

Annex 8

Qielong 1.2MW Hydro Power GS-VER Retroactive Project

Stakeholder Consultation Report

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1. MEETING OBJECTIVE

The stakeholder consultation is a two-way process of dialogue between the project developer and its stakeholders. For stakeholders, they can find a platform to express their opinions and views on the proposed project. For the project developer, they can have a better understanding of stakeholders' concern and incorporate their thoughts and suggestions into the project operation and management.

The meeting is deemed to collect stakeholders' feedback given particular attention to the impacts of the project on sustainable development according to the requirements of the "Gold Standard Manual for VER Developers".

2. MEETING ARRANGEMENTS

2.1. Meeting Organizer:

Xiahe Xingxin Hydropower Development Co., Ltd.

Climate Bridge Ltd.

2.2. Means of Invitation:

Emails, newspapers, notices, invitation letters and phone calls

- Notices posted at the public place by the project owner
- Oral and written Invitation letters send via email to local authority and local NGO by the project owner
- Written invitation letters sent via email to the Gold Standard Committee, related GS NGOs, GS local experts by Climate Bridge Ltd.
- Notices published on the local newspaper by the project owner

Table 1. List of Invited Experts from GS and related NGOs

Organizations and Experts Invited	Email Address	Confirmation received? Y/N
Gold Standard	info@cdmgoldstandard.com	No
Gold Standard	denise@cdmgoldstandard.org	No
Leon Wang GS China expert	leon@cdmgoldstandard.org	No
Dai Yuran GS China expert	yuran@cdmgoldstandard.org	No
Green Camel Bell Local NGO	ranlp@gcb.ngo.cn	Yes
Greenpeace Local GS supporter	Greenpeace.china@hk.greenpeace.org	Auto Reply
WWF China Local GS supporter	wwfchina@wwfchina.org	No
REEEP Local GS supporter	Li.junfeng@reeep.org	No
GEI Local GS supporter	spchen@geichina.org	No

2.3. Time:

2:30—4:30 PM, Thursday, June 24th 2010

2.4. Venue:

Meeting Room of Qielong Hydropower Plant in Xiahe County, Gansu Province, China

2.5. Language:

Chinese (Mandarin /Dialect)

2.6. Attendees' List: see the original list in Appendix II

No.	Attendees	Organization	Contact No.
1	LI Boqing	Xiahe Bureau of Water Resources	13919060929
2	ZHA Xi	Xiahe Bureau of Agriculture and Forestry	13893937753
3	LI Benjian	Xiahe Bureau of Water Resources	13893953682
4	YANG Yanjing	Xiahe Power Co., Ltd.	13909419778
5	XI Biquan	Qielong Hydropower Plant	13893936650
6	RAN Liping	Green Camel Bell	13893626401
7	ZHANG Lei	Xiahe Environment Protection Bureau	13893926770
8	DING Jiqing	Qielong Hydropower Plant	15101477980
9	TANG Suiwu	Qielong Hydropower Plant	15109424238
10	WANG Haiyun	Qielong Hydropower Plant	13893972659
11	WU Jian	Farmer	13893969461
12	ZHANG Yuheng	Qielong Hydropower Plant	15349097006
13	CHEN Gang	Climate Bridge Ltd.	13919286649
14	WEI Jie	Climate Bridge Ltd.	13669320880
15	ZHANG Feng	Climate Bridge Ltd.	13564408106
16	SUN Fulan	Qielong Hydropower Plant	15109422925
17	KAN Zhao	Farmer	13884072756
18	CAI Rangjia	Qielong Hydropower Plant	13893987197
19	QIAO Jinjia	Qielong Hydropower Plant	15009413493
20	ZHA Xi	Farmer	
21	DANG Yuantao	Xiahe Power Co., Ltd.	13909419368

3. MEETING AGENDA

- Opening and Attendees Sign-up (15 mins)
- Introducing the purpose of the consultation (5 mins)
- Introduction of the proposed project (10 mins)
- Introduction of Gold Standard (5 mins)
- Explanation of Sustainable Development Assessment Matrix (15 mins)
- Inviting attendees' comments on the proposed project (30 mins)
- Completing the checklist of project environmental and social impacts (30 mins)
- Questions & Answers on the proposed project (20 mins)
- Closing (5 mins)

4. MEETING DOCUMENTATION

The documents provided to stakeholders at the consultation meeting are listed as below (please see Appendix I for details):

- Attendance sheet including attendees' name, organization, position and contact information;
- Non-technical summary of the project;
- Brief description of project EIAs;
- Sustainable Development Assessment Matrix;
- Checklist, Appendix E of Gold Standard (22 copies)

The documents collected at the meeting are listed as below:

- Completed checklist (22 copies), Appendix E of Gold Standard (please see Appendix IV for samples of completed checklist. All of the completed checklists are available upon request)
- Meeting minutes
- Meeting photos (see Appendix V for details)

5. BRIEF PROJECT INTRODUCTION

Qielong Hydropower Project is a run-of-the-river hydropower station on downstream of Qielong Gully, a branch of Daxia River, in the Madang Township, Xiahe County, Gannan Tibetan Autonomous Prefecture, Gansu Province, P.R.China. The total installed capacity of the project is 1.20MW (0.4+0.8MW) with an annual feed-in electricity of 5,839MWh. All electricity generated will be transmitted to the North West China Power Grid (NWCPG). The construction of the project commenced in September 2007 and finished in November 2009.

