GOLD STANDARD LOCAL STAKEHOLDER CONSULTATION REPORT

CONTENTS

SECTION A. PROJECT DESCRIPTION

A. 1. Project eligibility under the Gold Standard

1.2 Assess project eligibility

My Climate and Impact Carbon have partnered to promote the replacement of inefficient traditional coal stoves, with clean burning biomass stoves. The partnership (here after referred to as the "Project") promotes sustainable livelihoods through cost savings from reduced coal consumption, and improved health through cleaner indoor air environments. By investing in clean household energy technologies, the Project also accelerates the transition away from fossil fuel energy systems and mitigates climate change by providing credible and robust greenhouse gas emission reductions.

1.2.1 Scale of project activity

This is a Large scale renewable energy project activity. The Project will leverage carbon revenues over a 7-year period (twice-renewable) to initially subsidize the cost and promotion of approximately 54,101 biomass stoves to poor rural households currently using traditional coal stoves. This will achieve an estimated average reduction of 69,645 tCO2e per annum, and cumulative emissions reductions of 487,516 tCO2e throughout the entire 7-year crediting period (twice renewable).

1.2.2 Host country or state

The Project's VER are hosted by China. According to GS methodology, any country can host a Gold Standard voluntary carbon market project. Since China does not have a cap on GHG emissions in the residential sector, issued GS VERs do not need to be backed up by allowances or other denominated units reflecting emission reductions.

1.2.3 Type of project activity

The Project fits under the Renewable Energy Supply category. The Project generates and delivers energy services from the combustion of renewable energy agricultural residues, which are non-fossil and non-depletable energy sources.

1.2.4 Greenhouse gases

The Project utilizes eligible GHG under the Gold Standard: Carbon Dioxide (CO2), Methane (CH4) and Nitrous oxide (N2O).

1.2.5 Official Development Assistance (ODA)

The Project does not receive ODA, and is not on the ODA recipient list of the OECD Development Assistance Committee.

1.2.6 Project timeframe

Previous announcement check
The Project was not previously announced to be going ahead without the revenues from carbon credits.

Retroactive registration
The Project will undergo a pre-feasibility assessment since it was operational prior to the time of first submission to Gold Standard.

Retroactive crediting
The Project will apply for Gold Standard VERs under the retroactive project cycle, and will apply for credits from realized emission reductions prior to Gold Standard registration beginning March 1, 2009.

Parallel submission
A project activity will be submitted to only the Gold Standard VER stream.

A. 2. Current project status

Provide information on the status of key project cycle stages (financing, equipment procurement, construction, commissioning) with dates where possible/ relevant.

The Project has been operational since March 1, 2009, and thus is applying for retroactive registration. Project conception, however, began in 2006 with the help of funding from the Shell Foundation. Impact Carbon (formerly the Center for Entrepreneurship in International Health and Development (CEIHD)) worked with the China Association of Rural Energy Industry (CAREI) to design and conduct a national competition to identify and recognize the best innovative biomass stove designs throughout China. Ten manufacturers, all established private companies, were recognized as being leaders in the field of producing efficient, sustainable improvements in biomass cook stoves. Although representing different levels of design, manufacturing, and pricing, all of these stoves were proven, market-tested products, and were developed in-country to meet local needs.

As part of the competition, the stoves were monitored in a test kitchen specifically designed to monitor chimney stoves. Each stove was tested 3-4 times. Thermal efficiency of the improved stove in laboratory testing averaged 42%, versus 10% to 15% in traditional stoves (Sinton, Smith et al. 2004). Chimney particle emissions were reduced by at least 70% and average indoor CO concentration was reduced more than 90%, indicating less overall emission as well as a healthier environment in the home. Based on this performance, the Project believed these stoves could enable households in rural China to meet Chinese national indoor air pollution standards, the first time this would be possible with solid fuel stoves (Edwards, Liu et al. 2007).

The Project has chosen to partner initially with the best gasifier stove in this group, but other stove manufacturers will be invited to join the Project once carbon revenues are made available for the project to expand. At the time of the competition the Jinqilin stove had already been market-

tested, but was still at small scale. High performance and limited initial market penetration made the Jinqilin stove a strong candidate for a carbon finance program that could assist with growth and expansion.

The Project will leverage carbon revenues and matching local government support to subsidize the cost of distributing the improved stoves to poor rural households currently using traditional coal stoves, achieving an estimated average reduction of 69,645 tCO2e per annum, and total emissions reductions of 487,516 tCO2e throughout the entire 7-year crediting period (twice renewable). To date, over 7000 stoves were sold in year 2009, and it is expected that at least 7000 stoves will be sold by year end 2010.

SECTION B. DESIGN OF STAKEHOLDER CONSULTATION PROCESS

B. 1. Design of physical meeting(s)

i. Agenda

Please ensure that at least the following points are covered but feel free to add more points as needed:

- Opening of the meeting
- Explanation of the project
- Questions for clarification about the project
- Blind SD exercise
- Discussion on monitoring SD
- Closure of the meeting

[See Toolkit 2.6.1 and Toolkit Annex J]

AGENDA

9:15-9:30: OPENING: Meeting started. Manager Han Wenping gave a welcome speech and introduces attendees.

9:30-9:45: NON-TECHNICAL EXPLANATION: Dr. Liu Guangqing from BUCT introduced the project background and non-technical summary of the project. Dr. Liu also stressed potential hazards of solid fuel combustion and the benefits of using high-efficiency low-emission biomass stoves.

9:45-10:10: CARBON EXPLANATION: Mr. Chen Xiaofu from CAREI presented the carbon project and a summary of the project timeline, including work completed to date, prophase, and current progress. Project requests, procedure and work plan were introduced in detail.

10:10-10:35: TECHNICAL EXPLANATION: Manager Han Wenping introduced the Jinqilin Company, stove manufacturing operations, and the company's sales condition. Principles of the biomass gasifier stove and its advantages were also explained. Finally, a film of the Jinqilin biomass stove was played.

10:35-10:50: QUESTIONS AND CLARIFICATION: Mr. Chen Xiaofu answered any outstanding questions about the project. Mr. Chen then explained how to fill in the environmental

and social impacts checklists and evaluation forms.

10:50-12:15 BLIND SD EXERCISE & DISCUSSION: Attendants expressed their opinions and suggestions, completed the SD exercise, and discussed monitoring issues.

12:15 CLOSING: Meeting ended. Gather forms.

12:30 LUNCH: Further discussion of the project.

14:00-16:00 SITE VISIT: Stakeholder visit to the Jinqilin factory

ii. Non-technical summary

Summary: Clean and Efficient Cooking and Heating Project, China

One of the most visible signs of the urban/rural disparity in China is in the household energy sector. While cleaner-burning petroleum-based fuels are increasingly common in wealthier areas, at least 50% of all households still depend on solid fuels as an important household fuel, a practice resulting in pollution exposures that the World Health Organization estimates to be annually responsible for over 380,000 premature deaths in China alone.

Impact Carbon and the China Association for Rural Energy Industries (CAREI) have partnered to alleviate the health and climate burdens found in rural China due to the inefficient and dirty use of solid fuels such as wood and coal for household energy demands. This partnership promotes the use of efficient and clean household energy technologies that can be used for cooking, heating, and water purification throughout China, and generates carbon credits in the voluntary market based on the greenhouse gas emission reductions of these technologies.

