



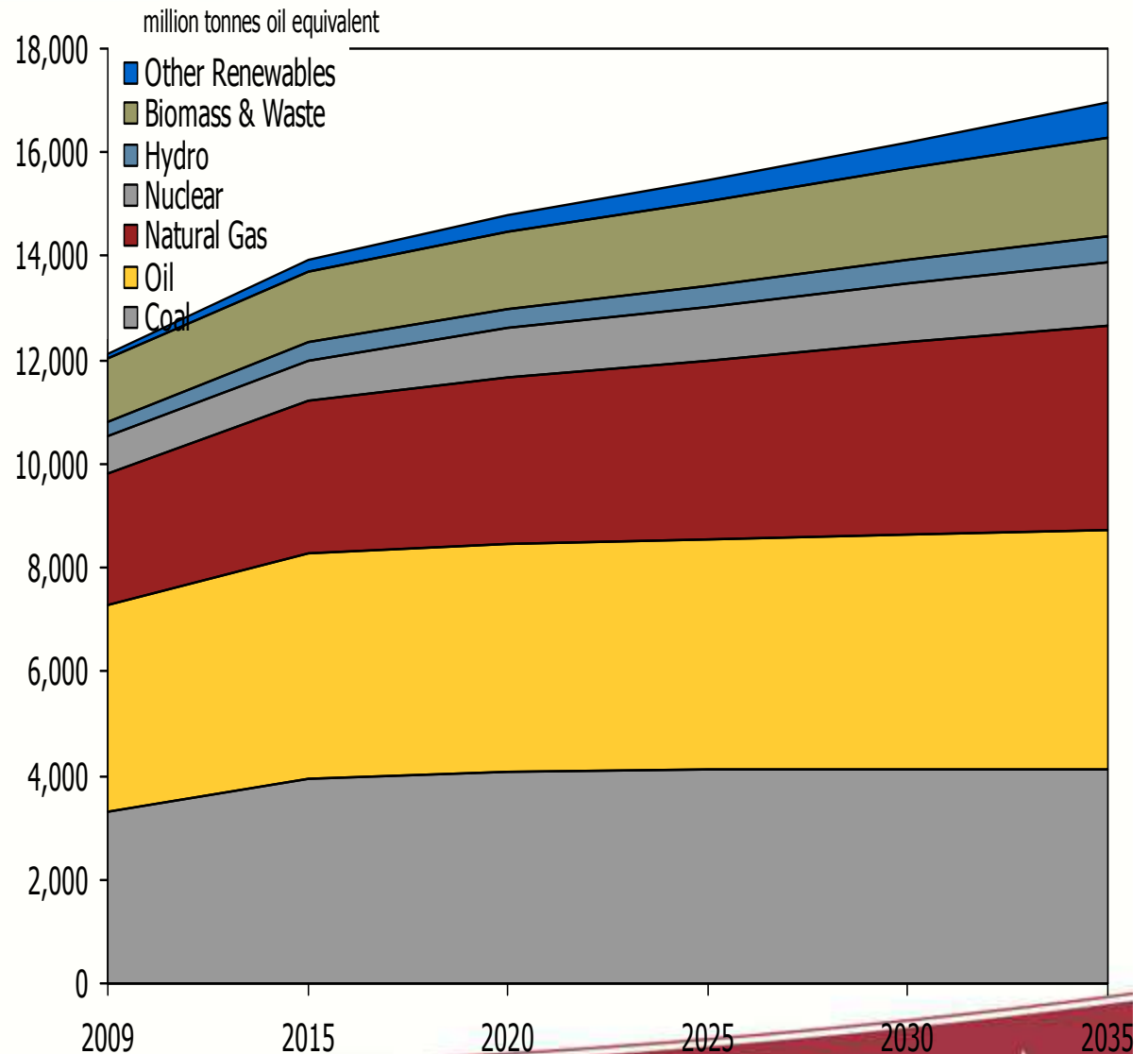
Canadian Oil and Gas Industry Outlook – Opportunities & Challenges

CORE Energy Conference – Halifax NS, October 3 2012

Dave Collyer, President

Global Primary Energy Demand IEA New Policies Scenario

- **Significant energy demand growth:**
 - Population, standards of living.
- **Need all forms of energy:**
 - Increasing role for renewables.
 - Continuing reliance on hydrocarbons.
 - Increasing role for non-conventional crude oil & natural gas.
- **Technology is a key lever for sustainable growth**
 - Production.
 - Cost competitiveness.
 - Environmental performance.



Source: International Energy Agency

World Energy Outlook 2011

Canada is a Global Energy Player

#3

Canada is third to Saudi Arabia & Venezuela in crude oil reserves

#3

Canada is third in the world in natural gas production.

#6

Canada is sixth largest oil producer in the world.

