



Carbon Sequestration Leadership Forum

Paris, 26 - 28 March 2007

***IEA / CSLF / G8
Cooperation***

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G8 - Gleneagles Communiqué July 2005



“We will act with resolve and urgency to meet our shared multiple objectives of reducing greenhouse gas emissions, improving the global environment, enhancing energy security and cutting air pollution in conjunction with our vigorous efforts to reduce poverty“



General Itinerary

- **Finish 2008 (Japan G8-summmmit)**
- **Interim reporting to G8 summits**
 - ◆ **2006 Russia**
 - ◆ **2007 Germany**

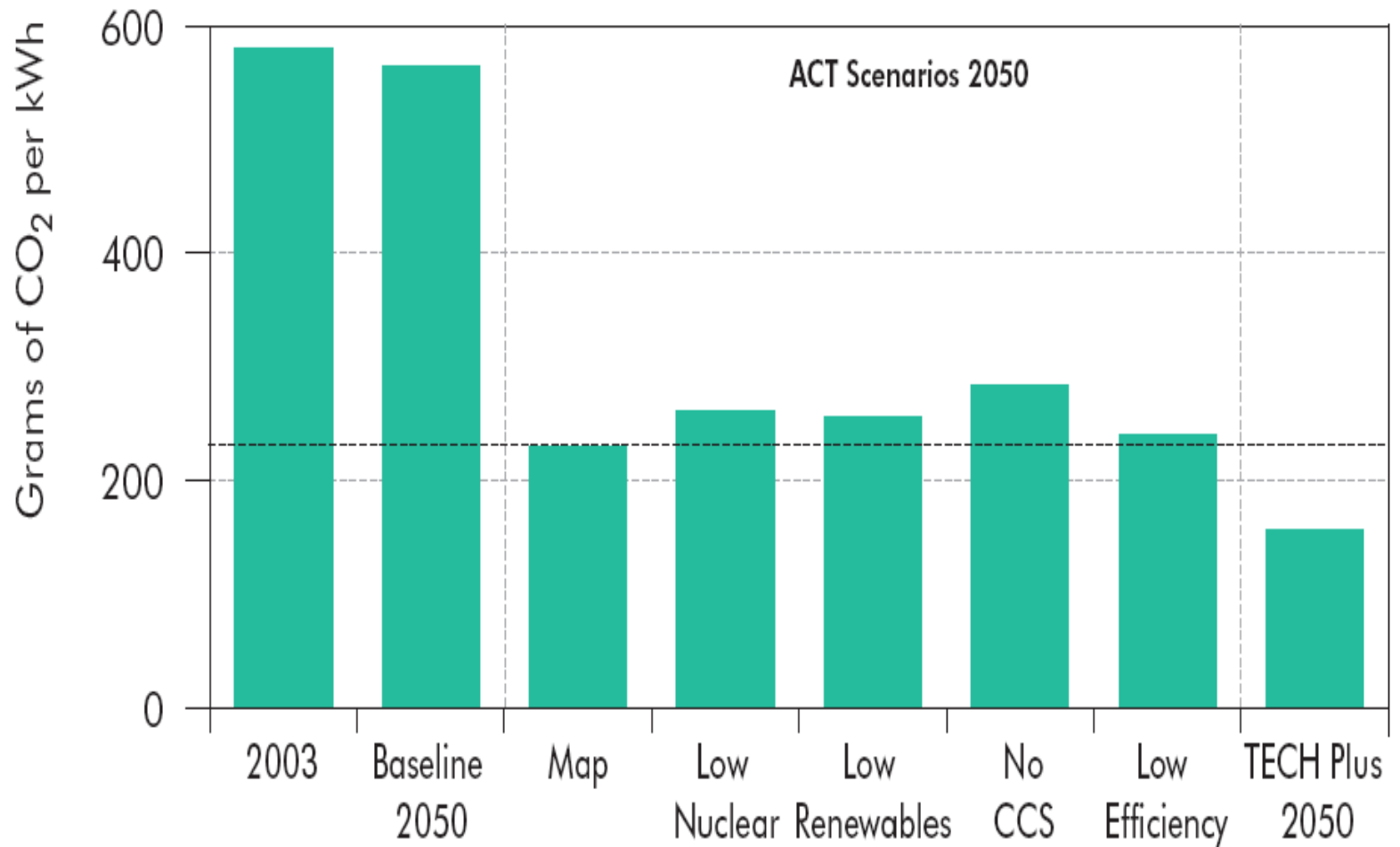
Accelerated Technology Scenarios (ACT)