Project Activity:

In China, this project promotes the replacement of inefficient coal burning stoves by making affordable cleaner burning stoves through the sale of voluntary market carbon credits. The project will invest revenues from carbon finance in stove subsidies, social marketing, and the development of a robust distribution chain.

The project proponents are working with Chinese manufacturers to promote improved stove technologies. Initially, the project is partnering with Shanxi Jinqilin Energy Technology Co. Ltd. (Jinqilin) to disseminate improved biomass semi-gasifier stoves to low-income rural communities in Shanxi Province, China. The efficient and clean-burning Jinqilin stoves will replace household coal consumption with agricultural residue as fuel. The project proponents are developing carbon finance for the emission reductions (ERs) generated by displaced coal consumption as a sustainable business model for large-scale stove dissemination with quantifiable health and poverty alleviation co-benefits. As carbon revenues are made available, the project will partner with other stove manufacturers to make available other types of stove technologies that are culturally and geographically appropriate for other regions of Shanxi.

Carbon revenues from this initial partnership with Jinqilin will help to expand the market for clean burning biomass stoves. Carbon revenues will be leveraged to increase the number of subsidized stoves available to households in Yangquan city and surrounding areas. Carbon finance makes it

possible to fund project development activities, monitoring and evaluation, capacity building and social marketing, and stove subsidies. In this way, revenues from the voluntary carbon project will help rural communities accelerate the transition to cleaner, more efficient, and more economical cooking technologies.

Shanxi Province ranks fourth amongst China's 32 provinces in terms of total residential coal consumption. In 2007, overall rural residential use of coal was 80% in Shanxi Province and 93% in Yangquan City (China National Bureau of Statistics, 2008). The abundant supply of coal in Shanxi provides little incentive to switch to other forms of fuel. Moreover, poor households are unable to switch away from coal because of the high cost and lack of awareness of cleaner-burning fuels or technologies. Although Shanxi is rich in surplus biomass fuels from agricultural output, it is likely that coal will remain the dominant fuel choice unless strong economic incentives are provided to switch to other fuels.

The Role of Carbon Finance:

The project is financed by investment capital that the project seeks to recapture by generating Voluntary Gold Standard carbon credits. Carbon credits will be generated in the voluntary carbon market, not the Clean Development Mechanism (CDM) of the Kyoto Protocol. The carbon credits will be generated using the voluntary market standards developed by the Gold Standard Foundation.

Partners:

The project proponents will phase in new stove manufactures and new stove technologies when carbon revenues are made available for project expansion. Initially, the project proponents have partnered with Shanxi Jinqilin Energy Technology Company Ltd. to manufacture, distribute, and maintain the Jinqilin stoves for local communities. China Association of Rural Energy Industry (CAREI) will manage government relations, and liaison between local, national, and international stakeholders. Impact Carbon (formerly CEIHD) will manage the development of the carbon asset.

iii. Invitation tracking table

[See Toolkit 2.6 and Toolkit Annex J]

Stakeholder Consultation Invitation Tracking

Type	Organization	Name of Invitee	Means of Invitation	Date of Invitation	Confirmed Received?	Intends to be in attendance
F	Global Environmental Institute (GEI)	Guo Benchi	bcguo@geichina.org	March 26,2010	No Response	No Response
D	Green Camel Bell (Gansu)	Ran Liping	ranlp@gcb.ngo.cn	March 26,2010	No Response	No Response

F	The Climate Group (China)	Wu Changhua	cwu@theclimategroup.org	March 26,2010	No Response	No Response
E	Gold Standard	Leon Wang	leon@cdmgoldstandard.org	March 26,2010	Confirmed	No Response
C	Clean Development Mechanism in China	(China DNA)	master@ccchina.gov.cn	March 26,2010	No Response	No Response
E	Gold Standard expert	Yuran Dai	yuran@cdmgoldstandard.org	March 26,2010	No Response	No Response
A	Beijing Unite Engineering Construction Co.Ltd	Xu Dongli	xdl@lhcy.com.cn	March 26,2010	Confirmed	Attendance
B	Beijing Business News	Huang Jingyi	piano_huang@yahoo.com.cn	March 28,2010	Confirmed	No Response
B	Energy Saving Office,Yangquan City	Chou Luxin	ypjnjczd@163.com, 0353-2296172	April 1,2010	Confirmed	Attendance
B	Agri. Environmental Protection Office,Yangquan	Wang Quanbao	yqxnbz@163.com, 0353-2299225	April 1,2010	Confirmed	Attendance
B	Agri. Environmental Protection Office,Yangquan	Bao Weidong	0353-2299226	April 1,2010	Confirmed	Attendance
B	Agricultural Machinery Institute,Changzhi City	Su Wenbin	cznjswb@126.com, 0355-3033579	April 1,2010	Confirmed	Attendance
B	Agricultural Machinery Institute,Changzhi City	Cao Huipeng	0355-3033579	April 1,2010	Confirmed	Attendance
A	User,Yuanping County	Li Yuexi	13934436855	April 1,2010	Confirmed	Attendance
A	Xiaohu Village Leader,Yu County	Liu Xinzhu	13935329815	April 1,2010	Confirmed	Attendance
A	User, Xiaohu Village	Liu Meishuang	13935329815	April 1,2010	Confirmed	Attendance
A	User, Xiaohu Village	Liu Xianbao	13935329815	April 1,2010	Confirmed	Attendance
A	Shenquan Village Leader, Yu County	Wu Junyin	13453309681	April 1,2010	Confirmed	Attendance
A	Wolongpo Village Leader, Yu County	Zhang Xiuqing	13935359928	April 2,2010	Confirmed	Attendance
A	Xipan Town Leader, Yu County	Zhao Jiantao	13935365994	April 2,2010	Confirmed	Attendance
A	Changchi Town Leader, Yu County	Wang Haisheng	13663639499	April 2,2010	Confirmed	Attendance
D	Merchants Association of Yu County (NGO)	Liang Yudang	13934034266	April 2,2010	Confirmed	Attendance
B	Director of Economic Commission,Yangquan	Qin Baolin	13935335566	April 2,2010	Confirmed	Attendance
B	Deputy Head of Yu county Government	Xi Wenbao	18903536222	April 2,2010	Confirmed	Attendance

B	Website,Yu County Government	Zhang Yu	13546675566	April 2,2010	Confirmed	Attendance
A	Radio and TV station,Yu County	Zhao Xinwen	13935315066	April 2,2010	Confirmed	Attendance
A	Newspaper,Yu county	Cheng Yu	15935388888	April 2,2010	Confirmed	Attendance
A	Not include Jinqilin,CAREI and BUCT					

Please explain how you decided that the above organisations/ individuals are relevant stakeholders to your project. Also, please discuss how your invitation methods seek to include a broad range of stakeholders (e.g. gender, age, ethnicity).

A broad range of stakeholders were invited to the stakeholder consultation meeting, including individuals from each of the six categories that GS recommends (see below). Invitations were sent by email whenever possible, but if the stakeholder did not have email, direct phone call invitations were made. Both thought leaders and local users within the community were invited, including village leaders, residents, government officials, media, manufacturers, NGOs, and international representatives.