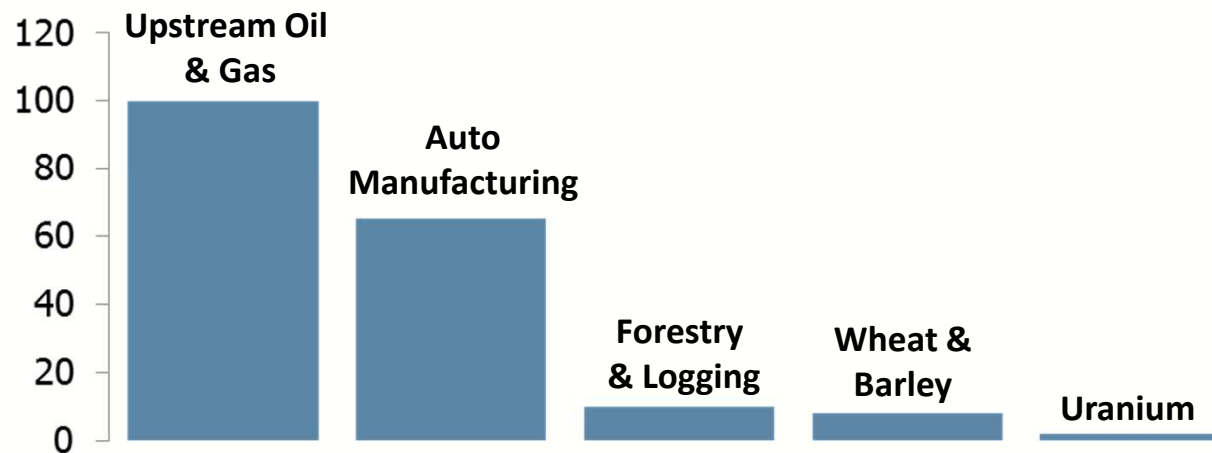
#2

Canada is second in the world in hydro-electricity generation.

The Canadian Oil and Natural Gas Industry - A Key Driving Force in the Canadian Economy

- Investing \$61 billion in Canada in 2012.
- \$21 billion to governments in 2011.
- 20-25% of the value on Toronto Stock Exchange.
- Approx. 18% of Canada's exports.
- Employs more than 550,000 people in Canada.

Annual Revenues (\$B)
Major Canadian Product Selling Industries



Upstream O&G Sector – Opportunities & Challenges

Opportunities

- Resource base.
- Production growth potential.
- Market demand.
- Established infrastructure.
- Human resources – skills / experience.
- Technology and innovation capability.
- Performance track record.
- Political stability.
- Access to capital.
- Broad public support.

Challenges

- Cost escalation.
- Market access.
- Human resources – capacity.
- Upcoming elections / political transitions.
- Expectations of public markets.
- Media profile.
- Industry collaboration.
- Industry reputation:
 - Landowner / community;
 - Heightened conflict w/ ENGOs.

