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Date : 22 June 2009
Ref. No. :JCI-CDM-C-09-052

CDM Executive Board
c/o Mr. Daniele Violetti
Secretary to the CDM Executive Board

Subject : Project Participants and DOE's Response to the Request for Review
(Reference No.2304: 73 MW Tonghua Iron & Steel Waste Gas and Heat Power Generation Project,

Dear Sirs,

Please find the attached document which shows the Project Participants' response and JCI's response to the request for review for the CDM project with the reference number 2304.

In case you have any further question or request, please let us know by phone call or Email.

Yours sincerely,

Hideyuki Sato

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Response of Project Participants and DOE to Requests for Review

Project title: 73 MW Tonghua Iron & Steel Waste Gas and Heat Power Generation Project

Reference No.: No. 2304

Project Participants: Tonghua Iron & Steel Co., Ltd.
Energy Initiative Japan Inc.
New Energy and Industrial Technology Development Organization (NEDO)

DOE: Japan Consulting Institute, JCI

***Issue 1**: The DOE shall validate the cessation of project implementation by means of credible evidence such as cancellation of contracts or revocation of government permits in accordance with EB 41 paragraph 67.*

Response of JCI

The proposed project activity is a unique independent development of the Steam Network Power Generation System (hereinafter called the System) project by using Chinese domestic technologies, idea originated by Tonghua Iron & Steel Co., Ltd., in accordance with the policy of Chinese government. However, the installation of the System had no precedent in China and thus Tonghua Iron & Steel Co., Ltd. faced difficulties in completing the System soon after the commissioning of the CCPP due to lack of technologies and empirical know-how. After the trial operation of the proposed project, the technological barriers of the Combined Cycle Power Plant (CCPP) using BFG as fuel, which is the main component of the proposed project, were found much severe and the operation had been often stopped for significant length of time due to frequent breakdown. The System requires each component (CCPP and CDQ) of the System to work together synchronously one another and the CCPP is an integral part of the System. The System cannot be completed without completing CCPP. For this reason, as the System could not work successfully and completely, the valid BFG had been often flared in atmosphere same as the pre-project situation before the implementation of the proposed project activity and valid energy could not been used effectively. Tonghua Iron & Steel Co., Ltd. and its suppliers had continuously tried to solve the problems by repairing and modifying the System by themselves only to result in additional expenses being piled up without expectancy of completion. Accordingly, the Board of the parent company of Tonghua Iron & Steel Co., Ltd. had decided to cease the development of the proposed project activity at the Board meeting held on 20 March 2006/**Appendix 1**/ and terminate the purchase contract with the company of equipment procurement/**Appendix 2**/.

JCI has reviewed Appendix 1 & 2 and confirmed its appropriateness. In addition, JCI has confirmed that as Tonghua Iron & Steel Co., Ltd. is a private company and the proposed project activity is a captive energy generation project, i.e., the facility is located within the field of the steelworks and therefore, it was predicted that the cease of the project would not affect adversely to outside of the perimeter, the power grid or public good. Therefore, government permits for cessation had not been required and also not needed legally. For this reason, no evidence of revocation of government permits in accordance with EB 41 paragraph 67 has been confirmed.

***Issue 2**: The DOE shall ensure that the project description clearly states the differences resulting from the project activity compared to the pre-project situation.*

Response of JCI

At the on-site assessment, JCI reviewed the drawings of pre-project situation and after the implementation of the proposed project activity, such as general arrangement drawing, piping drawings and etc., and conducted the site survey.

JCI has confirmed through the above action that the differences resulting from the proposed project activity compared to the pre-project situation were as follows;

1) Pre-project situation:
   All amount of surplus waste BFG and COG except being utilized in the processes of steel making plants such as blast furnace, coke oven, sintering and so on had been flared in atmosphere as waste gas. The flare system and stack was confirmed with visual check at the site.
   And the hot coke had been treated by the wet type quenching system.
2) After the implementation of the proposed project activity
   CCPP system using as fuel a part of surplus waste BFG and COG except being utilized in the processes of steel making plants and Coke Dry Quenching (CDQ) system instead of the wet type quenching system have been installed.
   In addition, the System by being linked CCPP and CDQ systems has been installed.

In the revised PDD, the project description shall be described more clearly the differences by the PP.

According to VVM version 01 paragraph 64, this process undertaken to validate the accuracy and completeness of the project description shall be described in the revised validation report

and contained the DOE's opinion.