Category Code	Category	Outcome
A	Local people impacted by the project or official representatives	Numerous people in this category were invited and attended.
B	Local policy makers and representatives of local authorities	Numerous people in this category were invited and attended.
C	For CDM/JI projects, an official representative of the DNA or DFP of the host country of your project, or the UNFCCC focal point. For voluntary GS projects, the DNA must also be notified. An invitation letter can be sent, however not formal response is required.	This is not a CDM/JI project. As a voluntary GS project, the China DNA (master@ccchina.gov.cn) was invited, but did not provide a formal response and was unable to attend.
D	Local non-governmental organizations working on topics relevant to your project.	Numerous people in this category were invited and attended.
E	The local Gold Standard expert who is located closest to your project location.	Leon Wang and Yuran Dai, both GS experts, were invited but were unable to attend.

F	Relevant non-governmental organizations (NGOs) supporting the Gold Standard, with a representation in your region and ALL GS supporter NGOs located in host country of the project.	Invitations were sent to all GS supporting NGOs based in mainland China, including: Global Environment Institute, Green Camel Bell, and the Climate Group were invited. None of the groups were able to attend. In addition, WWF Hong Kong was not invited because Hong Kong is not part of mainland China and would have required a Visa to attend.	

iv. Text of individual invitations

[See Toolkit 2.6 and Toolkit Annex J]

Invitation to Initial Stakeholder Consultation
Clean and Efficient Cooking and Heating Project, China

Dear Sir or Madam,

We invite you to provide input to the design of a project intended to fund the dissemination of clean and efficient biomass stoves by creating and selling voluntary emissions reductions which are known also as carbon offsets. This project is the result of partnership between China Association for Rural Energy Industries (CAREI), Beijing University of Chemical Technology(BUCT), Impact Carbon, Shanxi Jiqilin Energy Technology Co.,Ltd and other relevant partners.

This is a voluntary emissions reduction project that will be registered to the Voluntary Gold Standard. A brief non-technical description of the project is attached to this invitation. We are currently beginning the initial stakeholder consultation process, which includes both the opportunity to provide written feedback and to join us for a stakeholder meeting. Per the Voluntary Gold Standard, we invite all stakeholders, including the general public, to provide input to our project design.

- Written feedback can be provided by emailing chxiaofu@126.com, info@impactcarbon.org with direct feedback, or to request a template with which to review the project. Emails received before April 7, 2010 can be included in the formal stakeholder consultation process.

- The meeting will be held at the Yu County, Shanxi from 09:00am to 12:00am on 10/04/2010. It is located on Tianhai Hotel, No.2, Xinjian East Road. Yu County.

Thank you for your consideration of this request. We look forward to receiving your comments and/or having the pleasure of meeting you in person on 10/04/2010.

Sincerely,

Han Wenping - Shanxi Jiqilin Energy Technology Co.,Ltd

Chen Xiaofu - China Association of Rural Energy Industry

Liu Guangqing - Beijing University of Chemical Technology,

Evan Haigler - Impact Carbon, USA

Contact Tel:（0086）-10-65031567

Email:guangqing.liu@gmail.com

v. Text of public invitations

Government officials posted paper print-outs in government buildings. Village leaders conveyed the invitation to villagers during publicly aired news announcements using amplified outdoor speakers. These announcements paraphrased the text of the individual invitations.

B. 2. Description of other consultation methods used

If individuals and/ or entities (e.g. NGOs) are unable to attend the physical meeting, please discuss other methods that were used to solicit their feedback/ comments (e.g. questionnaires, phone calls, interviews).

Representative media attended the stakeholder consultation meeting. A news report and video footage of the consultation meeting was aired on local television (news clip is available to DOE upon request). The meeting results were described, and contact information was included in the news article for stakeholders to send comments and feedback. Government and village leaders also conveyed the meeting results with local households and stakeholders, and were asked to solicit questions they may have. Follow-up phone calls to the local leaders by Mr. Chen Xiaofu allowed for any feedback and questions from participants that were not able to attend. Participants contacted for follow-up calls and other consultations are listed in section C.3.ii “Minutes of other consultations.”

SECTION C. CONSULTATION PROCESS

C. 1. Participants’ in physical meeting(s)

i. List of participants

[See Toolkit 2.6.1 and Toolkit Annex J]
Please attach original participants’ list (in original language) as Annex 1.

PARTICIPANT LIST				
Date and time: 10/04/2010				
Location: Tianhai Hotel, No.2, Xinjian East Road. Yu County, Shanxi, China				
No.	Name	Organization	Male/ Female	Contact Details
A	Xu Dongli	Beijing Unite Engineering Construction Co.Ltd	Male	xdl@lhcy.com.cn
B	Qiu Luxin	Energy Saving Office,Yangquan City	Male	13503539317
B	Zeng Jin	Energy Saving Office,Yangquan City	Male	13903531436
B	Wang Jinbao	Agri. Environmental Protection Office,Yangquan	Male	2299226
B	Bao Weidong	Agri. Environmental Protection Office,Yangquan	Male	2299225
B	Su Wenbin	Agricultural Machinery Institute,Changzhi City	Male	cznjswb@126.com
B	Cao Huipeng	Agricultural Machinery Institute,Changzhi City	Male	cznjsv006@163.com
B	Wu Zhenghui	Agricultural Machinery Institute,Changzhi City	Male	czwzh999@163.com
A	Li Yuexi	User,Yuanping County	Male	13935359928
A	Liu Xinzhu	Xiaohu Village Leader,Yu County	Male	13935329815
A	Liu Meishuan	User, Xiaohu Village	Male	15935384317
A	Liu Xianbao	User, Xiaohu Village	Male	13453305165
A	Wu Junyin	Shenquan Village Leader, Yu County	Male	13453309681
A	Zheng Shinian	Shenquan Village Leader, Yu County	Male	13097504898
A	Wu Xingyan	User, Shenquan Villager, Yu County	Male	
A	Zhang Xiuqing	Wolongpo Village Leader, Yu County	Male	13935359928

A	Zhao Jiantao	Xipan Town Leader, Yu County	Male	13935365994
A	Wang Haisheng	Changchi Town Leader, Yu County	Male	13663639499
D	Liang Yudang	Merchants Association of Yu County (NGO)	Male	13934034266
B	Qin Baolin	Director of Economic Commission,Yangquan	Male	13935335566
B	Han Jiazheng	Deputy Head of Yu county Government	Male	3538083202
A	Han Xiuling	Accountant of Jinqilin Co.Ltd.	Female	
B	Zhang Yu	Website,Yu County Government	Male	13546695566
A	Zhao Xinwen	Radio and TV Station,Yu County	Male	13037065050
A	Han Wenping	Shanxi Jiqilin Energy Technology Co.,Ltd	Female	13503535088
D	Chen Xiaofu	China Association of Rural Energy Industry	Male	chxiaofu@126.com
D	Liu Guangqing	Beijing University of Chemical Technology	Male	guangqing.liu@gmail.com
D	Zhangweihao	Beijing University of Chemical Technology	Male	zhangweihao1987@163.com

Comments accompanying Annex 1 – original participants' list (in original language) attached as Annex 1

Participants in attendance represented a wide array of stakeholders for the carbon project, including government leaders, village leaders and residents, dealers, cooperative enterprises, NGOs, university, and project developers. Invitation letters were sent to 27 people, of whom 22 people confirmed receiving the invitations, and 19 people actually attended the meeting. An additional 5 persons not on the invitation list voluntarily attended the meeting, as well as another 4 representatives from Jinqilin Energy Technology Co.Ltd. In total 28 persons attended the stakeholder meeting. The original participant list with signatures can be found in Annex 1.

ii. Evaluation forms

[See Toolkit 2.6.1, 2.6.2 and Toolkit Annex J]

Please add at least 4-5 representative samples in English.
Please attach original evaluation forms (in original language) as Annex 2.

