



# Canadian Coal Industry

Presented to: National Energy Board  
Calgary, Alberta June 12<sup>th</sup>, 2006

Presented by: Allen Wright, Executive Director  
The Coal Association of Canada



# Presentation Overview

---

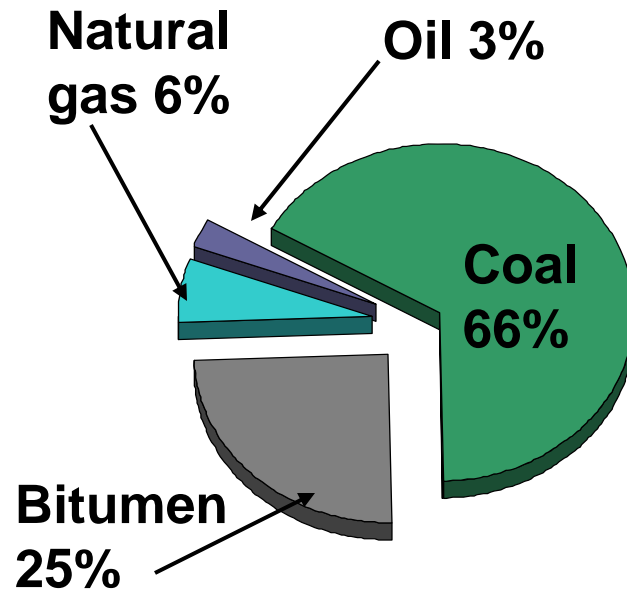
- ◆ **Canadian Coal at a Glance**
- ◆ **Coal Production**
- ◆ **Coal Consumption**
- ◆ **Issues Going Forward**
- ◆ **Summary**

# Canadian Coal at a Glance

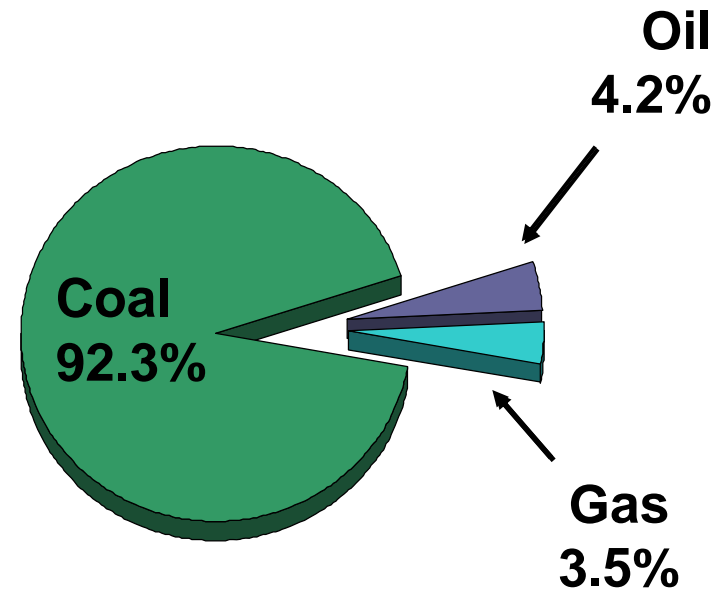




## Canadian Hydrocarbon Reserves



## North American Hydrocarbon Reserves



- 8.6 billion tonnes of proven coal reserves in Canada
- North America has a 236 year supply (N.E.B.)



Source: BP Statistical Review of World Energy, NRCan, NEB

# Coal Deposits in Canada



# Canadian Coal Mines





# Coal Mines: West

- **BC:** 9 Met Mines + 2 Thermal – Bituminous
- **AB:** 2 Met Mines + 2 Thermal – Bituminous
- **AB:** 5 Thermal Mines – Sub Bituminous
- **SASK:** 3 Thermal Mines – Lignite  
**‘Low Sulphur’**