- **Contributions to reduction of CO₂ emissions in 2050 compared to baseline scenario**

- 31-53% Energy efficiency
- **20-28% CO₂ capture and storage (CCS)**
- 11-16% Fuel switch
- 5-16% Renewable energies (electricity)
- 2-10% Nuclear power
- ~6% Bio fuels
- 1 – 3% Other technologies

CO₂ Intensity in Power Production





Cleaner Fossil Fuels

- **Global database**
(IEA CCC, mid-2007)
- **Report on best practices in operation**
(early 2008)
- **Series of case studies on recently constructed plants**
(IEA CCC, mid-2007)
- **Prospects of upgrades and replacement** (early 2008)
- **Potential of future developments and outlook** (early 2008)
- **Input to conferences:**
 - ◆ G8 expert workshop on clean coal, Leipzig, 6-7 March 2007
 - ◆ Global CCT Conference, Sardinia, 15-17 May 2007
 - ◆ Regional workshops (2007/2008)

Final Report to the G8 in mid-2008



Cleaner Fossil Fuels

Report on prospects of upgrades and replacement of coal-fired plants in major coal using economies
(85% of global coal demand covered)

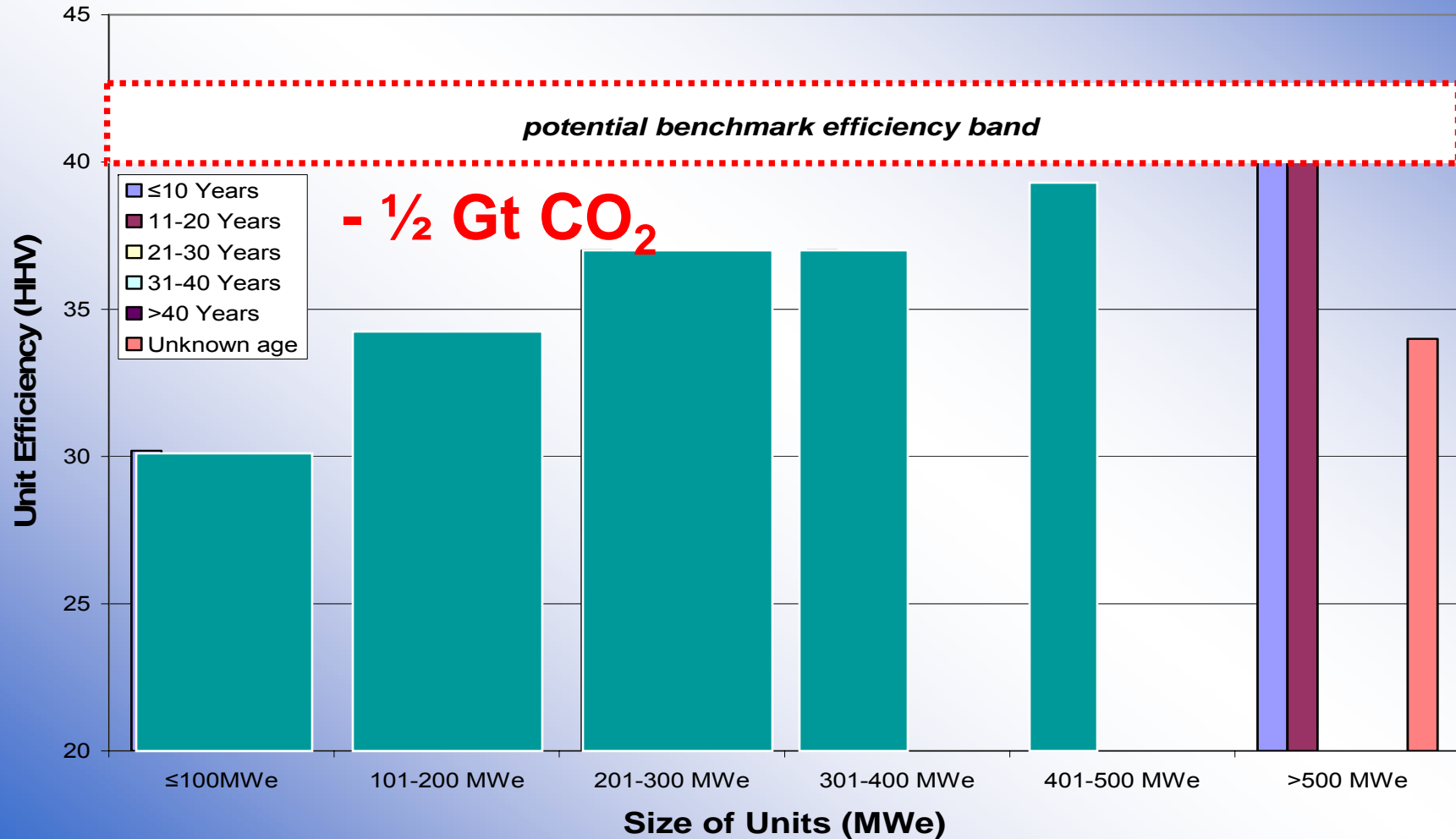
- The likely number of units and capacities that might require upgrade or replacement to bring them at par with benchmark
- Necessary investments
- Barriers to such upgrading or replacements
- Policy measures required to overcome the barriers
- Potential reduction of energy consumption and CO₂ emissions from such upgrading or replacement
- Policy recommendations