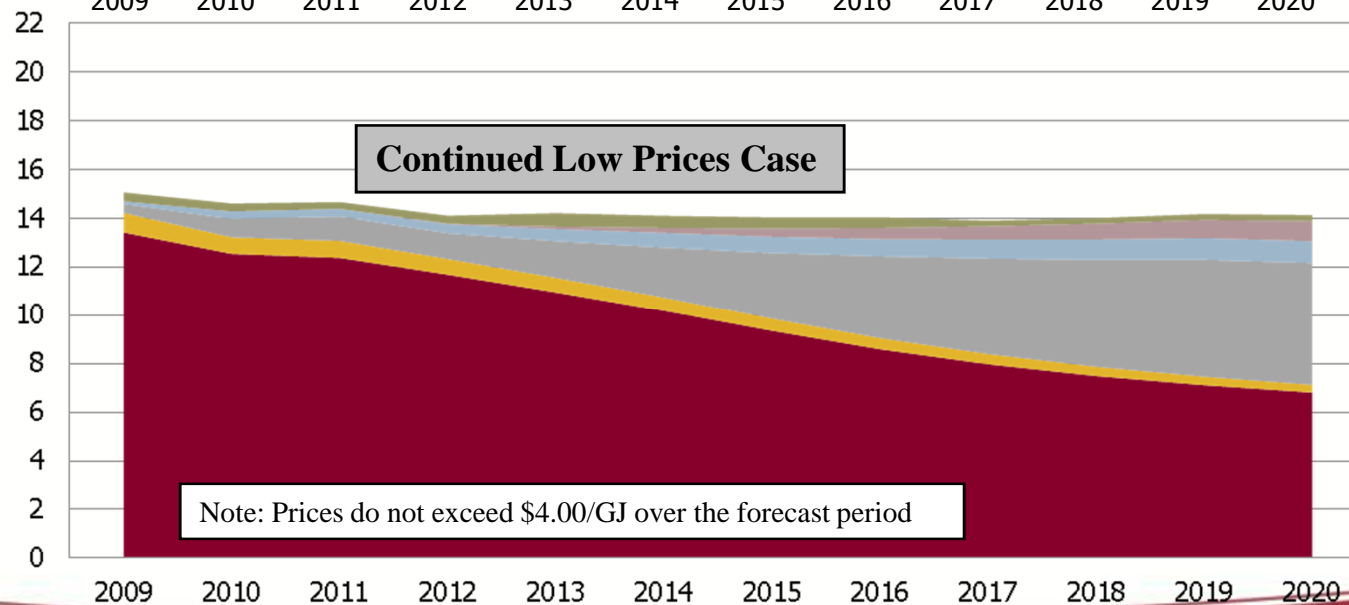
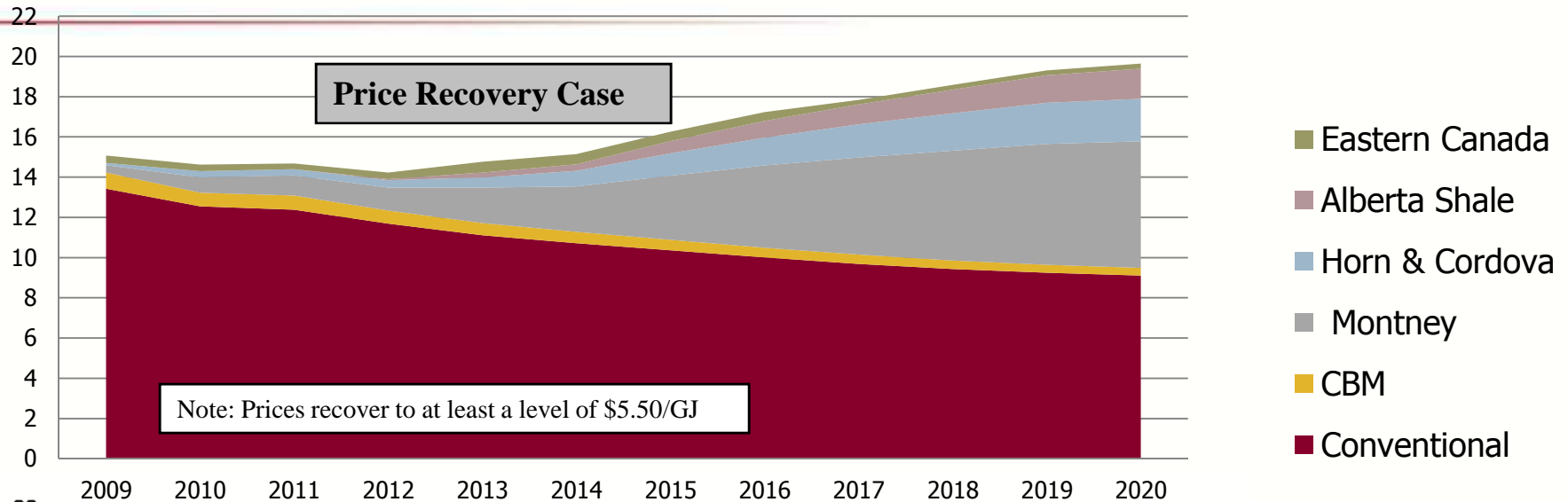
Natural Gas

North American Natural Gas – Supply Outlook

- Shale gas supply a game-changer ...100+ years supply
- Technology success (horizontal drilling, fracturing, completions)
- Implications:
 - New producing regions
 - Shifting S / D dynamics
 - Changes in p/ l flows
 - Emerging stakeholder challenges (env. & social)