# Canadian Mine Overview: Western Canada

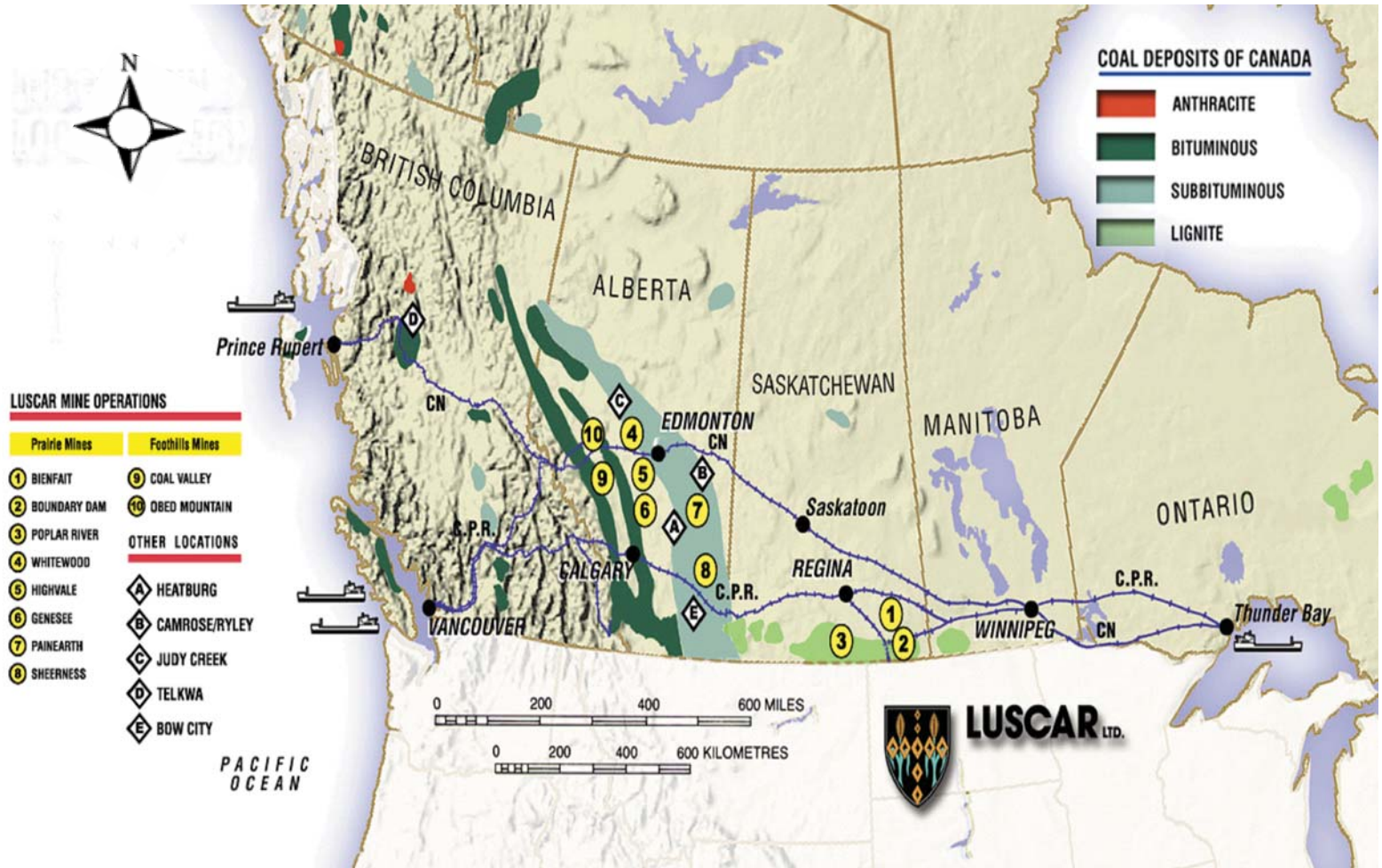
---

- ◆ **Established producers**
  - ◆ [Prairie Mines & Royalty Ltd. \(AB & Sask.\)](#)
  - ◆ [Coal Valley Resources Inc. \(AB\)](#)
  - ◆ [Elk Valley Coal Corp. \(AB & BC\)](#)
  - ◆ [Hillsborough \(BC\)](#)
  
- ◆ **Emerging companies**
  - ◆ [Western Canadian Coal Corp. \(BC\)](#)
  - ◆ [Northern Energy and Mining Inc. \(BC\)](#)
  - ◆ [Pine Valley Coal \(BC\)](#)
  - ◆ [Grande Cache Coal \(AB\)](#)
  - ◆ [Compliance Energy \(BC\)](#)
  - ◆ Fortune Minerals (BC) \*
  - ◆ Cline Mining (BC) \*
  - ◆ West Hawk Developments (BC & NWT) \*
  - ◆ Cash Minerals (Yukon) \*
  - ◆ First Coal (BC) \*
  - ◆ Anglo Coal Canada (BC) \*
  - ◆ Canadian Dehua Int'l Coal Group (BC) \*
  - ◆ Kennecott Canada Exploration (BC) \*