Issue 3: *The PP/DOE should further substantiate on how they have validated the existence of: (a) barrier due to the prevailing practices, in particular, how the project activity and other power generation technologies in the steel making plants in China have been differentiated; and (b) technological barrier as it appears that installation of Steam Network Power Generation System does not provide any solutions to technical difficulties of the gas turbines.*

Response of PP

(a) In China, there are only few steel making plants installed with CCPP or CDQ at the time of the project was started, and there are no plant linking these two systems as the System.

The PP has proved the above fact by conducting a survey of the plants installing either CCPP or CDQ in the steel making plants in China, and checked whether the installed plants have the System or not.

As stated in "Technological barriers" of the PDD, the CCPP installed in the Tonghua Iron & Steel Co., Ltd. was the second BFG-fired CCPP in China after the Shanghai Bao Steel, and furthermore was the first domestically produced CCPP in China. As shown in the Table 3-1, the number of plants installed with CCPP in the steel industry of China is 6, according to the published information as of March 2007, excluding the one in Shanghai Bao Steel and the one in this plant, and all of which are CDM projects.

As shown in the Table 3-2, as for the CDQ, there can be found 13 plants having installed the technology, but the plants installing the CDQ without CDM funding are large plants with annual raw steel production of 5 million tons or over, and all of those plants below this level, like the Tonghua Iron & Steel Co., Ltd., needed the proposed project to be invested through CDM funding.

Also, from both the China's Steel Industry 2008 (2008) C-press and the UNFCCC CDM web site, there can be found no plants having installed the System.

From the above, it is confirmed that the proposed project does not fall into a Prevailing practice.

Table 3-1 Cases of installing CCPP in China

Company	Equipment specification and capacity	Manufacturer Gas turbine	Year of installation	Import/ domestic	CDM
Nanjing (Jiangsu Province)	25MW (BFG and COG)	Nanjing Turbine & Electric Machinery (Group) Co., Ltd. (licensed by GE)	2006	Domestic	Applied
Jinan (Shandong Province)	544MW (BFG and COG) 44.6MW gas turbine x 8 42.6MW steam turbine x 4	Nanjing Turbine & Electric Machinery (Group) Co., Ltd. (licensed by GE)	2003	Domestic	Applied
Chongqing (Chongqing)	CCPP (BFG and COG) 50MW gas turbine with 12MW steam turbine	GE (US)	2006	Import	Applied
Lianyuan (Hunan Province)	50MW CCPP (30MW x 2) (BFG only, COG as an auxiliary fuel) 28.5MW gas turbine with 22MW steam turbine	Mitsubishi Heavy Industry (Japan)	2007	Import	Applied
Handan (Hebei Province)	50MW CCPP (30MW x 2) (BFG only, COG as an auxiliary fuel)	Mitsubishi Heavy Industry (jointly with Hanzhou gas turbine)	2007	Import	Applied
Baotou (Inner Mongolia)	300MW CCPP (150MW x 2) (BFG and COG)	Mitsubishi Heavy Industry (Japan)	2007	Import	Applied

Table 3-2 Cases of installing CDQ in China

Company	Crude steel production in 2004 (million tonne)	Ranking	Year of installing CDQ	CDQ products (Import / domestic)	Aid from government or overseas	CDM
Bao (Shanghai city)	21.4	1st	1985	Import (Japan)	Yes	Not applied
Anshan (Liaoning Province)	11.3	2nd	2005	Mostly domestic	No	Unidentified
Wuhan (Hubei Province)	9.3	3rd	2003	Import / domestic	No	Unidentified
Shougang (Beijing city)	8.5	4th	2001	Import (Japan)	Yes	Not applied
Maanshan (Anhui Province)	8.0	5th	2004	Mostly domestic	Yes	Unidentified
Tangshan (Hebei Province)	7.7	6th	Unidentified	Unidentified	Unidentified	Unidentified
Jiangsu (Jiangsu Province)	7.5	7th	2005	Unidentified	Unidentified	Unidentified
Shangang Jinan (Shandong Province)	6.8	9th	1999	Unidentified	Unidentified	Not applied
			2005	Import (Japan)	No	Applied
Benxi (Liaoning Province)	7.2	12th	2005	Mostly domestic	No	Unidentified

(b) The System itself is to stably generate power from the CCPP and CDQ, therefore it does not give any solution to the technological barrier of the Project.

