

Ref /9/ page 1/2

FSR ref no. 31-F034K-AA01

Shandong Huaneng Shouguang Wind Power Project

山东省华能寿光风力发电工程

可行性研究报告

Feasibility Study Report

(审定稿)

Shanghai Electric Power Design Institute Co., Ltd

上海电力设计院有限公司

设计证书: 甲级 090028

2006 年 04 月

April 2006

1.15 财务评价

Chapter 1.5 Financial Assessment

本工程项目计算期取 21 年，其中建设期 15 个月，生产期 20 年。

项目的建设符合当前国家鼓励发展的产业政策，符合国家当前节能减排政策，满足山东电力市场发展的需要，是必要而可行的。

本工程由山东省华能集团投资建设。工程动态总投资为 55807.57 万元，其中资本金（自筹）约占项目动态总投资的 30%，为 16742.30 万元，其余部分向国内商业银行贷款。

根据《建设项目经济评价方法与参数》（第二版），该项目采用 8% 的基准收益率。

通过计算分析，按当地平均上网电价（含增值税）为 0.7600 元/kWh；不含增值税平均电价为 0.7005 元/kWh 计算。本项目全部投资财务内部收益率（税后，下同）为 6.69%，全部投资财务净现值为-4552.17 万元，投资回收期为 9.99 年（不含建设期），平均投资利润率为 3.49%，平均投资利税率为 4.54%，资本金财务内部收益率为 6.67%，以 8% 的基准收益率，资本金财务净现值为-2480.41 万元，说明本项目在财务上不可行，建议项目寻求清洁发展机制(CDM)的支持。

According to the estimation of 0.76 RMB/kWh (including VAT), the project IRR is 6.69%

The project is financially unfeasible, suggest to seek CDM revenue support.

** English translation given in next page **

山东省寿光新能源投资开发 有限责任公司

山东省寿光新能源投资开发有限公司

董事会会议纪要

时间：2006 年 10 月 23 日

地点：山东省寿光新能源投资开发有限公司会议室

主持人：董事长李来付

与会人员：王业乾、姜佳胜、庞涛

记录：陈华立

本次会议讨论及决定的主要事项纪要如下：

本次会议着重对寿光风力发电项目的开发问题进行了讨论。会议认为，根据新近编制完成的工程可行性研究报告，项目内部收益率较低，达不到既定的行业基准值，需要寻求额外的财务支持予以弥补。而根据项目可行性研究报告的测算，本项目如果按照《京都议定书》下清洁发展机制的要求进行运作，可能获得额外的碳汇收入，大大改善项目的内部收益，增强项目的可开发性，为此，本次董事会以表决的方式审议通过以下决议：

一、将寿风光电项目作为清洁发展机制项目进行开发；

二、公司要尽快展开对《京都议定书》的学习和研究，掌握清洁发展机制项目的运作程序，培养清洁发展机制的专业人员，以进一步推动项目清洁发展机制运作的进程。

表决结果：4 票赞成，无票反对，无票弃权。



山东省寿光新能源投资开发有限公司

2006 年 10 月 23 日

Board Meeting of the former project developer

Board Meeting of Shandong Shouguang New Energy Investment Co., Ltd.

Meeting Minutes

Date of Meeting: October 23rd, 2006

Place of Meeting: Meeting room of Shandong Shouguang New Energy Investing Development Co., Ltd.

Presider: Board Chairman, Laifu Li

Attendance: Yejian Wang, Jiasheng Jiang, Tao Pang

Recorder: Huali Chen

The main issues discussed and resolutions made are as follows:

The meeting was hold to discuss the development of Shouguang Wind Farm Project. It was agreed that according to the newly accomplished Feasibility Study Report, the IRR of the project was comparatively low and cannot reach the benchmark of the field, so extra finance support was needed. And according to the estimation in FSR, if the proposed project was developed as a CDM project in accordance with the rules of "Kyoto Protocol", extra carbon trading income could be gained, as a result of which the IRR would be improved significantly and the project developing feasibility enhanced. Therefore, based on the above analysis, such board resolutions were made in the way of voting as follows:

To develop Shouguang Wind Farm Project as a CDM project;

To study the "Kyoto Protocol" as early as possible in order to master the developing procedure of a CDM project and train CDM specialists to quicken the developing speed of the project as a CDM project.

