

The 'commoditisation' of coal in a liberalising European energy market

Jon Dudas

Marketing Director: Energy

Verein der Kohlenimporteure- Hamburg- Jan.2004



bhpbilliton

BHP Billiton: a global footprint

Petroleum



Aluminium



Base Metals



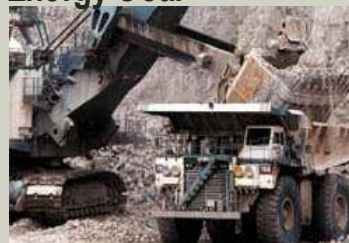
Carbon Steel Materials



Diamonds & Spec Prod



Energy Coal



Stainless Steel Materials



Coal has a legitimate commercial role in EU energy supply

- Competitive
- Low price volatility
- Abundant and geographically diverse
- Easy to store and transport
- Largest share of global generation fuels

Imported coal's contribution to fuel supply in the EU will remain relatively stable



Europe – a maturing market undergoing considerable change

- Demand declining – imports growing slowly
- Environmental issues already being priced in
- Deregulation requires risk managed approach
- Emergence of spot and derivative markets
- Energy market convergence
 - power generation growth from gas
 - strong coal/gas competition

European market for coal has fundamentally changed

The macro-environment (demand issues)

Variability in growth by region

- European import demand is likely to grow in the short term as subsidies disappear but plateau in the medium term

Threat of substitution from gas and new technologies

- Natural gas is a more economical and environmentally friendly fuel for new plant but constrained by limited infrastructure
- Alternative generation technologies/renewables limited impact in the medium term

Ageing coal-fired power plants

- Installed base of coal-fired power plants is ageing
- Refurbishing delivers only minor improvements

Impact of new environmental policies

- Global environmental pressure will have limited impact until 2005 but it is expected to increase in the longer term
- Increased generation cost of carbon emissions
- Kyoto protocol provides opportunities for carbon emissions trading



The macro-environment (supply/ competitiveness issues)

Declining prices

- Real prices of energy coal have declined cyclically over the last 20 years
- Constant increase in energy coal supply
- Success in driving down costs and expanding low cost mines

