



CBM AND CMM DEVELOPMENT IN MONGOLIA – NEW POLICIES TO STIMULATE CLEAN ENERGY PROJECTS

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KEY POINTS OF THE PRESENTATION:

- ❑ Geographical setting- country Mongolia
- ❑ Why is there a need for Mongolia CBM/CMM development
- ❑ CBM/CMM Policy of Mongolia
- ❑ What is the Mongolian position for the GMF in Washington, USA
- ❑ Conclusions

GEOGRAPHIC SETTING –COUNTRY MONGOLIA:

- ◆ Mongolia is landlocked country of 1.56 million sq. km
- ◆ Country, known for its wide steppes, the Gobi desert and numerous mountains, lakes and rivers (very vulnerable eco-system)
- ◆ Mongolia's climate is harsh with long cold, dry winters and short, hot, dry summers (mining activities –from May to Oct)
- ◆ Rich Land Resources: Rangeland with grasses and forest that supports the semi-nomadic lifestyle (very rich minerals)
- ◆ Land degradation and desertification are big problem due to human mismanagement (rehabilitations of land is important)
- ◆ Water resources are very weak (Not enough water for mineral development)
- ◆ Natural resources: Coal, oil, gold and uranium

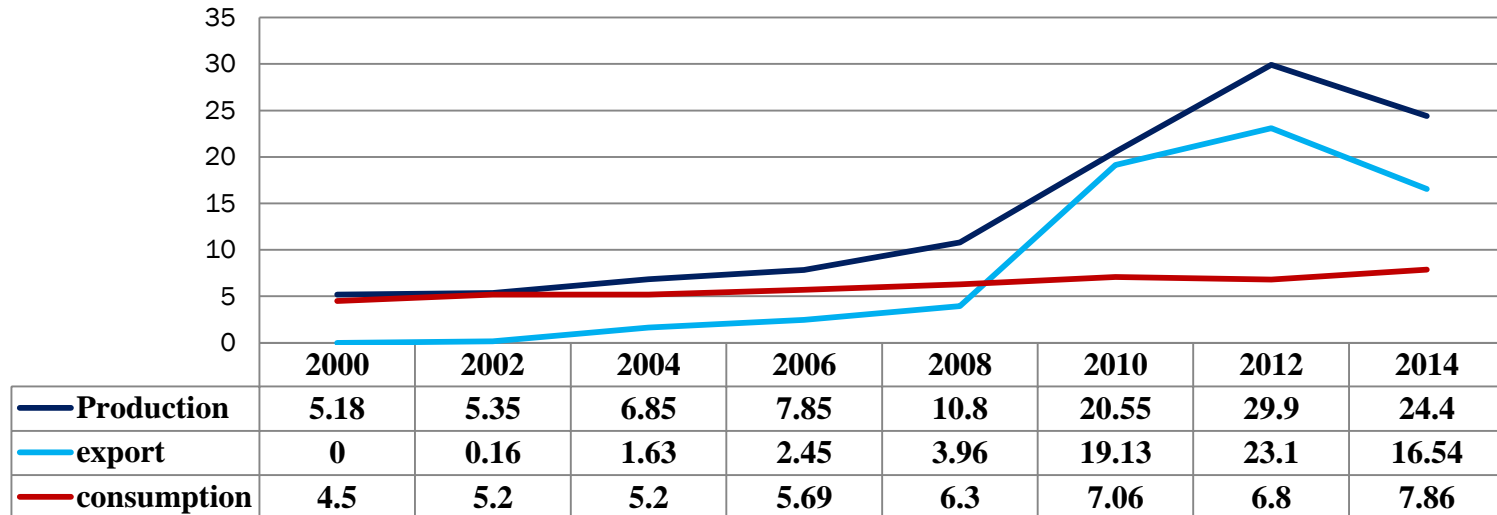
WHY THE NEED FOR CBM/CMM DEVELOPMENT IN MONGOLIA