As a renewable hydro power project, the proposed project will contribute to the local sustainable development through the following ways:

- Displacing part of the electricity generated from coal-fired power plants, and thus greenhouse gas (GHG) emission reductions can be achieved. The estimated annual GHG emission reductions are 4,870t CO₂e.
- Taking good advantage of the local water resource and promotes local economic development.
- Relieving electricity supply shortage in the local grid, and thus ensures the domestic and industrial power consumption to a certain extent.
- Creating short-term and long-term job opportunities in the project area during the periods of project construction and operation respectively, and thus helping alleviating local poverty.
- Doing extra work such as helping local villagers paving a new path, building up a water mill and water diversion channel for irrigation, all these will make their lives easier somehow. Besides, the project owner subsidizes residents in the nearby two villages with a fixed amount of lump sum so that they will be able to pay for electricity fee and relying more on electric appliance rather than wood fire in their daily life. As a result, more trees are protected from being cutting down.

6. STAKEHOLDERS' COMMENTS**6.1. Comments summarized from questionnaires:**

22 copies of the questionnaire assessing the project impacts on the local environment, and social economic development were prepared in Chinese and distributed to all attendees during the consultation meeting. All copies were answered and collected at the end of the meeting.

According to the results of survey, almost all participants are in favor of the proposed project, and they do not think the project affects the ecological environment or raise significant negative environmental or social impact. Some said there was no injury accident happened to workers during the entire construction period.

Instead, the project owner helped pave a new path, build up a water mill and a channel for irrigation, and the local residents considered such gave them great convenience in their daily life. In addition, some attendees point out the project created the job opportunities for local people, which is very good.

However, a few attendees point out the machinery noise issue and it may affect the health of the worker on-site. Therefore, proper protection should be provided.

6.2. Comments summarized from the meeting:**Environmental impacts**

The project activity is to take use of hydro resource in the local river to generate electricity, and it strictly follows the project approval procedures and meets with all environmental protection requirements.

The project owns bears the environmental protection in mind to start the project activity. The location of the project is far away from the residential area, and thus, the impact to local villagers is in significant.

Social-economic impacts

The project has brought some benefits to the local social development.

Some job opportunities have been created, and some farmers in the local village have been hired and trained to be a technical staff. The permanent workers get a monthly payment above 1000RMB in average. The project operation just started at the end of last year, the project owner is still facing with very difficult financial status, but the workers receive salaries every month with no delay.

Apart from constructing the proposed project, the project owner helped to improve the livelihood of local residents by doing extra work such as 1) built up a water mill in the local village, 2) paving a path to ease the transportation of local residents, and 3) building up a water channel for irrigation. All these have been welcomed and highly appreciated by the local residents. The local township delivered a certificate to the project owner for doing so (see Annex 14 to the project PDD).

Last but not least, the project activity will contributes to the economy development in the local township.

To conclude, most attendees show positive opinion towards the proposed project, and would like to propose the project for GS-VER registration.

6.3. Comments taken into consideration:

Local residents support the development of the proposed project, and would be happier if the project owner could bring more benefits to their living.

Appendix I Meeting Invitation and its Attachments

a). Sample of Meeting Invitation via Email



Invitation to Stakeholder Consultation Meeting of Qielong Hydropower Project in Gansu Province, China

1 message

ZHANG, Feng <zhang.feng@climatebridge.com> 9 June 2010 12:27
To: greenpeace.china@hk.greenpeace.org
Cc: Linjia Cai <cai.linjia@climatebridge.com>, Liang Yu <yu.liang@climatebridge.com>

Dear Sir/Madam,

Xingxin Hydropower Development Co., Ltd. and Climate Bridge Ltd. would like to invite you to attend the
Local Stakeholder Consultation Meeting of Qielong Hydropower Project on 24th June 2010.

The Qielong Hydropower Project, pursuing Gold Standard VER retroactive registration, is jointly developed by Xingxin Hydropower Development Co., Ltd. in Xiahe County and Climate Bridge Ltd. The purpose of the meeting is to invite public opinions on the project, particularly to assess the environmental, socio-economic, and health impacts from the project, which is crucial to achieve the goal of sustainable development in local community that is highly valued by the Gold Standard.

Please see below for details of the meeting:

Date: Thursday, June 24th, 2010

Time: 2:30pm - 4:30pm

Location: The Meeting Room of the Qielong Hydropower Plant in Madang Township, Xiahe County,

Gansu Province, P. R. China

Language: Mandarin/Dialect

Enclosed please find an Invitation in Chinese and appendixes of the following for your reference:

1. Non-technical summary of the project (in English and Chinese);
2. Summary of Environmental Impact Assessment (in English and Chinese);
3. Sustainable Development Assessment Matrix (in English and Chinese);
4. Environment and Social Impacts Check List—Appendix E (in Chinese)

We are looking forward to your attendance that day.

Best regards,
Jasper

Jasper ZHANG 张枫
Business Analyst 项目分析师

Climate Bridge 环保桥

Email/QQ: zhang.feng@climatebridge.com

Tel: +86 21 6246 2036; Fax: +86 21 2301 9950

Bridging East and West to contribute to a greener society

2 attachments

 Invitation in Chinese_邀请函.pdf
114K

 Appendixes_Qielong Hydropower_项目资料.pdf
242K

b). Replies from invitees:

1) Reply from Green Peace Association

Auto-reply message from Greenpeace China 綠色和平自動回覆訊息

1 message

greenpeace.china@hk.greenpeace.org <greenpeace.china@hk.greenpeace.org>

17 June 2010
12:16

To: zhang.feng@climatebridge.com

(中文版本在後)

Dear Sir/Madam,

Thank you for your email. This auto-reply message is to acknowledge the receipt of your email and it will be processed as soon as possible.

In all but a few exceptional cases, we work on a global scale and does not address individual pollution cases one by one. Due to limited resources, we have to focus our manpower and resources on issues that pose major threats to ecosystems and species like climate and energy, food safety, toxic chemicals and forests. As a result, we might not be able to respond to all public requests and opinions shortly. Thank you for your patience and understanding.

