São Paulo, November 01st 2007

Request for Review UNFCC, dated October 26th 2007for the CDM Project 1235

Rio Grande do Sul Cooperatives Small Hydro Power Plants

Review Form 1 and 3

1. Version 3 of the Additionality Tool should be used to demonstrate additionality.

EB 32 of 20-22 June 2007, reconfirmed at EB 35 15-19 October, Annex 13 PROCEDURES FOR THE REVISION OF AN APPROVED BASELINE OR MONITORING METHODOLOGY BY THE EXECUTIVE BOARD, states that: (ii) project activities that have been published for public comments for validation using the previously approved methodology or tool, so long as the project activity is submitted for registration within 8 months of the effective date of the revision 2.

Project participants clarify that the validation process had begun in the end of 2006, and at 01 January 2007 the first validation report was issued. After passing through Brazilian DNA meeting, it was necessary to make small modifications in the PDD, and then issued a new validation report dated 28 May 2007. For this reason, as the first validation was finished before the publicizing of the version 03 of the Additionality Tool, which was made publicly available after the EB29 meeting (15-16 February), the PDD is using the version 02.

Additionally, the present project activity was publicized for requesting registration at 07 Sep 2007. For the reason above, project participant (PP) understand that it is possible to register the project activity with the Tool version 02.

2. Further substantiation is required regarding how the barriers prevent the implementation of this specific project activity and do not impact the baseline. If the main argument to demonstrate the additionality of the project activity is the low IRR, this should be demonstrated in accordance with step 2 of the additionality tool.

The low IRR is not the main argument, but the other barriers as follows are:

- Lack of investment sources to finance the private sector in the country, and the high costs of the available alternatives, as indicated by the project debt structure, which is mostly dependent to the equity capital.
- Regulatory uncertainty, once a completely new power sector regulation is under development since January 2002.

This kind of barriers could be seen as the common practice and not a project specific barrier. PPs will show below that, in fact these barrier and risk are not project specific, but that the majority of Small Hydros in Brazil required some source of financial incentives to be constructed in the last years. Also will be demonstrated that the construction of Small Hydros WITHOUT financial incentives are specific cases and that a NEED to financial incentives is the common practice.

Project participants (PPs) held a research about the small hydro power plants (SHPs) that started operation between the years 2003 to 2005. It was identified the number of SHPs that received some kind of financial incentive (Proinfa or CDM, Proinfa explanation is available in the PDD). In the next page is showed the tables by year with the SHPs and incentive type.

Started operation in 2003 (installed capacity in MW)

	SHP Plant Name	State	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	CDM
1	Baruíto	MT				12,20				6,10					X
2	Braço Norte III	MT										7,08	7,08		X
3	Cach. do Rio do Rauen	SC	1,60												
4	Cachoeira dos Prazeres*	MG											2,03		
5	Cach. Encoberta (Ormeo J. Botelho)	MG												11,35	X
6	Esmeril	SP	3,24												
7	Ferradura	RS												9,20	X
8	Fumaça*	MG					10,08								
9	Furquim*	MG											6,00		
10	Granada	MG							15,80						X
11	Indiavaí	MT								21,00		7,00			X
12	Linha 3 Leste	RS												13,50	X
13	Palestina	MG											12,48		X
14	Passo do Meio	RS										30,00			X
15	Pedrinho I	PR										16,20			X
16	Pesqueiro	PR	12,44												X
17	Ponte	MG					24,40								X
18	Ribeirão do Pinhal	SP											1,20		
19	Rolador (Padre Carlos)	MG						2,60	2,60					2,60	
20	Salto do Lobo	SP	1,06												
21	Salto Forqueta	RS			6,12										
22	Salto Natal	PR											15,12		X
23	Santa Lúcia II	MT				1,20	6,40								X
	Sub total		**18,34**	**-**	**6,12**	**13,40**	**40,88**	**2,60**	**18,40**	**27,10**	**-**	**60,28**	**43,91**	**36,65**	14

TOTAL = 267.68 MW

*self-generator inside private industry

Started operation in 2004 (installed capacity in MW)

	SHP Plant Name	State	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	CDM
1	Cachoeira da Lavrinha	GO					1,44								
2	Cach. Encoberta (Ormeo J. Botelho)	MG				11,35									X
3	Paina II	PR							1,30						
4	Pai Joaquim	MG			23,00										
5	Paraíso I	MS		21,60											X
6	Rio Branco	RO												6,90	X
7	Rio São Marcos	RS												2,20	
	TOTAIS PARCIAIS		**-**	**21,60**	**23,00**	**11,35**	**1,44**	**-**	**1,30**	**-**	**-**	**-**	**-**	**9,10**	3

TOTAL = 67.79 MW

Started operation in 2005 (installed capacity in MW)

	SHP Plant Name	State	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	CDM
1	Camargo Corrêa	MT												2,00	
2	Comendador Venâncio	RJ			0,77										
3	Cristalino	PR								4,00					X
4	Faxinal II	MT											10,00		
5	Furnas do Segredo	RS										9,80			X
6	Ivan Botelho III	MG	12,20	12,20											X
7	Ombreiras	MT							26,00						X
8	Porto Góes	SP											14,30		
9	Salto Corgão	MT						13,50	13,50						X
10	Santa Clara I	PR								3,60					X
11	Santo Antônio	RS										4,50			
	TOTAIS PARCIAIS		**12,20**	**12,20**	**0,77**	**-**	**-**	**13,50**	**39,50**	**7,60**	**-**	**14,30**	**24,30**	**2,00**	6

TOTAL = 126.37 MW

In number of SHPs, there were 41 that started operation in the period 2003 to 2005, where 23 received CDM incentives, which represents 56% of the SHPs. In terms of installed capacity it is 78,6% of the total 461,84 MW. From this result, it is clearly demonstrated that common practice for SHPs is the implementation of the activity (construction and operation of the SHP) through the incentive of CDM.

