CMM Investment Project Development
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Project Identification Form

THE ORIGINATOR OF THIS FORM HAS ASKED THAT THE COMPANY AND MINES NOT BE NAMED PUBLICLY; HOWEVER, INTERESTED PERSONS MAY INQUIRE TO THE UNECE AND THE UNECE WILL THEN CONTACT THE COMPANY. Please direct any inquiries to Clark Talkington, UNECE Sustainable Energy Division, at +41 22 917 2671 or clark.Talkington@unece.org.

This Form is intended for early identification of technically and financially viable projects in the field of CMM capture and use. It is designed to help the specialists reviewing it to understand the context, key issues and requirements of your project.

Definition "Owner/Project Sponsor": a person or entity that initiates, owns and promotes the project and has decision making power on borrowing or equity distribution.

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Energy / Heat production

Project name: **VAM project**
The project includes four mines in Russian Federation

Mine:
Annual coal production (t): **9 mln tn**
Proven reserves (t): **298 mln**

Owner: *Please inquire*
Owner's representative:

Address:
City:
Country:
E-mail:
Telephone:
Telefax:

Amount of CH_4 ventilated (m^3/h), 100% methane:

2006	18 528
2008	17 214
2011	12 336

Percentage CH_4 % in volume: **100%**
Average CH_4 %: **0,4%**
For how long (y): **up until 2025**
Methane emission from the ventilation systems in 2005 was approximately 153 mln. m^3 (100% methane) with average methane concentration in the methane-air mix from 0,3% to 0,7%

Amount of CH_4 drained (m^3/h):
Percentage CH_4 % in volume (m^3/h):
of which more than 30% CH_4:
For how long (y):

Type of boilers to be installed, or modified (heat only, co-generation):
Ventilation air methane is not consumed in any form. Catalytic oxidiser to be installed to utilize methane flowing through ventilation system
Installed capacity (MWt):
Estimated heat production (MWh):

Type of generator(s) to be installed:
Installed capacity (MWe):
Estimated electricity production (MWh):

Main end-users/customers (number, private/commercial, etc.):
Mining company (own purposes)

Future plans for drainage
Improved degasification system

Legal status of owner/sponsor (mark appropriate box):

Public Company		**Private Company**	To be privatised	Other (specify):

Energy Demand

	Uses (heating shafts, machinery etc.)	**Annual use**							**Today's price**
		2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	in Rub
Heat	Heating: shafts, buildings			407	373	383	383	383	675/MWh
Electricity	Mines								1,35/kWh

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Proposed Measures and Financing

Object	**Measure**	**Estimated CH_4 amount used** in mln m3/y	**Estimated investment** in Rub	**Estimated savings** in Rub/year
Investments in VAM utilization equipment Investments in ventilation system to increase throughput capacity of main ventilator		120		
Total investments and savings				

Lifetime of the project	Proposed start of implementation	Expected implementation time
10+ Years	Jan 1st 2008 (day/month/year)	1 Years Months

Preliminary Financing Plan

	Type (in kind/equity/cash)	**Rub**	**% of total**	**Interest rate %**
Owner (Sponsor)'s own resources				
Equity capital funding	Cash	60 mln	50%	13%
Loan from local banks				
Loan from international sources				
TOTAL				

Comments: due to the lack of knowledge regarding potential capital expenditure required for the project and operating costs associated with the project, financial part was left blank.

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General comments and additional information

Brief project description

Project requires installation of active Catalytic oxidisers to produce heat through catalytic process applied to ventilated air-methane mixture. The project would generate around 5-10 mln tn of CO_2 equivalent based on the amount of methane emitted into the atmosphere in 2005 and projections to 2011

The nature of the market for the enterprise's products or services

(Briefly discuss the nature of the market, its location and size, type of consumers, financial position of buyers, advantages of your product or service over the competition)

The mining company produces high quality high-volatile hard coking coal that is used as raw material for steel making. Coals could be compared in quality with major Australian and US coal brands. The consumers of coal mined are metallurgical plants in Russia and abroad.

Benefits details

(Describe the benefits to the national and local economy expected from the project, covering the specific impact on: energy and environmental improvements, import substitution, job creation, productivity improvements, technology transfer)

The project would promote utilization of large quantities of methane that were previously emitted into atmosphere. This would greatly improve environmental situation in this region of the Russian Federation. Heat generated through the use of Catalytic oxidisers will be utilized to serve the mining company's internal needs. The use of new technology for ventilation air methane utilization will promote introduction of similar equipment at major Russian coal mines and provide cost savings for coal producers

(Please add additional pages if necessary)

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Summary Cashflow Analysis

All figures in Rub thousand

Year	**0**	**1**	**2**	**3**	**4**
1.Capital investment [1]					
2. Revenue [1]					
3. Energy savings [1]					
4. Other benefits/income [1,2]					
5. Operation & Maintenance cost [1]					
6. Other costs [1]					

[1] as related to the project
[2] including reduction of environmental fees, taxes, penalties, etc. and any Carbon credits

Other Financial Parameters

Taxes	Applied on	Applicable rate (%)
• profit		
• VAT		
• others		
Depreciation		