\* Non Producing

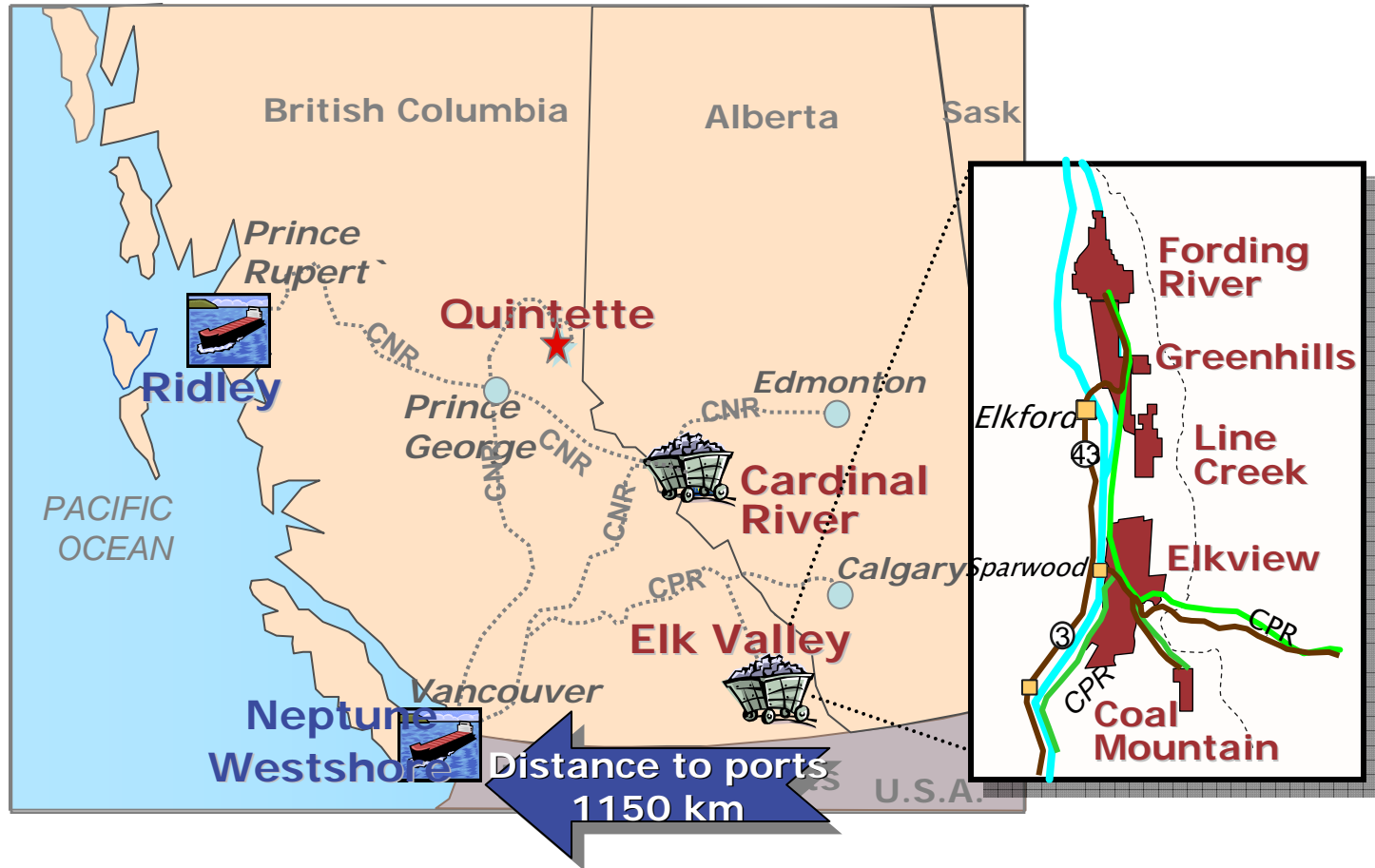


# Prairie Mines & Royalty Ltd + Coal Valley Resources Inc. – formerly Luscar Ltd.



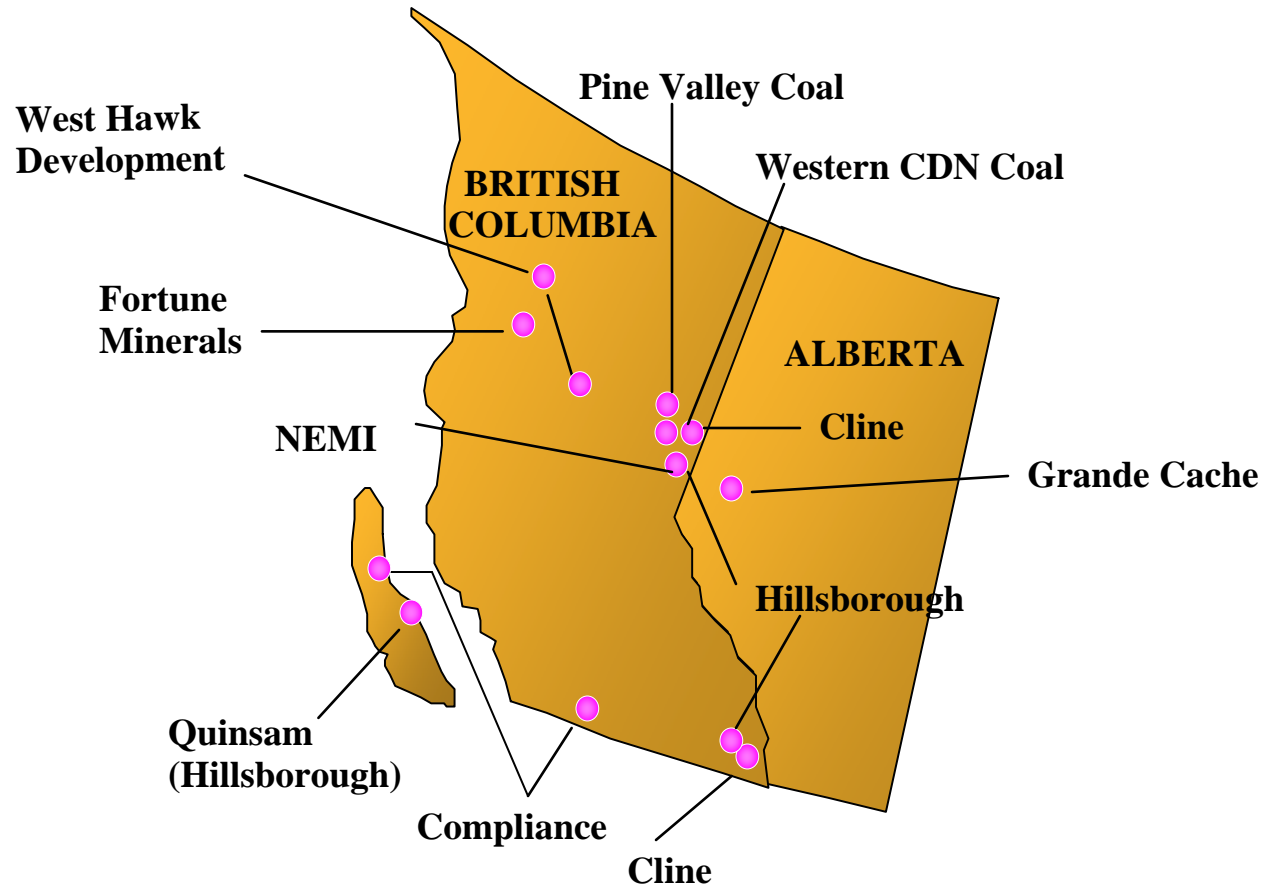


# Elk Valley Coal Assets





# Emerging Mines: B.C. & Alberta





# History of Peace River Coalfield

- Exploration began in 1968
- 16 year contracts signed with Japanese steel industry in 1981
- Agreement to ship 6 million tonnes of coal at a price higher than the world market
- Mines, town, railroad and roads built as a coordinated development in the early 1980s
- Largest industrial undertaking in BC
- First coal shipped in 1983
- Quintette & Bullmoose mines operated until 2001 and 2003, respectively.