Industry consolidation

- Increased concentration of suppliers recently
- Fragmentation remains high

New entrants - China

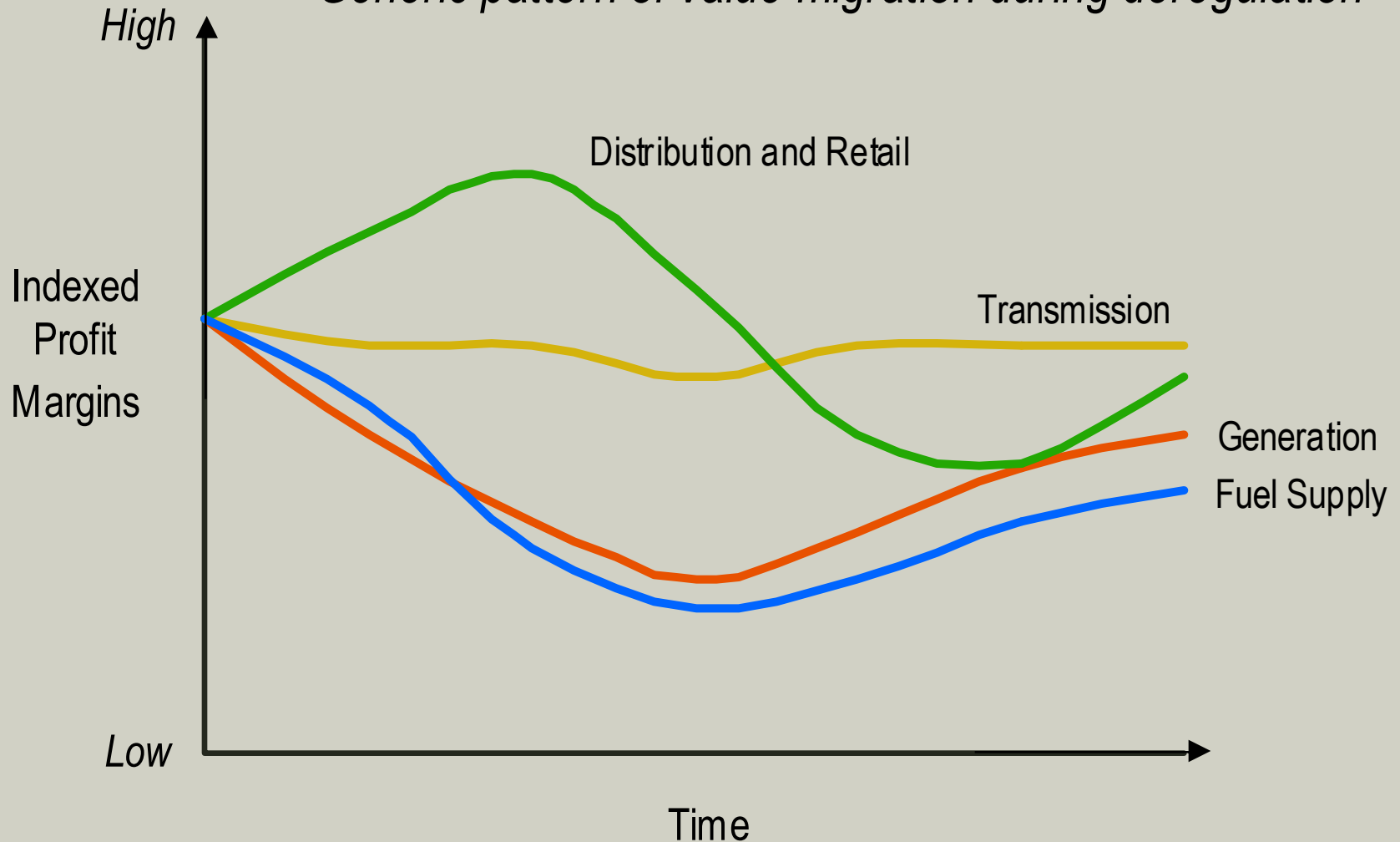
- Chinese exports are destabilising factor
- China faces infrastructure challenges
- Uncertainty of potential size and growth of energy coal exports in the medium term

Advent of paper trading

- The proliferation of integrated trading desks (utilities)
- Customers and suppliers in the same competitive space
