

TRENDS IN GLOBAL COKING COAL MARKETS

65th Session Of The OECD Steel Committee And The Joint OECD /Malaysia/World Steel
Association Workshop On Steel & Related Raw Materials

Hotel Nikko, Kuala Lumpur

15th December 2008



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Presentation Summary

- Introduction
- Global Reserves & Location
- Key Production & Consumption Demographics
- Trade Flows
- Key Industry Issues
- Restrictive Practices
- Implications of 2008 Meltdown
- Projected Trends
- Conclusions



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Introduction

- Coal was the fastest growing fuel in the world for fifth consecutive year...
- Aggregate international trade in coal reached 917Mt in 2007
Whilst significant - accounts only for 17% of total consumed
- Aggregate Global coking coal trade increased by 10.9% to 247.2Mt in 2007
- Coking coal trade represents 27% of Global hard coal trade



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Source: IEA

Introduction

- Metallurgical Coal → Coke = Essential Raw Material for Steel
- 68% of global steel production relies directly on inputs of coal !!
- Approx 600 MT of Coking Coal & Pulverized Coal Injection coals used in global steel production - 12% of aggregate hard coal consumption worldwide



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Sources: IEA & World Steel Association

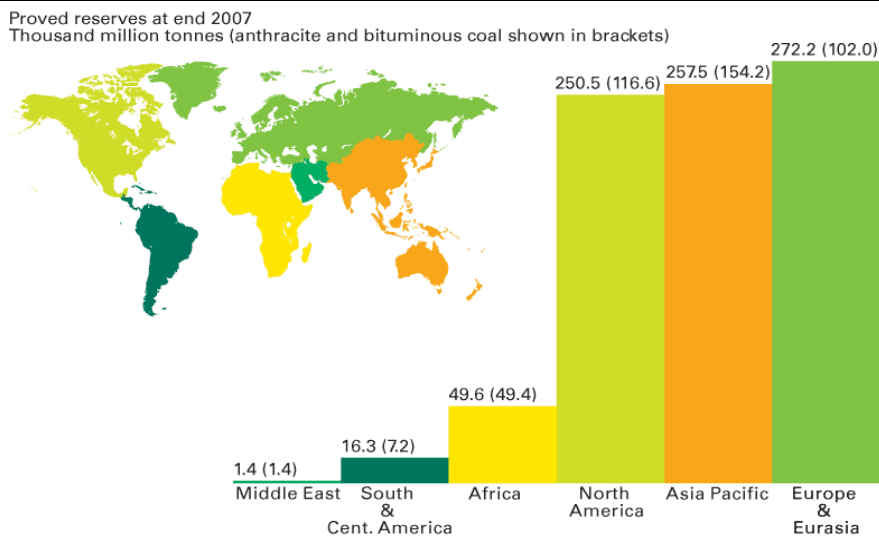
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Proved Coal Reserves (End 2007)



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Source : BP Statistical Review of World Energy 2008

Global Reserves & Location

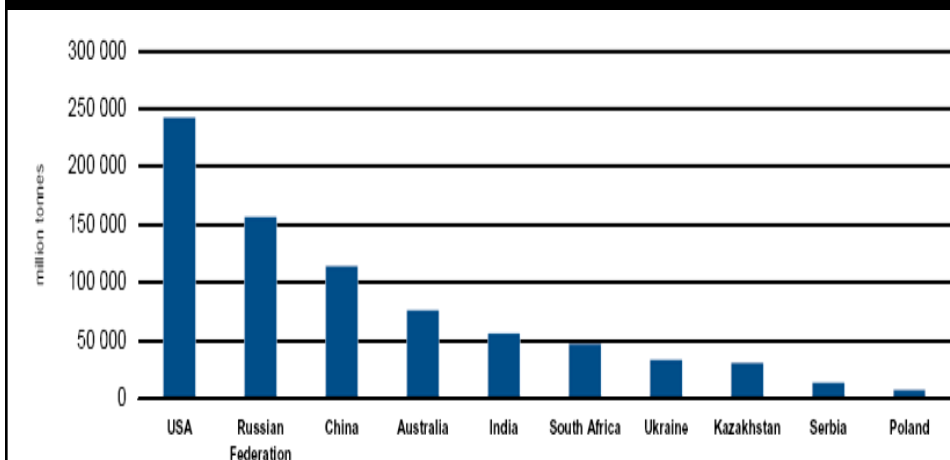
- Proven Global Coal reserves approx 847.5 billion tonnes (2007)
- Proven Coking Coal reserves worldwide approx 430 billion tonnes (2007)
-Adequate coal to last over 130 years at current rates of production