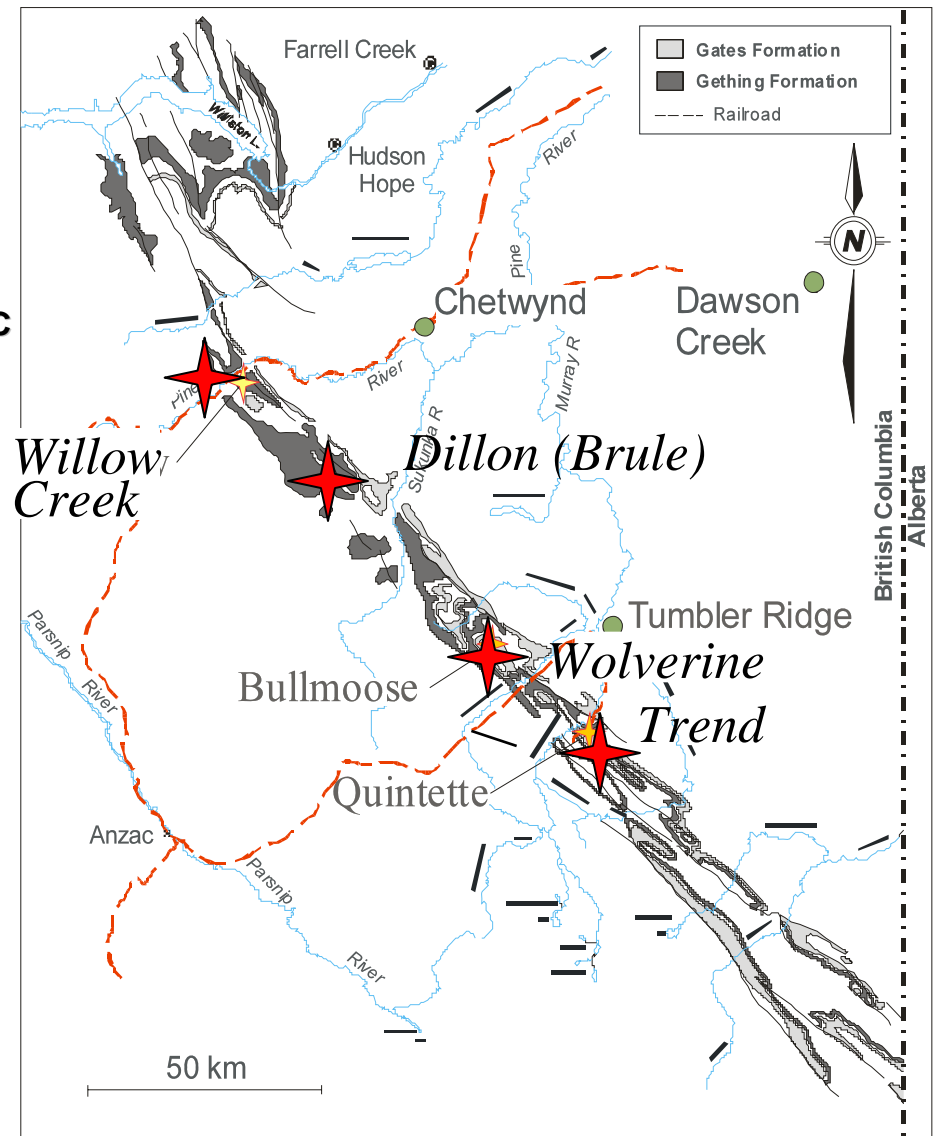
# Northeast Coal – Mines and Advanced Projects



**New Mines in 2004:**  
 Willow Creek - PVM  
 Dillon (Burnt River) - WCC

**Mines under Construction:**  
 Trend - NEMI  
 Wolverine (Perry Creek) - WCC

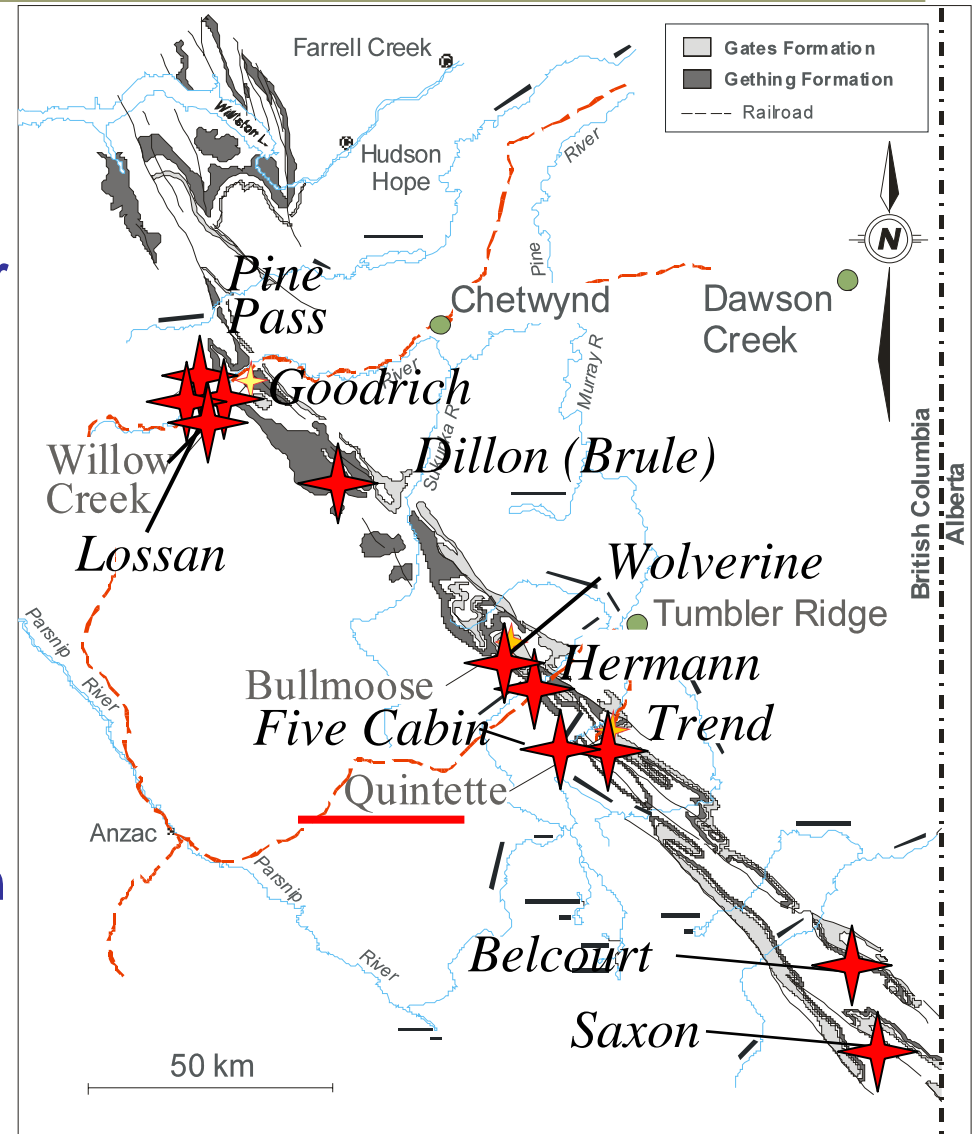
**Proposed Mines Under Review :**  
 Brule (Burnt River) - WCC