As have been stated in "Technological barriers" of the PDD, the solution to the technological barrier is receiving the technical support from Energy Initiative Japan Inc. (EIJ), who is one of the PPs, due to the CER revenue and by making the Project to be a CDM project, thus proves the additionality of the Project as a CDM.

The results of the technical checks by EIJ were as follows;

1) The frequent malfunction of the CCPP is caused by several reasons, namely, a) the dust in the waste gases adheres unevenly to the gas compressor (axial type) of the CCPP, which causes vibration during the rotation, b) there were defects upon construction and operation & maintenance, and c) the mixing ratio of the COG and BFG is inappropriate causing the low heat value of the fuel.

2) Therefore, improvement of maintenance and exchange to the new centrifugal type compressor are effective solutions to the problems.

The Tonghua Iron & Steel Co., Ltd., given these suggestions, had modified and repaired the CCPP, had improved the mixing ratio of the fuel gases, and, the compressor was changed entirely to the centrifugal type which has larger tolerance for dust adherence to cope with the problem.

With these countermeasures realized in anticipation of the CDM project, the problems of the System were solved, and thus normal operations of the power generation are achieved.

As such, the technological barrier of the proposed project is cleared by the proposed project being re-started as a CDM project, and reduction of CO2 would be realized.

Response of JCI

(a) As mentioned above, the System is the System linking between CCPP system and CDQ system, even each of these components may have qualification for CDM, aimed to maximize power generation using surplus waste BFG and COG at most, minimize volume of flared waste gases into atmosphere. Therefore, the valid energy generated from surplus waste BFG and COG could always be recovered priority as electricity.

JCI confirmed that the System is energy conservation system utilizing most availably surplus waste BFG and COG installed firstly in China.

(b) The surplus waste BFG, after being processed in the gas compressor, is used as fuel of CCPP system, which is main component of the System, and the axial type compressor has been provided by Chinese domestic technology. The compressor's frequent malfunctions

had caused substantial period of forced outage of the CCPP system and substantial amount of additional costs, and originally designed power generation was not attained. As the result the System could not been completed. Accordingly, the PP has ceased the proposed project as described in Issue 1.

After re-starting as CDM project, the PP had considered Japanese experience and advice on design, operation and maintenance and installed the new compressor of centrifugal type as CDM project in order to resolve technical and commercial difficulties of the project and be able to operate the System completely.

JCI confirmed that by installation of the new type compressor, CCPP system has been operated successfully and the linkage of CCPP/CDQ systems has been completed and the System has been operated satisfactorily.

***Issue 4**: The PP/DOE should further substantiate the applicability of ACM0012 version 02 to the project activity, in particular, (a) what would happen to the waste gas in the absence of the project activity; (b) whether the project activity is going to be built in an existing or new facility as forecasted generation of the BFG in 2009 is almost double than that in 2006; and (c) whether there is any on-site energy generation facility prior to implementation of the project activity.*

Response of PP

The applicability of ACM0012 version 02 to the proposed project activity is assessed on page 9 Table B.2-1 on the PDD. Also, the dispersion of the surplus gases is proven based on the gas balance. Below are the answers to the particular questions raised:

(a) The surplus gas, if the Project is not implemented, is flared and emitted to the air.

To prove the surplus of the waste gases occur, the waste gas was conversed to energy amount in following Tables 4-1, 4-2 and 4-3 (Which are the same tables as B.6-3 to 5 in the PDD).

As shown in Table B.6-2, page 29 of the PDD, the necessary amount of energy for the CCPP is 119,636 Mcal/hr, which, compared to the actual energy amount from the surplus waste gas of 2004-2006, is below the actual surplus amount.

Table 4-1 Amount of energy of surplus waste gas in 2004

Type of waste gas	Amount of surplus waste gas (Nm^3/hr)	Heating value of surplus waste gas ($kcal/Nm^3$)	Energy amount of surplus waste gas (Mcal/hr)
BFG	129,540	800	103,632
COG	5,610	4,120	23,113

LDG	8,300	1,900	15,770
Total	-	-	**142,515**

Table 4-2 Amount of energy of surplus waste gas in 2005

Type of waste gas	Amount of surplus waste gas (Nm^3/hr)	Heating value of surplus waste gas ($kcal/Nm^3$)	Energy amount of surplus waste gas (Mcal/hr)
BFG	140,510	800	112,408
COG	5,800	4,120	23,896
LDG	9,980	1,900	18,962
Total	-	-	**155,266**

