

**Clarifications on issues associated with validation requirements
for project activity under review
“Fenglin Hydropower Project” (2846)**

Note for PP/DOE

The request for clarification below has been prepared to assist the PP/DOE in responding to the concerns of the Executive Board, as described in the scope of the review. The PP/DOE should be aware that the consideration of the review will be based on the scope of the review and any additional information considered relevant to address issues identified in this scope should also be submitted.

In responding to the questions of the review team given below, the PP/DOE should keep in mind that the initial response of the PP/DOE to the requests for review will also be considered by the review team in preparing its recommendation to the Board.

SCOPE: A review to determine the additionality of the project activity through an assessment of the suitability of the tariff applied, 0.36 RMB/kWh (including VAT), in the project IRR calculation considering that there are higher tariffs in Jilin province (such as 0.45 RMB/kWh, including VAT) and as the project IRR crosses the benchmark when such higher tariff is applied to this project activity.

Request for clarification to the PP/DOE:

Context:

- In response to the request for review, the PP/DOE have explained that the tariff approved for this project activity is 0.36 RMB/kWh including VAT. However, the Board noticed that the highest available tariff approved for registered CDM projects in Jilin province is 0.45 RMB/kWh including VAT. The project IRR crosses the selected benchmark when applying the highest tariff.

Questions:

1. The DOE is requested to provide information on the total number of hydropower projects exporting electricity to the same grid as this project activity (both CDM and non CDM projects), and the commissioning dates of these projects.
2. Where available the DOE should indicate the tariff applicable to each of these project activities. Where not available, the DOE should explain how it exercised due diligence in following up the request of the Board, e.g. by including written evidence from regulators on the unavailability of data.
3. If not already provided in the original validation report or in answer to the request for review, the DOE should describe how the proposed tariff for this project activity was determined.
4. Where previous tariffs are higher than the tariff applicable to this project activity, the DOE should explain the reasons for this and provide an opinion as to whether the net return to the investor has been reduced as a result of the reduction in tariffs.
5. The DOE should explain what policy considerations have been applied in determining tariffs for similar projects and whether these differ from the policy considerations affecting the tariff for this project.
6. The DOE should state the tariff value at which the IRR of the project activity would reach the

benchmark.

7. For comparison purposes the DOE and PP shall provide information on the tariffs applicable to common non-renewable energy types in the region and the trend in these tariffs.

PP responses:

1. The DOE is requested to provide information on the total number of hydro power projects exporting electricity to the same grid as this project activity (both CDM and non CDM projects), and the commissioning dates of these projects.

And

2. Where available the DOE should indicate the tariff applicable to each of these project activities. Where not available, the DOE should explain how it exercised due diligence in following up the request of the Board, e.g. by including written evidence from regulators on the unavailability of data

- i. For CDM project : registered CDM projects and projects submitted for registration, as well as commissioned projects in stage of GSP are listed as below;
- ii. For non-CDM projects: As discussed in PDD section B.5 step 4, the power industry in China experienced significant reforms in 2002, consequently changing the structures of the power system. Therefore, only projects developed after 2002 should be considered. The project developer has consulted Jilin Province Hydropower Bureau, who is in charge of small hydropower in Jilin province. The Bureau has provided information of the small hydropower stations¹ starting operation since 2002 in Jilin province, as listed below.

	Stations	Capacity	Tariff (incl.VAT)	Operation date
		(kw)	Yuan/Kwh	
<i>Registered CDM projects and Operated projects applying for CDM support</i>				
1	Jilin Xijingou Hydropower Project (registered Ref.2435)	48,000	0.45	not yet commissioned
2	Antu 303 hydropower station (submitted to EB for registration)	6,000	0.393	2008
3	Shuanghe Second Small Hydropower Project in Jilin Province (at the stage of GSP)	12,000	0.356	2010
4	Antu Gudonghe I Hydro Power Project (at the stage of GSP)	32,000	0.36	2009

Operated non-CDM projects				
5	Heihe	225	0.270	2002-11
6	Yongming	285	0.280	2003
7	Jiazai	75	0.320	2003-04
8	New Beijing	8,000	0.335	2003-05
9	Shuangshan Phase I	4,000	0.295	2004-02
10	Xiaoshu	3,000	0.280	2004-04
11	Changlong	275	0.280	2004-05-08
12	Shuangshan Phase II	4,000	0.320	2005-07
13	Shuangshan Phase III	4,000	0.320	2006-01-01
14	Jinshan Phase II	360	0.280	2006-1
15	Hongyegu	2,520	0.370	2006-03-12
16	Lishu Fumin	525	0.280	2006-03-25
17	Daan Phase II	640	0.280	2006-4-1
18	Qingfeng Shuiku	375	0.280	2006-04-10
19	Songyue	375	0.280	2006-05-01
20	Renchuan	55	0.280	2006-09-15
21	Jinshan	375	0.280	2006-11
22	Guangming	5,000	0.393	2007-4-5
23	Quanxing	375	0.280	2007-4-12
24	Helong	4,500	0.393	2007-09-05
25	Anyu	200	0.280	2007-9-26
26	Baoshan	2,000	0.280	2007-10-8
27	Xiaoyu	375	0.280	2007-10-15
28	Xingyuan	480	0.280	2007-10-25
29	Fengyuan	1,200	0.280	2007-11-20
30	Hongyuan	200	0.280	2008
31	Shengli	435	0.280	2008
32	Anfu	260	0.280	2008
33	Aimin	360	0.280	2008
34	Jiangfeng	235	0.280	2008
35	Feiyu	250	0.280	2008
36	Rongfeng	960	0.280	2008

The tariffs information for each of the listed projects is presented in the below figure:

4. Where previous tariffs are higher than the tariff applicable to this project activity, the DOE should explain the reasons for this and provide an opinion as to whether the net return to the investor has been reduced as a result of the reduction in tariffs.