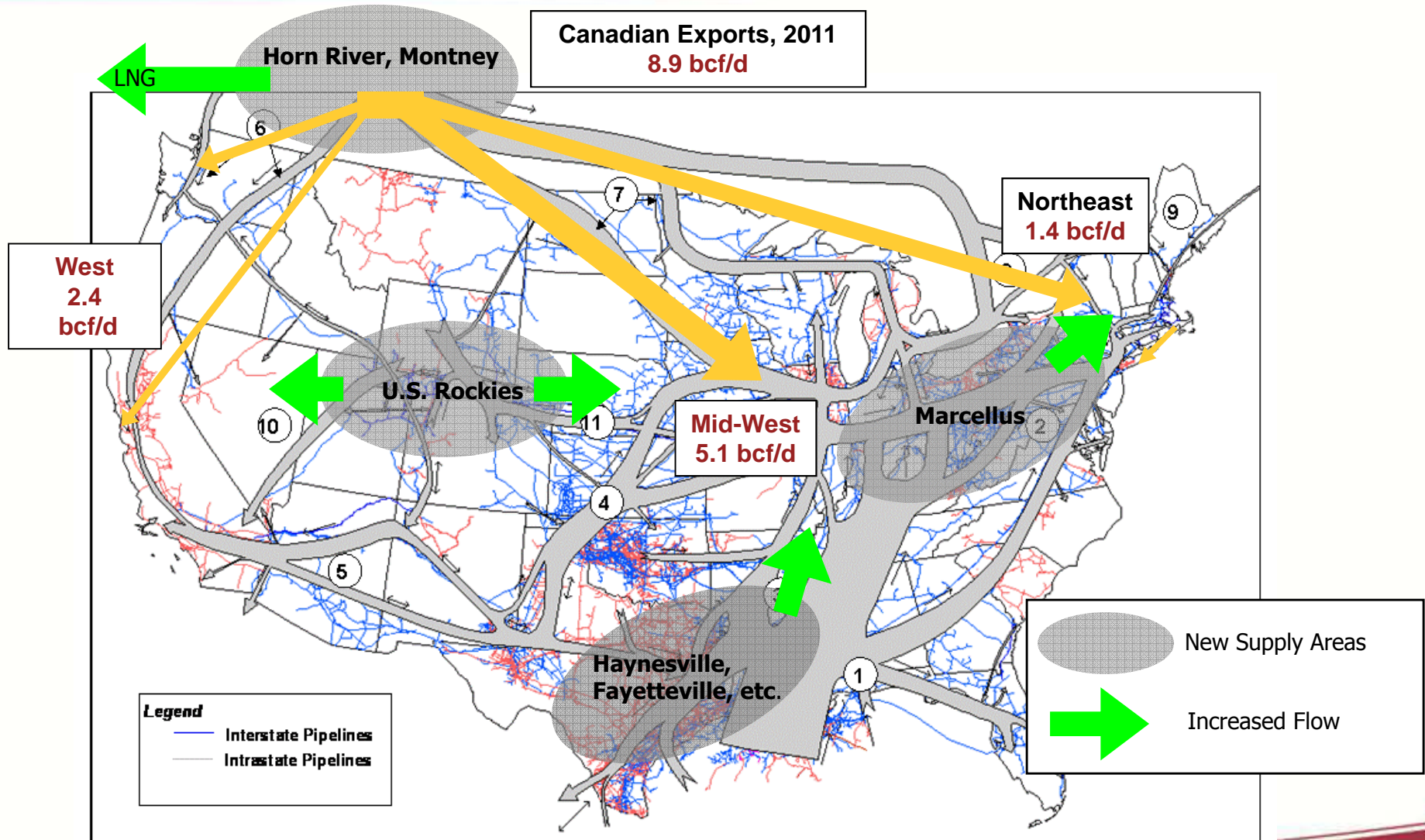


Canadian Natural Gas Production – Two Price Scenarios (bcfd)



Canadian Natural Gas Exports, 2011

Potential Effect of New Shale Gas on Gas Flow



Source: Energy Information Administration, Office of Oil and Gas, Natural Gas Division, GasTran Gas Transportation Information System.

Potential West Coast LNG Terminals



Positives

- Asian market growth
- Proximity to Asia
- Deep water port(s)
- Robust supply
- Gov't & stakeholder support

Potential Challenges

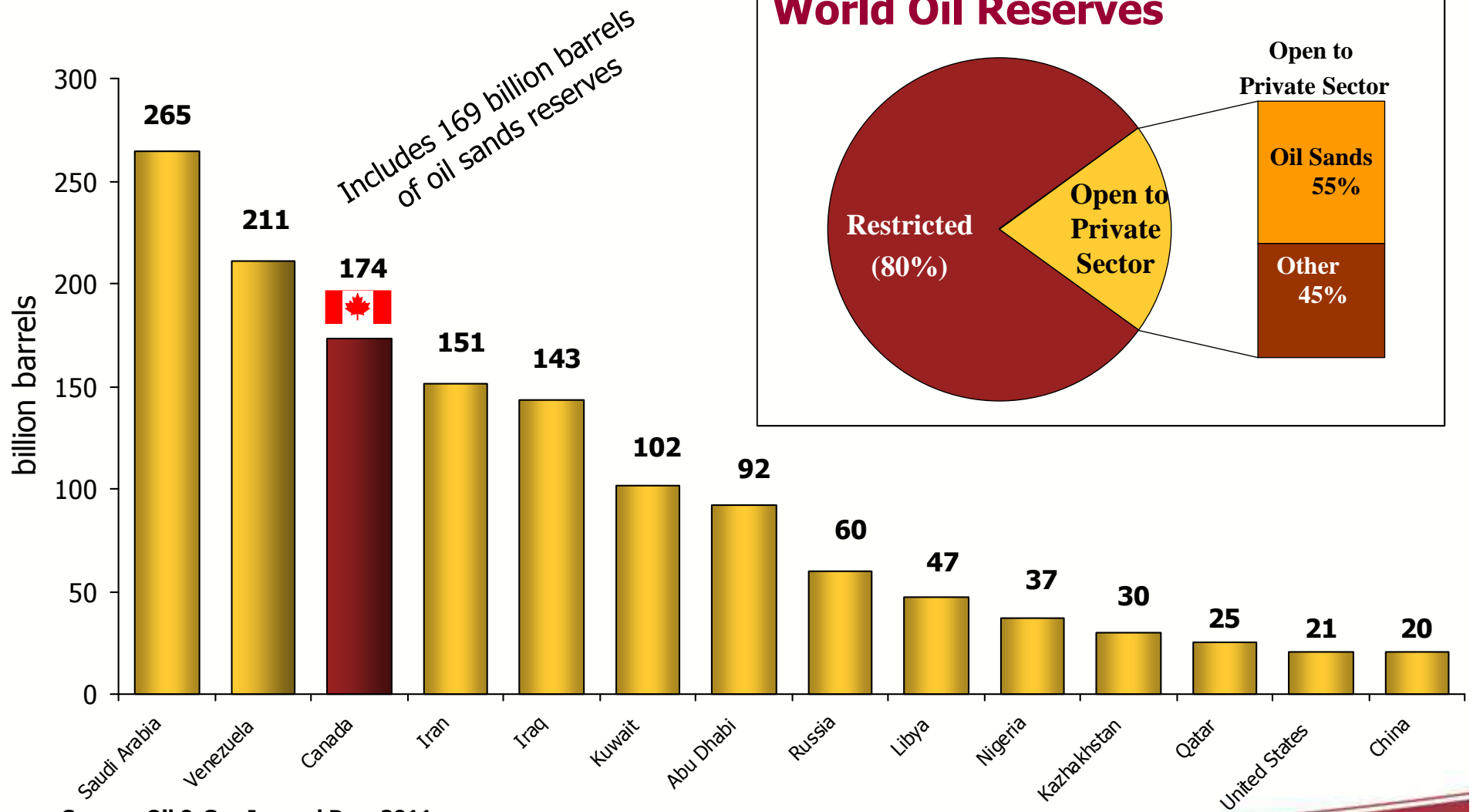
- Multiple competing projects
- Global scale
- Cost escalation
- Market window