This work is based on IEA CCC database, VGB publications, EU-IPPC, prior work by DTI and Dutch government, and information sourced from Utilities in the target countries



Preliminary observations

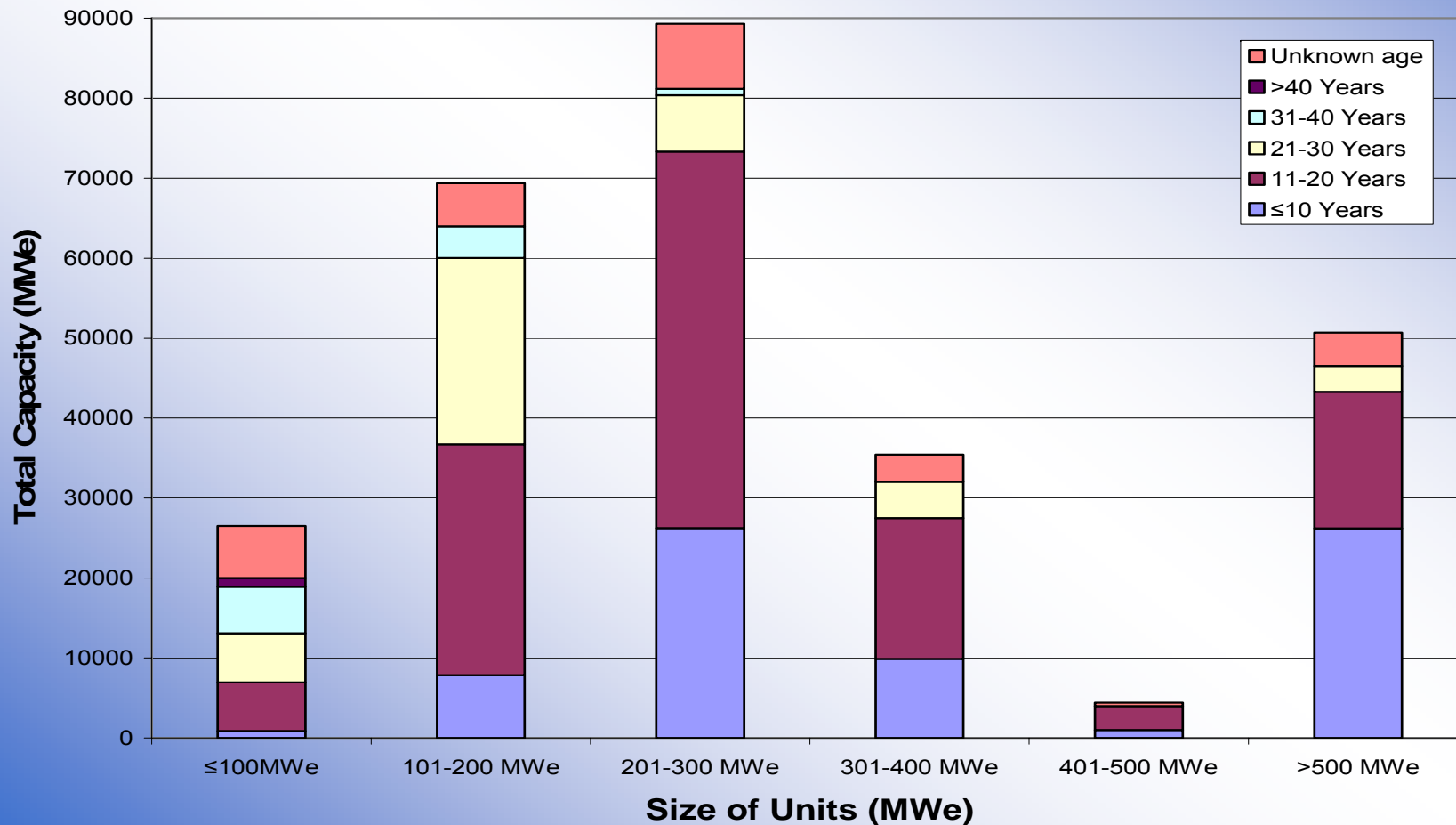
Efficiency, Age and Size of Operating Coal-Fired Units in China





