**Remit (Founding Decree):**
To advise and inform the federal government and German industry in all questions relating to the geosciences and natural resources.

**Tasks:**
- Advising the federal government and the German industry in questions relating to natural resources and the geosciences
- International geoscientific cooperation and technical cooperation
- Geoscientific research and development

**Responsibilities:**

**BGR (Federal Institute for Geosciences and Natural Resources):**

**Responsibilities**

- Four Departments
- 17 Sub-departments
- Staff > 700

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**Resources and production — from where and how**
Reserves of hard coal (total 723 Gt) in 2009 of the top ten countries and Germany as well as their distribution by region.

Source: BGR 2010
Resources of hard coal (total 17,167 Gt) in 2009 of the top ten countries as well as their distribution by region.

Australia - Developments

- Coal exploration expenditure tripled since 2004
- Current and future main hard coal producing areas are/will be Queensland and NSW
- New/renewed exploration in south, west and northwest Australia
- Pushing of CBM/GTL projects
- Intensified research in the fields of CTL/UCG/GTL

Sources: ABARE/ABARES, Department of Resources, Energy and Tourism, Geoscience Australia 2010/2011
China – Development of Coal Production

Rest of China

Xinjiang

~ 39% ~39%

Total Resources: 5,570 Gt (Third Chinese Coal Assessment in 1997)

Inner Mongolia

~ 22%

Coal production 2000
Coal production 2005
Coal production 2010 (preliminary)

Xinjiang

39 Mt

2.8% 1.9%

Inner Mongolia

23.7% 23.7%

26.5% 22.5%

559 Mt

24.6% 10.8%

Shaanxi

135 Mt

355 Mt

2.8% 6.4%

Shanxi

246 Mt

1 Mt

24.6% 6.4%

Sources: Tex Report, Xinhua, CNACG, Chen Qui
USA – Development of Coal Production

- Powder River Basin: ~44% of U.S. coal production
- Appalachian Basin: ~70% of U.S. coal production
- <2% in 2009 (in 1970 ~32% of U.S. coal production)

Sources: USGS, EIA 2010

Advanced projects:
- New Players in southern Africa: Mozambique, Botswana (?)
  - Mozambique: Benga Coal Project
    - Australian Riversdale Mining Ltd. (Rio Tinto) (65%) and Indian Tata Steel (35%)
  - Botswana: Several early exploration stage projects in the eastern part of the country.

New Player in Asia: Mongolia

Several advanced projects and dozens of early exploration stage projects especially near the Chinese border.

Tavan Tolgoi deposit:
- thick seams,
- low strip ratios
- good coal qualities

(South Gobi desert)

Challenges:
- infrastructure
- workforce
- climate, water

Sources:
Peabody Energy 2010, BGR 2010

Summary

› Since 2004 the global coal exploration was pushed by high coal prices and provided very promising results. A lot of new coal mines came and will come on stream in the next years in traditional and as well complete new hard coal mining regions.

› From our perspective the geological availability of coal will only be a minor constraint for the future coal supply. The main challenge is the increasing spatial distance between the production and the consumption of coal. This aspect is related with huge investments in infrastructure in new mining regions.

› Alternatives like `coal by wire´, coal derived gas and liquids from underground (CBM, UCG) or above ground facilities might ease the physical coal transport problems. Nonetheless such alternatives need large investments and/or as well a lot of R&D.

› Especially in highly industrialized countries the public acceptance of coal is a serious issue which might affect coal consumption in several countries.
Thank you for your attention!

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