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Sources : BP Statistical Review of World Energy 2008

Recoverable Coal Reserves (Proved): Top 10 countries



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Source : Survey of Energy Resources 2007

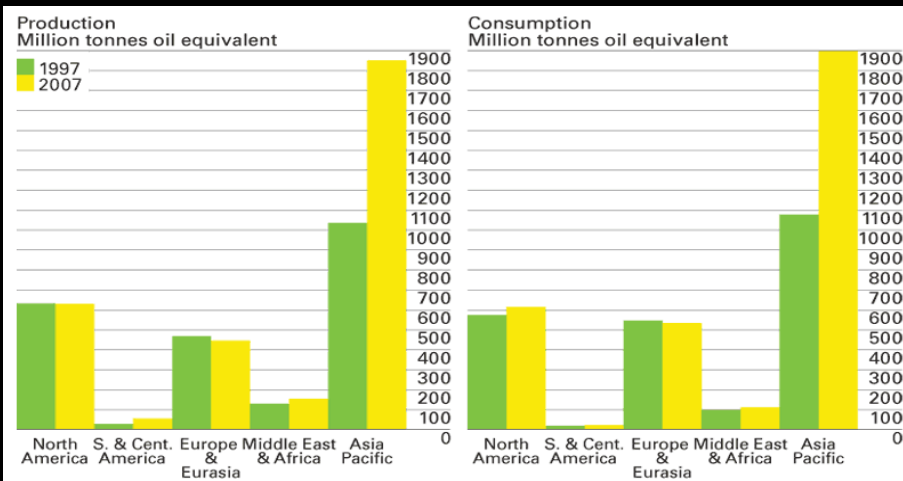
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Production & Consumption Demographics



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Source : BP Statistical Review of World Energy 2008



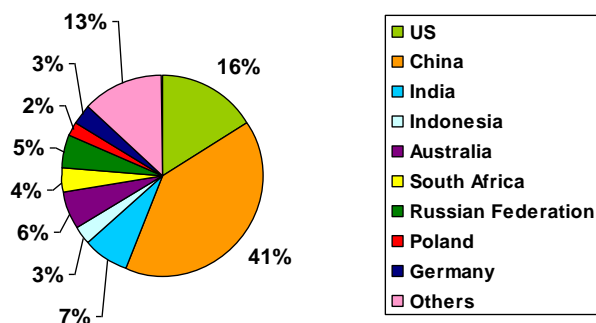
Global Coal Production



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Key Production Demographics

Coal Production - Country Wise
(As per end of 2007)



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Source : PC Research Group



Global Coal Consumption



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Coal Consumption

	2007	2006
China	1311.4	1215
US	573.7	565.7
India	208	195.1
Japan	125.3	119.1
South Africa	97.7	93.8
Russian Federation	94.5	96.7
Germany	86.0	83.5
South Korea	59.7	54.8
Poland	57.1	58
Australia	53.1	56.9

*(All Figures in Million Tonnes)



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Source : PC Research Group

Key Consumption Extrapolations

- In 2007 **Global consumption rose by 4.5% over 2006**
Far above the 10-year average of 3.2%
- Chinese coal consumption rose by 7.9% (2007)
It now accounts for more than **two-thirds of global growth**
- Indian consumption rose by 6.6%
- OECD consumption rose by 1.3%



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Source : PC Research Group

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Coking Coal Trade Flows



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Source : International Energy Agency