- Total paper market could reach 500 mt by 2005

Activities that generate superior returns change over course of deregulation process

*Generic pattern of value migration during deregulation**



Note: * Germany, UK and US

The “new” coal environment

- Generators are very responsive to market signals
- Coal market has changed to a traded (physical & derivative) market

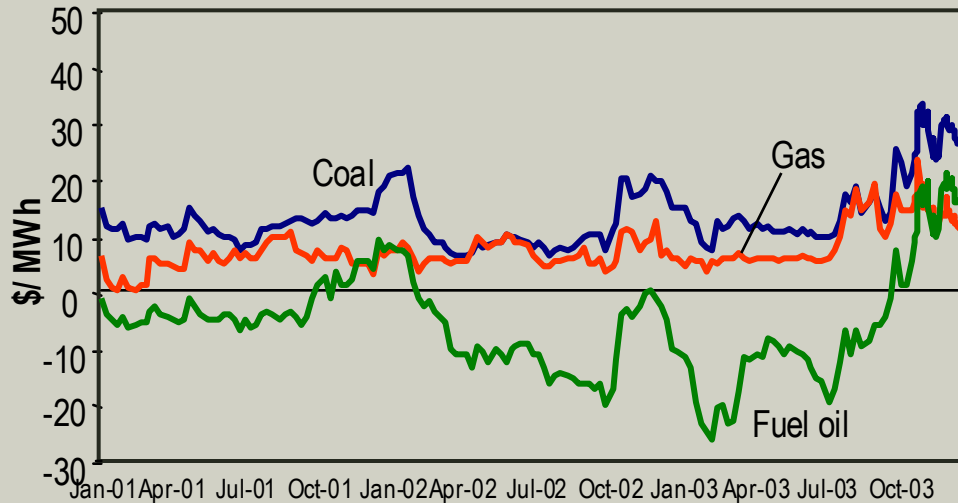
Europe (non annual)	1996: 29%	2002: >75%	2003: >80%
RoW (non annual)	1996: 20%	2002: >60%	2003: >60%