Name	**Representative Responses**
What is your impression of the meeting?	A1- Very good, open, fair A2- Meaningful, successful, timely A3- Very good, know more about the importance and necessity of energy-saving and emission reduction. A4- Good goals. Impressed deeply. A5- Necessary and successful
What do you like about the project?	A1- Protect environment, do good to human race A2- Save energy, improve environment, provide benefits to residents and enterprise A3- Save energy, reduce emissions, do good to farmer' s health and income A4- Save energy, improve air quality, increase residents income, provide employment A5- Important for environment and reemployment
What do you not like about the project?	A1- Dissemination of 6000 stoves per year should be larger. A2- Enhance propaganda. Make rural residents understand social and environmental benefits of project, not only personal benefits. A3- Develop a chain of providing briquettes and selling stove. A4-) Expand project boundary, not only in Yu County. A5- Stove should enhance heating function
Signature	

Comments accompanying Annex 2. Original evaluation forms are attached as Annex 2. Stakeholders agreed that many positive benefits would result from the project activity. Many suggested that project should be larger than 7,000 stoves per year so that more households could benefit from the program. They also suggested introducing briquette technology so that areas outside of Yangquan City with less corn cobs, but still plenty of agricultural residues, could also benefit from the stove. Heating functions such as hot water piping would also be helpful for heating in the winter. Finally, many suggested expanded “propaganda,” which is meant as social marketing and education on the benefits of using clean burning biomass stoves as compared to

traditional coal stoves.

C. 2. Pictures from physical meeting(s)

[See Toolkit 2.6 and 2.6.1]

C. 3. Outcome of consultation process

i. Minutes of physical meeting(s)

Please ensure that you include a summary of the meeting as well as all comments received.

[See Toolkit 2.6, 2.6.1, 2.6.2 and Toolkit Annex J]

9:15-9:30: Meeting started. Manager Han Wenping gave a welcome speech and introduces attendees.

9:30-9:45: Dr. Liu Guangqing from BUCT introduced non-technical summary of project, including project background and benefits that project will bring in. Hazards of solid fuel combustion and necessity of using high-efficiency low-emission biomass stove were stressed.

9:45-10:10: Mr. Chen Xiaofu from CAREI presented Jinqilin carbon project, mainly including complete basic work of prophase and current progress. Project requests, procedure and work plan

were introduced in detail.

10:10-10:35: Manager Han Wenping introduced Jinqilin Company and stove manufacture and sales condition. Principle of biomass gasifier stove and its advantages were explained. Then propaganda film of Jinqilin biomass stove was played.

10:35-10:50: Mr. Chen Xiaofu received questions from participants. He then explained how to fill in environmental and social impacts checklists and evaluation forms.

10:50 Merchants Association of Yu County (NGO), Liang Yudang:

The meeting is very important and successful. Thanks government leaders attending the meeting and supports the project. 500 Jinqilin stoves have been disseminated in his county. All households are using Jinqilin stoves. They are very helpful to people's health. His wife' s chronic pharyngitis has been mitigated after using Jinqilin stove. His suggestions: 1) Dissemination of 6000 stoves per year should be larger. 2) Compare economic benefits of Jinqilin biomass stove with that of traditional stove and induction cooker in terms of fuel or energy consumption. 3) Consider rural residents' affordability. At some places in Yu County, economic level is very low. Residents can not afford the stove yet. Provide some subsidy for stoves and fuels.

11:05 Xipan Town Leader, Yu County, Zhao Jiantao:

He knows more about carbon trade through the meeting. He provides the following suggestions combining years of grass-roots work: 1) Enhance propaganda. Make rural residents understand social and environmental benefits of project, not only personal benefits. 2) Develop a chain of providing briquettes and selling stove. 3) Intensify efforts to train real residents to use stove.

11:10 Deputy Head of Yu county Government, Han Jiazheng:

Thanked sponsors hold the meeting and stressed the meaning of the project. From government perspective, he provided following suggestions: 1) Local government will always support and concern the project. He requests all stakeholders to contribute to the project. 2) Jinqilin company should enhance project propaganda, increase awareness and expand the market. 3) Enhance cooperation and complement other's work. There should be resource-sharing of all stakeholders which will help the project develop more smoothly. 4) Make best use of local biomass. Contribute much to energy-saving and emission-reduction.

11:15 Energy Saving Office, Yangquan City, Qiu Luxin

Government will continue to support the project. Hopes project will become large-scale as soon as possible. 2) Hopes experts provide more support and consultation. Strive for early success of the project.

11:20 Agri. Environmental Protection Office,Yangquan, Wang Jinbao:

Stressed current achievements. Hopes for success based on the cooperation of experts and enterprises.

11:25 Farmer and user, Yuanping County, Li Yuexi:

Stressed the advantages of project and biomass stoves. As a Jinqilin stove dealer and briquettes producer, he introduced stove sales and briquettes production.

11:30 Agricultural Machinery Institute, Changzhi City, Su Wenbin:

Expressed his long focus on carbon trade and interest on Jinqilin stove. Suggestions: 1) Expand project boundary, not only in Yu County. 2) Fire hole of stove should be larger. Thus some big pots can be put in. 3) Pay attention to collection of fuel of different size. Thus combustion can be durable and complete without adding fuels again. 4) Promote cooperation of stove manufacturer and briquettes producer.

11:40 Changchi Town Leader, Yu County, Wang Haisheng:

Stressed stove advantages and provided the following suggestions: 1) Intensify efforts to propaganda to rural residents 2) Consider expanding dissemination scale. 3) With living standard improving, what people need is convenience. 4) Stove should enhance heating function.

11:45 Xiaohu Village Leader,Yu County, Liu Xinzhu:

Propaganda should be enhanced to improve knowledge on care, maintenance, and use of stove.

11:50 Jinqilin Users in Xiaohu Village, Liu Meishuan and Liu Xianbao

Liu Meishuan: 1) Combustion time of corn cob is short. Adding some saw powder can extend combustion time. 2) If using Jinqilin stove is more economic and convenient, more people will purchase Jinqilin stove instead of induction cooker.

Liu Xianbao: Cooking with induction cooker, my neighbor use about 70 kWh per month. Cooking with Jinqilin stove, I use about 10 kWh per month, so I save much more money. If more subsidies are provided, more people will choose Jinqilin stove. And most people hope to get paid for helping implement the project.

11:50 Shenquan Village Leader, Yu County, Wu Junyin:

1) More training must be given on proper use of stove. 2) Briquette is cleaner than corn cob. If it's cheap, people will all consider using it.

11:55 Agricultural Machinery Institute,Changzhi City, Wu Zhenghui:

1)Try to prolong primary combustion time. 2) It is hard to adjust secondary airflow, need more training.

12:00 Agricultural Machinery Institute,Changzhi City, Cao Huipeng:

Rural residents need stove that is economical and convenient to use. If cost of using stove and briquette is not much cheaper than coal, people will not purchase stove. And if it is not convenient

to use, people will not use stove even without any cost.

12:05 Agri. Environmental Protection Office,Yangquan, Bao Weidong:

Rural residents can exchange briquette with crop residues or other biomass without extra fee. Carbon finance of project can be used to subsidize residents and the fuel producer.

12:10 Beijing Unite Engineering Construction Colt, Xu Dongli:

Developer should build a rational business model for briquettes so that it can expand beyond corn cob rich locations. Focus on improving after-sale service, training users and increasing propaganda.