Major Coal Exporters (2007)

Australia	132 Mt
Indonesia	32 Mt
USA	29 Mt
Canada	27 Mt
Russia	15 Mt
PR China	3 Mt



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Source : World Coal Institute

Major Coal Importers (2007)

Japan	54 Mt
South Korea	23 Mt
India	23 Mt
Germany	10 Mt
Chinese Taipei	8 Mt
United Kingdom	7 Mt
PR China	6 Mt
France	5 Mt



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Source : World Coal Institute

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Key Industry Issues

- Low mine productivity
- Relatively poor coal quality
- Long distances between mines & markets hampering profitability



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Source : PC Research Group




Key Industry Issues

- Outdated Equipment, Lack of Safety parts
- Poor safety procedures – Accidental Gas Explosions
- Tariff Barriers – Create Unequal Playing Field

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Restrictive Trade Practices

- Lead to distortion of Raw Material Trade
- Rising cost paid by end Consumer on Finished Products
- Export Barriers :
 - Export bans
 - Export taxes
 - Export quotas
 - Export licensing restrictions
 - Captive mining schemes
 - Resource Protection fees



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Source : PC Research Group

Restrictive Trade Practices

- Foreign Investment Barriers
- **Subsidized Overseas Raw Material Acquisitions**
- Cost competitiveness & profitability leads to expand abroad by paying premiums



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Source : PC Research Group

Restrictive Trade Practices

- Restriction on foreigners from conducting surveys & mapping activities
- **Preferential policies** - low-interest bank loans, insuring of overseas projects to acquire resources



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Source : PC Research Group

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Implications of 2008 Meltdown



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Implications of 2008 Meltdown

- **Key Markets** – Real Estate Constructions, Automobiles, Industrial equipment sharply down...leading to...
-Upto 35% Drop in Projected Steel Revenues
- Pre-slowdown production levels may not return until 2011
- Coking Coal contract prices projected to be 50% lower – US \$125 to \$150 per tonne in 2009-10
-hence **Coking Coal in surplus** due to Steel production cuts



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Source : PC Research Group

Implications of 2008 Meltdown

- Global Steel production could decline up to 15% in fourth quarter 2008 & fall 4.2% in 2009
- In Long term **Met Coal is a scarce commodity** - Faces major supply constraints
- **Expect Vast production cuts**
- By 2nd quarter of 2009 Met Coal use = 560 million tonnes



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Source : PC Research Group

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Projected Future Trends



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Projected Future Trends

- Global coal demand is expected to surge 73% between 2005 and 2030, with developing countries accounting for a 74% share of this increase
- International coal trade is expected to grow by 53% from 2005 to 2030
- Coal's share of world energy consumption would increase from 27% in 2005 to 29% in 2030



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Source : World Coal Institute, IEA

Projected Future Trends

- **Australia** - World's leading exporter of coal will dominate future International Coal trade
- **South America** may be the second-largest exporter of coal worldwide in 2030, primarily as a result of increase in exports from Colombia
- **OECD coal use** is likely to continue laggard growth trend



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Source : PC Research Group

Projected Future Trends

- **Regionally**, increased use of coal in non-OECD countries will account for 91% of the total growth in world coal consumption
- **China** will become world's largest primary energy user in about five years
- **India's** coal use is expected to grow by some 3.3% per annum to 2030, more than doubling in absolute terms



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Source : PC Research Group

Projected Future Trends

- China & India with over 40% of World Population will continue to dominate Global Demand as...
- ...Pressures build on governments to **create infrastructure** for better :
 - Housing
 - Transport systems
 - Communications networks
 - Energy
 - Sanitation
 - Healthcare



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Source : PC Research Group

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Conclusions

Projected Pan Global Coal outlook depends on :

- Relative fuel prices
- **Government Policies of fiscal stimulus package to rescue economies out of slowdown**
- **Government policies on fuel diversification**
- **Climate change, air pollution & developments in clean coal technology in power generation**



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Thank You



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