Canadian LNG Export Project Development Activity

Companies	Location	Capacity	Est.	Status
• Apache / EOG / Encana	Bish Cove, Kitimat, BC	1.4 Bcf/d	2017	Awaiting Investment Decision
• BC LNG Export Cooperative	Kitimat, BC	0.25 Bcf/d	2013	Permits received
• Shell /China National / Korea Gas/Mitsubishi	Kitimat, BC	1.8 Bcf/d	2020	Final stages of discussion
• Progress / Petronas	Prince Rupert	1.0 Bcf/d	2018	Conducting feasibility
• Nexen / Inpex	TBD			Conducting feasibility
• BG Group	Prince Rupert	4.2 Bcf/d	2020	Initial Stages of Development

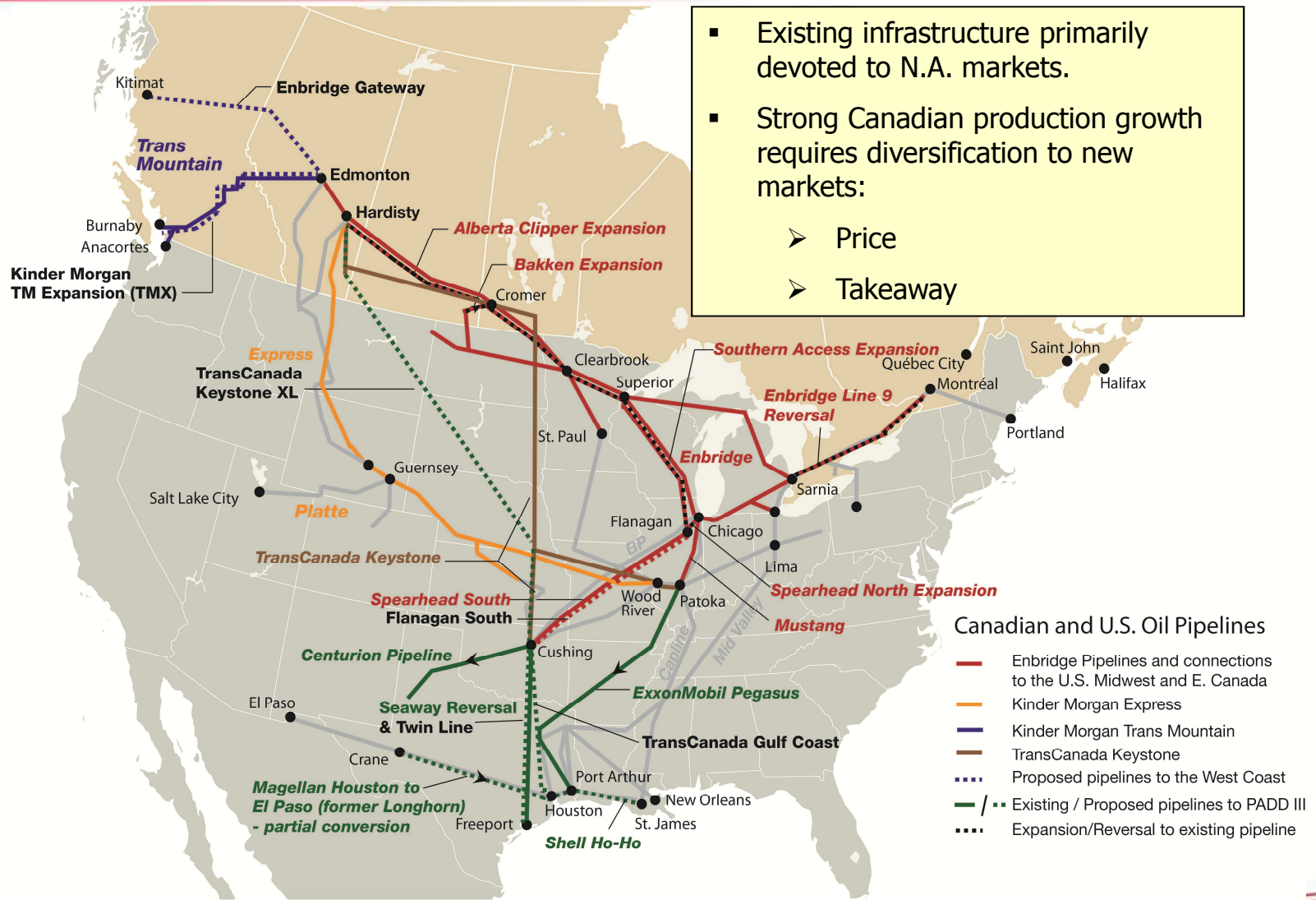
Crude Oil

Global Crude Oil Reserves by Country