- Power, gas and coal prices are converging – being in one market increasingly means being in them all from a risk perspective
(and industry needs to assist in improving coal price discovery methodologies)

This normally implies personnel, systems and organisational changes

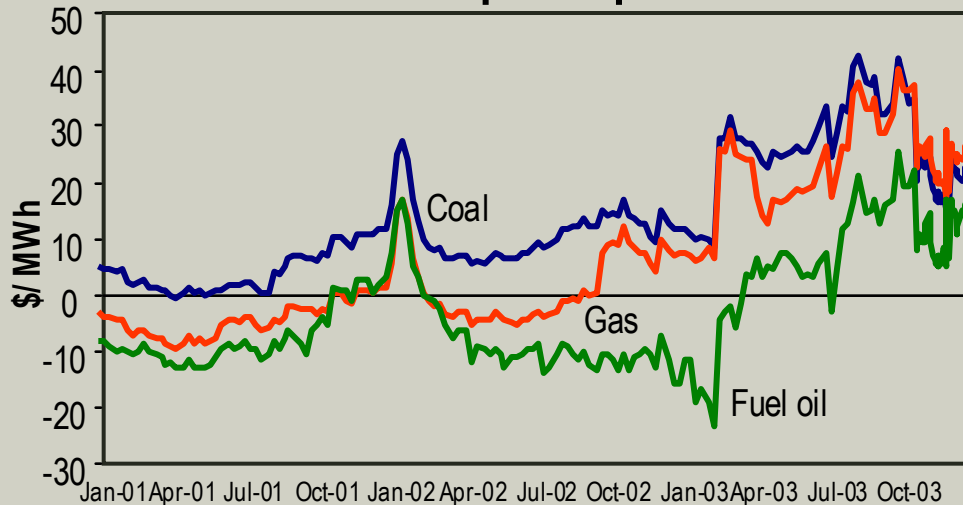
Interfuel competition

UK Spark Spread



- Gas and coal competing head on
- Deregulated gas market

German Spark Spread



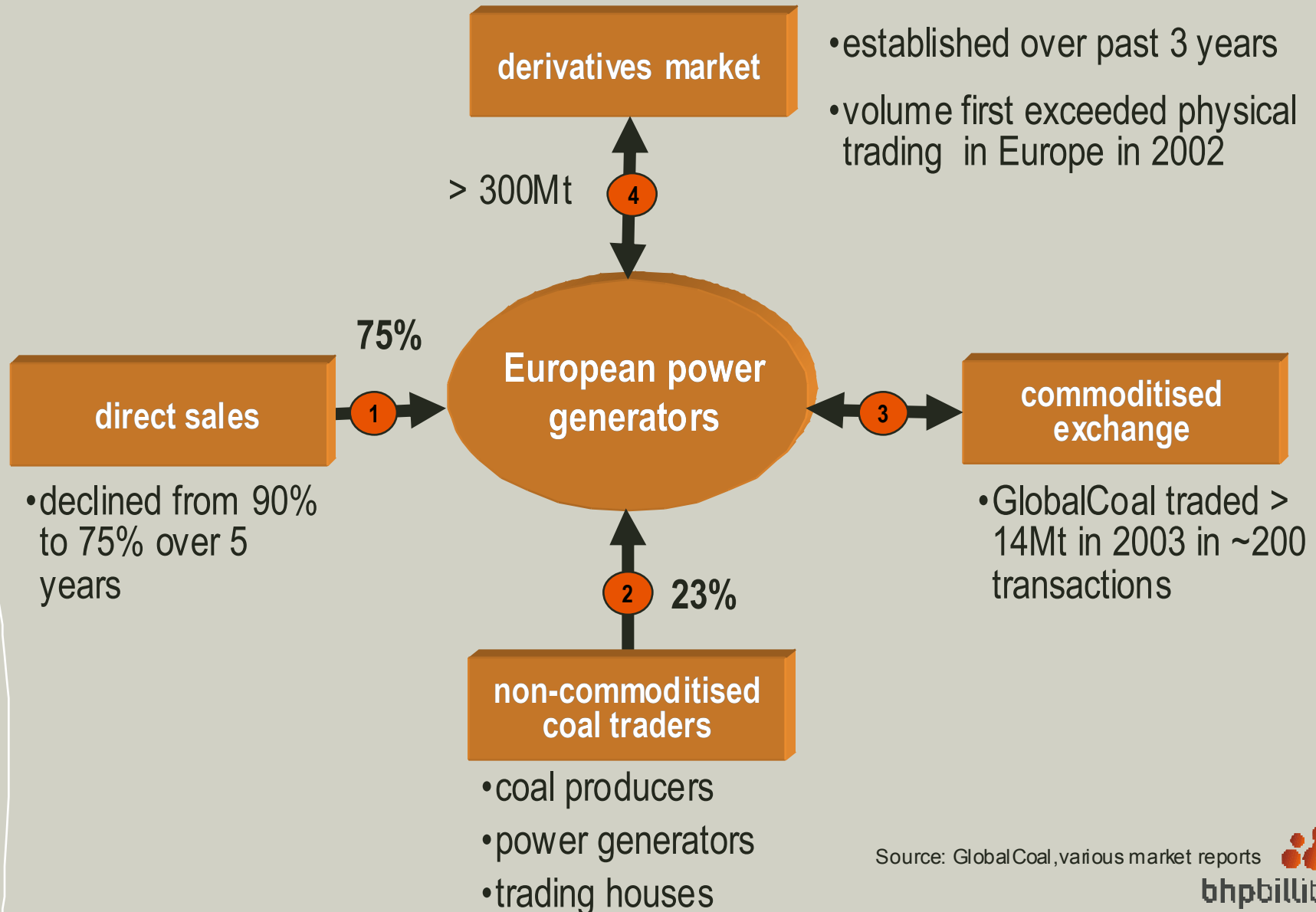
- Coal generally still favoured
- Gas market in process of deregulating

