

## UNECE AD -HOC GROUP OF EXPERTS COAL

# INCORPORATING A STRATEGIC VISION FOR COAL IN THE ENERGY SECTOR

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## COAL IN THE 21<sup>st</sup> CENTURY

- Is the 'dash-for-coal' reality or a myth?
- Increased orders for coal generating plant, especially in Europe
- However, coal faces more challenges than ever before
- But, possibly options for growth in coal use, not stagnation
- But to achieve that, coal producers and users need to adopt a strategic approach to ensure the growth options are fulfilled
- Coal industry has not been renown for strategic planning to date

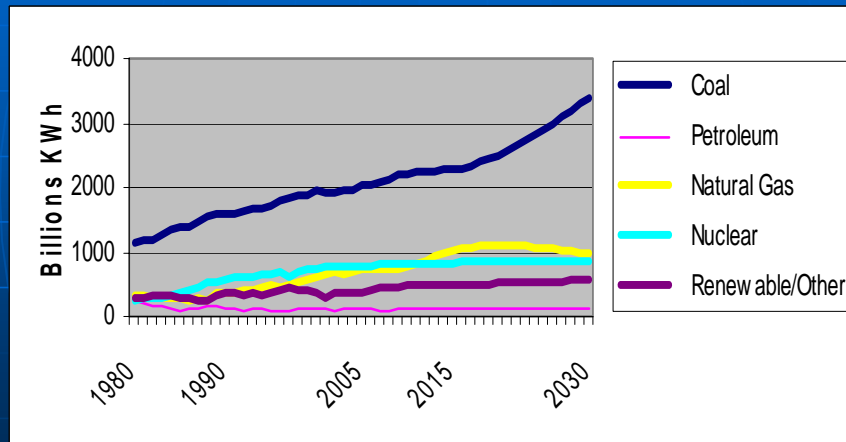
## THE ISSUES

- Things look bright but.....
- Make no mistake, coal is at a disadvantage to other fuel sources:
  - It emits twice as much CO<sub>2</sub> as gas
  - It emits SO<sub>2</sub>
  - It emits NO<sub>x</sub>
  - It emits dust
  - It emits mercury
- So why has it traditionally been so popular?

## COAL'S POPULARITY

- It is easily transportable – but gas is becoming flexible
- It is cheap – not in the last two years and emission prices will be critical
- It is produced from 'safe' countries – new deposits in Pakistan, Bangladesh, Colombia, Venezuela
- There is a diversity of supply – but in Europe restricted to Russia, SA, Colombia and Poland
- **ARE COAL'S TRADITIONAL STRENGTHS GOING TO REMAIN VALID OR, DO WE NEED NEW STRATEGIES TO EXPLOIT NEW STRENGTHS TO FULFILL COAL'S POTENTIAL?**

## COAL'S FUTURE ROLE



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## COAL'S FUTURE ROLE

- It looks rosy but there are issues to be addressed
- Will it be reality and can it be better with a proper strategic approach?
- Can coal dominate energy markets and reflect its reserve base?
- Will major disruptions (such as €50 per tonne emission prices, high freight rates) occur that can seriously affect coal's role?

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## COAL'S MAIN CHALLENGES

- **Ability to exploit new resources economically**
  - **By 2020, perhaps before, much of the world's 'easy' coal will have been mined – that is, coal that can be loaded on a ship at a cash cost of below \$20 per tonne**
  - **New resources, typically, will struggle to meet this criterion – even in Australia**
- **Maintaining or growing market share in a carbon - constrained world where traditionally strengths are being eroded**

## GET STRATEGIC

- **For coal producers, marketing has been a disposal function – mining costs are minimised by maximising production, largely irrespective of market demands**
- **Little attention has been paid to rivals – what is really happening in gas, nuclear and renewables?**
- **No new benefits of coal have emerged to counter those being eroded – but they do exist**
- **Producers and users seem prepared to watch other energy participants developing new technologies which they hope will benefit them**

## KEY STRATEGIES

- Value the benefits coal has – low sulphur, low ash etc. Can these attributes be used to create benefit?
- Should coal be branded? It used to be but oversupply rendered it irrelevant but are opportunities available?
- Move towards longer term contracts linked to key prices?
- As an industry, should we actively change the public perception of coal?
- Embrace clean coal technologies
- Understand the rivals

## CLEAN COAL TECHNOLOGIES

- Can these technologies ensure coal is a dominant force?
- How realistic are they – are we backing the right horse:
  - CO2 sequestration
    - Viable in some regions, not others?
    - Will coal benefit or lose out to gas?
    - Can the costs ever really be contained?
  - Methane use
    - Enormous potential – resources 35-240 Tcm
    - Not actively promoted outside US And China (CMM)

## CLEAN COAL TECHNOLOGIES

- **Boiler design – important, but can we exploit the low quality coals in the world?**
- **Coal gasification and liquefaction**
  - Can make use of about 9 trillion tonnes of unmineable coal
  - Move coal into new competitive area of transport
  - Extract energy safely
  - What is really being done?
- **Hydrogen technologies – coal as a feedstock?**

## FAR-REACHING STRATEGIES – IS COAL BEING LEFT BEHIND?

- **Oil and gas companies looking at energy markets throughout the 21<sup>st</sup> century**
- **Actively assessing coal markets and developments**
- **Recognise coal's potential and are looking to exploit it without being directly involved**
- **Seeking investments to allow growth of market share in the future energy markets**
- **Look beyond conventional coal production and use**
- **Develop a strong cross-commodity understanding**

## CONCLUSION

- Coal has a fairly bright future
- But, it could be brighter
- Important to develop long term strategies that rely on good analyses of rival fuel developments
- Assess clean coal technologies most important to you and your customers
- Consider strategic joint ventures that allow participation in sector most important to you
- Strengthen industry bodies that can help re-brand coal in the public's eye