Voting results: the resolution passed by 4votes to none, with none abstentions.

Shandong Shouguang New Energy Investing Development Co., Ltd (Stamp)

October 23rd, 2006

Contract no.: CRIH-A-012

p.1 of 2 /Ref 25/

清洁发展机制项目第

号

山东省寿光风电项目

清洁发展机制合作协议书

Shangdong Shouguang Windfarm Project

CDM consultant Contract

2006-12

二〇〇六年十二月

第七条 协议的终止

- 1、协议有效期届满并且本协议下的义务全部履行完毕本协议终止。
- 2、相关部门不批准此项目后，本协议终止。

第八条 文件版权

乙方在甲方项目的申报过程中制作的《清洁发展机制项目设计文件（PDD）》版权归乙方所有，版权有效年限为甲方项目活动期（3×7年），共计21年。在此期间内，PDD文件的制作、修改、解释、使用均需由乙方完成。

第九条 法律适用

本协议根据签字时按照中华人民共和国现行的有关法律、法令和相关国际条约制定。如在本协议生效后，由于我国颁布了新的法律、法令或相关国际条约进行修改，致使协议在履行时发生较大变化，双方及时协商，并对本协议作必要修正。

第十条 争端解决机制

- 1、在执行本协议中所发生的或与本协议有关的一切争执，双方本着友好协商的方式解决。
- 2、对于协议后仍不能解决的争端，向北京市有管辖权的人民法院起诉。
- 3、本协议所适用的争端范围，仅限于本协议范畴内发生的费用。

第十一条 生效

本协议文本共四份，双方各执两份。自甲、乙双方签字之日起生效。

Party A - Shandong Shouguang New Energy
Investment Co Ltd (former project developer)
(stamp)
[signature]
date: 2006-12

Party B - Beijing Chiangjiang River Int. Holding
(stamp)
[signature]
date: 2006-12-15

甲方：山东省寿光新能源开发有限公司（盖章）

乙方：北京长江国际工程咨询有限公司（盖章）

代表人（签字）：

代表人（签字）：

签字时间：

2006年12月 日

签字时间：

2006年12月15日

[CONFIDENTIAL]

June, 2007

(第 2 案)

The Kansai Electric Power Co.,Inc.

MOU for purchasing CERs from
Shandong Huaneng Shouguang 49.5MW Wind Farm Project (Draft)

This MOU outlines the basic terms of a potential agreement between Shandong Shouguang New Energy Resources Investment and Development Co.Ltd.(the Seller) and Kansai Electric Power (the Buyer) for the sale and purchase of CER generated from Shangdong Huaneng Shouguang 49.5MW Wind Farm Project(the Project).

- not to be disclosed -

Nature of MOU

Main entities of this MOU and ERPA	This MOU and ERPA shall be agreed and signed between Shandong Shouguang New Energy Resources Investment and Development Co.,Ltd. and Kansai Electric Power Co.,Inc.
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- not to be disclosed -

[CONFIDENTIAL]

- not to be disclosed -

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be duly executed and agree that it shall be binding and of legal effect of this Agreement.

On Behalf of Buyer:

- not to be disclosed -

Authorized Signature
Name: Shosuke Mori
Title: President and Director
Company: Kansai Electric Power Co.,Inc.

Date: 2007.8.2

On Behalf of Seller:

Authorized Signature
Name: Wang Ye Qian
Title: General Manager
Company: Shandong Shouguang New Energy Resources Investment and Development Co.,Ltd.

Date: 2007.7.10

Schedule.1

Verification Period(dd/mm/yyyy)	Expected Volumes Delivered to Kansai(tCO2)*	Delivery Deadline (dd/mm/yyyy)	Cumulative Volumes(tCO2)
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- not to be disclosed -

中华人民共和国国家发展和改革委员会

THE NATIONAL DEVELOPMENT AND REFORM
COMMISSION OF THE PEOPLE'S REPUBLIC OF CHINA

No.38, Yuetan Nanjie, Beijing 100824

January, 2008

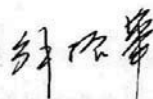
Letter of Approval for Shandong Huaneng Shouguang 49.5 MW Wind Farm
Project As a Clean Development Mechanism Project by National Development
and Reform Commission of the People's Republic of China