Source: Energy Argus Coal Daily International



bhpbilliton

The evolving market

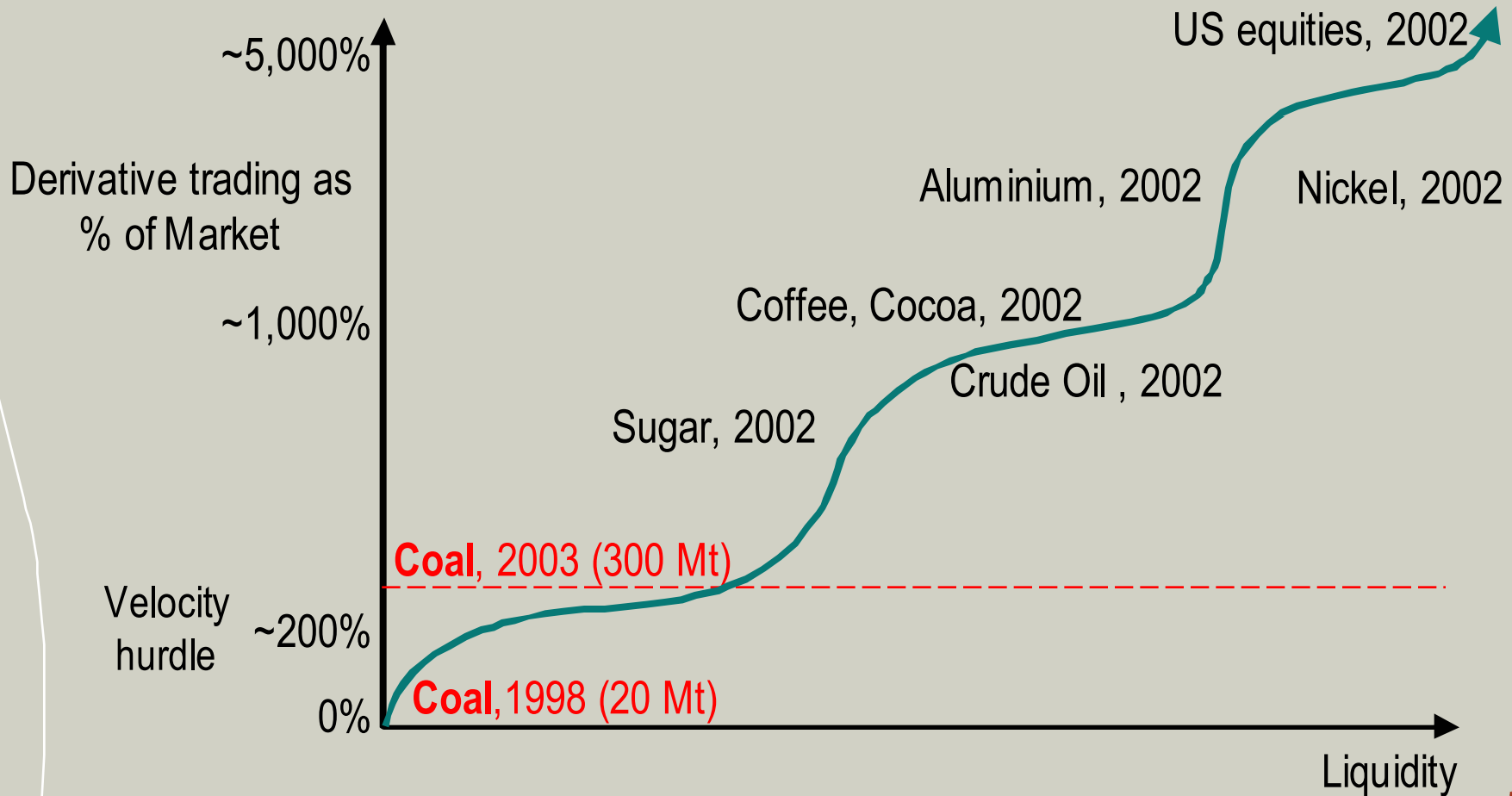


Source: GlobalCoal, various market reports



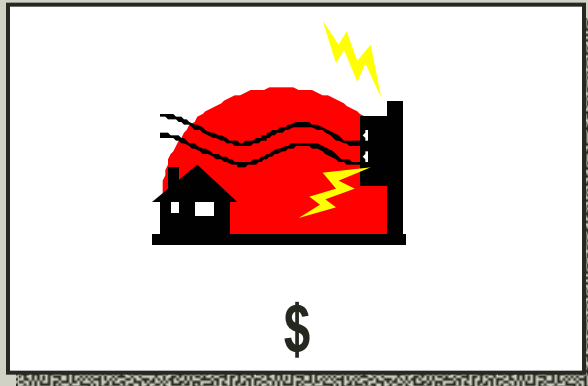
Coal derivatives breaching liquidity hurdle

