Project Finance and Methane Capture and Use Projects Asian Development Bank (ADB)



ADB Member Countries

Newly Industrialized Economies (NIEs) Hong Kong, China Republic of Korea Singapore

Taipei,China

Central and East Asia Developing Member Countries (DMCs) Armenia Azerbaijan People's Republic of China Kazakhstan Kyrgyz Republic Mongolia Tajikistan Turkmenistan Uzbekistan

Southeast Asia DMCs

Indonesia Philippines Malaysia

Mekong DMCs

Cambodia Lao PDR Thailand Viet Nam

South Asia DMCs

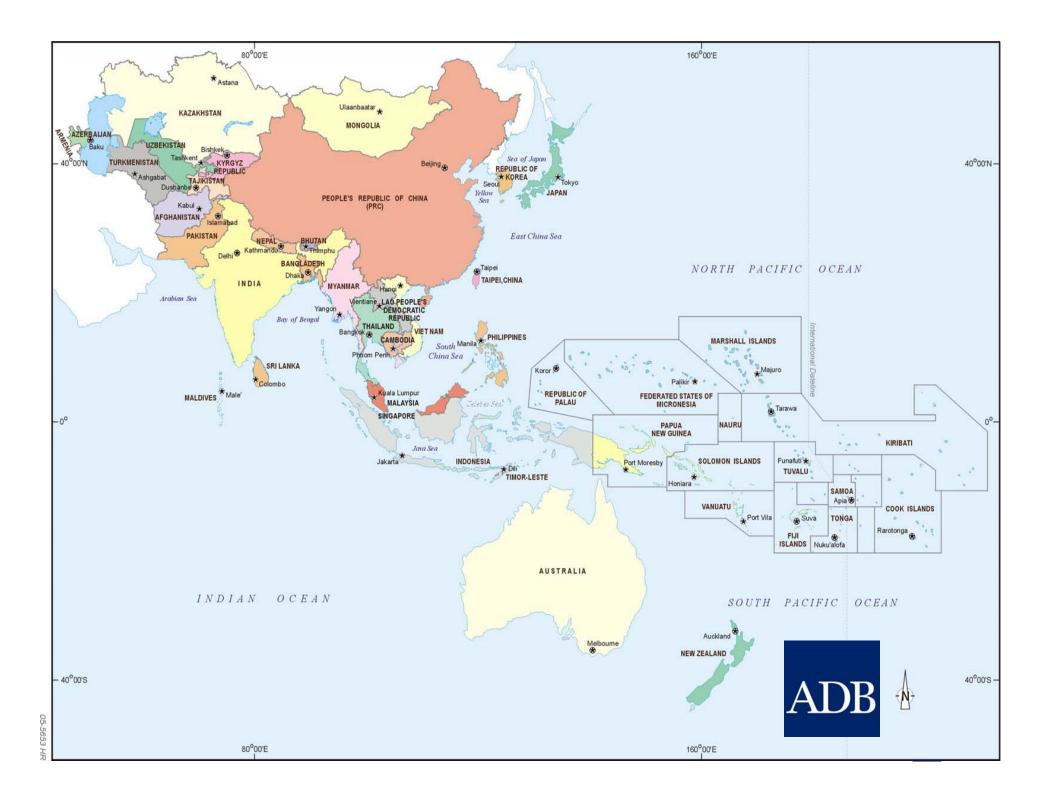
Afghanistan Bangladesh Bhutan India Maldives Myanmar Nepal Pakistan Sri Lanka

Pacific DMCs

Cook Islands Fiji Islands Kiribati Marshall Islands Federal States of Micronesia Nauru Papua New Guinea Samoa Solomon Islands Tonga Timor-Leste Tuvalu Vanuatu

Developed Member Countries Australia Austria **Belaium** Canada Denmark Finland France Germany Italy Japan **Netherlands** New Zealand Norway Portugal Spain Sweden Switzerland Turkey **United Kingdom** United States

ADB



PLANNED ADB ASSISTANCE FOR 2005

Public Sector Loans: \$6.2 billion
 Private Sector Loans and Equity: \$700 million.
 Grants: \$214 million
 TA Grants: \$177.7 million



ADB's Key Thrusts in Cleaner Energy

Environment

Energy Efficiency

Renewable Energy

Fuel Switching



ADB Interest in CBM/CMM Projects in the PRC

 Considerable potential for capture of CMM and CBM, which is a potent greenhouse gas
 Present technology barrier and potential for opening up of CBM/CMM sector is enormous
 Promotes clean power production
 Urgent need to improve miners safety
 Offers considerable potential for arranging financing under CDM



Barriers to CMM and CBM Development

- Methane treated as 'nuisance product' and emphasis on mining of coal
- Unfamiliarity with determining suitability of coal seams for increased CMM production and inefficient drainage methods
- Inexperience with CBM exploration and development of CBM surface wells
- Absence of ready markets for the methane and inadequate pipeline systems
- Unclear delineation of coal mining and CBM blocks



Requirements for ADB Support of CBM/CMM Projects

- Strong ownership of the project and clear implementation arrangements
- Detailed assessment of CBM/CMM resources and proven technical feasibility
- Well-defined scope of the project with new technologies
- Available market for the CBM/CMM or power to be produced under the project
- Financial and economic viability
- Availability of required equity and local financing



Methane Capture and ERs

Utilization of CH₄ in 50 MW power generation backing out a coal-fired plant
Project costs : about \$40 million
GHG savings over project life : 31 million tons of CO₂ equivalent

methane capture & less C intensive power

NPV of ER revenues over 10 years at \$3/ton of CO₂: about \$39 million



For More Information

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THANK YOU