For more, please visit our website What We Do (<http://www.greenpeace.org/china/en/campaigns>) and FAQs (<http://www.greenpeace.org/china/en/faqs>) for further information.

Best Regards,
Greenpeace China

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Greenpeace exists because this fragile earth deserves a voice.  
It needs solutions. It needs change. It needs action.  
Website: [www.greenpeace.org.cn](http://www.greenpeace.org.cn)  
Join us and take action: <http://www.greenpeace.org/china/en/SupportUs>

敬啟者：

我們已經收到你的電子郵件，謝謝，我們會盡快處理。

由於資源所限，在一般情況下，綠色和平只可集中處理全球性環境問題，而不會處理個別地區上的污染個案。現時，我們把人力和資源集中在嚴重威脅全球環境生態的問題如氣候與能源、食品安全、有毒化學物污染防治和森林砍伐等。因此，我們或許未能在短時間內逐一回應市民的查詢和意見，謝謝你的耐心等待和諒解。

我們建議你參考本會網站的項目簡介  
(<http://www.greenpeace.org/china/ch/campaigns>)和常見問題  
(<http://www.greenpeace.org/china/ch/faq>)，以進一步了解本會工作。

綠色和平謹啟

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綠色和平存在，因為脆弱的地球需要呼喊、需要行動、需要改變。
網址：www.greenpeace.org.cn
加入我們，一起行動：<http://www.greenpeace.org/china/ch/SupportUs>

2) Reply from Green Camel Bell

Re: Invitation to Stakeholder Consultation Meeting of Qielong Hydropower Project in China on June 24, 2010

1 message

Ran Liping <ranliping@gmail.com>
To: zhangfeng <zhang.feng@climatebridge.com>

18 June 2010 17:52



张枫:

你好, 非常抱歉回复迟了! 24日的相关方会议我可以参与,
时间可以调整开!

到时联系!

祝好!

冉丽萍

冉丽萍 Ran Liping
绿驼铃 Green Camel Bell

----- Original -----

From: "zhangfeng" <zhang.feng@climatebridge.com>;
Date: Wed, Jun 9, 2010 12:39 PM
To: "Ran Liping" <ranliping@gmail.com>;
"ranlp" <ranlp@gcb.ngo.cn>;
Subject: Invitation to Stakeholder Consultation Meeting of Qielong
Hydropower Project in China on June 24, 2010

c). Attachments to the Invitation

甘肃省夏河县切龙水力发电项目黄金标准追溯认证利益相关方会议

邀 请 函

尊敬的先生/女士：

您好！

甘肃夏河星鑫水电开发有限责任公司和英国环保桥有限公司诚邀您出席切龙水力发电项目黄金标准追溯认证的利益相关方会议。

“甘肃省夏河县切龙水力发电项目”属清洁能源项目，有助于减排温室气体，应对全球气候变化。为此，夏河县星鑫水电开发有限责任公司和英国环保桥有限公司就此项目达成协议共同完成GS-VER（黄金标准自愿减排）的开发工作，给予项目相应的碳基金资助。

此次在项目现场组织和召开黄金标准利益相关方会议，旨在听取各利益相关方对项目的意见和建议，以确保项目的实施和运行不会对当地的社会、环境和居民生活健康造成重大的负面影响，同时能够符合可持续发展的要求。

在此，谨代表夏河县星鑫水电开发有限责任公司和英国环保桥有限公司诚挚邀请您的支持和参与。该会议拟定于 2010 年 6 月 24 日（星期四），下午 2:30-4:30 在切龙水电站会议室举行，会议语言为普通话。随函附以下项目资料，给您作为参考。

1. 项目简介（中英文）
2. 项目环境影响评价简述（中英文）
3. 项目可持续发展评估表（中英文）
4. 项目环境和社会影响问卷（中文）

祝您工作顺利！

项目联系人：

夏河县星鑫水电开发有限责任公司

联系人：郭建祥

联系电话：13321228465

英国环保桥有限公司

联系人：张枫

联系电话：021-62462036

Email: zhang.feng@climatebridge.com

2010 年 6 月 9 日



甘肃省夏河县切龙水电站工程——项目简介

切龙水电站工程由甘肃省夏河县星鑫水电开发有限责任公司通过申请“黄金标准-碳自愿减排（GS-VER）基金”进行开发。本项目经由兰州信荣水力水电技术咨询服务有限责任公司研究设计。

切龙水电站位于夏河县麻当乡境内的大夏河支流切龙沟中下段，为一径流引水式电站。电站装机 1200KW，年利用小时数 5042h，年均发电量 605 万度，属五等小（II）型工程中的微型电站，其供电对象主要是向甘南电网送电，提高甘南州夏河县工农牧生产及生活用电等，在一定程度上填补当地用电的缺口。

电站工程于 2007 年 9 月开工建设，2009 年 11 月建成发电。经计算，项目建成后每年减少的二氧化碳气体（CO₂）排放量约为 4,870 吨，在一定程度上保护了气候环境。

由于项目的经济指标较弱，贷款利息压力也比较大。希望能通过“黄金标准-碳自愿减排（GS-VER）”审核，使切龙水电工程项目得以顺利运行。

Description of Qielong Hydropower Project in Xiahe County, Gansu Province

The Qielong Hydropower project is developed by Xiahe Xingxin Hydropower Development Co., Ltd. through applying for GS-VER fund. The proposed project was designed by Lanzhou Xinrong Hydraulic and Hydropower Engineering Consulting Services Co., Ltd.

The project is located on the downstream of Qielong Ditch, a tributary of Daxia River, in Madang Township, Xiahe county, Gansu Province. Its installed capacity is 1.2MW; the designed annual power generated is 6,050MWh and the designed annual operation period is 5,042 hours. It aims to feed in electricity to the local Gannan Grid to make up the shortage of local power supply to a certain extent.