Derivative Trading Volume as Percentage of European Import Market

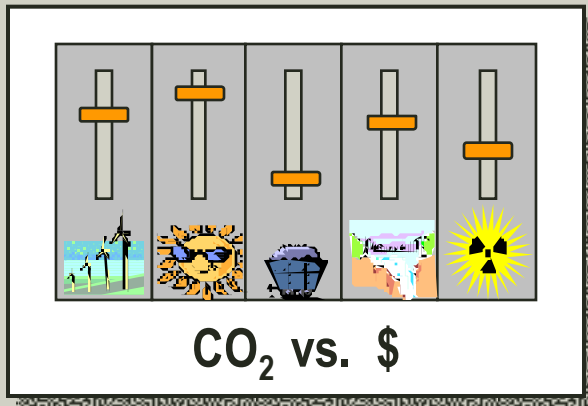


It's not just the market that is changing

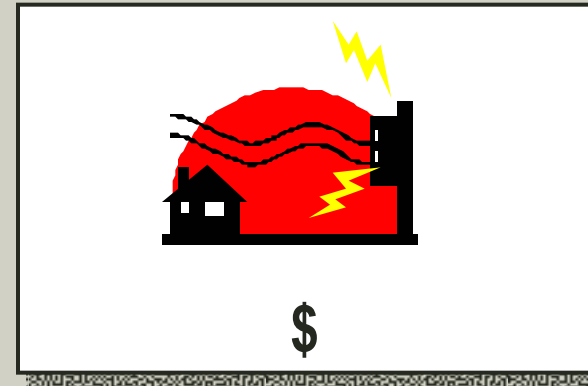
Customer A



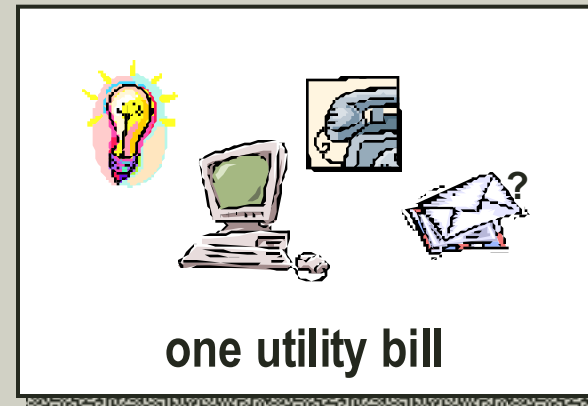
Differentiation
introduction of a new
trade-off for the
customer



Customer B



Structural Adjustment
integration of
complementors



=

≠



Key changes in coal marketing over last 3 years

- New products - index linked pricing contracts

separation of price from volume/ quality/ terms

- multi source supply contracts
- delivery to plant contracts
- coal tolling contracts

- Agents and traders only when appropriate

brand = quality/ reliability/ service/ trust.....direct relationships

- Mine- market coordination

- Skills addition - trading (physical/ paper) - structuring - risk management

Need for coal trading master agreements

- Speed up contract negotiation
- Save money..... lawyers are expensive
- Simplify the physical coal business (and costs)
- Lower barriers of entry to new market players
- Easy to integrate into master netting agreements
- Easy to integrate into management systems



Supplier needs to follow the market



“Classic”

- FOB
- LT contract
- equity coal
- fixed price

“Commodity”

- FOB/CIF
- spot
- equity coal
- + index price

“Market led”

- delivered into plant
- partnership
- freight and supply arbitrage
- equity and traded coal
- + non coal price linkages