- ◆ Mongolia has CBM/CMM resource potential. (**Mongolia can use this CBM/CMM resources to bolster energy security, reduce pollution, meet global climate commitments**)
- ◆ Energy sector emitted 60 percent of total GHG emissions.
- ◆ Total estimated CMM resources of coal basins are 3,117 billion cubic meters.
- ◆ Total estimated CMM resources for Nariin Sukhait mine is 728.98 million cubic meters, and 120 million cubic meters for Baganuur mine. (**Mongolia with support of EPA ,USA starts to estimate CMM resources in some coal mine in Goby areas**)

COAL – MAJOR PRIMARY ENERGY SOURCE

Total geological coal resources are estimated at approx. 150 billion tons, including about 24 billion tons explored. Currently, there are 29 operating coal mines.

Annual coal production, consumption and export, mln tn



WHAT IS ROLE OF CBM/CMM RESOURCES FOR REDUCTION OF AIR POLLUTION IN MONGOLIA

To reduce coal consumption

1. **97% of electricity and 100% of heating** are produced with coal in Mongolia.

Since 2000 the air pollution in Ulaanbaatar city is increasing continuously and it's become 4-5 times more than permissible levels by 2015.

THE SOLUTION: an efficient and main way to combat against air pollution is to replace coal with clean fuel like CBM/CMM.



METHANE DEMAND OF ULAANBAATAR (BY 2016)

How many CBM resources is need for Ulaanbaatar?

Type Source	Number sources	Annual Methane consumption, thousand. m3
HOBs of schools, hospitals, and public apartments not connected to district heating system	150	
Low-pressure boilers of small scaled buildings of businesses and service	1,500.0	
Stoves and wall-stoves in gers and private houses of Ulaanbaatar	270,000.0	
Combined heat and Power (CHPs) with 1000 MW	Annual coal consumption -6 mln.tn	
TOTAL		(2.3 mln m3)

Where we find 2.3 mln M3 CBM resources?

Yes, we have possibilities

Suggestion: Establishment of Mine Power generation and heating station in Nalaikh mine located 40 km from Ulaanbaatar.

PROJECT DETAILS; MINE INFORMATION

Status of mine: Active

Type of mine: Underground

Mining Method: Longwall

CBM resources: 15 m³ per tonne of coal

TYPE OF ASSISTANCE SOUGHT

Financial Assistance for drilling of boreholes in projected mine area

Technical Assistance including resource assessment

Overcoming legal or regulatory issues: Ownership of gas depends on obtaining a license according to petroleum law, separate from coal license issued according to minerals law

PROJECT FINANCES

Projected capital costs for first phase (resource assessment and test boreholes):

US\$800,000?