12:15 Meeting closed.

ii. Minutes of other consultations

After the consultation, project manager Mr.Chen Xiaofu met with other official leaders that were unable to attend the consultation meeting, including Wu Runzhen, deputy president of Yu County; Han Tao, from the Merchant Bureau of Yu County; Li Liangde, deputy director of Science & Technology Bureau of Yu County; Li Haicheng, vice president of Chanchi Town and a village leader of Huang'an village. They all gave very positive feedback and hoped to promote the biomass stove in their regions. Mr. Chen Xiaofu also called and met with Mr. Wang Liangliang from the Gold Standard's Beijing Office. and Ms. Huang Jingyi from Beijing Business Newspaper. They too think the program is very good and are willing to help promote the program.

iii. Assessment of all comments

[See Toolkit 2.6]

Stakeholder comment	**Was comment taken into account (Yes/ No)?**	**Explanation (Why? How?)**

1. Dissemination of 6000 stoves per year should be larger.	No	The Project aims to increase future availability of the stove, but will focus first on solidifying its distribution supply chain, and customer service goals. These initial steps will help ensure smooth and sustainable growth, allowing for future expansion beyond 6000 stoves per year.
2. Compare economic benefits of Jinqilin biomass stove with that of traditional stove and induction cooker in terms of fuel or energy consumption.	Yes	For some households, the induction cooker has become a source of supplemental cooking. In the most recent China 2005 national census, less than 0.3% of villagers in Shanxi use electricity for cooking. The official census rate has likely increased slightly since 2005, but that data is not yet available. Kitchen surveys showed nearly 5% of households use electricity for cooking during non-heating months, but less than 0.2% use electricity during the heating months. Anecdotal evidence shows cooking with an induction cooker uses an average of 70 kWh per month, whereas cooking with the Jinqilin stove uses about 10 kWh per month. Electrical connectivity to most rural villages, unfortunately, has low overall capacity to accommodate peak energy use. Power outages are already a common occurrence in rural villages. Increased demand has driven the higher frequency of outages. Until rural electrical infrastructure is improved, heavy loads from household appliances will not be possible. The Project will monitor the use of induction stoves, and we are open to the promotion of induction stoves when the technology becomes an economically and structurally viable option in rural areas.

3. Need to consider rural residents' affordability. At some places in Yu County, economic level is very low. Residents cannot afford the stove yet. Provide some subsidy for stoves.	Yes	Cost-sharing is central to the sustainability of the project. From our experience, providing free technologies often leads to low adoption rates and poor long-term maintenance of a product. Subsidies will be provided to offset the cost of the stove, at roughly 1/3 to 1/2 the retail cost. The Project will rely on local government officials and village leaders to determine the appropriate cost-sharing burden that will make the new stoves affordable, yet still valued. We will also employ educational outreach programs to demonstrate to users the cost savings accrued from reduced coal purchases, which in turn will quickly offset the cost of a new stove within the first year of use.
4. Enhance propaganda, make rural residents understand social and environmental benefits of project, not only personal benefits.	Yes	As described in the sustainability monitoring plan, the Project will leverage CAREI's expertise to train and educate users on the benefits of using improved biomass stoves. These benefits include personal health, climate, and economic savings.
5. Develop a chain of providing briquettes and selling stove.	Yes	The Project fully supports the collection of renewable biomass residues for sustainable pellet production. The Jinqilin manufacturer is piloting new biomass briquette making technologies and dissemination models. Since coal is the primary fuel in Shanxi province, excess agricultural residues are often disposed of in open field burning[1]. Although these large reserves agricultural residues provide an attractive source of fuel, the Project will continue to focus dissemination efforts only in areas where sufficient corn cob residues are available. The Project will support biomass pellet production after a robust briquette supply chain has been proven to be viable and cost-competitive with

[1] In Shanxi province, nearly 75% of crop residues are disposed of in open-field burning, and only 25% is used as household fuel. See: Yan, X., Ohara, T., Akimoto, H., 2006. Bottom-up estimate of biomass burning in mainland China. Atmospheric Environment 40, 5262-5273.

		alternative fuels.
6. Intensify efforts to train real residents to use stove.	Yes	The Jinqilin manufacturer is developing stronger customer service plans. This includes up front training on appropriate use, and village level follow-up and maintenance of stoves.
7. Enhance cooperation and complement other's work. There should be resource-sharing of all stakeholders which will help the project develop more smoothly	Yes	The stakeholder consultation meeting provided an excellent opportunity for experts from all sectors to meet and discuss possible collaboration. The Project is excited to work with local officials, leaders, and manufacturers to ensure smooth dissemination, adoption, and support of the project. Contact information of all stakeholders attending the meeting was distributed at the close of the meeting.
8. Expand project boundary, not only in Yu County.	Yes	Dissemination of stoves will occur first in areas where strong local partners have been established, and where adequate biomass fuel is available. The Project will expand to areas further afield after biomass pellet supply chains have been successfully piloted, and after the Jinqilin manufacturer have obtained sufficient resources to dispatch robust technical and customer support.
9. Fire hole of stove should be larger. Thus some big pots can be put in.	No	The current stove design has removable rings, allowing for small and large sized pots to fit on the burner. A larger pot could be appropriate for institutional stoves, but at this point the manufacturer is focused on residential uses.

10. Pay attention to collection of fuel of different size. Thus combustion can be durable and complete without adding fuels again.	Yes	Future training seminars will emphasize the benefit of using size appropriate fuels. Longer cooking requires larger pieces of biomass that will burn longer, while shorter cooking tasks require less fuel and hence can use shorter length fuels that will burn more quickly.
11. Promote cooperation of stove manufacturer and briquettes producer.	Yes	Jinqilin manufacturer is exploring briquette making technologies, and entertaining possibilities with many briquette producers.
12. Stove should enhance heating function.	No	At this point the stove does not provide heating functions. There exists, however, biomass gasifier stove technologies that provide additional heating capabilities. The Jinqilin manufacturer will explore these possibilities after more financial resources are available for expanded research and development.
13. In my village all households have Jinqilin stove, while not everyone is actually using it, because many households can not use the stove properly.	Yes	As described above and in the sustainability monitoring plan, the Jinqilin manufacturer is expanding training and customer support to users. The Project will use household surveys to monitor closely the actual adoption rates of the Jinqilin stove. In projections (see PDD), the Project conservatively assumes high drop-off rates after the first year of purchase. The Project is addressing adoption issues through expanded training through CAREI, and Jinqilin manufacturer.