Table 4-3 Amount of energy of surplus waste gas in 2006

Type of waste gas	Amount of surplus waste gas (Nm^3/hr)	Heating value of surplus waste gas ($kcal/Nm^3$)	Energy amount of surplus waste gas (Mcal/hr)
BFG	148,740	800	118,992
COG	6,530	4,120	26,904
LDG	0	1,900	0
Total	-	-	**145,896**

As shown in the table above, energy amount of the surplus waste gas in 2004, 2005 and 2006 always exceeds the expected energy consumption by the CCPP.

For the further clarification, theoretical waste gas balance that could be realized when the CCPP was installed in 2006, which is the nearest year of the System restarting, is shown in following Table 4-4.

As the surplus gas amount of 2006 include all of the plant consumption amount such as the amount of gas consumed in the production process, it can be proved that the waste gas is always in the surplus and will be emitted to the air in the absence of the project activity.

Table 4-4 Theoretical waste gas balance in 2006 of which could be realized in the case of CCPP installed

		BFG	COG	LDG
Heating value of waste gas (kcal/Nm³)		800	4,120	1,900
Total waste gas generation (Nm³/h)		**562,000**	**44,100**	**21,200**
Waste gas consumption in steel making process (Nm³/h)	Blast furnace	238,530	1,180	0
	Coke oven	98,545	7,300	0
	Sintering	3,660	1,480	0
	Pelletizing	40,960	0	0
	Electric furnace	5,530	2,390	0
	Converter	11,260	5,300	10,400
	Rolling mill	55,400	10,220	10,800
	Other processes	1,600	0	0
	Subtotal	**455,485**	**27,870**	**21,200**
Waste gas supplied to Tonghua City (Nm³/h)		0	1,500	0
Surplus waste gas (Nm³/h)	CCPP	74,870	14,500	0
	Boiler (back-up)	0	0	0
	Emitted to the air after combustion	31,645	230	0
	Subtotal	**106,515**	**16,230**	**0**
Total waste gas consumption (Nm³/h)		**562,000**	**44,100**	**21,200**

(b) The amount of forecasted waste gas in 2009 is the gas generated when the steel making plant will be expanded to 5 million tons/year, and is shown as a reference that the gas will be in surplus even in that scenario as well. The System is constructed within and based on the existing facility.

(c) There is no power generation facility prior to the operation of the System in Tonghua Iron & Steel site.

Only steam boilers which were used for the steam supply to the steel making process has been installed prior to the project start.

Response of JCI

(a) JCI confirmed that the surplus waste BFG was flared in atmosphere in the absence of the project activity as described in issue 2 and also based on energy balance described in the above the PP's response the surplus waste BFG remaining after being utilized in the

proposed project should be generated and flared in atmosphere.

(b) JCI confirmed that the proposed project would be built in an existing facility.
The Gas balance estimation from 2009 onward shown in the Table B.4-4 in the PDD is the gas amount generated as a reference when the plant will be expanded to annual raw steel production of 5 million tons/year, that is the gas will be in surplus except being utilized for the steel making plants in Tonghua Iron & Steel Co., Ltd. even in the future as well.

(c) JCI confirmed that there is no power generation facility prior to the implementation of the proposed project activity. Only steam boilers which are used for the steam supply to the steel making process had been installed prior to the implementation of the proposed project activity.

***Issue 5**: The data used to calculate the grid emission factor in the PDD submitted for registration was not available at the commencement of validation (February 2008). The PP and DOE are therefore requested to amend the grid emission factor using data, which was available at this date and provide corresponding calculation of the emission reductions.*

Response of PP

The calculation procedure of Emission Factor of the North East China Power Grid based on the data, which was available at February 2008, is as follows;

The sources of the data are listed as follows;

- China Energy Statistical Yearbook 1999- 2006
- China Power Yearbook1999- 2006
- "China's Regional Grid Baseline Emission Factor Renewed" released on August 9, 2007 by the Office of National Coordination Committee on Climate Change and National Development and Reform Committee.

Based on the amended emission factor, calculation of the emission reductions of the project are described as follows.

