



Canada's Energy Sector

November 25, 2014

Canada 

Purpose

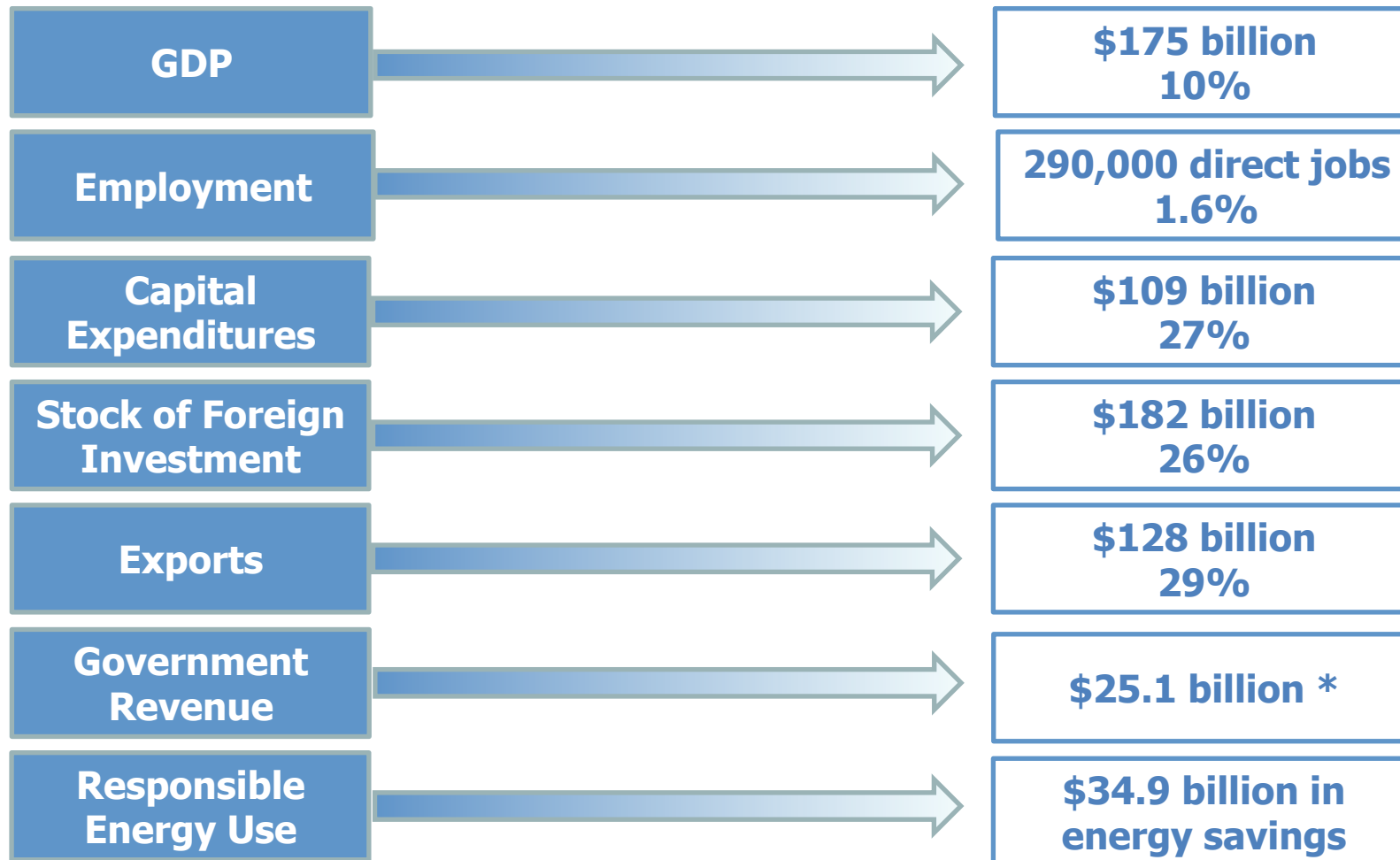
- Provide an overview of Canada's energy sector and highlight its importance to Japan