14. Rural residents can exchange briquette with crop residues or other biomass without extra fee. Carbon finance of project can be used to subsidize residents and the fuel producer.	No	Carbon finance has not yet been actualized. When financing becomes available, the Project will re-evaluate the potential for carbon to subsidize fuel producers. In the meantime, the Project supports efforts by Jinqilin to develop pilot program supply chains for biomass pellets.

iv. **Revisit sustainability assessment**

Are you going to revisit the sustainable development assessment? Please note that this is necessary when there are indicators scored 'negative' or if there are stakeholder comments that can't be mitigated **[See Toolkit 2.7]**	**Yes**	**No**
	☐	**X**

Give reasoning behind the decision There is no plan to revisit the sustainable development assessment at this point. The stakeholder consultation process has not uncovered any aspects of the project that conflict with our original assessments.

v. Summary of alterations based on comments

If stakeholder comments have been taken into account and any aspect of the project modified, then please discuss that here. According to the sustainability matrix, none of the indicators were scored less than "positive" by the stakeholders. The Project proponents are encouraged by the overwhelming positive feedback and support by stakeholders. There was clear agreement that only positive, and no negative, impacts will occur as a result of the project. There were, however, suggestions for improving the sustainability of the project design. Many stakeholders stressed the importance of educating local residents of the health and environmental benefits of the stove. They also encouraged greater training and technical support for current users of the Jinqilin stove. As a result of these comments, the Project will design a comprehensive education and training program to encourage dissemination and appropriate use of the stove. Project partners at the China Association for Rural Energy Industries (CAREI) have extensive experience in training, promotion, and education for improved stoves. Most recently, CAREI and Impact Carbon led a US Environmental Protection Agency (EPA) and Wuppertal Institute funded project that promoted capacity building and training for the scale-up of improved stoves in poor western regions of China. This expertise will be utilized in the Shanxi carbon

project.

Stakeholders also suggested expanding the availability of biomass fuels so that residents in areas outside of Yu County – who have less corn cob production – can also take advantage of the improved stove program. In response to this, the Project proponents are investigating options for new and innovative biomass pellet supply chains. Following the suggestion of stakeholders, the Project is exploring the option to utilize the abundant surplus of wheat, corn stalk, and other agricultural residues to produce biomass pellets. It is possible that pellets can be used to supplement current corn cob fuel stocks, as well as enable the Project to expand to areas with fewer available corn cob residues. Until then, the Project will focus on areas with high corn cob yields.

The project proponents did not elicit from the stakeholder meeting any major changes for the project design. The positive results of the stakeholder meeting reinforce our confidence that the project design will deliver high quality social and environmental benefits to all participants and stakeholders.

SECTION D. SUSTAINABLE DEVELOPMENT ASSESSMENT

D. 1. Own sustainable development assessment

i. 'Do no harm' assessment

[See Toolkit 2.4.1 and Toolkit Annex H]

Safeguarding Principles	Description of relevance to my project	Assessment of my project risks breaching it (low/med/high)	Mitigation Measure
1 HUMAN RIGHTS The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses.	Improved cookstoves respect the dignity, cultural property and indigenous qualities of local communities. The project will improve local health through reduced indoor air pollution.	low	N/A

2 HUMAN RIGHTS The project does not involve and is not complicit in involuntary resettlement.	The sale and distribution of cookstoves will not cause involuntary resettlement.	low	N/A
3 HUMAN RIGHTS The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.	Local cooking practices will be preserved with the installation of new cookstoves.	low	N/A
4 LABOUR STANDARDS The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights	The project generates employment through manufacturing and sales of stoves. The project respects all employee's freedom of association and does not restrict these rights.	low	N/A
5 LABOUR STANDARDS The project does not involve and is not complicit in any form of forced or compulsory labour.	All employees are compensated fair market rates. Participation in the project is voluntary, no forced or compulsory labour is employed by the project.	low	N/A
6 LABOUR STANDARDS The project does not employ and is not complicit in any form of child labour.	The project does not employ and is not complicity in child labor.	low	N/A
7 LABOUR STANDARDS The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	Project participants are self selecting in that they choose whether or not to purchase a subsidized stove. The project does not involve any form of discrimination based on gender, race, religion, sexual orientation, or any other basis.	low	N/A

8 LABOUR STANDARDS The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments	The construction of cookstoves involves light metal work.	low	No hazardous materials wil be used in the contruction of stoves. Local safety protocols will be followed during the manufacturing process.
9 ENVIRONMENTAL PROTECTION The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle. This principle can be defined as: ”When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.”	The project does not pose a threat to human health or the environment. The project aims to improve health through reducing levels of indoor air pollution.	low	N/A
10 ENVIRONMENTAL PROTECTION The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value or (d) recognized as protected by traditional local communities	The project will reduce the demand for raw coal and associated processes needed to remove coal from their sources. Natural habitats will not be degraded or converted.	low	N/A
11 ANTI-CORRUPTION The project does not involve and is not complicit in corruption.	The project is not involved or complicit in corruption.	low	N/A

Additional relevant critical issues for my project type	Description of relevance to my project	Assessment of my project risks breaching it (low/med/high)	Mitigation Measure
1	N/A	N/A	N/A
2	N/A	N/A	N/A
Etc.	N/A	N/A	N/A

ii. Sustainable development matrix

[See Toolkit 2.4.2 and Toolkit Annex I]

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Gold Standard indicators of sustainable development.	**If relevant copy mitigation measure from "do no harm" –table, or include mitigation measure used to neutralise a score of '–'**	**Check www.undp.or/mdg and www.mdgmonitor.org Describe how your indicator is related to local MDG goals**	**Defined by project developer**	**Negative impact: score '-' in case negative impact is not fully mitigated score 0 in case impact is planned to be fully mitigated No change in impact: score 0 Positive impact: score '+'**
Air quality	N/A	MDG Goal 7, Target 1 MDG Goal 5, Target 1 MDG Goal 4, Target 1	Project reduces indoor & outdoor air pollution. Exposure to indoor smoke from traditional stoves has been directly linked to	+ Positive

			negative health outcomes.	
Water quality and quantity	N/A	MDG Goal 7, Target 3	Project will reduce demand for coal. Mining and processing of coal has been shown to have adverse effects on below and above ground water reserves, including acid mine drainage. Private mines are difficult to measure, so this is listed as neutral.	0 Neutral
Soil condition	N/A	N/A	N/A	0 Neutral
Other pollutants	N/A	N/A	N/A	0 Neutral
Biodiversity	N/A	N/A	N/A	0 Neutral
Quality of employment		MDG Goal 1, Target 2	Jinqilin manufacturing is expanding with stove sales, increasing the need for skilled and trained stove technicians.	+ Positive
Livelihood of the poor	N/A	MDG Goal 1, Target 1; MDG Goal 7, Target 4.	Household disposable income will increase as a result of purchasing less coal for cooking.	+ Positive
Access to affordable and clean energy services	N/A	MDG Goal 1	Burning surplus agricultural biomass instead of purchasing expensive coal will save users money and provide a cheaper and cleaner alternative to coal fuels.	+ Positive
Human and institutional capacity	N/A	MDG Goal 1, Target 2	Cleaner cooking environments will provide gender equality for women, who are disproportionately exposed to indoor air pollutants as cooks.	+ Positive
Quantitative employment and income generation	N/A	MDG Goal 1, Target 2	Increased stove sales will increase job opportunities for local and regional populations.	+ Positive
Balance of payments and investment	N/A	MDG Goal 1, Target 2	N/A	0 Neutral