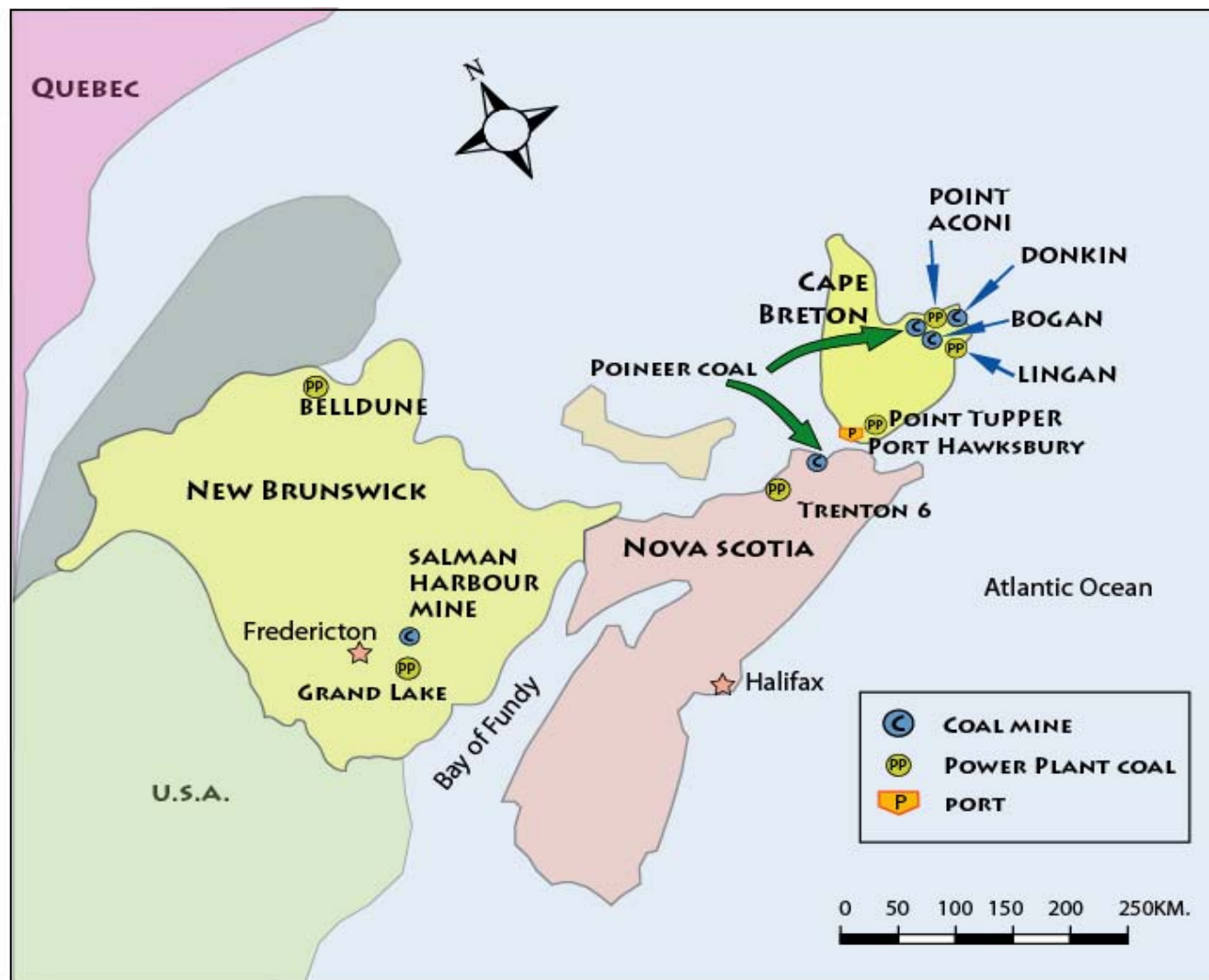
# Northeast Coal – Advanced Exploration Projects



- ◆ **Pine Pass**- Falls Mtn Coal
- ◆ **Lossan** – Cline Mining
- ◆ **Goodrich-Peace River**  
– Kennecott Canada Exploration
- ◆ **Goodrich Central-South** – First Coal
- ◆ **Hermann** - WCC
- ◆ **Five Cabin** - Hillsborough
- ◆ **Quintette (Babcock area)** - EVCC
- ◆ **Trend (Roman Mtn)** - NEMI
- ◆ **Belcourt (Red Deer & Holtslander), Saxon & Omega** – NEMI + WCC



# Coal Mining in Atlantic Canada





# Canadian Mine Overview: New Brunswick

- **NB Coal – Salman Harbour Mine at Minto – 160K to 180K tpa until 2010- high sulphur**
- **Coal fired plants at Belledune - 450MW and Grand Lake 57MW**
- **Plans for new coal-fuelled unit on hold due to refurbishment of Nuclear plant at Point LePreau**
- **Most coal comes from South America and United States**



# Canadian Mine Overview: Nova Scotia

- Five Coal-Fuelled/petcoke plants
- Reclamation Mining – Stellarton & Cape Breton Island – Pioneer Coal, – push back from locals – 400K tpa 2005; potential up to 1 million tpa – high sulphur
- Donkin Mine – underground – 450 million tonnes potential – Xstrata Consortium
- Unique High Wall Miner





# CDN Production & Projections

	2005e (in Million Tonnes)	2006e
<b>Metallurgical</b>	<b>27.0</b>	<b>30.0</b>
<b>Thermal</b>	<b><u>40.7</u></b>	<b><u>41.5</u></b>
	<b>67.7</b>	<b>71.5</b>