No. 838

The Chinese Government approves Shandong Huaneng Shouguang 49.5 MW Wind
Farm Project as a Clean Development Mechanism project, with the following
remarks:

1. China approved the Kyoto Protocol to the United Nations Framework Convention
on Climate Change on 30 August 2002, and is a Party to the Kyoto Protocol.
2. Shandong Huaneng Shouguang 49.5 MW Wind Farm Project complies with the
permission requirements provided for in the Measures for Operation and
Management of Clean Development Mechanism Project in China, and assists
China in achieving sustainable development.
3. Shandong Shouguang New Energy Resources Investment and Development Co.,
Ltd. is hereby authorized as China's participant to voluntarily participate in and
carry out the project activity.
4. Shandong Shouguang New Energy Resources Investment and Development Co.,
Ltd. is permitted to transfer to The Kansai Electric Power Co., Inc. that is
authorized by the Government of Japan no more than 440,000 tCO₂e in total
Certified Emission Reductions (CERs).

Xie Zhenhua



Minister, Vice Chairman
National Development and Reform Commission
People's Republic of China

Please note that "Shandong Shouguang New Energy
Resources Investment and Development Co., Ltd." is the
former project developer of the project. The project was
then transferred to current PP as approved by the
Chinese DNA as indicated later.

内部文件
注意保存

** English translation given in the next 2 page **

华能新能源产业控股有限公司

会议纪要

二〇〇八（第一期）

商务部

二〇〇八年一月七日

2008年1月7日上午，公司总经理赵世明同志在公司10层会议室主
持召开了 CDM 工作组二〇〇八年第一次会议。参加会议的人员有牛栋春、
杨青、何焱、金勇、宋育红、刘瑞轩、刘峰同志。

会上宋育红同志对近来 CDM 项目的工作情况进行了通报，经会议认
真研究讨论，形成会议纪要：

我公司已于2007年10月22日与山东省寿光新能源投资开发有限公司
签订《关于转让寿光风电项目前期工作的协议》，并得到山东寿光风力发电
项目的开发所有权。经过对寿光风力发电项目详细了解和研究：该项目装
机容量为 49.5MW，每年可向电网提供 9647.88 万 kWh 电量，可通过替代
电网火力发电站发电所产生的温室气体实现减排，故项目具有良好的社会
效益。另外可以通过申请 CDM 开发，出售碳排放权获得额外收入，从而
取得一定的经济效益。鉴于上述原因，我公司愿意继续开展该项目 CDM 的
后续工作。

该项目原业主已于2006年12月15日与北京长江国际工程咨询有限公
司签订了 CDM 咨询协议，于2007年5月25日接受了买方的现场考察，
并于2007年8月2日与买方签订了 MOU。

为进一步加快项目进程，我公司决定继续推进项目的 CDM 开发进程。请我公司及项目公司相关人员积极学习 CDM 相关知识，加快工作进度，努力推进项目开发。鉴于此，经华能新能源产业控股有限公司本次会议研究决定，尽快将本项目申报为清洁发展机制项目。

发：全体参会人员、商务部、相关项目公司或筹备处

Huaneng New-Energy Industrial Holding Limited

Meeting Minutes

(2008) 1st Section

Commercial Department

January 7, 2008

On Jan. 7th morning, General Manager, Mr. Zhao Shiming, opened the first Working Group Session on CDM issues of the year at Meeting Room of Huaneng New-Energy Industrial Holding Limited. Niu Dongchun, Yang Qing, He Yan, Jin Yong, Song Yuhong, Liu Ruixuan and Li Feng attended the meeting.

In the meeting, Song Yuhong reported the CDM project status in recent times. A meeting minutes was summarized systematically as follows:

“Agreement on Transferring Shouguang Windfarm Project Preliminary Work” has been signed by Shandong Shouguang New-Energy Investment and Development Co., Ltd. and us on Oct. 22, 2007. And our company got the ownership to develop the project. After the specific study on Shouguang Windfarm Project, some findings were reached: The proposed project has a total installed capacity of 49.5MW; it is designed to provide annual on-grid electricity supply of 96.4788GWh by displacing part of thermal power in the grid and achieve GHGs reductions, which made the proposed project positive social profits; by developing the project under CDM rules can reach extra revenue and got economic profits. In view of the above reasons, we decided to continue the development of followed CDM issues.