(1) Baseline Emissions

As described in PDD B.6.3. (Page 35), net electricity supplied to the Tonghua Iron and Steel ($EG_{i,j,y}$) is calculated by:

$EG_{i,j,y} = EG_{GEN,y} - EC_{AUX,y}$ = 468,204 - 150,997 = 317,207MWh/yr

The emission factor of the electricity replaced by the proposed project activity ($EF_{grid,CM,y} = EF_{elec,i,j,y}$) is 1.0517t$CO_2$/MWh, and the factor for fraction of total electricity generated from

use of waste gas (f_{wg}) and the fraction of total energy produced using waste gas in year y (f_{cap}) is 1. Hence, the baseline emissions are calculated as:

$$BE_y = BE_{En,y} = BE_{Elec,y} = f_{cap} * f_{wg} = \sum_j \sum_i ((EG_{i,j,y} * EF_{Elec,i,j,y}))$$

= 1 * 1 * 317,207 × 1.0517 ＝ 333,606 tCO_2/yr

(2) Project Emissions

The amount of diesel oil consumed by the Steam Network Power Generation System for start-up of CCPP is estimated to be 330t/yr. Applying country specific net calorific value (42,652MJ/t) and carbon emission factor (20.2 TC/TJ) for diesel oil, the project emissions are calculated as:

$$PE_y = PE_{AF,y} + PE_{BL,y} = PE_{AF,y} = \sum EF_{i,y} \bullet NCV_i \bullet EF_{CO2,i}$$

＝330 × 42,652 ／ 1,000,000 × 20.2 × (44/12) × 1 ＝ 1,043 tCO_2

(3) Leakage

Leakage calculation is unnecessary, according to ACM0012.

(4) Emission Reductions

The emission reductions of the proposed project activity are:

$ER_y = BE_y - PE_y$ =333,606 tCO_2 －1,043 tCO_2 ＝ 332,563 tCO_2

The estimation of emission reductions during the crediting period is shown in the Table 5-1 as follows.

Table 5-1 Estimation of Emission Reductions during the Crediting Period

Year	Estimation of project activity emissions (tCO_{2e})	Estimation of baseline emissions (tCO_{2e})	Estimation of leakage (tCO_{2e})	Estimation of overall emission reductions (tCO_{2e})
2009	956	305,779	0	304,823
2010	1,043	333,606	0	332,563
2011	1,043	333,606	0	332,563
2012	1,043	333,606	0	332,563
2013	1,043	333,606	0	332,563
2014	1,043	333,606	0	332,563

Year	Estimation of project activity emissions (tCO_{2e})	Estimation of baseline emissions (tCO_{2e})	Estimation of leakage (tCO_{2e})	Estimation of overall emission reductions (tCO_{2e})
2015	1,043	333,606	0	332,563
2016	1,043	333,606	0	332,563
2017	1,043	333,606	0	332,563
2018	1,043	333,606	0	332,563
2019	87	27,827	0	27,740
Total (tCO_{2e})	**10,430**	**3,336,060**	**0**	**3,325,630**

These calculation results shall be described in the revised PDD.

Response of JCI

JCI reviewed the above calculation prepared by the PP and confirmed its appropriateness.

The result of calculation shall be reflected in the revised validation report.

Appendix 1: Minutes of the board meeting on 20 March 2006

Appendix 2: Agreement on termination of the contract 'NO.CME-T-2006/2' between Tonghua Iron & Steel Co., Ltd. and Shanxi Blower (Group) Co., Ltd.

Appendix 1

通钢集团公司首届董事会第四次会议摘要

会议时间：2006 年 3 月 20 日，8：10-10：15

会议地点：集团公司六楼会议室

参加董事：安凤成、张志祥、崔杰、孙玉斌、刘家琪、赵春辉、陈国君、徐传谌、姜茂发、张生久、朱洪山

会议主持：安 凤 成

会议记录：李秀平

会议内容：

第一，审议通过了《通化钢铁集团公司 2006 年财务预算调整草案》的议案。会议根据一季度集团公司实际经济运行情况，在落实集团公司首届董事会第三次会议原则通过的预算利润 44，450 万元的基础上，又提出增加挖潜指标 5，053 万元，以进一步挖掘各层面各环节潜力，确保财务预算积极稳妥和整体效益的不断提升。

第二，审议通过了《关于通化钢铁集团公司执行统一会计政策的议案》。会议确定，自 2006 年 4 月 1 日起执行，通化钢铁集团有限责任公司及各子公司执行统的一会计政策，以规范集团公司及其子公司的会计核算，真实、完整地提供会计信息。

