



MINISTRY OF MINERAL
RESOURCES
AND ENERGY

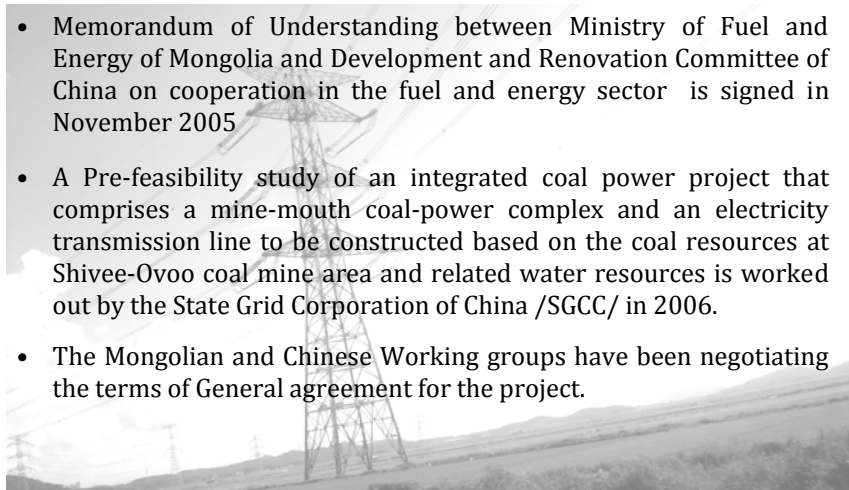
ENERGY PROJECTS IN MONGOLIA

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SHIVEE-OVOO COAL POWER COMPLEX

- Memorandum of Understanding between Ministry of Fuel and Energy of Mongolia and Development and Renovation Committee of China on cooperation in the fuel and energy sector is signed in November 2005
- A Pre-feasibility study of an integrated coal power project that comprises a mine-mouth coal-power complex and an electricity transmission line to be constructed based on the coal resources at Shivee-Ovoo coal mine area and related water resources is worked out by the State Grid Corporation of China /SGCC/ in 2006.
- The Mongolian and Chinese Working groups have been negotiating the terms of General agreement for the project.



General agreement for Power plant complex at Shivee-Ovoo

Preliminary Feasibility study consists of power plant, coal mine and transmission line.

- 1. Construction work of Power Plant**
 - 2. Extension of Shivee-Ovoo coal mine**
 - 3. Construct 630 kV DC transmission line of Shivee-Ovoo-north China power Grid**
- **The main topics for the negotiation:**
 - a/ Cooperation mode: product sharing or equity investment, consequently project financing option and
 - b/ problems related to the taxes.

SHIVEE-OVOO COAL POWER COMPLEX

- The coal-power complex will include:
 - **an opencast coal mine with 20 million tons of annual production to be constructed on the bases of the Shivee-Ovee coal mine area,**
 - **water access and supply facilities of 16 million cubic meter per year,**
 - **8 by 600 (4800) Megawatt power plant, annual operation hour -5500**
 - **Station own use 7.6 % = 364 MW**
 - **630 kV DC power transmission line with 1400 km length for 4000 MW electricity transmission system to export to the North China Power Grid and**
 - **approx. 300 MW electricity supply for Mongolian Central energy system by 220 kV transmission line**
 - **its auxiliary facilities.**
- **Construction work will take 7 years**
- **Preliminary cost estimation 28 billion yan**

'ULAANBAATAR CHP-5' PROJECT



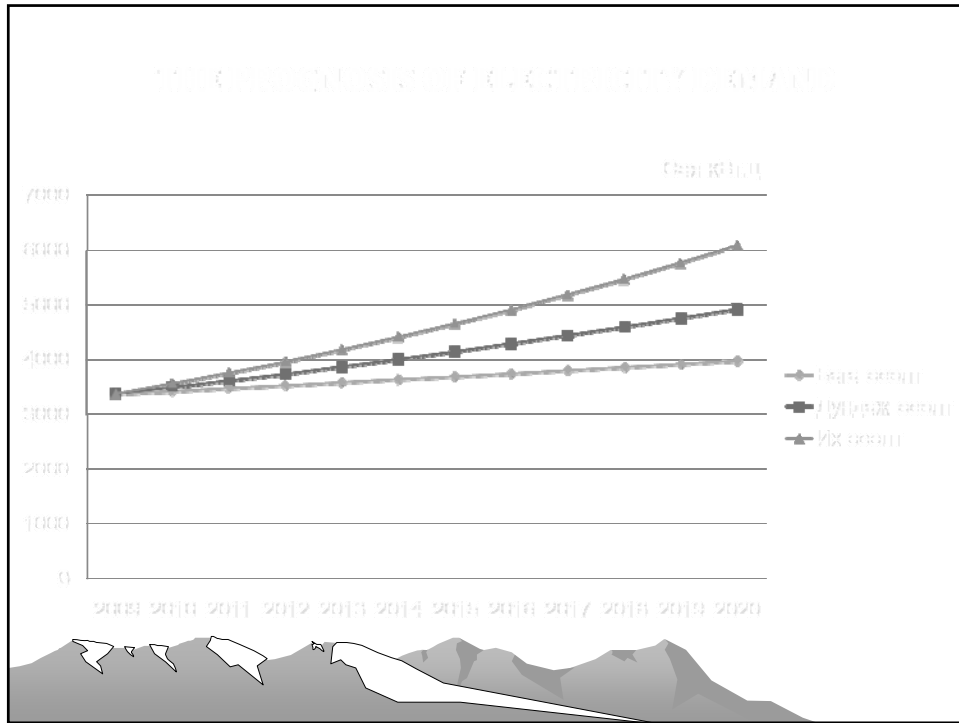
REASON FOR CONSTRUCTION OF ULAANBAATAR CHP-5

- The current heat demand in Ulaanbaatar 1555 Gcal/h and an available heat generation capacity is 1585 Gcal/h.
- The available electricity generation capacity is 690 MW and the peak load in 2010 reached 711 MW.
- The CHP-2(21 MW by electricity and 55 Gcal/h by heat) and the low pressure side of CHP-3 (48 MW by electricity and 120 Gcal/h by heat) will be out aged by 2015
- A heat demand will increase by 900 Gcal/h and a electricity demand will 700 MW by 2020 as indicated in strategic and development plans
- These factors show that there will shortage of heat and electricity capacity in UB from 2011 and necessity of construction CHP-5.



Benefits of CHP-5

- Meet increased demand of heat and electricity in UB as well as CES,
- Cover the shortage of heat and electricity capacity
- Improve operation of heat supply system in UB
- Improve dispatching of UB heat load at CHP's
- Improve quality of heat supply in UB



The progress of the project

The first tender was announced, evaluated and canceled in 2008

The MOU for preparation technical part of a Bid document for the CHP-5 project among ADB, MoMRaE, MOF was signed in 2010.

The evaluation of the tender proposal of short listed Bidders has been started in 15 June 2010.

Expected signing on the contract with selected Consultant will be in August 2010 and implementation will be completed at the beginning of 2011.

Ulaanbaatar CHP-5

- Installed electricity capacity: 300 MW
- Heating capacity: 700 Gcal/hour
- Location: Eastern side of the Ulaanbaatar
- Length of heat transmission line: 8-9 km
- Length of 220 kV power line: 3.5 km
- Length of railway: 5 km
- Approx. investment: US\$500 million



THANK YOU FOR YOUR ATTENTION!

