



Fuxin CDM Project Information Sheet

Name of project	Fuxin Coal Mine Methane (CMM)/ Coal Bed Methane (CBM) Utilization Project
Brief project description	Under the Project, CMM/CBM extraction and distribution will be improved (i.e. investments will be made in new wells, extraction stations, storage tanks and distribution networks), improving safety conditions and enabling gas to be supplied to utilization schemes. Currently the Fuxin mining area makes use of both CMM drainage and mine ventilation to maintain safe methane concentrations within the mines. Of the methane drained, Fuxin vents approximately 85% to the atmosphere. The project will reduce venting through increasing CMM drainage ¹ and surface based CBM drainage, and in turn increasing the supply of the CMM/CBM to power generation schemes and residential and industrial customers. If the quality of the gas captured is too low for customer use, or supply exceeds demand and storage capacity, then the gas will be flared. Through these measures the Project will reduce greenhouse gas emissions significantly below the baseline scenario.
Technology to be employed	<p>The proposed CMM/CBM Utilization Project at Fuxin will comprise the following components:</p> <p><u>Improved CMM extraction capacity:</u> New and upgraded extraction, storage, compression and transmission systems for delivery of gas to residential and industrial customers, and electricity generation schemes;</p> <p><u>CBM extraction system:</u> Drilling of CBM wells to extract methane, pre-drainage prior to mining and post-drainage after mining through;</p> <p><u>Electricity generation:</u> The project will install a pilot plant of 4 MW and up to a total of 12MW of modular gas engines for generation of electricity from CMM/CBM. Electricity will be used to meet approximately half of FXDUC’s internal requirements, therefore reducing the volume of electricity purchased from the North-East Power Grid. Please note that the final configuration of this scheme(s) is still under discussion between the project developer and other project parties;</p> <p><u>Residential and industrial utilization:</u> CMM will continue to be supplied to Fuxin city and a Fluoride Chemical Plant, however additional infrastructure (i.e. improved extraction, storage,</p>

¹ Note that increasing CMM drainage will reduce the methane vented as Ventilation Air Methane (VAM), (i.e. less ventilation is required) and also enables capture of the methane in a more useable form. The methane concentration in ventilation air is usually less than 1% by volume and the energy value cannot be extracted, drained CMM typically has a methane concentration of 30-40% (although lower concentrations can arise in some operational circumstances) and can be either supplied directly to consumers, or mixed with higher quality gas to improve the methane concentration even further.

	<p>compression & transmission systems) will be installed to enable additional supplies of CMM/CBM to the Fuxin Gas Company for compression in tanks and transportation to Shenyang and Qinhuangdao cities, respectively;</p> <p><u>Installation of flares:</u> If the quality of the CMM captured is too low for electricity generation and utilization by other customers, or supply exceeds demand and storage capacity, but still exceeds 25% methane concentration, the CMM will be flared, rather than vented. A state-of-the-art flaring system will be incorporated in the project in several locations.</p>
Project developer	The project owner, Fuxin Coalbed Methane (CBM)/Coalmine Methane (CMM) Development and Utilization Company (FXDUC), is a wholly owned subsidiary company of Fuxin Mining Group Corporation Ltd. (FXMGC), a state-owned enterprise (SOE).
Project sponsor	FXMGC, Asian Development Bank, and a local (PRC) development consortium led by Westlake Associates Limited.
Summary of the financials	<p>The project owner, Fuxin Coalbed Methane (CBM)/Coal Mine Methane (CMM) Development and Utilization Company (FXDUC), will finance its investment program with a combination of private equity (provided by FXDUC), an international loan (to be provided by the Asian Development Bank), and, at a later stage, the proceeds from the sale of Certified Emissions Reductions (CERs) and the revenues from the sale of gas to customers and avoided electricity purchase.</p> <p>A loan of US\$15.8 million from ADB's Ordinary Capital Resources will have a 25-year term including a grace period of 5 years, an interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and a commitment charge of 0.75% per annum.</p> <p>The Fuxin project is one of the sub-components of the Liaoning Environmental Improvement Project. The loan for the Liaoning Project was approved on November 25th 2004, for a total amount of US\$70 million, from Ordinary Capital Resources. The ADB project evaluation process started in 2003 and evaluation of the CDM eligibility of the project was also conducted during this time by staff now working as part of the ADB's CDM Facility. The CDM Facility supports the ADB's Operational Departments in the identification, development and implementation of CDM projects across member countries in Asia.</p>
Location of the project	The Fuxin CMM/CBM Utilization Project will be developed in the Fuxin mining area, in the west of Liaoning Province, in North East China. The Fuxin mining area covers the Wulong, Liujia, Wangyingbei, Wangyningnan, Qingehemen, and Aiyou mines.
CDM Project Status	<p>The draft Project Design Document, New Baseline and Monitoring Methodologies have been submitted to the CDM Executive Board and will be reviewed at the April 2005 meeting of the Meth Panel.</p> <p>Host Country Approval application will be submitted in May 2005. Approval is expected to take up to 3 months.</p>



	Registration with the CDM Executive Board is anticipated by end 2005.
Delivery of credits	
Earliest project start date	2006
Expected first year of CER delivery	2006 ²
Project lifetime	21 years
Project crediting period	7 years, renewable up to a maximum of 21 years
Credits available for contracting	<p>The current PDD states that there will be emission reductions of around 5 million tCO₂e in the first crediting period 2006 – 2012. Contracting for this amount will depend on purchaser interest and terms.</p> <p>Approximately 500,000 – 700,000 tCO₂e per annum available in second crediting period 2013 – 2019.</p>

² The first credits are expected from the installation of flares, which will occur once the project is registered as a CDM project.