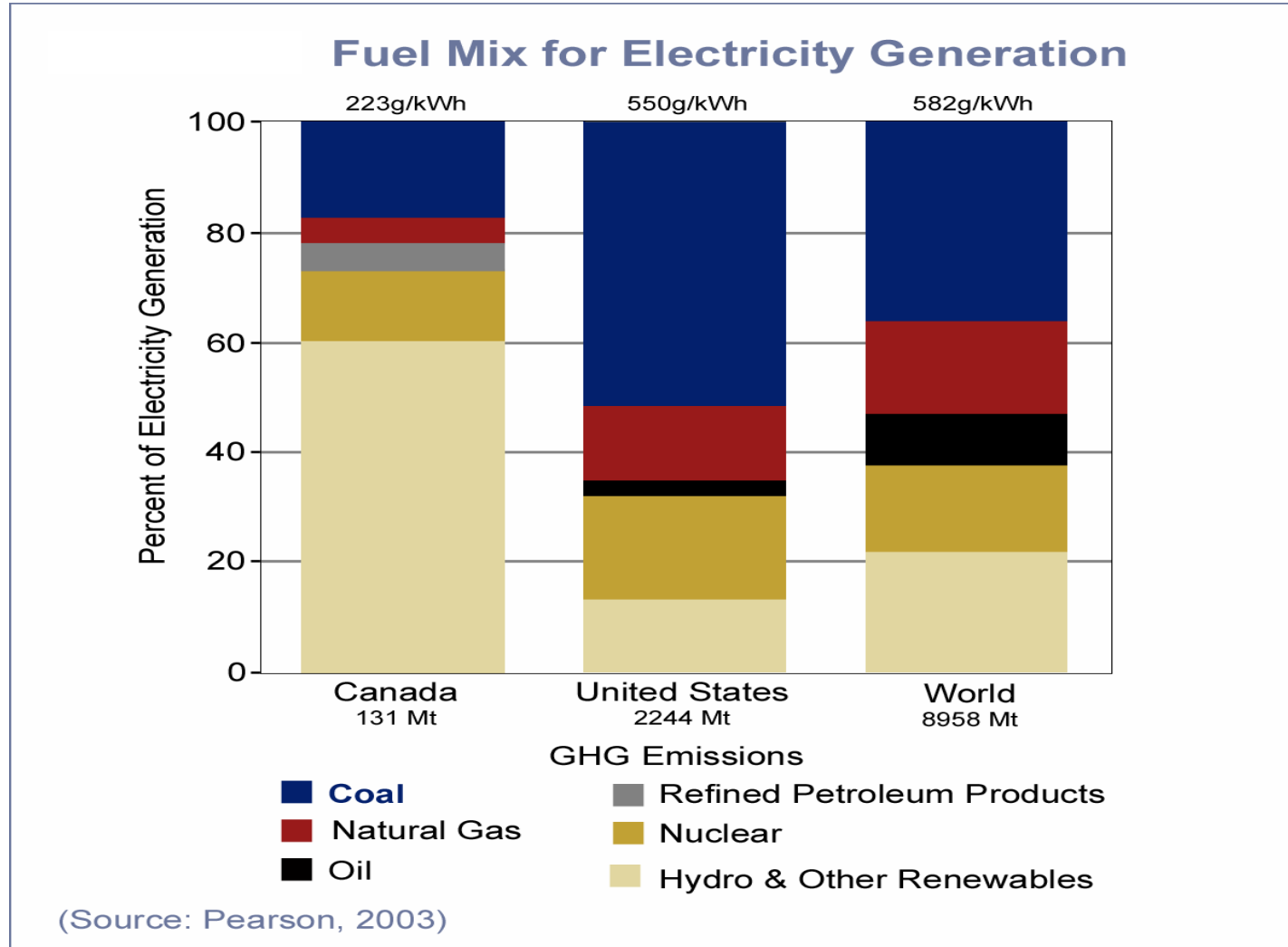
- Mix: 40% Metallurgical; 60 % Thermal
- Potential production to 30 MM T from Established Met. Producers & from Emerging Producers to 20+ MM T by 2010 \*
- Increasing demand in China, India, Brazil etc. expected to use this expanded production
- Thermal Production to show modest increases with projected increase from NEBC, VCR Isl., Yukon & NWT

\*Disclaimer: Projections only - may or may not happen

# Coal Consumption in Canada: Electricity



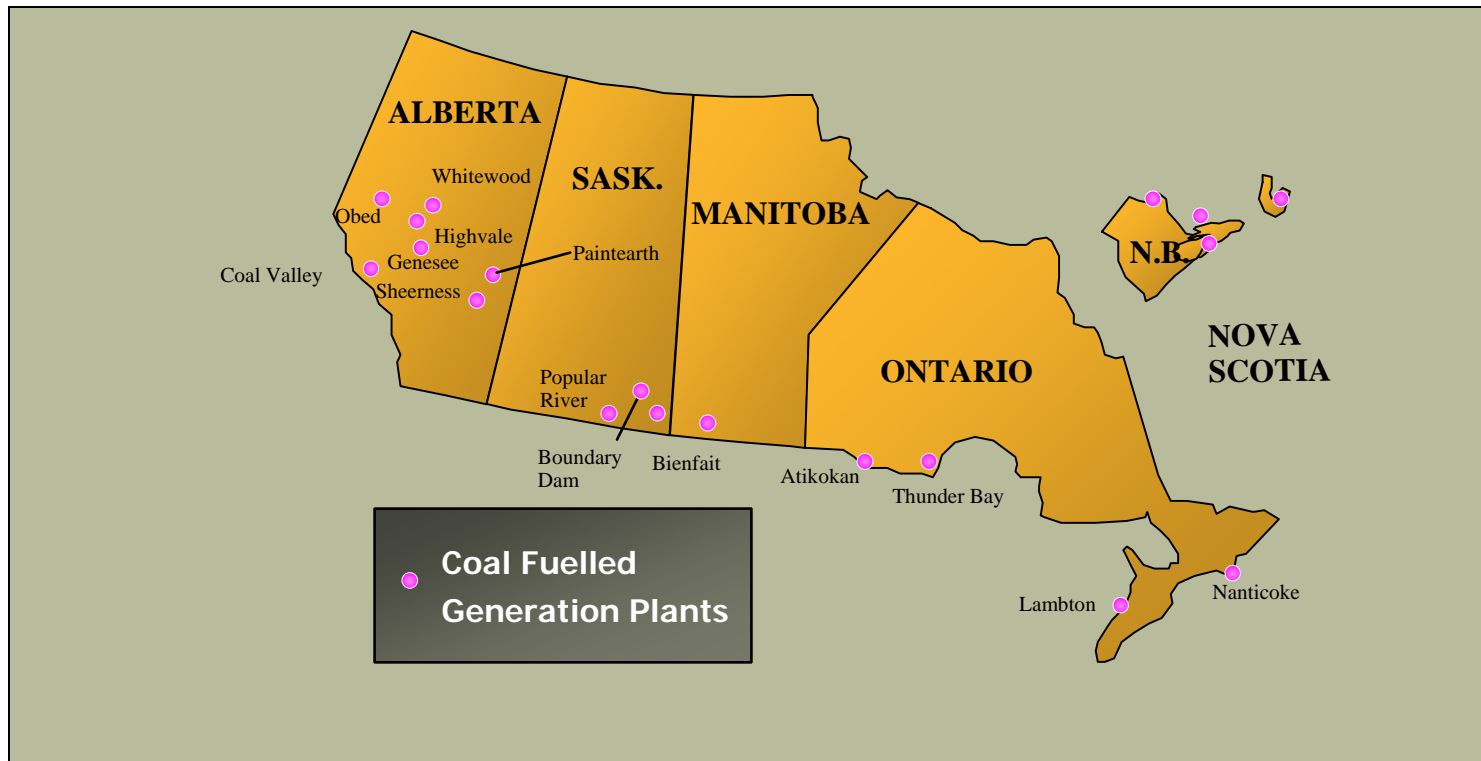
# Comparing Fuel Mixes – Canada, United States, World