Canada has an abundance and diversity of energy resources

- Fifth largest producer of oil and third largest proved reserves
- Fifth largest producer of natural gas and fourth largest exporter
- Third largest producer of hydro power
- Second largest producer of uranium and fourth largest proved reserves
- Own nuclear power technology (CANDU)
- About 77% of power generation is non-emitting – ninth largest in installed wind capacity
- Vast renewable and clean energy potential

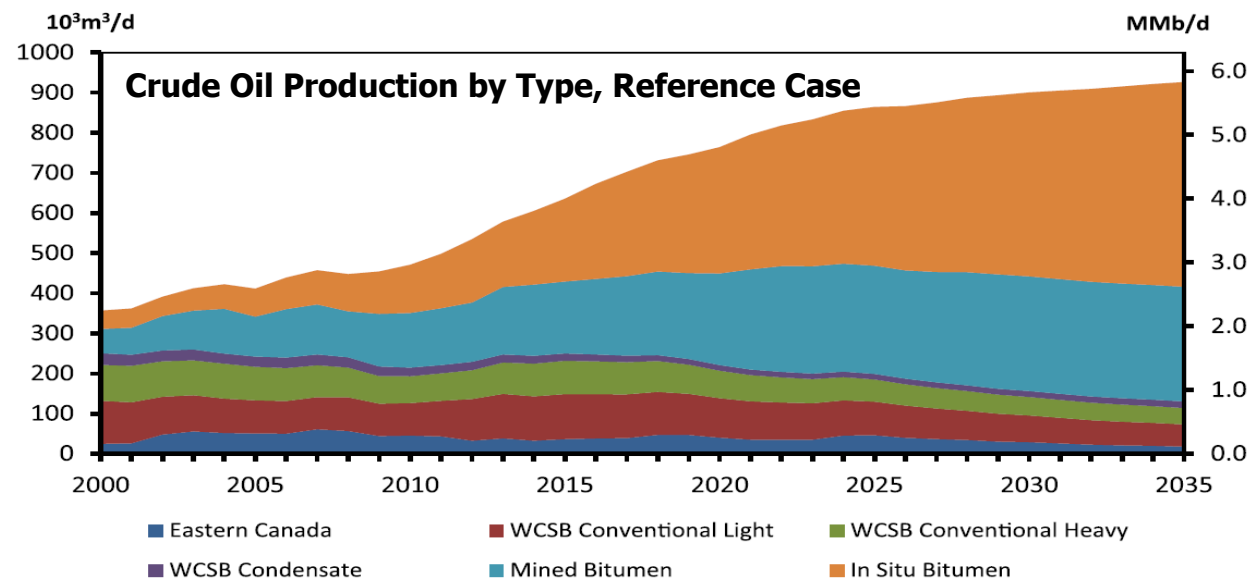


The energy sector makes a large direct contribution to the Canadian economy

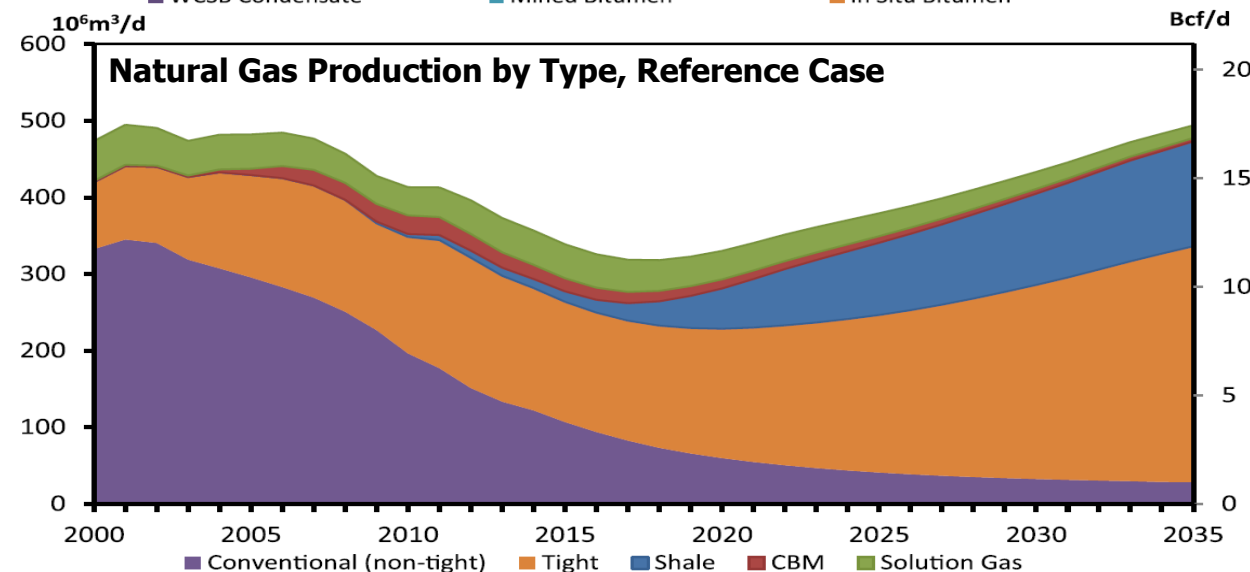


* Annual average (2008-2012)