The project construction started in September 2007, and finished in November 2009. The annual CO₂ Emission Reductions (ERs) are estimated to be 4,870tonnes during the operation period, which will be beneficial to the atmosphere.

As the project is not financially attractive to the investors and pressure from the loan is quite high, the project developer decided to apply for GS-VER fund to ensure the proposed project activity progressing smoothly.

甘肃省夏河县切龙水电站工程——项目环境评价简述

该项目在施工和运行期间 对周边环境造成的影响及相应的缓解措施 列在下表中：

	环境影响类型	影响原因	主要影响因素	缓解办法
施工期间	水污染	机械运作 材料处理 工人日常生活	悬浮物 废油 生活污水	生产废水进行沉淀处理后可循环利用，不向外排放； 生活污水经处理后可以用于绿化、泼洒路面、或农业灌溉，不向外排放。
	固体废弃物	建筑工程	弃渣 生活垃圾	工程弃渣全部堆置在规划布设的渣场，并按照水土保持方案进行处理； 生活垃圾须收集起来定期运到附近的填埋场。
	大气污染	建筑工程	粉尘	大气污染对当地的影响非常小。
	噪音污染	交通运输 建筑工程	噪音	建筑工程在夜晚是禁止的。电站离居民区较远。
	水土流失	管道的开挖和铺设	弃土 弃渣	及时对弃土场进行平土整治，弃土用于修建防洪堤，工程完成后应植树绿化；
	生态系统	挖掘和弃土堆放	弃土 弃渣	项目完成后植树绿化以弥补因开挖造成的植被流失。
运行期间	水污染	员工日常生活 项目操作和维护	生活污水 废油	含油废水经水油分离后，液体经沉淀处理可以循环利用，不外排。 生活污水经处理后可以用于绿化、泼洒路面、或农业灌溉，不外排。
	固体废弃物	员工日常生活	生活垃圾	生活垃圾须收集起来定期运到填埋场。

Environmental Impact Assessment (EIA) Summary of Qielong Hydropower Project in Xiahe County, Gansu Province

The major Project pollutions and relevant mitigation measures during the construction and operation period are listed as follows in accordance to Project EIA and relevant documents:

	Major Pollution	Sources	Pollutants	Mitigation Measures
Project Construction Phase	Waste water	Machines and materials washing Workers' Daily life	SS Oil Sewage	Washing wastewater will be treated and reused with no discharge; Domestic swage will also be treated and used for road sparkling, plant watering, or agriculture irrigation with no discharge.
	Solid waste	Construction	Material Wastes Domestic garbage	Construction solid wastes will be collected at the dumping site and treated following the water and soil conservation plan. Domestic garbage will be collected and transported to the local landfill plant.
	Waste gas	Construction	Dust	The impact to the local environment is assessed to be minor.
	Noise	Construction Transportation	Noise	Construction will be banned in the night. The construction site is far from the residents' area.
	Water and Soil Loss	Drudging and wastes piling up	Waste stones and soil	The land will be recovered, and discarded soil will be used to construct levees or for vegetation recovery.
	Ecosystem	Drudging and wastes piling up	Waste stones and soil	Replanting plan shall be carried out after construction so as to compensate the vegetation destroyed previously.
Project Operation Phase	Waste water	Machine operation Operators' Daily Life	Sewage Oil	Industrial waste water goes through an oil-water-separation and the liquid will be reused after sedimentation. Domestic swage will also be treated and used for road sparkling, plant watering, or agriculture irrigation with no discharge.
	Solid Waste	Operators' Daily Life	Domestic garbage	Domestic garbage will be collected and transported to local landfill plant.

甘肃省夏河县切龙水电站工程——项目可持续发展评估表

分量 • 指标	分值 (-到+)	原因
当地/区域/全球环境		
• 水质和水量		生产废水进行沉淀处理后可循环利用，不向外排放； 生活污水经处理后可以用于绿化、泼洒路面、或农业灌溉，不向外排放。
• 空气质量 (除温室气体之外的排放物)	0	在运行阶段，项目将取代构成国家电网主力的化石燃料，从而减少温室气体的排放。考虑到该电站的装机，所以项目对空气质量的改善有较小的作用。
• 其它污染物（包括有毒物质、放射性物质、持久性有机污染物、破坏臭氧层气体等）	0	厂房隔声和采取隔振降噪措施后，机组噪声对周边村民及环境的影响较小。而且电站周边区域的植被，也可以起到一定的隔音减噪作用。
• 土壤状况（质量和数量）	0	电站规模较小占用土地较少，且均为荒坡荒地。
• 生物多样性（种类和栖息地保护）	0	电站的修建对浮游生物、底栖生物不会造成明显负面影响。工程施工期间须采取相应的措施保护河道鱼类。
小计	0	
社会发展和可持续性		
• 就业 (包括工作质量、是否达到劳动标准等)	+	项目建设和运行期间可为当地提供一些就业机会，其中工种涉及电站站长、建筑工、会计、出纳、维修工等。电站为员工提供技能培训。
• 贫困人口的生活 (包括消除贫穷、促进平等和享受基本设施服务)	+	• 消除贫穷 (+) 施工期间将提供诸多临时工作机会，运行期间提供若干长期的正式工作机会,增加当地村民的收入，有助于缓解当地的贫穷状况。 正式员工的每年工资平均超过 10000 元，高于甘肃省农村居民平均收入 2436 元。
• 享受电力设施服务	+	麻当乡供电存在较大缺口，本项目对地方电力供应作出了小小的贡献了。
• 人员和机构能力（包括授权、教育、参与、性别等方面）	+	• 授权 (+) 1、邀请村民参与利益相关方问卷；2、提供工作岗位给当地村民； • 性别平等 (+) 电站安排女性员工在运行期间工作。
小计	+	
经济和技术发展		
• 就业（数字）	+	项目建设和运行期间可为当地提供就业机会，项目建设期内可以安排约50个农村劳动力现场施工，运行后可提供8个长期的就业机会。
• 回报平衡（可持续性）	0	此项指标难以证明和监测。
• 技术自主性（包括项目可复制性、硬通货负债、技能开发、机构能力、技术转让等）	0	水轮发电机采用国内技术，所以不牵涉技术转让。
小计	+	
总计	+	