# Thermal Coal Generation

- 55.2 Mt – 2004 + 4 Mt - steel/cement/other
- AB: 2004 -25 Mt for electricity = 45% Cdn coal for Power – 2/3 generation
- Sask: 2004 11.5 Mt - 66.7% generation
- Ontario: 2004 – 11.9 Mt down from 15.5 Mt (Lakeview)
- NS: 2004 2 Mt & NB 1 Mt – most imported





# Canadian Thermal Production/Demand

## Exports:

- Approx. 2 Mt exported; focus on Japan and Korea but diversify to Chile, Central America and Mexico (Petecalco – 2200 MW = 7 million tpa)
- Luscar doubled production at Coal Valley - 2 Mt to 4 Mt for export in 2006

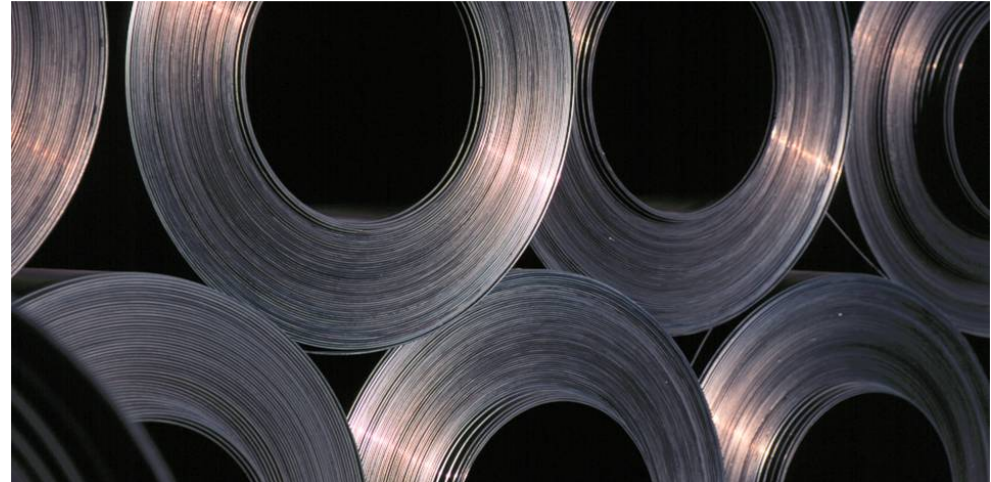
## Imports:

- 1.4 Mt Saskatchewan coal into Ontario at risk
- Ontario imports down from 15.5 Mt to 11.9 Mt
- NB & NS dependent on imports (US – CAPP & PRB) + South America (Columbia)- 950K & 1.8 Mt respectively
- Minto mine to continue to produce until 2010

## Potential:

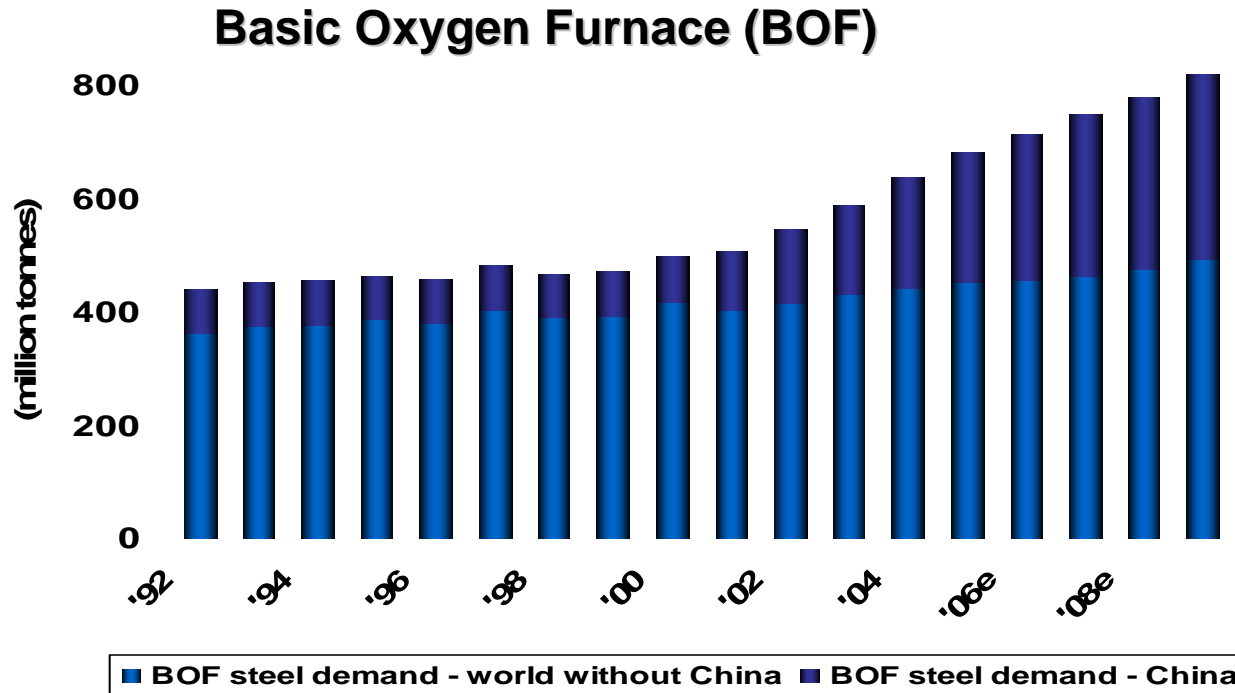
- Coal-fuelled generation in BC on radar screen
- Donkin – Xstrata Group – 450 MM T – Met & Thermal