Canadian oil and gas production is growing



■ Oil production increases 75% by 2035



■ Natural gas production increases 25% by 2035

Source: National Energy Board: Energy Futures, 2013

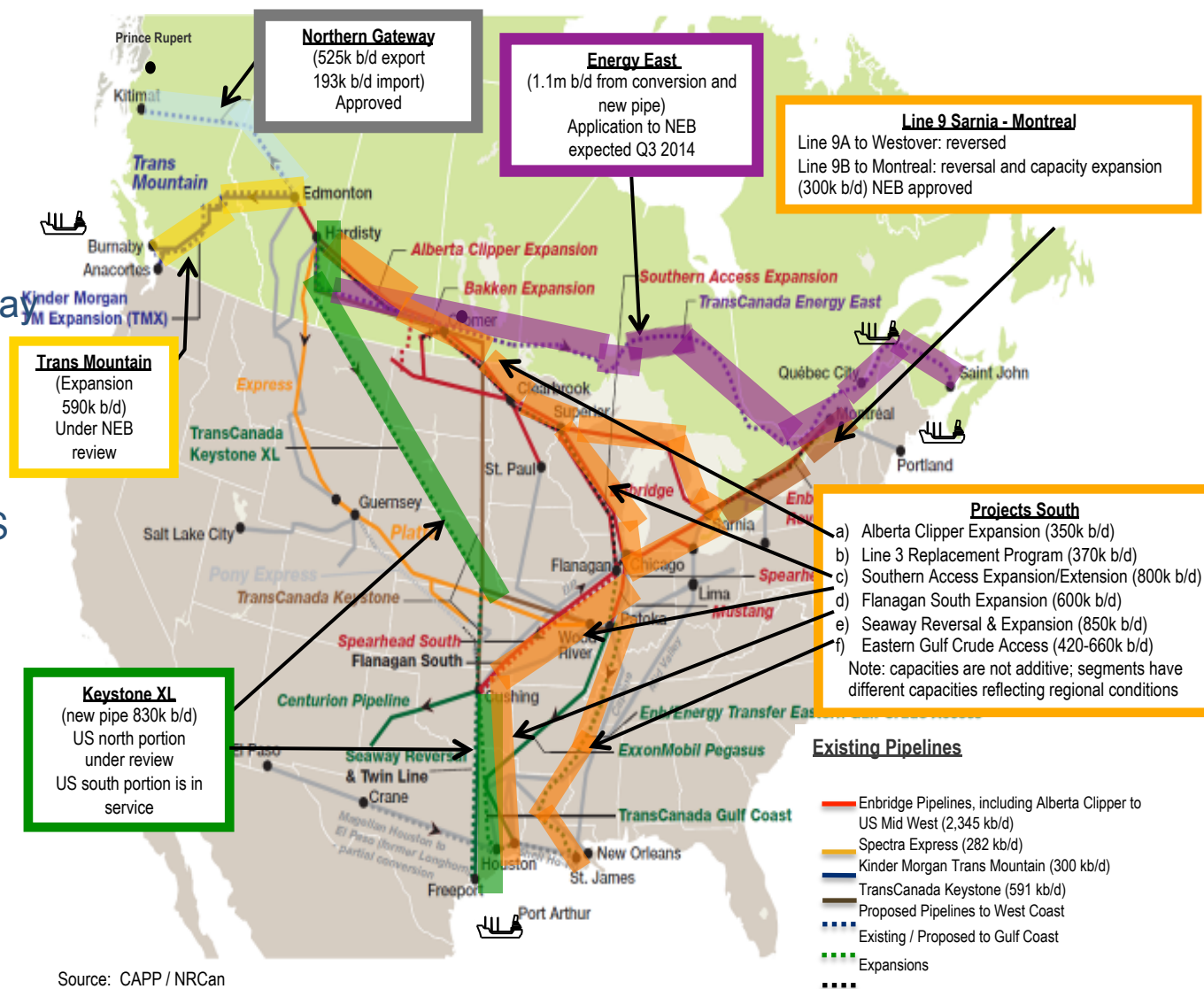
Canada's Proposed LNG export capacity

NO.	NAME	CAPACITY	IN SERVICE	EXPORT LICENCE
WEST COAST (proposed) – 267 million tonnes per annum (mtpa) (36 bcf/d)				
1	Douglas Channel LNG	1.8 mtpa / (0.25 bcf/d)	2015	Approved
2	Kitimat LNG	10 mtpa / (1.3 bcf/d)	2017	Approved
3	LNG Canada	24 mtpa / (3.2 bcf/d)	2019/20	Approved
4	Prince Rupert LNG	21.6 mtpa / (2.91 bcf/d)	2022	Approved
5	Pacific Northwest LNG	19.68 mtpa / (2.74 bcf/d)	2018	Approved
6	WCC LNG	30 mtpa / (4 bcf/d)	2021	Approved
7	Woodfibre LNG	2.1 mtpa / (0.33 bcf/d)	2017	Approved
8	Triton LNG	2.3 mtpa / (0.32 bcf/d)	2017	Under review
9	Aurora LNG	24 mtpa / (3.1 bcf/d)	2023	Under review
10	Kitsault Energy	20 mtpa / (2.71 bcf/d)	2018/19	Under review
11	WesPac LNG Marine Terminal	3 mtpa / (0.40 bcf/d)	2016	Under review
12	Steelhead LNG	30 mtpa (4.25 bcf/d)	2019	Under review
13	Grassy Point LNG	20 mtpa / (2.8 bcf/d)	2021	Under review
14	Discovery LNG	20 mtpa / (2.63 bcf/d)	2021	Under review
15	Cedar LNG	14.5 mtpa / (1.95 bcf/d)	2017/20	Under review
16	Orca LNG	24 mtpa / (3.20 bcf/d)	2019	Under review
EAST COAST (proposed) – 10 mtpa (1.4 bcf/d)				
17	Goldboro LNG	10 mtpa / (1.4 bcf/d)	2020	Incomplete – option to refile
EAST COAST – IMPORT FACILITY – 7.5 mtpa (1 bcf/d)				
18	Canaport LNG	7.5 mtpa / (1 bcf/d)	Existing import facility with authority to export LNG	