Projected capital costs for power project: US\$5 million

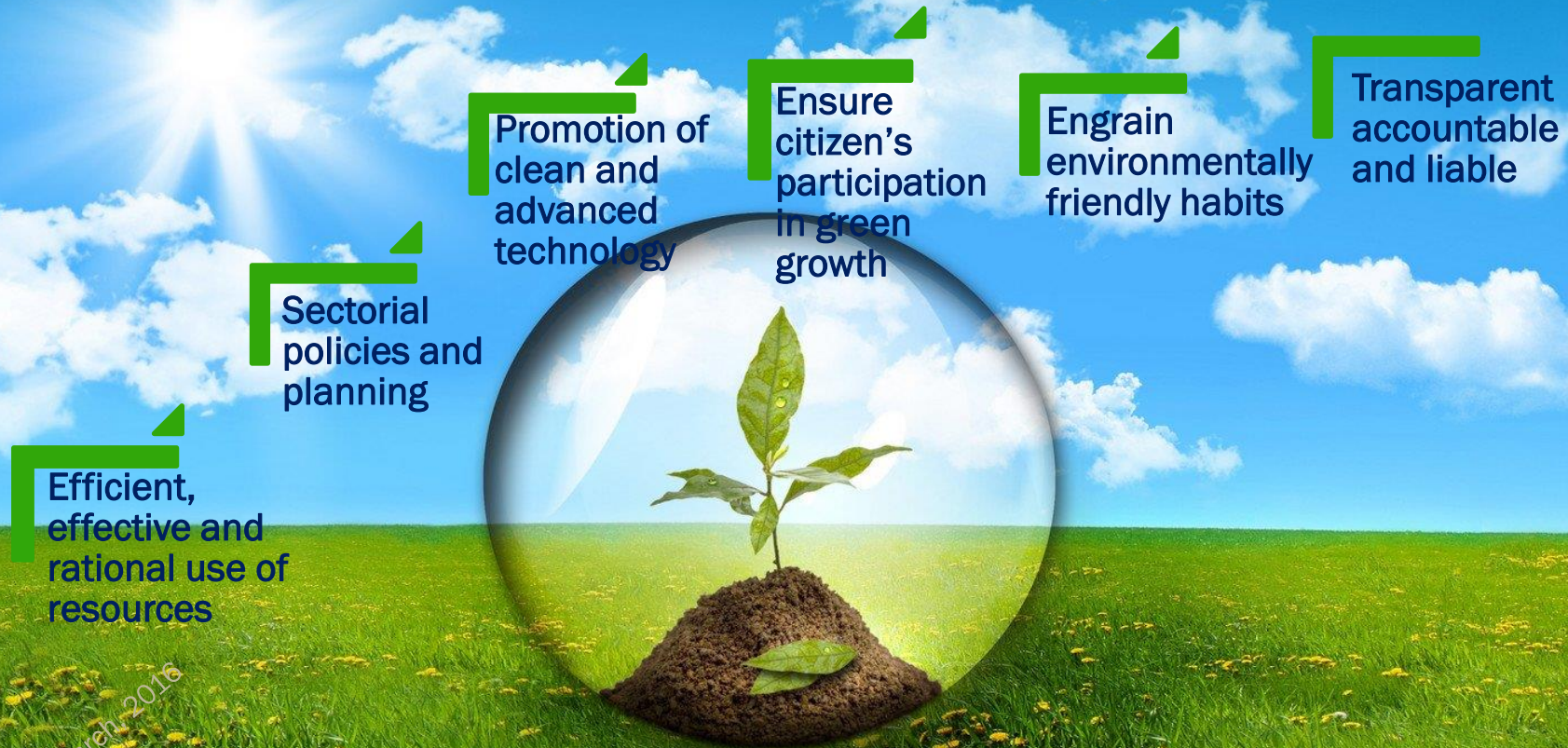
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MONGOLIAN CBM/CMM POLICY

- National Green Development Policy, 2014 (2014-2030)
- National Climate Change Action Programme, 2011 (2011-2021)
- State Policy on Energy, 2015 (2015-2030)
- National Agriculture Development Policy, 2010 (2010-2021)
- State Policy on Forest, 2015 (2016-2030)
- Law on Renewable Energy, 2015
- Law on Energy, 2015
- Law on Petroleum
- Government Resolution on CBM/CMM Development

MONGOLIAN CBM/CMM POLICY

DEVELOPMENT POLICY



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Strategic objectives of GDP in the energy sector

- This will be achieved by renewing energy and CBM/CMM production and other industrial technologies, by reducing excessive consumption and transmission losses, and by the optimization of pricing policies
- Reducing building heat losses through the introduction of green solutions such as energy efficient and advanced technologies and standards, green building rating systems, energy audits, and the introduction of incentives mechanisms
- Introduce environmental standards and norms consistent with international standards and increase the results and quality of environmental assessments while promoting competitiveness and increased productivity