The original project owner has signed CDM Consulting Agreement with Beijing Changjiang River International Holding on Dec. 15, 2006. On-site Assessment of Buyer has finished on May 25, 2007. And on Aug. 2, 2008, MOU was signed.

For further promote the project progress, it is decided to continue to develop the project under CDM rules. And all relevant persons of our company and other correlative companies' personnel should study the CDM-related knowledge actively and master their work efficiency and promote the project development. In all, Huaneng New-Energy Industrial Holding Limited decided to declare the proposed project as CDM project.

正本

华能寿光风电工程 49.5MW 项目
风力发电机塔筒设备制作
合同书

Tower Structure of wind Turbine Purchase Contract of
Shandong Huaneng Shouguang 49.5MW Windfarm Project

Buyer: Huaneng Shouguang Wind Power Co., Ltd.

Seller: Qingdao Taisheng Power Machinery Limited

合同买方（以下简称业主）：华能寿光风力发电有限公司

合同卖方（以下简称塔筒制造商）：青岛泰胜电力工程机械有限公司

设计单位：（以下简称华锐风电）：华锐风电科技有限公司

2008 年 1 月 16 日

16 January 2008
(Project Start Date)

第 1 页 共 33 页

Huaneng Shouguang Windfarm 49.5MW Project
Wind Tower Equipment Contract

华能寿光风电工程 49.5MW 项目
风力发电机塔筒设备制作
合同书

Contract No. SB-20080116001

合同编号：华能寿光 SB-20080116001

华能寿光风力发电有限公司通过招标方式将寿光风电工程 49.5MW 风电场项目的 33 台（套）风力发电机塔筒设备合同授予 青岛泰胜电力工程机械有限公司。为此，华能寿光风力发电有限公司（买方）与 青岛泰胜电力工程机械有限公司（卖方）于 2008 年 1 月 16 日 在 山东省潍坊市（地点）签订协议如下：

1. 33 台（套）风力发电机塔筒设备、基础段及塔架附件合同价格为：

Not to be disclosed

上述设备价格中已包含设备运输费、保险费和伴随服务费等。

2. 下列文件是本合同不可分割的组成部分：

合同书；

中标通知书；

开标后至签订合同前双方往来文函；

投标声明及投标报价书；

招投标文件交货进度（设备交货批次及交货时间表）；

性能保证、设备特性；

技术服务、技术培训；

合同条款；

第 2 页 共 33 页

Huaneng Shouguang Wind Power Co., Ltd.

Authorized Signature and Chop

签署页

甲方：华能寿光风力发电有限公司（盖章）
 法定代表人（或授权代表）：
 地址：山东省潍坊市胜利东街 387 号金融大厦 11 楼
 邮编：261041
 电话：0536-2228009
 传真：0536-2228004
 开户行：
 帐号：
 联系人：
 日期：2008 年 1 月 16 日

Date: 16 January 2008

乙方：青岛泰胜电力工程机械有限公司（盖章）
 法定代表人（或授权代表）：

地址：山东省胶州市海尔大道南段东侧

邮编：266318

电话：0532-88057000

传真：0532-85269266

开户行：中国建行胶州支行

帐号：37101997706051002991

税号：370281783729243

联系人：

Project title - Shandong
Shouguang Windfarm Project

Project Commencement Report

开工报告

建设单位：华能寿光风力发电有限公司

鲁 JJ-006

0 0 1

工程名称	华能寿光风电场工程	工程地点	山东省寿光市北部沿海地区
施工单位	中铁十四局集团有限公司	监理单位	山东华能建设项目管理有限公司

- not to be disclosed -

定期工期	105 天	计划 开工 日期	2008-4-15	计划竣 工日期	2008-7-28	合同编号	华能寿光 TJ-20080201003
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说明	1、施工测量放线已完成； 2、人员、机械设备、材料已到场； 3、施工组织设计已上报； 4、施工方案已确定； 5、施工现场道路、水、电、通讯已达到开工条件。
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上述准备工作已经就绪，定于 2008-4-15 正式开工，希望监理（建设）单位于 2008-3-30 前进行审核，特此报告。