# CDN Coal Exports & Consumption in Canada: Steel



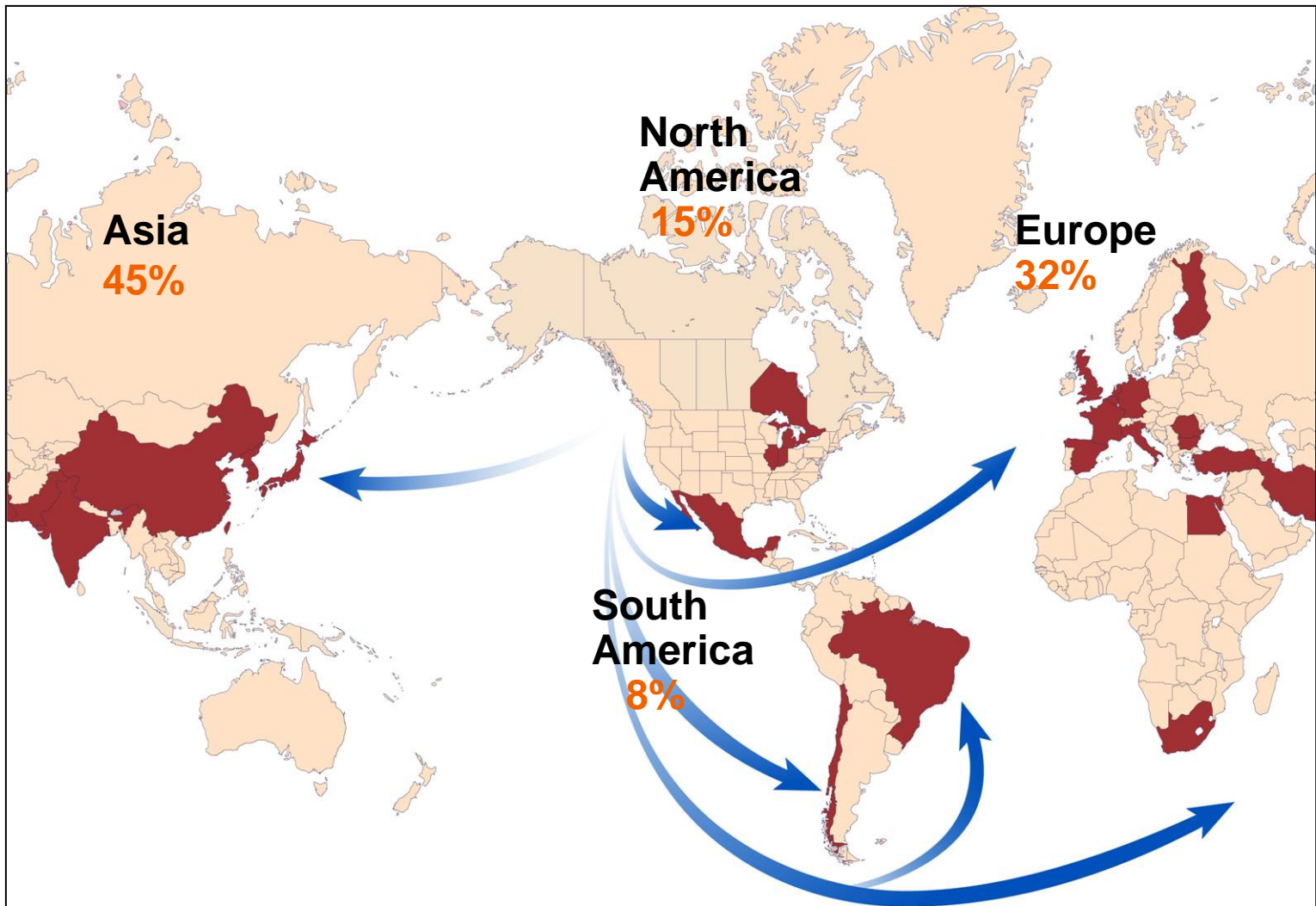


# Drivers – Global Steel Production (BOF)



- Demand for metallurgical coal is tied to demand for steel
- Growth in BOF steel production has been about 1.5% per year
- Strong growth when China added
- Economic growth created unprecedented demand for steel and raw materials

# Market Diversification





# Canadian Steel: Coal Use

- Coke capacity 3.3 million tpa
- 2004 approx 2.8 million T produced
- 2004 CDN Steel Mills consumed 4.4 million T – 23% CDN coal, rest Appalachian coal
- EVCC – approx. 1 million T; Grande Cache starting to sell to CDN Steel Mills
- Future: more Western coal – ‘security of supply’

# Coal Consumption in Canada: Cement





# Canadian Cement: Coal Use

- All CDN cement plants using coal except white cement plant on Ontario
- **2001**: 1 million T of coal = produced 13 million tpa of cement; **2003**: 1.1-1.2 million T of coal = 13.5 million T of cement
- Export to USA under pressure from Thailand, Korea and China; 35-40% down 20%



# Going Forward: **Met Coal**

## Advantages

- Strong steel Demand
- Huge Quality Coal Resources
- Safety Standards
- Environment Record – Reclamation
- Low Sulphur

## Issues

- Markets & Pricing
- Human Capital
- Infrastructure Constraints
- Regulatory Processes
- Tires





# Going Forward: Thermal Coal

## Advantages

- Huge Resource
- Security of Supply
- Stable Price
- Core Competency
- Clean Coal Technologies – Off the Shelf to gasification/coal to liquids
- Low Sulphur - Western Coals

## Issues

- Acid Gases, Hg & CO<sub>2</sub>
- Public Education
- Challenge to demonstrate technologies ASAP
- Reducing Financial risks associated with Emerging Technologies

# Summary



- **CDN Met Coal** experiencing a bit of a '*Renaissance*' in AB & BC
- **CDN Met Coal** opportunities driven by demand from China, India and Brazil
- **CDN Steam Coal** production remains consistent; some export growth
- **Steam Coal** consumption at risk in Ontario with projected plant shutdowns; consumption strong in AB, Sask, NB & NS



*Victoria, British Columbia  
September 9-12, 2006*

**[www.coal.ca](http://www.coal.ca) / [info@coal.ca](mailto:info@coal.ca)**