MONGOLIAN CBM/CMM POLICY : THE PETROLEUM LAW

- The Parliament of Mongolia adopted the law of Petroleum , effective July 1,2014.
- The new law revised the law of 1991 in order to promote foreign investments
- The law regulates all aspects of petroleum, exploration and exploitation within territory of Mongolia. Natural bitumen, oil shale, gas-rich shale, gas sand, coal bed methane are all covered
- While the new law makes few significant changes to the fiscal and regulatory terms governing conventional hydrocarbons, the only specific fiscal incentive is a 10% royalty, instead of 15% for conventional resources.
- Product sharing contracts (PSC) grants the investors a significantly higher share of revenue than other countries with similar level of reserves (e.g. Colombia and Uganda)
- The new petroleum law states that the Government should develop special regulation on prospecting, exploration and exploitation of CMB development. According to this petroleum law, the Government of Mongolia developed and approved the regulation on prospecting, exploration and exploitation of CBM development (Government's resolution №295 dated at 7 July, 2015)

**MONGOLIAN CBM/CMM POLICY:
THE GOVERNMENT RESOLUTION (№295 DATED 7 JULY, 2015) THAT
WILL REGULATE FOR CBM DEVELOPMENT IN TERRITORY OF
MONGOLIA)**

- The aim of this resolution of Government is to regulate matters pertaining to CBM prospecting, exploration, and exploitation within territory of Mongolia
- An application to prospect for CBM must be submitted to the Petroleum authority and contract to prospect for CBM can made for period of up to three years

MONGOLIAN CBM/CMM POLICY: THE GOVERNMENT RESOLUTION (№295 DATED 7 JULY, 2015) THAT WILL REGULATE FOR CBM DEVELOPMENT IN TERRITORY OF MONGOLIA)

- Following the conclusion of prospecting work, a contractor may request to enter PSC for exploration within 60 days
- Exploration term is up to 10 years, and may be extended once by up 5 years
- CBM exploitation term can be for up to 30 years, Petroleum authority may extend in once by to 5 years
- Royalties vary from 5 percent to 10 percent of the amount extracted.

CMM DEVELOPMENT WILL BE REGULATED BY THE MINING LAW IN MONGOLIA (LAW UNDER DISCUSSION IN PARLIAMENT)

CMM Ownership	<ul style="list-style-type: none">• As of 2016, 46 of 5 coal mines are government-owned• CMM resources will be government-owned• Different types of CMM are treated differently: Surface pre-mine drainage requires CBM license (administered as oil and gas).
Conflicts and Barriers	<ul style="list-style-type: none">• CBM / CMM licenses overlapped with mining licenses
Solutions	<ul style="list-style-type: none">• Government issued notice on overlapping licenses which instructs coal and gas operators to negotiate cooperation or production agreements
Policies and Incentives	<ul style="list-style-type: none">• CBM regulated by Petroleum Law, CMM regulated by Mining Law (under development)• Subsidies for CMM utilization/CMM-generated power• Tax, fee, and royalty exemptions

MONGOLIAN CBM/CMM POLICY - CONCLUSIONS

- Legal and regulatory frameworks governing CBM/CMM should be improved and implemented. These cases can provide valuable background information in considering the policy framework required to facilitate and encourage CBM/CMM projects in Mongolia.
- Further, Mongolia should consider valuable options for developing regulations and policies that prevent ownership conflicts and mitigate perceived legal risks for project developers.
- One major concern is financial accountability. Project developers must consider the Foreign Investment Law, Company Law and General Taxation Law of Mongolia, all of which impact the legality of CBM/CMM projects and determine the course of their operation under the Petroleum Law.

What is the position of Mongolia for the GMF

How to promote GMI cooperation?

- ◆ GMI could support the CBM/CMM development experiences in transboundary areas of neighboring countries (Mongolia and China)
- ◆ GMI may pay more attention to promote human capacity building (resource assessment, project development, legal issues like ownership) in countries that do not yet have enough experience
- ◆ Support preparation, publication, distribution and awareness materials for decision makers and public
- ◆ Support the removal of different barriers (institutional as well as technological)
- ◆ Finally, I would like express thanks to the US EPA, for financial support for CBM/CMM development in Mongolia that helps to reach sustainable development of Mongolia



THANK YOU FOR YOUR ATTENTION

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