施工单位：

项目经理：

审核意见：

总监理工程师（建设单位项目负责人）：

It is agreed that the project construction
to be started on April 15th, 2008. □

（公章）
2008 年 3 月 30 日

山东省建设工程质量监督总站监制

Shandong Huaneng Construction Management Limited □
(stamp) □

Date: March 30th, 2008 □

核证减排量购买协议
CERTIFIED EMISSION REDUCTIONS
PURCHASE AGREEMENT

项 目：华能寿光 49.5MW 风电场工程

Project: Shandong Huaneng Shouguang 49.5MW
Wind Farm Project

卖 方：华能新能源产业控股有限公司

Seller : Huaneng New Energy Industrial Co., Ltd

买 方：关西电力株式会社

Buyer : The Kansai Electric Power Co.,Inc.

CERTIFIED EMISSION REDUCTIONS
PURCHASE AGREEMENT

Huaneng New Energy Industrial Co., Ltd (hereinafter called "Seller")

and

The Kansai Electric Power Co.,Inc. (hereinafter called "Buyer")

WITNESSETH:

WHEREAS, Seller operates the project of Shandong Shouguang 49.5MW wind power generation at the Shandong Province, described in greater detail in Schedule B hereto (hereinafter called the "Project") that may produce Certified Emission Reductions (hereinafter called the "CERs") for which Seller will have the right to transfer such ownership as set forth herein;

WHEREAS, Seller seeks to sell CERs to be generated through the Project to Buyer, and Buyer seeks to purchase the same from Seller; and

WHEREAS, Seller and Buyer wish to enter into this Agreement in furtherance of the foregoing objectives and to set forth their agreements in respect thereof;

NOW THEREFORE, the Parties hereby agree as follows:

ARTICLE 1

TERM AND INTERPRETATIONS

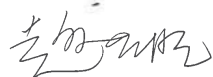
- not to be disclosed -

- not to be disclosed -

Huaneng New Energy Industrial Co., Ltd

Name: Zhao Shiming
Title: President and Executive Director

Date: 2009.2.18



The Kansai Electric Power Co., Inc

Name: Shosuke Mori
Title: President and Director

Date: 09.1.30

- not to be disclosed -

TÜV Rheinland Hong Kong Ltd.
Member of TÜV Rheinland Group
Industrial Services



Proposal

for

CDM VALIDATION SERVICES

On

Shandong Huaneng Shouguang 49.5MW Wind Farm Project

for

Kansai Electric Power Co., INC

Contact Person(s): Ms. Fang Jing(BJ)
Mr. Wilfred Chan (HK)

Q106592ver03

2009-02-19

TÜV Rheinland Hong Kong Ltd.



TÜV Rheinland Hong Kong Ltd.
Member of TÜV Rheinland Group

Industrial Services

- not to be disclosed -

We hope this offer finds your interest and that we can establish a successful business relationship.

Sincerely Yours


Mr. Wilfred Chan
CDM Project Manager
TÜV Rheinland Hong Kong Ltd.

Yes, we accept this quotation as stated.

25 Feb, 2009
Date

- not to be disclosed -

Kansai Electric Power Co., INC
(Signature and Company Chop)

中华人民共和国国家发展和改革委员会气候司

DEPARTMENT OF CLIMATE CHANGE, THE NATIONAL
DEVELOPMENT AND REFORM COMMISSION OF THE
PEOPLE'S REPUBLIC OF CHINA

Sept, 2009

Approval Note on Change of the Project Owner of Shandong Huaneng
Shouguang 49.5MW Wind Farm Project by the Department of Climate
Change, National Development and Reform Commission of the People's
Republic of China

No.015

The Chinese Government approves the application for change of the project owner of Shandong Huaneng Shouguang 49.5MW Wind Farm Project, with the following remarks:

The project owner is changed from the previous Shandong Shouguang New Energy Resources Investment and Development Co., Ltd. to current Huaneng Shouguang Wind Power Co., Ltd. Any other provision of the *Letter of Approval for Shandong Huaneng Shouguang 49.5MW Wind Farm Project As a Clean Development Mechanism Project by National Development and Reform Commission of the People's Republic of China* (No.838) remains unchanged.

SU Wei


Director General
Department of Climate Change
National Development & Reform Commission
People's Republic of China