Sustainable Development Assessment Matrix of Qielong Hydropower Project

Component • Indicators	Score (- to +)	Reasons
Local/regional/global environment		
• Water quality and quantity	0	Industrial waste water goes through an oil-water-separation and the liquid will be reused after sedimentation. Domestic swage will also be treated and used for road sparkling, plant watering, or agriculture irrigation with no discharge.
• Air quality (emissions other than GHGs)	0	As a clean renewable energy project, it reduces the emissions of greenhouse gas (GHG), though to a minor extent if considering its small installed capacity.
• Other pollutants (including, where relevant, toxicity, radioactivity, POPs, stratospheric ozone layer depleting gases)	0	• <u>Noise</u> With noise lowering and vibration isolation measurements, the machinery noise causes minor effect to the nearby residents. Plus there is dense vegetation surrounding the power station, and the distance from the powerhouse to the residential area, such noise can be lessened to a certain extent.
• Soil condition (quality and quantity)	0	• <u>Soil condition</u> Excavated earth and stones are removed and reused for the dam & powerhouse construction. Being a small project, it requisites only a small area of wasted land.
• Biodiversity (species and habitat conservation)	0	The project does not raise negative impact towards the Plankton or Benthos. Proper measurements will be taken to protect fishes from being caught by the machines.
Sub total	0	
Social sustainability and development		
• Employment (including job quality, fulfillment of labor standards)	+	Some temporary and permanent employment opportunities will be provided during the project construction and operation periods. Work-injury insurance and skill training will be provided to maintenance workers.
• Livelihood of the poor (including poverty alleviation, distributional equity, and access to essential services)	+	• <u>Poverty Alleviation (+)</u> About 50 jobs at most are available during the construction period and 8 permanent employment opportunities will be created during operation period, most of which are from local community including 1 female worker. The average income for permanent employee is above 10000 RMB/year above the average level of 2436 RMB/year in rural area of Gansu Province ¹ .

¹ http://www1.china.com.cn/economic/txt/2009-05/05/content_17724321.htm

		A path leading to the power station has been paved, and a water mill and a water channel for irrigation have been built up. These give convenience to local villagers. Therefore, this indicator scores as positive.
• Access to energy services	+	Although the project is micro-scale, it helps to release the power supply shortage in Madang township, and reduces the dependences of provincial grid to a certain extent. Therefore, this indicator scores as positive.
• Human and institutional capacity (including empowerment, education, involvement, gender)	+	The local stakeholder consultation for the GS-VER retroactive registration invited both local residents and officers. This helps to improve the local democracy. Meanwhile, one female farmer has been hired to work in the hydropower station. Therefore, this indicator scores as positive.
Subtotal	+	
Economic and technological development		
• Employment (numbers)	+	Some 50 temporary and 8 permanent employment opportunities will be provided during the project construction and operation periods.
• Balance of payments (sustainability)	0	Net foreign currency savings will also be very difficult to proof and monitor, therefore this indicator scores a zero as well.
• Technological self reliance (including project replicability, hard currency liability, skills development, institutional capacity, technology transfer)	0	No change regarding technology self-reliance is expected through the project activity since it uses domestically produced equipment.
Sub total	+	
TOTAL	+	

Environmental and Social Impacts Checklist for Qielong Hydropower Project

甘肃省夏河县切龙水电站工程——项目环境和社会影响问卷

姓名		性别		年龄	
文化程度		民族		职业	

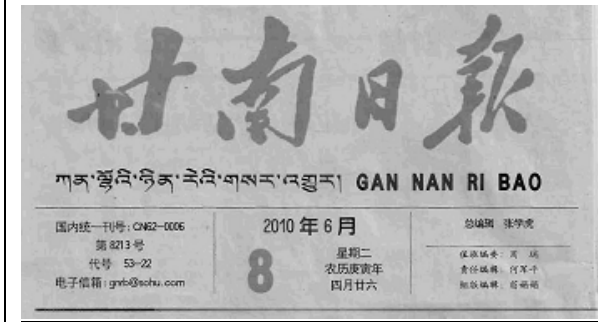
切龙电站是否会对当地环境造成影响	是/否/? 简要说明	是否可能造成显著影响? 是/否/? 简要说明原因
1. 该电站的建设、运行或者停运是否会占用或影响自然资源或生态系统（例如土地、水、森林、动物栖息地、自然物料等），尤其是不可再生或稀缺的自然资源？		
2. 该电站是否涉及使用、储存、运输、装卸、生产或释放可能破坏环境的物质或材料？		
3. 该电站是否会向大气排放污染物或者有毒、有害、有危险的物质？		
4. 该电站是否会产生噪声、振动或者释放光、热能或电磁辐射？		
5. 该电站是否会释放污染物到土壤、地表水、地下水、沿海水体或者海洋中，从而造成污染？		
6. 该电站所在地或其周围如果存在受国际、国家、地方法律法规保护的生态区域，是否会受到电站的影响？		
7. 该电站所在地或其周围如果存在比较重要或比较敏感的生态区域（例如湿地、河道或者其它水体、沿海区域、山脉、森林），是否会受到电站的影响？		
8. 该电站所在地或其周围如果存在受保护的重要的敏感动植物活动区域（例如动物繁殖、做巢、进食、栖息、过冬、迁徙地等），是否会受到电站的影响？		
9. 该电站所在地或其周围如果存在内陆水体、沿海水域、海洋水体、或地下水体，是否会受到电站的影响？		
10. 该电站所在地或其周围如果容易遭受地震、沉降、滑坡、侵蚀、洪水或者极端恶劣天气（如气温异常、雾、大风等），电站的建设是否会引发环境问题？		
切龙电站是否会对当地社会经济和卫生造成影响	是/否/? 简要说明	是否可能造成显著影响? 是/否/? 简要说明原因
11. 该电站是否涉及使用、储存、运输、装卸、生产或释放危害人体健康、引发切实或潜在的健康风险的物质或材料（包括固体垃圾）？		

