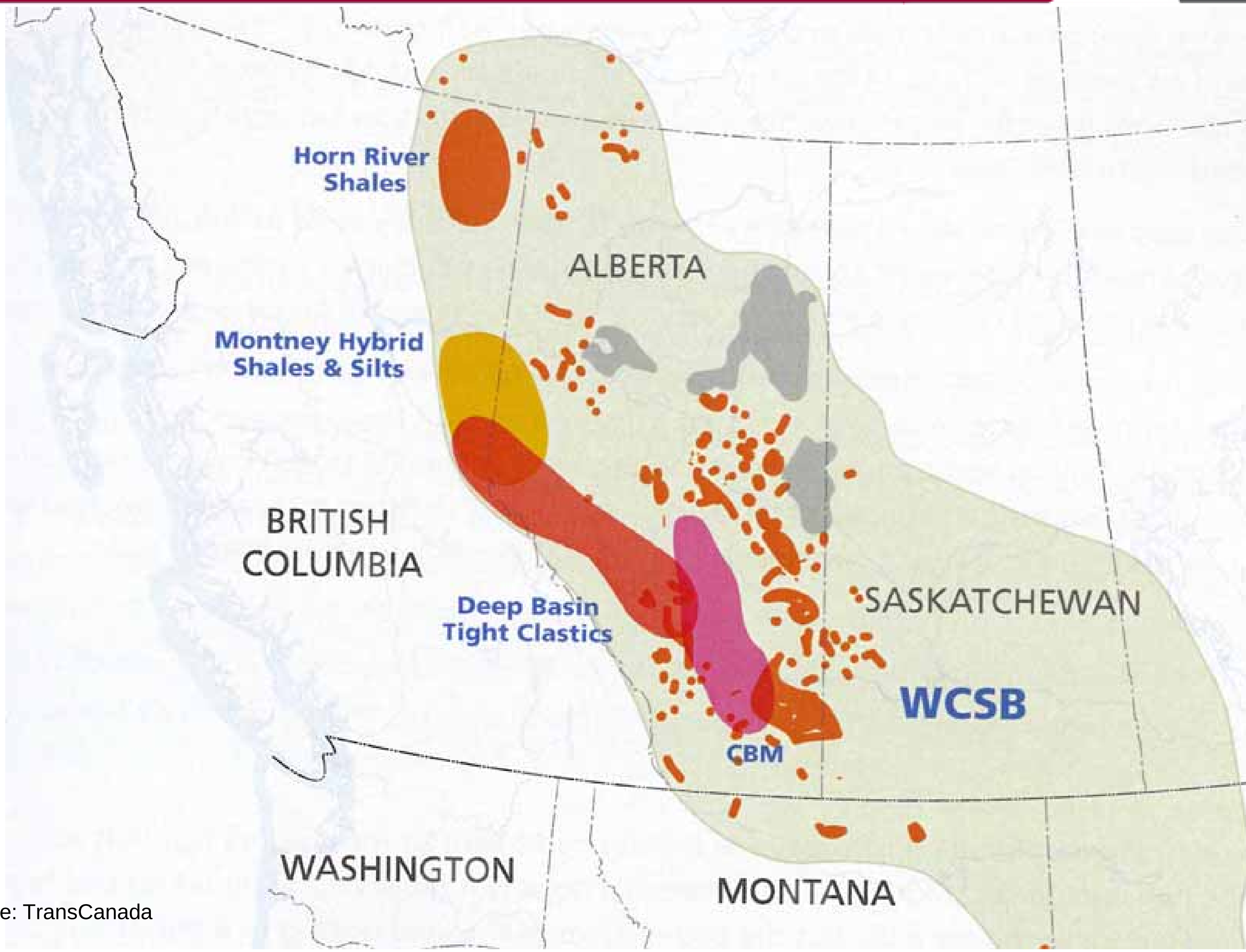
Total Wells Drilled in Western Canada

	2008	2009F	2010F
Alberta	11,150	5,570	6,600
British Columbia	800	625	750
Saskatchewan	3,870	1,580	1,900
Manitoba	300	225	250