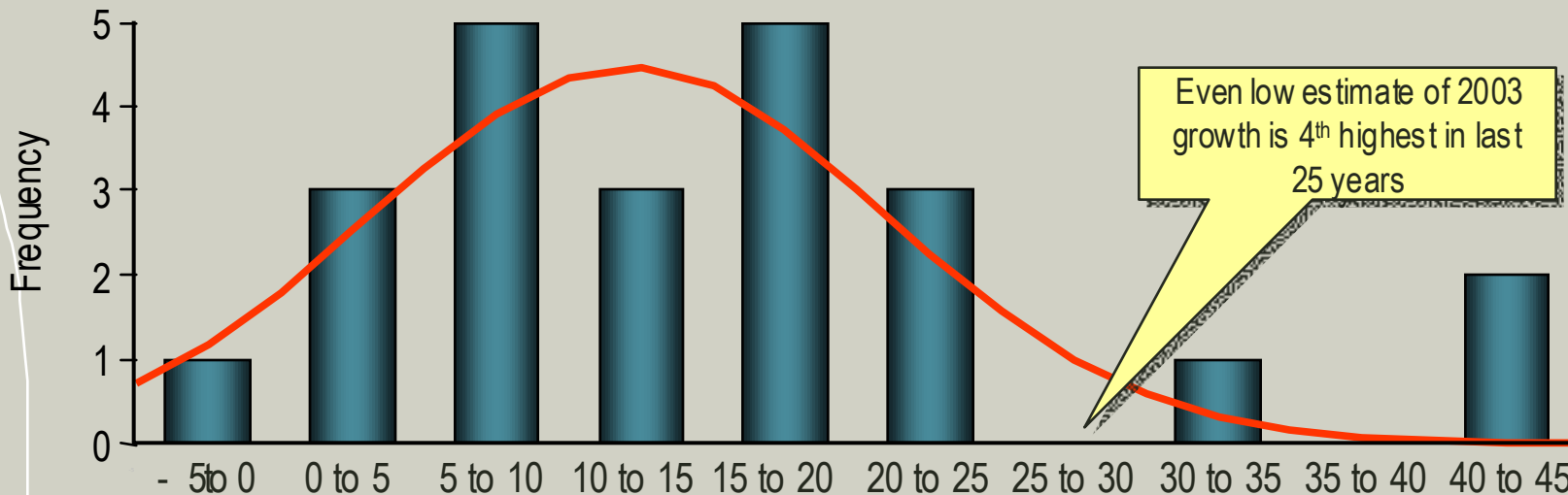
It is a unique market environment

- We are in the freight business - record freight rates mean
 - freight > fuel price for Australian product in Asia
- Huge producer and consumer currency changes
 - SA Rand, AUD, Yen, EUR, GBP
- Strong European power prices
- 'Last minute' buying behaviour in both Europe and Asia
- Unreliable supply
 - KPC strikes, China mine explosions and price majeure



2003 has been a year of unexpected high demand...

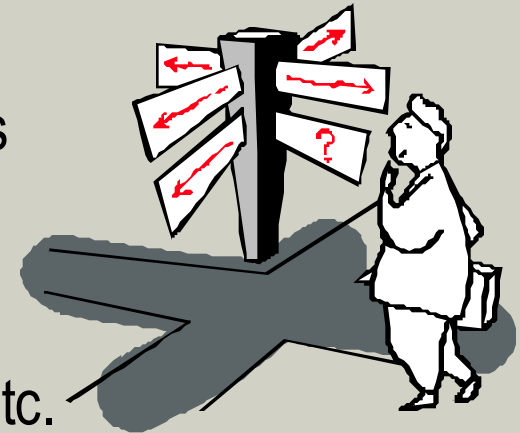
Japan – nuclear issues	+ 8 MT
Rest of Pacific	+11 MT
Europe & Med - low hydro, hot summer	+ 8 MT
Americas – gas \$5/mmbtu, domestic prod -2%	+10 MT
TOTAL	+ 37 MT



Historical global seaborne growth 1978-2003 (Mtpa)

Where does this lead to?

- Indexation to power, gas, oil, emissions indices
- Financially settled options
- Physical coal supply with caps, floors and collars
- CO₂e emissions – bundled with coal supply
- Cross commodity trading – coal spark spreads etc.
- Integrated trading desks



The coal industry's unique commoditisation process will continue



Will financial coal be accepted in Germany?

“ Wir Deutschen sind es gewohnt, in Produkten und Produktentwicklung- also in Hardware- zu denken.

Alle unseren grossen Firmen und Konzerne sind von Handwerkern oder Ingenieuren gegrundet worden.

Wir waren und sind immer stolz darauf, dass wir gute Produkte, z.B. den Mercedes hatten.

Finanzierung- darueber sprach man nicht, wie ueberhaupt Dienstleistung unterentwickelt ist, die aber weltweit im Zuge der Globalisierung immer wichtiger wird...

...Und es faellt uns Deutschen schwer, Finanzierung nun auch als "Produkt" anzuerkennen und auch noch mit anderen Hardware Produkten zu verknuepfen.... “



Hardware = ok !

Financial products?

Source: Lothar Spaeth, Chairman of the board of Jenoptik, on Jan 12th 2004:
(speech to Adenauer Stiftung - "Bonner Wasserwerk Gespraechе")