12. 该电站是否向大气排放危害人体健康的有害、有毒、有危险的物质？		
13. 该电站是否会产生危害人体健康的噪声、振动或释放危害人体健康的光、热能或电磁辐射？		
14. 该电站是否会污染土壤或地表水、地下水、沿海水体或者海洋，从而可能间接的危害人体健康？		
15. 该电站施工和运行过程中是否存在发生危害人体健康的事故的风险？		
16. 该电站有没有影响到当地社会，例如对当地人口、传统生活习俗或者就业等方面？		
17. 该电站所在地或其周围如果存在景观、历史、文化等方面极具价值的区域（不管是否受国际、国家或者地方法律法规保护），是否会受到电站的影响？		
18. 该电站所在地或其周围的道路交通是否会因为电站建设运行而变得拥堵？		
19. 该电站是否建在一个容易被很多人看到的地方？		
20. 该电站所在地或其周围的用地如果已存在或被规划了（例如，用作住宅、私人财产、工业、商业、休闲、公共开阔地、社区设施、农业、林业、旅游、采矿或者采石等），是否会受到电站建设的影响？		
21. 该电站所在地或其周围如果人口密集、建筑密集、或属于敏感区域（例如医院、学校、教堂、公用设施），是否会受到电站的影响？		
22. 该电站所在地或其周围如果有重要的、高质量的或稀缺的资源（例如地下水、地表水、森林、农业、渔业、旅游和矿藏等），是否会受到电站的影响？		
23. 该电站所在地或者其周围如果容易遭受地震、沉降、滑坡、侵蚀、洪水或者极端恶劣天气（如气温异常、雾、大风等），电站的建设是否会引发社会问题？		

Appendix III

Bulletin at local newspaper & Notice posted in the local village

Bulletin at local newspaper



Notice posted in the local village

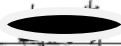


Appendix IV

Samples of Completed Environmental and Social Impacts Checklist

Sample 1

切龙水电站项目—环境和社会影响公众问卷

姓名		性别	女	年龄	24
文化程度	本科	民族	汉	职业	社会工作者

切龙电站是否会对当地环境造成影响	是/否/? 简要说明	是否可能造成显著影响? 是/否/? 简要说明原因
1. 该电站的建设、运行或者停运是否会占用或影响自然资源或生态系统(例如土地、水、森林、动物栖息地、自然物料等),尤其是不可再生或稀缺的自然资源?	否 电站建设地已去荒	
2. 该电站是否涉及使用、储存、运输、装卸、生产或释放可能破坏环境的物质或材料?	是,极少量的木材和油类	
3. 该电站是否会向大气排放污染物或者有毒、有害、有危险的物质?	否	
4. 该电站是否会产生噪声、振动或者释放光、热能或电磁辐射?	是	
5. 该电站是否会释放污染物到土壤、地表水、地下水、沿海水体或者海洋中,从而造成污染?	否	
6. 该电站所在地或其周围如果存在受国际、国家、地方法律法规保护的生态区域,是否会受到电站的影响?	否	
7. 该电站所在地或其周围如果存在比较重要或比较敏感的生态区域(例如湿地、河道或其它水体、沿海区域、山脉、森林),是否会受到电站的影响?	否	
8. 该电站所在地或其周围如果存在受保护的重要的敏感动植物活动区域(例如动物繁殖、做巢、进食、栖息、过冬、迁徙地等),是否会受到电站的影响?	否	
9. 该电站所在地或其周围如果存在内陆水体、沿海水域、海洋水体、或地下水,是否会受到电站的影响?	否	
10. 该电站所在地或其周围如果容易遭受地震、沉降、滑坡、侵蚀、洪水或者极端恶劣天气(如气温异常、雾、大风等),电站的建设是否会引发环境问题?	否	
切龙电站是否会对当地社会经济和卫生造成影响	是/否/? 简要说明	是否可能造成显著影响? 是/否/? 简要说明原因
11. 该电站是否涉及使用、储存、运输、装卸、生产或释放危害人体健康、引发切实或潜在的健康风险的物质或材料(包括固体垃圾)?	否	
12. 该电站是否向大气排放危害人体健康的有害、	否	