Not applicable as the proposed project obtained its tariff approval in April 2005 and the highest tariff **actually applied** previously is 0.335 RMB / kwh, lower than this project's tariff.

5. The DOE should explain what policy considerations have been applied in determining tariffs for similar projects and whether these differ from the policy considerations affecting the tariff for this project.

In Jilin province, the policy consideration is to guarantee a minimum of renewable energy from small hydro power plants and thus to guarantee a minimum tariff. This policy consideration has not changed over time, and can be noted that the minimum tariff has been lifted from 0.28 to 0.31 RMB/kwh between 2005 and 2009².

6. The DOE should state the tariff value at which the IRR of the project activity would reach the benchmark.

When the tariff of the proposed project increases 22%, to nearly 0.44 RMB/kwh, the IRR would reach the benchmark 8%. If the actual investment would be used for IRR assessment, the tariff would have to increase to 0.63 RMB/kwh (incl. VAT) for IRR to reach benchmark 8%.

It is noted that the estimated construction period of the project activity will extend to 6 years compared to original 3 years estimated in PDSR. Costs such as raw material price and fees for compensation have greatly increased which led to the increase of the total investment of the project. According to the approval on the *Revised Preliminary Design Report* from the Water Resource Department of Jilin Province in December 2009, the actual fixed asset investment would reach to over 400 million RMB, which would be used, the tariff would have to increase to 0.63RMB/kwh (incl. VAT) for the IRR to reach the benchmark 8%.

In terms of **Benchmark**, it can be seen that the investor of the proposed project has made a **conservative** choice of **8%**, compared with other similar projects registered at EB which apply a benchmark of **10%**. According to *Economic Evaluation Code for Small Hydropower Project SL16-95* issued by the Ministry of Water Resources in 1995 (Document No. SL16-95), the IRR of hydro power projects with an installed capacity **below 50 MW** that are developed in rural areas should be higher than **10%**. This benchmark is **widely used** for power project investments in the Host Country and

² Policy document *Jifagaijiagezi[2005] No.468*
<http://www.jlzwgk.gov.cn/jsp/gkml/bjgkml.do?method=detail&baseMIID=152&mlID=201&bmID=284&id=701>
and policy document *Jishengjiage[2009]No.227*
http://wj.jl.gov.cn/zyynyjg/dj/200912/t20091215_667622.html

serves as the sectoral benchmark rate on total investment for hydro projects. If 10% would be used for assessment, the tariff would have to increase 48%, to 0.53 Yuan/kwh.

We sincerely hope Executive Board will take this fact into consideration when assessing the additionality of the proposed project, which is environmentally and economically beneficial to the local community and is in great need of **CDM support** to complete construction and start generating zero emission electric power.

Below provide some similar projects registered at EB, applying a benchmark of 10%.

<i>Ref</i>	<i>Project</i>	<i>Capacity (MW)</i>	<i>Benchmark</i>	<i>Registration date</i>
2030	Fugong Mukeji Hydropower Project	31.5	10%	4-Mar-2009
1474	Qinghai Qinggangxia 43.8MW Hydropower Project	43.8	10%	23-Jun-2008
2048	Lufeng 36MW Hydropower Project in Yunnan Province	36	10%	4-Mar-2009
1388	Yunnan Dali Yanger 49.8MW Hydropower Project	49.8	10%	20-Mar-2008
2990	Sichuan Xiaohe 48MW Hydropower Project	48	10%	19-Feb-2010
2806	Sichuan Mabian Yi-Autonomous County Bajiaoxi Hydro Power Station	36	10%	18-Dec-2009

7. For comparison purposes the DOE and PP shall provide information on the tariffs applicable to common non-renewable energy types in the region and the trend in these tariffs.

There is no separate tariff for non-renewable energy types publicly available, therefore the tariffs for coal-fired powers in Jilin province is given below³:

³ <http://dbj.serc.gov.cn/dbdjWeb/webeditor/UploadFile//20090311065531766.xls>

Date	Tariff (Yuan/kwh)
2004	0.3150
2005	0.3240
2006	0.3560
2007	Unchanged
2008	0.3457

8. The DOE should explain which "reference tariff" would be calculated if, starting with the highest observed tariff for similar types of projects in the province concerned, this highest tariff would be taken as point of departure and then changed/lowered only according to the justified and quantitatively substantiated changes over time of the project's investment and operating costs. In this assessment all costs have to be taken into account. The "reference tariff" thus calculated may be considered as the tariff not changing/affecting the incentive to the investor/operator of the project. The DOE should then explain the impact of assuming this "reference tariff" in calculating the IRR for the demonstration of additionality.

It is noted that this question is not applicable as this project's tariff is higher than the highest tariff for previous projects.

In General

We would like to raise the attention of the Executive Board/Secretariat to the fact that questions 4 and 8 are out of the validation scope as defined in the methodology, additionality tool and the VVM. It is our view that this project has complied with all UNFCCC criteria at the time of its submission for registration and we do sincerely hope that the Executive Board will not prevent projects with a truly high environmental integrity from receiving the support that is rightfully theirs and very much needed, based on retroactively applying guidance that is not even publicly available as of now, which is not fair to PP and DOE, as we observed.