第三，审议通过了关于《通化钢铁集团国贸公司和进出口公司重组方案》的议案。会议确定，集团公司受让股份公司持有国贸公司的67%股权，将国贸公司设置为集团公司全资子公司。但考虑到进出口公司的历史渊源及当地政府的政策支持，注册地仍然保留在通化市。具体操作从2006年4月1日开始。

第四，审议通过了关于《通化钢铁集团2006年资产经营责任制总体方案》的议案。会议确定，2006年集团公司对各子公司的考核仍执行资产经营责任制，建龙公司暂按重组前的内部分配制度独立运行。从2007年开始执行统一的经济合同考核。

第五，审议通过了关于《通化钢铁集团公司2006年固定资产投资项目实施方案》的议案。会议本着量入为出、区分轻重缓急的原则，对项目的启动实施进行了排序。会议确定，首期启动项目总投资240，691万元，冷轧板工程、凝石项目、冷弯型钢工程项目，根据资金筹措、落实情况再确定项目启动时间。

第六，审议通过了关于《中止废热、废气发电项目运行》的议案。会议确定，自2003年10月CCPP投产开始以来，多次发生煤气压缩机的喘震等一系列问题，无法按照原计划进行发电、不能有效利用富产煤气，改进、维修成本不断增高，该项目难于继续运行。目前技术问题以及经济问题均没有解决办法，故决定

中止项目运行。但是，废气、废热网络发电系统属于国内首次尝试，所以应该考虑CDM化，争取国际方面的支援和帮助。由集团经济运行部负责始探讨CDM、由股份公司机动部、热电厂与制造商等相关厂家研拟技术改进方案。

第七，审议并有条件地通过了关于《通钢集团桦甸矿业公司大西沟东山二区井下开采项目方案》的议案。会议确定大西沟东山二区井下开采项目采取“合同采矿”的融资方式建设。但考虑到采矿成本和经济效益，会议决定对90元吨和110元/吨开采成本再做一次招标。

第八，审议通过了关于《通化钢铁集团公司建立新型薪酬制度指导意见》的议案。会议确定，从2007年1月份起，集团公司建立新型薪酬制度。建龙公司在改制重组前确立的薪酬分配制度，执行到2006年末。但本年度工资总额增长应在集团公司确定的增长幅度内操作。

第九，审议通过了《关于对吉林建龙公司委托浙江建龙公司销售业务的意见》的议案。会议确定，1、保持吉林建龙公司委托浙江建龙公司销售业务合同期的完整，此办法延续至2006年末。2007年实行代理还是其他方式由通钢集团经营层于2006年四季度前拿出具体意见。2、浙江建龙所持有的吉林建龙的印信、

证照，在不影响吉林建龙原销售业务的情况下，由吉林建龙予以收回、更换。对集团重组日（2006年1月1日）到印信证照收回日期间，吉林建龙与浙江建龙所有经济业务派人进行梳理和备案，与浙江建龙签订书面法律文书，并就集团重组日到印信证照收回期间，所涉及的目前、潜在和未来所涉及的民事和法律事项，由浙江建龙提出书面承诺函。3、集团重组日到印信证照收回日期间，浙江建龙欠吉林建龙的销售款由吉林建龙收回；代理费由原有的20元/吨调至5元/吨，调整后的差价，由吉林建龙收回。期间所发生的财务贴现费用，由吉林建龙收回。所占用资金利息，由浙江建龙承担、吉林建龙收回。

第十，审议了关于《吉林建龙公司担保问题的意见》的议案。各位董事围绕此议案进行了认真讨论，并确定会后立即对吉林建龙公司为建龙系担保问题采取补救措施，实施反担保及股权抵押。

记录人员签字： 于秀平

2006.3-20

The Minutes of the Board of Directors' Meeting of Tonghua Iron & Steel Group Co.

Date of the meeting: March 20, 2006, 8:10-10:15

* * * *

6. The proposed agenda "the cessation of the waste heat / gas power generation project" was approved. Since its inception of operation in October 2003, problems such as vibration of gas compressor have occurred frequently and the CCPP has not been operational as planned. Accordingly, excess by-product gas has not been utilized. Further, the expenses for repair and modification have increased and will continue doing so, and continuation of the project is no longer possible. At this moment, there are no solutions for the technical and commercial problems, and thus the cessation of the project has been resolved. However, the project was the first attempt of its kind in the country and the possibility of applying for CDM and support and cooperation from the international community should be sought. The Department of Economic Operation of the Company was assigned to investigation of CDM, the Utility Division and the Power Division of the subsidiary company(*) to the discussion for technical aspects of CDM solutions with the equipment manufacturers.