有毒、有危险的物质？		
13. 该电站是否会产生危害人体健康的噪声、振动或释放危害人体健康的光、热能或电磁辐射？	是 发电机噪声对工人有一定影响需设防护	
14. 该电站是否会污染土壤或地表水、地下水、沿海水体或者海洋，从而可能间接的危害人体健康？	否	
15. 该电站施工和运行过程中是否存在发生危害人体健康的事故的风险？	否	
16. 该电站有没有影响到当地社会，例如对当地人口、传统生活习俗或者就业等方面？	是 解决了周边村民工作问题，尤其中学教龄生招收。	
17. 该电站所在地或其周围如果存在景观、历史、文化等方面极具价值的区域（不管是否受国际、国家或者地方法律法规保护），是否会受到电站的影响？	否	
18. 该电站所在地或其周围的道路交通是否会因为电站建设运行而变得拥堵？	否	
19. 该电站是否建在一个容易被很多人看到的地方？	否	
20. 该电站所在地或其周围的用地如果已存在或被规划了（例如，用作住宅、私人财产、工业、商业、休闲、公共开阔地、社区设施、农业、林业、旅游、采矿或者采石等），是否会受到电站建设的影响？	否	
21. 该电站所在地或其周围如果人口密集、建筑密集、或属于敏感区域（例如医院、学校、教堂、公用设施），是否会受到电站的影响？	否	
22. 该电站所在地或其周围如果有重要的、高质量的或稀缺的资源（例如地下水、地表水、森林、农业、渔业、旅游和矿藏等），是否会受到电站的影响？	否	
23. 该电站所在地或者其周围如果容易遭受地震、沉降、滑坡、侵蚀、洪水或者极端恶劣天气（如气温异常、雾、大风等），电站的建设是否会引发社会问题？	否	

Sample 2

切龙水电站项目—环境和社会影响公众问卷

姓名		性别	男	年龄	23
文化程度	大专	民族	壮	职业	员工

切龙电站是否会对当地环境造成影响	是/否/? 简要说明	是否可能造成显著影响? 是/否/? 简要说明原因
1. 该电站的建设、运行或者停运是否会占用或影响自然资源或生态系统(例如土地、水、森林、动物栖息地、自然物料等),尤其是不可再生或稀缺的自然资源?	否	
2. 该电站是否涉及使用、储存、运输、装卸、生产或释放可能破坏环境的物质或材料?	否	
3. 该电站是否会向大气排放污染物或者有毒、有害、有危险的物质?	否	
4. 该电站是否会产生噪声、振动或者释放光、热能或电磁辐射?	否	电站不会产生振动或辐射光、热能或电磁辐射
5. 该电站是否会释放污染物到土壤、地表水、地下水、沿海水体或者海洋中,从而造成污染?	否	电站只会利用水资源,但不会排放污染物
6. 该电站所在地或其周围如果存在受国际、国家、地方法律法规保护的生态区域,是否会受到电站的影响?	否	电站周围没有国际、国家生态保护区
7. 该电站所在地或其周围如果存在比较重要或比较敏感的生态区域(例如湿地、河道或者其它水体、沿海区域、山脉、森林),是否会受到电站的影响?	否	电站周围没有比较敏感的生态区域
8. 该电站所在地或其周围如果存在受保护的重要的敏感动植物活动区域(例如动物繁殖、做巢、进食、栖息、过冬、迁徙地等),是否会受到电站的影响?	否	电站周围没有敏感的动植物活动区域
9. 该电站所在地或其周围如果存在内陆水体、沿海水域、海洋水体、或地下水,是否会受到电站的影响?	否	该电站周围没有沿海水域、海洋水体
10. 该电站所在地或其周围如果容易遭受地震、沉降、滑坡、侵蚀、洪水或者极端恶劣天气(如气温异常、雾、大风等),电站的建设是否会引发环境问题?	否	
切龙电站是否会对当地社会经济和卫生造成影响	是/否/? 简要说明	是否可能造成显著影响? 是/否/? 简要说明原因
11. 该电站是否涉及使用、储存、运输、装卸、生产或释放危害人体健康、引发切实或潜在的健康风险的物质或材料(包括固体垃圾)?	否	该电站不会产生危害人体健康的物质
12. 该电站是否向大气排放危害人体健康的有害、	否	电站不会产生有毒、有害

有毒、有危险的物质?	否	有害物质
13. 该电站是否会产生危害人体健康的噪声、振动或释放危害人体健康的光、热能或电磁辐射?	否	不会产生危害人的噪声、振动或光、热能或电磁辐射。
14. 该电站是否会污染土壤或地表水、地下水、沿海水体或者海洋,从而可能间接的危害人体健康?	否	
15. 该电站施工和运行过程中是否存在发生危害人体健康的事故的风险?	否	没有发生过任何事故。
16. 该电站有没有影响到当地社会,例如对当地人口人口、传统生活习俗或者就业等方面?	否	电站的建成增加了就业
17. 该电站所在地或其周围如果存在景观、历史、文化等方面极具价值的区域(不管是否受国际、国家或者地方法律法规保护),是否会受到电站的影响?	否	
18. 该电站所在地或其周围的道路交通是否会因为电站建设运行而变得拥堵?	否	电站周围的道路交通良好
19. 该电站是否建在一个容易被很多人看到的地方?	否	
20. 该电站所在地或其周围的用地如果已存在或被规划了(例如,用作住宅、私人财产、工业、商业、休闲、公共开阔地、社区设施、农业、林业、旅游、采矿或者采石等),是否会受到电站建设的影响?	否	
21. 该电站所在地或其周围如果人口密集、建筑密集、或属于敏感区域(例如医院、学校、教堂、公用设施),是否会受到电站的影响?	否	电站不在人口密集、建筑密集敏感区域。
22. 该电站所在地或其周围如果有重要的、高质量的或稀缺的资源(例如地下水、地表水、森林、农业、渔业、旅游和矿藏等),是否会受到电站的影响?	否	
23. 该电站所在地或者其周围如果容易遭受地震、沉降、滑坡、侵蚀、洪水或者极端恶劣天气(如气温异常、雾、大风等),电站的建设是否会引发社会问题?	否	

Appendix V Meeting Photos



Appendix VI Feedback Report from Green Camel Bell (a local NGO)



甘肃省绿驼铃环境发展中心

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甘肃省夏河县切龙 1200KW 水力发电项目 利益相关方会议情况说明