Oil pipelines proposed west, east and south

- TransCanada
 - Keystone XL
 - Energy East
- Enbridge
 - Northern Gateway
 - Line 9 Reversal
 - Line 3 Replacement Program
 - Mainline and US debottlenecking projects
- Kinder Morgan
 - Trans Mountain Expansion



Source: CAPP / NRCan

In Canada, both federal and provincial governments have energy responsibilities

Federal Responsibility

- International and interprovincial energy trade
- International and interprovincial energy infrastructure
- Regulation of nuclear energy and uranium
- Energy resources on federal Crown land, offshore and North of 60°
- Responsible energy use standards and regulations

Shared Responsibility

- Trade and investment
- Responsible energy use
- Environmental regulation of energy projects
- Scientific research and development
- Management of offshore under Accords

Provincial Responsibility

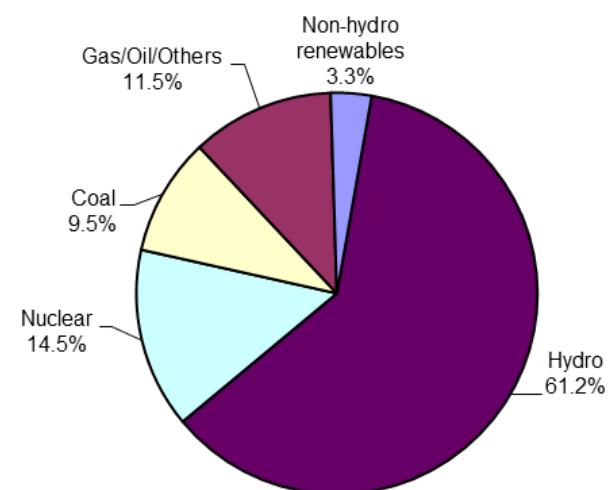
- Ownership and management of energy resources
- Royalty design and collection
- Electricity production, distribution and regulation
- Land-use planning and allocation
- Laws and regulations on exploration, development, conservation and energy use



Canada is powered by renewable energy

- Canada has a clean electricity generation mix
- The nuclear sector is a major source of electricity, and provides significant economic benefits for Canada

**Canadian Electricity Generation
by Source, 2012**



Source: Statistics Canada, NRCan

- Canada's electricity system is highly integrated with the US
 - Canadian exports approximately \$2 billion per year worth of electricity

Energy innovation is key to Canada's competitiveness and productivity

- Since 2006, the Government of Canada has invested more than \$10 billion in clean energy
 - For energy efficiency, clean energy technologies, and production of cleaner energy and fuels
- Canada is also a leader in carbon capture and storage technology, with four commercial-scale demonstration projects in operation or under construction.
- Sustainable Development Technology Canada brings new technologies closer to commercialization
 - Government investment of \$923 million for the SD Tech Fund
 - Since 2002, the SD Tech Fund has leveraged more than \$1.6 billion from other project partners

Canada has strategic advantages in key technology clusters:

- 1 Unconventional oil and gas
- 2 Next generation transportation
- 3 Energy efficiency
- 4 Distributed power generation
- 5 Longer term R&D opportunities

Canada is pursuing the responsible growth of our energy sector

- Expansion and diversification of our export markets
- New energy transportation infrastructure
- Responsible Resource Development
- Enhancing aboriginal engagement

Canada is pursuing the responsible growth of our energy sector

- Regulatory reviews have been sped up
- BC LNG tax clarified
- Labour issues being addressed

Canada is pursuing the responsible growth of our energy sector

- Public confidence being addressed
- Development of gas fields
- Canadian advantages over the U.S.

Summary

- Abundant and diverse supply of energy resources
- Shared responsibility
- Oil and gas production continues to grow
- Export of energy to Japan is high priority
- Japanese investment is welcome
- Responsible resource development

Thank you! Merci!
ご清聴ありがとうございました

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