(*) translator's note: denoting Tonghua Iron & Steel Co.

Appendix 2

关于解除 CME-T-200006/2 号合同的协议书

卖方：西安陕鼓动力股份有限公司

业主：适化钢铁股份有限公司

关于2000年6月10日在吉林省通化市通化钢铁集团有限责任公司签署的“通化钢铁集团有限责任公司高炉煤气“CCPP”工程煤气压缩机设备供货合同(合同号：CME-T-200006/2) ”供货合同（以下简称为：合同），由于在CCPP项目执行过程中所遇到难于解决的种种技术问题，通化钢铁集团有限责任公司——即合同第二章 定义中的第2.11项所规定的“共同买方”（以下简称为：业主）决定中止该项目的继续实施。

因此，就中止该项目事宜，合同的业主与卖方（即合同第二章 定义中的第2.12项所规定的“西安陕鼓动力股份有限公司”）之间达成以下协议：

一、 **业主变更：**

由于合同业主由“吉林通化钢铁集团有限责任公司”变更为“通化钢铁股份有限公司”，所以在本协议内重新定义“业主”即“通化钢铁股份有限公司”。

二、 **责任：**

双方承认该项目的技术问题属于高科技项目引进过程中难以避免的固有问题，因此，就解除合同事宜双方均不负任何法律责任。

三、 **索赔：**

双方承诺就解除合同事宜不向对方提出任何索赔要求。

四、 遗留事务：

在签署合同之后，并在签署本协议之前（即2000年6月10日至2006年3月30日期间）业主所订购的维修/改造等所需零配件等均按原计划执行。但卖方不承担相关技术服务。

五、 协议生效与其它：

1. 协议于双方授权代表签署2006年3月30日即日生效。

2. 协议一式两份。

业主：遵化钢铁股份有限公司

签字：

卖方：西安陕鼓动力股份有限公司

签字：

合同专用章（销1）

2006年3月30日

Agreement on termination of the contract 'NO.CME-T-20006/2

Seller：Shanxi Blower (Group) Co., Ltd.

Project Owner：Tonghua Iron & Steel Co., Ltd.

As for the contract on delivery of gas compressor for CCPP using blast furnace gas signed at Tonghua Iron & Steel Group Co., Ltd. on Jun. 10, 2000 (hereinafter called the Contract), Tonghua Iron & Steel Group Co., Ltd., as defined 'Co-buyer' (hereinafter called Project owner) has made a decision to cease the project because many kinds of technological problem difficult to be solved have occurred in the course of implementation of the project.
According to cease of the project, the project owner and the Seller (Shanxi Blower (Group) Co., Ltd., stipulated in the article 2.12 of the chapter Ⅱ of the contract) have reached an agreement the followings on the termination of the contract.

Article 1 Change of the project owner:

As the project owner in the contract has been changed from 'Tonghua Iron & Steel Group Co., Ltd.' to 'Tonghua Iron & Steel Co., Ltd.' Therefore, the owner is redefined as 'Tonghua Iron & Steel Co., Ltd.'

Article 2 Responsibility:

Both of the contractors are recognizing that the technological problems of the project are specific problem that cannot be avoided in the process of advanced technology introduction. Accordingly, both of the contractors are cleared of all responsibility legally.

Article 3 Compensation:

Both of the contractors do not sue for any kind of compensation each other in terminating the contract.

Article 4 Pending issues:

Seller should deliver the parts being used for maintenance and/or modification of the plant which the owner has already ordered after the signing of the purchase contract and

before the signing of this agreement (more specifically, duration from Jun. 10, 2000 to Mar.30, 2006). In this regard, Seller is not responsible for supplying a technical support.

Article 5 Effectuation of the agreement and the others

1. This agreement is valid just after both of authorized person of the contractors have signed on Mar. 30, 2006.
2. This agreement is to be prepared by two sets.

Project Owner: Tonghua Iron & Steel Co., Ltd.
Signature:

Seller: Shanxi Blower (Group) Co., Ltd.
Signature:

Mar. 30, 2006