Source – CAPP. Based on Rig Release

Western Canada – Resource Plays



Source: TransCanada

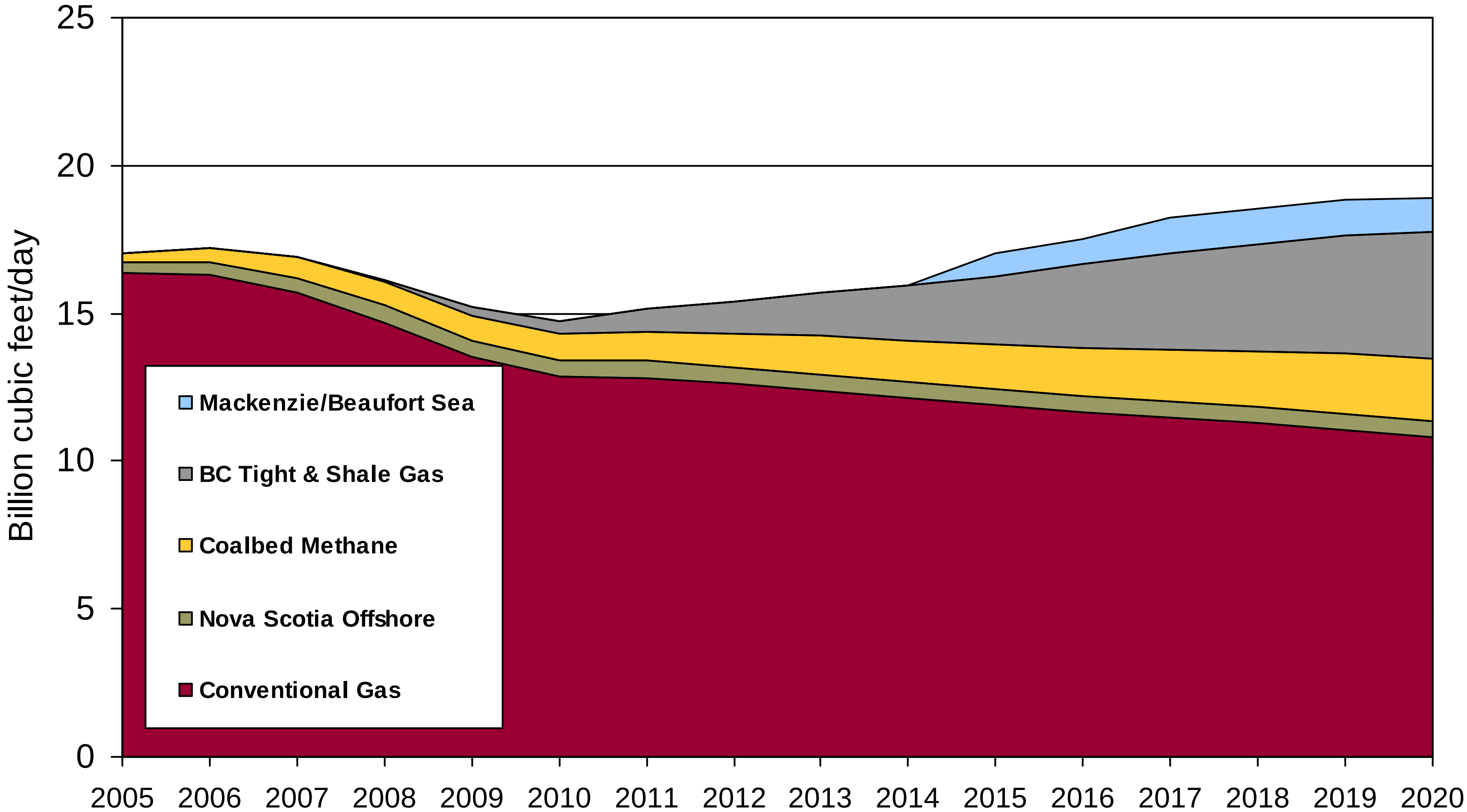
U.S. & Canadian Shales – Key Characteristics

	Barnett	Haynesville	Marcellus	Horn River	Montney
Depth (ft.)	6,500 – 9,000	10,500 – 13,500	3,000 – 8,500	6,500 – 13,000	5,000 – 10,000
Thickness of Shale (ft.)	100 – 500	200 – 300	50 – 250	300 – 600	300 – 500
Total Organic Content (%)	3.0 – 7.0	3.0 – 5.0	3.0 – 12.0	3.0 – 10.0	2.5 – 6.0
Original Gas in Place (Bcf / Section)	50 – 200	150 – 250	50 – 150	130 – 320	60 – 150
Recovery Factor (%)	20 – 40	20 – 40	20 – 40	20 – 40	20 – 40
Est. Ultimate Recovery (Bcf / Well)	1.0 – 4.0	4.5 – 8.5	2.2 – 4.1	3.0 – 9.0	2.0 – 6.0

By any measure involving purely geological reservoir parameters, the Horn River and the Montney resource plays compare very favourably to their U.S. counterparts.

Source: TransCanada

Cdn. Natural Gas Production Outlook



Sources: CAPP

Canadian Natural Gas – The Myths, Realities, Opportunities

CAPP

- **Myths:**
  - Canadian supply available for export will continue to decline
  - Natural gas is a “bridge” fuel
- **Realities:**
  - Significant changes underway in N.A. supply / demand dynamic
  - Abundant Cdn. resource, robust supply outlook, technology momentum
  - Market skepticism – supply potential, competitiveness, price volatility
  - Must address stakeholder environmental concerns
  - Natural gas not adequately on the public policy radar screen
- **Opportunities:**
  - Growth in production
  - Utilize established infrastructure
  - Foundational element of sustainable energy future….broaden use

“3E” Policy and Regulatory Context – What’s Required?

- Access to the resource for responsible development
- Continued open access to markets
- Competitiveness / level playing field…..let market decide where investments are optimal
- Non-discriminatory environmental policies in U.S. and Canada
- Effective, efficient and consistent pipeline p/l regulatory oversight
- Continued policy support for technology and innovation