... preliminary observations

Capacity, Age and Size of Operating Coal-Fired Units in China





CO₂ Capture Readiness

- Engineering and cost study on capture ready plant (IEA GHG R&D Programme);
- Report on policy instruments and incentives for capture ready plant (IEA Secretariat);
- Coordination with the CSLF
- Involvement of developing countries
- Dissemination efforts



Workshops on Near-term Opportunities for CCS (1)

Coordination with the CSLF

Involvement of developing countries

- **Goal: To accelerate the development and commercialisation of CCS**
- **Policy, technical and commercial issues – report to the G8 with specific recommendations**
- **Governments, private sector, NGOs, R&D organisations**



Workshops on Near-term Opportunities for CCS (2)

Three events:

- **Issues Workshop (San Francisco)**
22-23 August 2006
- **Assessment Workshop (Norway)**
21-22 June 2007
- **Recommendations Workshop (Canada)**





Topics raised (1)

Issues Workshop San Francisco 2006

- Inventory of regulatory frameworks (regulators?) – assessment what worked and what not
- Inventory of current CCS activities
- Monitoring
- (Acceptable) escape rates
- Leakages
- How are failures handled?



Topics raised (2)

- **Technical standards needed (pressure etc. ?)**
- **Siting questions / geological formations**
- **Acceptable impact on aquifers**
- **Standards in other (similar) areas**
- **Public debate**



Relevant for...

- Authorisation
- Liability
- Creating value for CO₂-reduction
- International standards for safety
- Public acceptance



International Technical Document on CCS?

- Could an internationally discussed technical document (guideline?) support CCS development
- Areas of relevance:
 - ◆ Create CO₂ value – feed into international trading schemes
 - ◆ Site assessment and authorization
 - ◆ National legal and regulatory frameworks
 - ◆ International standards for safety
 - ◆ Monitoring and verification of storage
 - ◆ Liability questions
 - ◆ Provide information needed to get public acceptance



Joint IEA/CSLF Activities

1st Workshop on Legal
Aspects of Storing CO₂
Paris, 13 July 2004

Legal Aspects of Storing CO₂
1st edition

2nd Workshop on Legal
Aspects of Storing CO₂
Paris, 17 October 2006

Legal Aspects of Storing CO₂
2nd edition, available soon