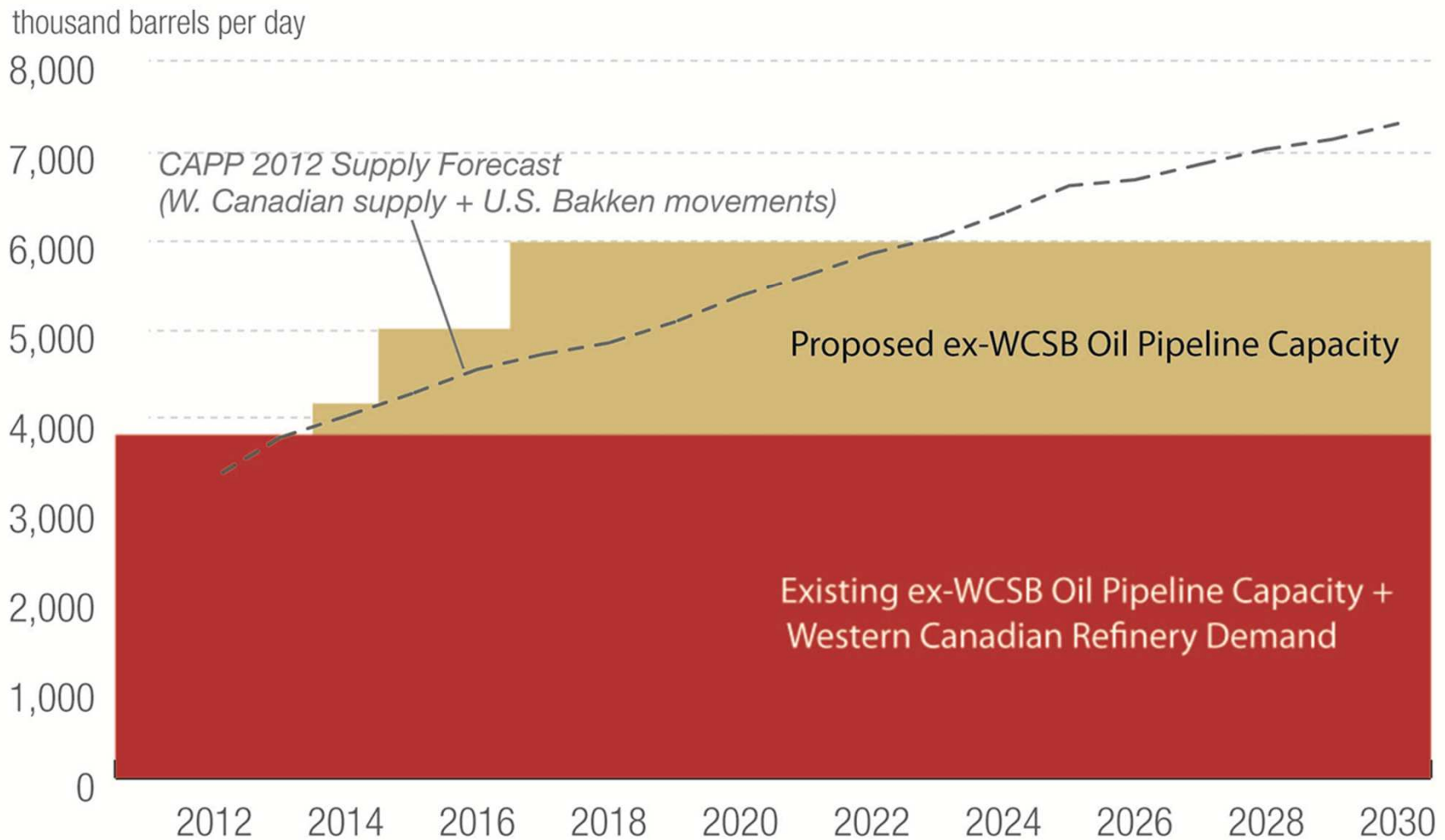
Source: Oil & Gas Journal Dec. 2011

Western Canadian and Bakken Crude Pipeline Routes to U.S., Canada and Offshore



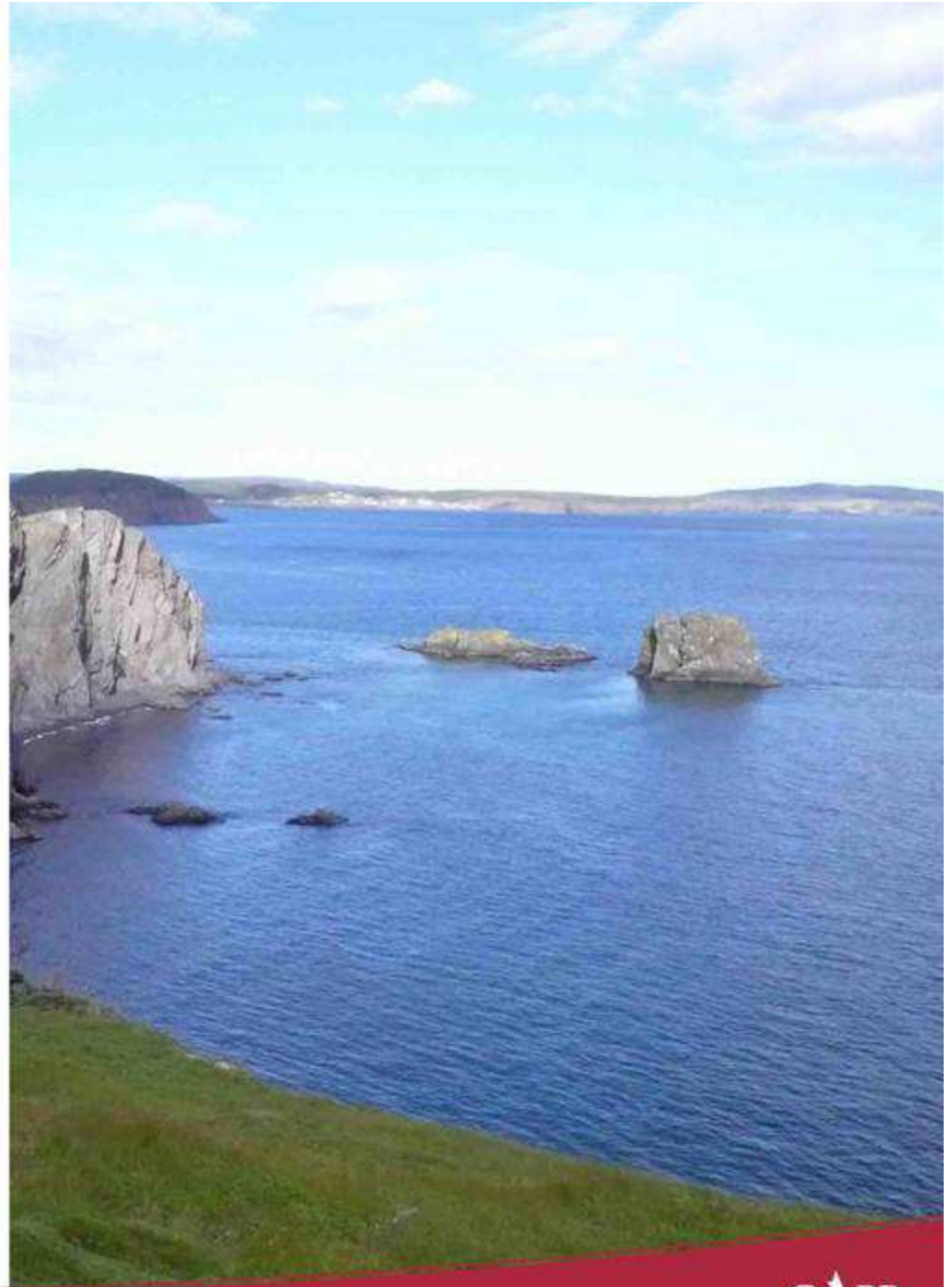
- Existing infrastructure primarily devoted to N.A. markets.
- Strong Canadian production growth requires diversification to new markets:
 - Price
 - Takeaway

WCSB Pipeline Takeaway Capacity vs. Supply



Eastern Canada

- **Importing 800,000 b/d.**
- **Light oil refineries.**
- **Price differential**
 - World price imports are higher than domestic.
- **Transportation options:**
 - Pipelines:
 - Line 9 reversal
 - TransCanada conversion
 - Rail
 - First 75,000 bbls. to Irving
 - Ports:
 - Montreal, QC
 - Quebec, QC
 - St. John, NB
 - Portland, Maine



Market Access

- **Objective:**

- Industry seeks timely expansion of crude oil and natural gas export infrastructure aligned with production growth.
- Drivers are fundamentally:
 - Securing market outlets
 - Securing global prices

- **What is needed to achieve this objective:**

- Economically viable projects supported by producers & markets.
- Support from governments (federal and provincial) – policy and project approvals.
- Regulatory approvals (necessary, but not sufficient).
- ***Social license*** to build and operate.