一、项目概述

甘肃省夏河县切龙 1200KW 水力发电项目（以下简称“切龙水电站”）由甘肃省夏河县星鑫水电开发有限责任公司（以下简称“星鑫公司”）开发所有。本项目经由兰州信荣水力水电技术咨询服务股份有限公司研究设计。

切龙水电站位于夏河县麻当乡境内的大夏河支流切龙沟中下段，为一径流引水式电站。电站装机 1200KW，年利用小时数 5042h，年均发电量 605 万度，属五等小（II）型工程中的微型电站，其供电对象主要是向甘南电网送电，提高甘南州夏河县工农牧生产及生活用电等，在一定程度上填补当地用电的缺口。

星鑫公司和英国环保桥（以下简称“环保桥”）共同承担“黄金标准”项目开发工作，计划通过追溯认证“黄金标准”运作，以求获得碳基金资助继续完成开发。项目位于甘南高原林区，区域水力资源非常丰富。

二、“黄金标准”介绍

“黄金标准”：清洁发展机制和联合履约项目的质量标准”为清洁发展机制(CDM)和联合履约(JI)之下的减排项目。这一标准，可用以保证项目的环境效益，获得广泛的公众参与和可持续发展。

一般 CDM 项目，在项目环境影响方面关注度低，项目相关利益方参与不足，缺乏整体环境的可持续性。“黄金标准”更加注重并提出了解决以上问题的重要工具，维护了《京都议定书》所倡导的环境完整性，优化 CDM 项目，进而推动国际碳市场的积极性和持续发展。

三、现场调查和利益相关方会议情况

1) 现场调查和发现

2010 年 6 月 24 日下午，环保桥工作人员对于切龙水电站进行了现场勘察，绿驼铃应邀参与、监督了全过程。环保桥人员审核对照了切龙水电站现场建设情况，包括设备操作维护手册以及运行记录，查看了设备运行情况，水电站并网计量表做了检查；

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查看了周围应建设破坏地区的生态环境修复情况等；同时也就水电站管理人员做了访谈。

调查、发现与问题：

- ✧ 切龙水电站共安装两台卧式机组（功率为 600kw）；
- ✧ 切龙水电站建设区域内居住人群极少，噪声对周围居民无影响；水电站厂房内防噪音措施不足，主控室噪音较大；
- ✧ 切龙水电站每年发放电费补贴 1 万元；修建水磨房 1 座，帮助修整灌溉渠道；
- ✧ 切龙水电站周围自然环境优美。水电站上游植被破坏严重，雨水丰润，渠道水含泥沙量较大；
- ✧ 切龙水电站地处山坳，开挖建设区域生态恢复较少；
- ✧ 切龙水电站没有布置相关消防措施。

建议：

- ✧ 继续进行植被恢复，减少水土流失；
- ✧ 合理布置消防设施，制定消防应急办法；
- ✧ 切龙水电站所在流域水电开发兴盛，建议项目在运行期做好运行管理，对生活垃圾、弃渣、废油做好统一收置和处理。

2) 利益相关方会议情况

为了广泛的征询利益相关方对建设项目的意见和建议，给与公众一个参与的平台，同时将项目的信息和 CDM 主要内容告知利害关系人员，使项目更有益于可持续发展。利益相关方座谈会于 2010 年 6 月 24 日下午 2：30——4:00 在甘肃省甘南州夏河县小河水电站会议室召开。

参会人员：共 20 名，其中 3 名女性，占 15%。参会部门有：夏河县环保局、夏河县林业局、夏河县电力局 1、夏河县水利局、夏河县麻当乡政府、环保桥、非政府组织代表 1 名（甘肃省绿驼铃环境发展中心）、村民代表。其中村民代表 6 人。

利益相关方会议过程：

- ✧ 介绍会议目的和与会人员；
- ✧ 介绍 CDM 和黄金标准；
- ✧ 水电站项目介绍；
- ✧ 参会代表针对项目发表意见；
- ✧ 解释并填写收回项目环境与社会经济影响问卷；
- ✧ 补充以及致谢

四、甘肃省绿驼铃环境发展中心结论

1. 通过现场勘察绿驼铃确认甘南州夏河县切龙 1200KW 水力发电项目建设和运转正常。后期项目进展情况，绿驼铃将进一步追踪考察。
2. 通过参与和监督甘南州夏河县切龙 1200KW 水力发电项目现场调查，绿驼铃认为整个项目在建设基本符合项目设计，但是植被恢复工作和消防措施需进一步加强。
3. 通过参与和监督甘南州夏河县切龙 1200KW 水力发电项目利益相关方会议，绿驼铃认为整个会议流程基本符合公众参与流程，会议收集了利益相关方人群的反馈和意见；收集了项目环境和社会经济影响调查问卷。但需增进项目业主方对于“黄金标准-自愿减排”对于环境和可持续发展的认识，保证项目在减排期内持续环境整体性。
4. 甘南州夏河县切龙 1200KW 水力发电项目广泛邀请各利害关系方参与利益相关方会议。会议采纳一些当地居民的意见，一定程度上提高了当地，尤其是民族地区的民主水平。
5. 水力发电是夏河县支柱产业，在考虑发展与环境后，参与人员表示支持甘南州夏河县切龙 1200KW 水力发电项目追溯认证“黄金标准”，推进清洁能源，推动经济发展。
6. 鉴于以上现场考察审核和利益相关方会议，绿驼铃认为甘南州夏河县切龙 1200KW 水力发电项目开发在以上环节基本符合“黄金标准-自愿减排”的要求，但必须在运行管理中做好尊重当地居民，尤其是少数民族的生存环境和文化习俗，及时补充做好植被恢复、消防措施安装等工作。

甘肃省绿驼铃环境发展中心

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