Technology transfer and technological self-reliance	N/A	MDG Goal 1, Target 1 MDG Goal 1, Target 2	Improvements in stove technology and design provide the manufacturer with the potential to export their technologies and patents to manufacturers in other parts of China.	+ Positive
Justification choices, data source and provision of references				
Air quality	The project will lower levels of indoor air pollution by providing more efficient burning cookstoves. Overwhelming scientific evidence exists linking high levels of indoor air pollution caused by the burning of solid fuels, with adverse health outcomes. Example literature includes: *Aunan, K., Fang, J., Vennemo, H., Oye, K., Seip, H.M., 2004. Co-benefits of climate policy--lessons learned from a study in Shanxi, China. Energy Policy 32, 567-581.* *Desai, M., Mehta, S., Smith, K., 2004. Indoor smoke from solid fuels: Assessing the environmental burden of disease at national and local levels, WHO Environmental Burden of Disease Series, No.4. World Health Organization, Geneva.* *Liu, J., Zheng, B., Aposhian, H.V., Zhou, Y., Chen, M.-L., Zhang, A., Waalkes, M.P., 2002. Chronic Arsenic Poisoning from Burning High-Arsenic-Containing Coal in Guizhou, China. Environmental Health Perspectives 110, 119-122.* *Smith, K., Mehta, S., Maeusezahl-Feuz, M. (Eds.), 2004. Ch.18 Indoor Air Pollution from Household use of Solid Fuels. World Health Organization, Geneva.* *Zhang, Z., Smith, K.R., 2007. Household Air Pollution from Coal and Biomass Fuels in China: Measurements, Health Impacts, and Interventions. Environmental Health Perspectives 115, 848-855.* *Zheng, B., Ding, Z., Huang, R., Zhu, J., Yu, X., Wang, A., Zhou, D., Mao, D., Su, H., 1999. Issues of health and disease relating to coal use in southwestern China. International Journal of Coal Geology 40, 119-132.*			
Water quality and quantity	The project replaces coal with biomass as a household's primary cooking fuel, thus reducing the demand for coal. Coal mining has the potential to lower water quality in above and below aquifers. Example literature includes: *Davis, E.C., Boegly, W.J., Jr., 1981. A Review of Water Quality Issues*			

	Associated with Coal Storage. J Environ Qual 10, 127-133. *He, B., Liang, L., Jiang, G., 2002. Distributions of arsenic and selenium in selected Chinese coal mines. The Science of The Total Environment 296, 19-26.*
Soil condition	N/A
Other pollutants	N/A
Biodiversity	N/A
Quality of employment	Increased stove sales will broaden the types and quality of employment available to local residents. In particular there will be a need for stove technicians that can build, maintain, and provide adequate training for stove use. The manufacturer will increase their capacity to train employees.
Livelihood of the poor	The project reduces the need to purchase expensive coal for household cooking. Marginal savings accrued from not having to purchase fuel year round can be used to fulfil other household needs. Furthermore, improvements in indoor air quality also benefit health, which allow for more productive livelihoods. Related literature includes: *Aunan, K., Fang, J., Hu, T., Seip, H.M., Vennemo, H., 2006. Climate change and air quality--measures with co-benefits in China. Environ Sci Technol 40, 4822-4829.* *Aunan, K., Mestl, H., Seip, H., Fang, J., D. O'Connor, D., Vennemo, H., Zhai, F., 2003. Co-benefits of CO 2-reducing policies in China-a matter of scale? International Journal of Global Environmental Issues 3, 287-304.* *Dudek, D., Golub, A., Strukova, E., 2003. Ancillary Benefits of Reducing Greenhouse Gas Emissions in Transitional Economies. World Development 31, 1759-1769.* *Gupta, C.L., 2003. Role of renewable energy technologies in generating sustainable livelihoods. Renewable and Sustainable Energy Reviews 7, 155-174.* *Krupnick, A., Burtraw, D., Markandya, A., 2000. The ancillary benefits and costs of climate change mitigation: A conceptual framework Workshop on Assessing the Ancillary Benefits and Costs of Greenhouse Gas Mitigation Strategies. OECD Environment Directorate, Washington DC.* *Wang, X., Smith, K.R., 1999. Secondary benefits of greenhouse gas control: health impacts in China. Environmental Science & Technology 33, 3056-3061.*

Access to affordable and clean energy services	Using surplus agricultural biomass instead of purchasing expensive coal will save users money and provide a cheaper and cleaner alternative to coal fuels. *Brew-Hammond, A., Crole-Rees, A., 2004. Reducing Rural Poverty through Increased Access to Energy Services: A Review of the Multifunctional Platform Project in Mali, in: UNDP (Ed.).* *Pal, R.C., Sethi, K.S., 2005. Improved cookstove technology for rural livelihoods for women: sharing experiences from Haryana – India. Boiling Point, 13-14.*
Human and institutional capacity	Cleaner cooking environments will increase gender equality for women, who are disproportionately exposed to indoor air pollutants as cooks. *Babar, A.Z., 2001. Gender Issues in Wood Energy. Gender Technology and Development 5.* *El Tayeb Muneer, S., Mukhtar Mohamed, E.W., 2003. Adoption of biomass improved cookstoves in a patriarchal society: an example from Sudan. The Science of The Total Environment 307, 259-266.* *Misana, S., Karlsson, G.V., 2001. Generating Opportunities: Case Studies on Energy and Women, in: UNDP (Ed.). UNDP.*
Quantitative employment and income generation	New employment opportunities will arise from increased stove sales. Expansion of manufacturing, sales, and research and development, will be required to maintain adequate supply for stoves for the market.
Balance of payments and investment	N/A
Technology transfer and technological self-reliance	Patent rights to the current stove used for the project were purchased from a third party stove designer in China. It is possible that stove manufacturers participating in this project will eventually license technology to other manufacturers in different regions and countries.

Millennium Development Goals

Goal 1: Eradicate extreme poverty and hunger
- Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day
- Target 2: Achieve full and productive employment and decent work for all, including women and young people
- Target 3: Halve, between 1990 and 2015, the proportion of people who suffer from hunger

Goal 2: Achieve universal primary education
- Target 1: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

Goal 3: Promote gender equality and empower women
- Target 1: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

Goal 4: Reduce child mortality
- Target 1: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate

Goal 5: Improve maternal health
- Target 1: Reduce by three quarters the maternal mortality ratio
- Target 2: Achieve universal access to reproductive health

Goal 6: Combat HIV/AIDS, Malaria and Other Diseases
- Target 1: Have halted by 2015 and begun to reverse the spread of HIV/AIDS
- Target 2: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it
- Target 3: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases (ie: tuberculosis)

Goal 7: Ensure environmental sustainability
- Target 1: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources
- Target 2: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss
- Target 3: Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation
- Target 4: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers

Goal 8: Develop a global partnership for development
- Target 1: Address the special needs of least developed countries, landlocked countries and small island developing states
- Target 2: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system
- Target 3: Deal comprehensively with developing countries' debt
- Target 4: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries
- Target 5: In cooperation with the private sector, make available benefits of new technologies, especially information and communications

D. 2. Stakeholders Blind sustainable development matrix

[See Toolkit 2.6.1]

Indicator	**Chosen parameter and explanation**	**Preliminary score**
Gold Standard indicators of sustainable development	**Defined by project developer**	**<u>Negative impact</u>:** **score '-' in case negative impact is not fully mitigated, score '0' in case impact is planned to be fully mitigated** **<u>No change in impact</u>: score '0'** **<u>Positive impact</u>:** **score '+'**
Air quality	All 19 respondents scored air quality impacts as positive. They cited the improvements in air quality for both indoor and outdoor environments.	(+) Large
Water quality and quantity	Out of 19 respondents, 13 ranked water quality impacts as irrelevant, while 6 ranked the impact as positive. Those who ranked it as positive cite the reduced need for water in coal processing, but agree that there is no impact on residential water use. To conservatively accommodate both opinions, the Project scores this indicator as neutral.	(0) Neutral