Social License Framework

Social License = Performance + Communication

- **Performance:**

- Continuous environmental & social performance improvement (across the value chain).....including monitoring, timely & transparent reporting.
- “What’s in it for me?”.....line of sight to jobs and economic benefits.
- Robust regulatory system.
- Solutions-oriented advocacy for balanced policy and regulation.

- **Communications & Outreach:**

- Sustained communications grounded in performance improvement:
 - Fact-based & emotive messaging.....not apologetic or defensive.
 - Delivered via diversity of mediums, approaches, spokespersons.
- Strong focus on outreach & engagement - local / regional (must include Aboriginals) and national / international.

- **New challenges for industry – requires leadership & collaboration**

Atlantic Canada Opportunities & Challenges

Atlantic Canada Offshore – Opportunities & Challenges

Opportunities

- Resource base.
- Renewed interest offshore NS.
- Good track record – fabrication / supply and service.
- Excellent local tech. programs.
- Demonstrated expertise.

Challenges

- Relatively higher costs:
 - Drilling wells (rig availability, import duties, EA processes, harsh environment etc.);
 - Production (labour, service / supply, etc.).
- Tight labour market.
- Overall competitiveness.



Photo courtesy of ExxonMobil/Prisma

Atlantic Canada Onshore – Opportunities/Challenges

Opportunities

- Resource base & production growth potential.
- Opportunity to align fiscal & regulatory framework to attract investment.
- Existing infrastructure.
- Local market demand.

Challenges

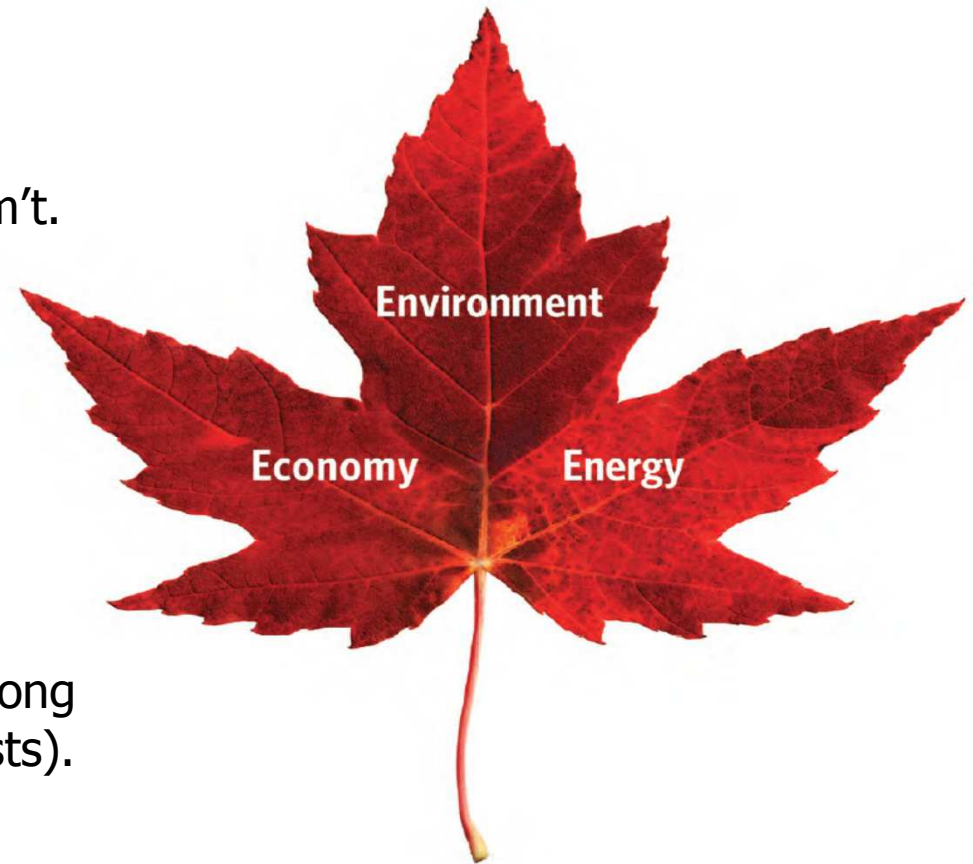
- Early days.....need activity to assess potential.
- Limited movement on establishing onshore shale gas regulations (NS).
- Lack of competitive regulatory and royalty framework (NB).
- Social license issues.



Photo courtesy of Corridor Resources

The Way Forward

- **Opportunities**
 - Market demand.
 - Competitive supply.
 - Build on strong foundation.
- **Key Challenges**
 - Market access / infrastructure dev't.
 - Social license.
- **Industry Social License**
 - Performance + Communication.
 - Must be earned (every day!).
 - Key levers:
 - Technology & innovation.
 - Collaboration (within sector, along value chain, w/ aligned interests).
- **"A Marathon, Not a Sprint"**



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