Soil condition	Out of 18 respondents, 10 ranked the impact on soil condition as irrelevant, while 8 ranked the impact as positive. The Project accommodates both views by scoring this indicator as neutral.	(0) Neutral
Other pollutants	Out of 18 respondents, 6 ranked the impact on soil condition as irrelevant, while 12 ranked the impact as positive. The Project accommodates both views by scoring this indicator as neutral.	(0) Neutral
Biodiversity	All 18 respondents rank this as positive. The use of the term "biodiversity" was interpreted by project participants as "environmental sustainability," which in Chinese conveys the idea of environmental stewardship, including the promotion of biodiversity.	(+) Large
Quality of employment	All 18 respondents rank this as positive. Respondents cited stove manufacturing jobs as improvements over farming jobs.	(+) Large
Livelihood of the poor	All 18 respondents rank this as positive. Opinions voiced cited the cost savings from not having to buy coal fuel for cooking.	(+) Large
Access to affordable and clean energy services	All 18 respondents rank this as positive. Attendees cited reduced economic burdens on household as a result of subsidies for improved stove technologies.	(+) Large
Human and institutional capacity	Out of 18 respondents, 17 ranked the impact on human and institutional capacity as positive, and 1 ranked it as irrelevant. The respondents cited improved kitchen environments for cooks (mainly women) from reduced exposure to smoke. The Project considers 17 votes as strong evidence for a positive score.	(+) Large
Quantitative employment and income generation	All 18 respondents ranked this as positive. Opinions voiced cite the expansion of labor opportunities through stove manufacturing.	(+) Large

Balance of payments and investment	Out of 18 respondents, 17 ranked the impact on balance of payments and investment as positive, and 1 ranked it as irrelevant. The respondents cited increased cooperation between experts, which they believe in turn will bring more investment.	(+) Large
Technology transfer and technological self-reliance	All 18 respondents scored this as positive. Attendees cited improvements in technology from increased capacity for research and development.	(+) Large

*Note: There were 28 attendees at the stakeholder meeting, 9 of which were affiliated with the project developer team. To avoid bias, only the 19 participants not affiliated with the project developer team took part in the blind sustainability assessment. Moreover, one respondent provided responses to only 2 indicators, thus in total there were only 18 completed matrixes.

Give analysis of difference between own sustainable development matrix and the one resulting from the blind exercise with stakeholders. Explain how both were consolidated.

Both matrixes resulted in nearly identical outcomes – mostly positive impacts. There were no negative scores. The two indicators that differed were:

1) Biodiversity Indicator: The Project scored this neutral, and stakeholders scored this positive. The difference in scores stems from the differing interpretations of "biodiversity." The Project defines biodiversity as the variety of plant and animals in a particular region. By this definition, the Project does not hinder or expand biodiversity. In contrast, stakeholders defined biodiversity as environmental stewardship that improves the natural ecosystem. By this definition, the stakeholders believe the project improves "biodiversity" through reduced indoor and outdoor emissions from coal smoke. Regardless, neither score requires mitigation efforts, and result in no changes to the project design. To conservatively assess the Project's impacts on biodiversity, we score this indicator neutral, believing that this is aligned with GS methodology and descriptions for "biodiversity."

2) Balance of Payments and Investments: The Project scored this neutral, and stakeholders scored this positive. The Project conservatively assumes that no international transfer of payments or investments will result from the project activity. Stakeholders interpreted "balance of payments and investments" and benefits accrued to the local economy through the project activity. In this manner, the stakeholders believe the Project will bring positive impacts through new expertise to local businesses. Regardless, neither score requires mitigation efforts, and result in no changes to the project design. To conservatively assess the Project's impacts on Balance of Payments and Investments, we score this indicator neutral, believing that this score best reflects GS methodology for this indicator.

D. 3. Consolidated sustainable development matrix

[See Toolkit 2.4.2]

Indicator	**Preliminary score**			
Gold Standard indicators of sustainable development	Project "Own" Score	Stakeholder Score	Consolidated Score	If difference in score, explain.
Air quality	(+) Positive	(+) Positive	(+) Positive	N/A
Water quality and quantity	(0) Neutral	(0) Neutral	(0) Neutral	N/A
Soil condition	(0) Neutral	(0) Neutral	(0) Neutral	N/A
Other pollutants	(0) Neutral	(0) Neutral	(0) Neutral	N/A
Biodiversity	(0) Neutral	(+) Positive	(0) Neutral	The Project believes the definition of "biodiversity" employed by stakeholders is already addressed in other environmental indicators (air, water, soil, other pollutants). Furthermore, the project activities do not increase, or decrease, the diversity of plant or animal life, thus the Project consolidates the score to "neutral."
Quality of employment	(+) Positive	(+) Positive	(+) Positive	N/A
Livelihood of the poor	(+) Positive	(+) Positive	(+) Positive	N/A

Access to affordable and clean energy services	(+) Positive	(+) Positive	(+) Positive	N/A
Human and institutional capacity	(+) Positive	(+) Positive	(+) Positive	N/A
Quantitative employment and income generation	(+) Positive	(+) Positive	(+) Positive	N/A
Balance of payments and investment	(0) Neutral	(+) Positive	(0) Neutral	Although economic benefits will accrue to the community through greater manufacturing of stoves, the Project conservatively assumes the balance of payments and investment will not change. Stakeholders' scoring of this indicator (positive impact) is absorbed into other indicators (employment, technology transfer). The Project thus consolidates this score to "Neutral."
Technology transfer and technological self-reliance	(+) Positive	(+) Positive	(+) Positive	N/A

*Justification for each indicator score can be found in the Passport.

SECTION E.	DISCUSSION ON SUSTAINABILITY MONITORING PLAN

[See Toolkit 2.4.3 and 2.6.1]

Discuss stakeholders' ideas on monitoring sustainable development indicators. Do people have ideas on how this could be done in a cost effective way? Are there ways in which stakeholders can participate in monitoring?

For a detailed description of the sustainability monitoring plan, see the Project's GS Passport, Section G: Sustainability Monitoring Plan. In this plan, local stakeholders will participate in household surveys and interviews to help assess the impacts of project activities. The Project is committed to all aspects of sustainability and will continually adjust monitoring activities to reflect the realities of project implementation. During the stakeholder meeting no one provided comments or recommendations for improving the monitoring of sustainable development indicators.

SECTION F.	DESCRPTION OF THE DESIGN OF THE STAKEHOLDER FEEDBACK ROUND

[See Toolkit 2.11]

A stakeholder feedback round was conducted to allow further feedback on the project design, and to demonstrate that the Project has taken due account of comments from stakeholders who attended the meeting. To this end, the Project will make available the final stakeholder report via:

1. Posting online for public viewing, and will provide an email address for further comments and feedback.
2. Soliciting follow-up comments from local leaders through informal phone calls, and through manufacturer conversations with end users in the villages.
3. Distributing hardcopies of the report to various locations in Shanxi, including the Yangquan City government office, and in meeting rooms of various villages.

The results of the stakeholder consultation provide no compelling evidence for major changes to the original project design presented at the meeting. In response to comments from stakeholders, the Project will expand marketing and training (as described in the sustainability monitoring plan), and will begin feasibility assessments for biomass pellet supply chains that can supplement areas with lower biomass corn cob supplies. The Project believes due account has been taken of initial stakeholder feedback, and we continually remain open to further comments.

ANNEX 1. ORIGINAL PARTICIPANTS LIST

Attached as separate document.

ANNEX 2. ORIGINAL EVALUATION FORMS

Attached as separate document.