For the specific year of 2003, where 2 of the SHPs involved in the present project activity started operation, and the other one was under construction, among the 23 SHPs that started operation in that year, 14 received incentives, representing 61%. In terms of installed capacity represents 85% of the total 268MW. Other 3 SHPs are operated by private industry, self generating electricity to meet mainly internal demand.

In accordance with described in the PDD, and evidenced with the numbers presented above, besides the existence of Proinfa, proves that it is required a strong incentive to promote the construction of renewable energy projects in Brazil, where includes the SHPs.

In this way, PPs demonstrate that the barriers and risks used in the PDD are real, faced by the majority of the SHPs, and that some kind of incentive was necessary to transpose these barriers to implement the project.

The 3 (three) SHPs owned by the cooperatives were not contemplated by Proinfa incentives, therefore, they need the CDM incentives to proceed with the project activity.

Further substantiation of the **institutional barrier** is described below, as well as updated data:

An article written in 2004 by two professors of Energy Planning at the Universidade Federal do Rio de Janeiro analyzes Brazilian energy regulations and identifies four fragilities that can undermine their suitable implementation. Those fragilities refer to:

1) The guarantee of the purchase of electricity. Some points are still to be clarified, regarding:
   a) Minimum and maximum limits for the purchase of energy;
   b) the possibility of the ONS - Electrical System Operator to determine production increase or decrease, depending on the demand variation;
   c) Payment for the availability of production capacity, in periods when there is abundant energy offer.
2) The definition of the role of the three different regulatory agents: MME – Ministry of Mines and Energy, ANEEL - Brazilian power regulatory agency - *Agência Nacional de Energia Elétrica* and Eletrobrás – Brazilian Electricity Company – *Centrais Elétricas Brasileiras*. There are coordination problems among these institutions, due to an unclear division of their functions. This leads to investor's insecurity, because they have three different interlocutors, instead of one.

3) Juridical problems in the public calls legislation. Some rules are not totally compatible with the legislation, what might even lead to contract annulations.

4) The way the energy price is presently established, through the calculation of an average price for each type of energy source, penalizes projects with a lower cost-benefit rate. The authors suggest that the prices should be set according to the characteristics of each project.

Link to this article (with an abstract in English):

http://www.seeds.usp.br/pir/arquivos/congressos/CBPE2004/Artigos/PROINFA%20E%20CDE%20-%20QUESTIONAMENTOS%20SOBRE%20A%20LEGISLA%C7%C3O%20E%20REGULA.pdf

There is a rising demand for energy in Brazil, but it is not being attended by small hydro power plants. In the most recent energy auctions in Brazil, the results were the following: in an auction which took place on July 26, 2007, there was in an increase of 1.781,8 MW into National Electric System, all of them from oil thermo plants[1]; in an auction which took place on October 16, 2007, there was in an increase of 4,353 MW into National Electric System, from which 69% originated from fossil fuel (oil, coal and natural gas) plants[2].

In the energy auction for alternative energy sources, that took place on June 18, 2007, 2,803 MW were qualified, but only 638.64 MW were negotiated[3], what shows the lack of interest by most of the participants, due to the price and conditions presented. From the estimated 1,165 MW available from sugarcane bagasse plants and small hydro power plants, only 97 MW from small hydro were sold. The result of the auction was considered “disappointing” by Nelson Hubner, the minister of Mines and Energy[4].

The barriers mentioned above can be evidenced by the fact that the generation of electrical energy from small hydro power plants represents only 1.7 % of the total generation of electricity in Brazil, as can be seeing in the clarification of the next request 3.

3. Further details regarding the common practice should be provided in accordance with the requirements of step 4 of the additionality tool, i.e. similar project activities should be described and the differences between each of these activities and the project should be clearly indicated.

Additional to the explanations described in the PDD, PPs add the following:

Step 4. Common practice analysis

[1] Source: http://www.epe.gov.br/Lists/LeilaoA32007/DispForm.aspx?ID=44
[2] Source: Newspaper Folha de S. Paulo, 17/10/2007, http://www1.folha.uol.com.br/fsp/dinheiro/fi1710200730.htm
[3] Source: http://www.epe.gov.br/PressReleases/20070618_1.pdf
[4] Source: Newspaper Folha de S. Paulo, 17/07/2007, http://www1.folha.uol.com.br/folha/dinheiro/ult91u305247.shtml

Projects are considered similar if they are in the same country/region and/or rely on a broadly similar technology, are of a similar scale, and take place in a comparable environment with respect to regulatory framework, investment climate, access to technology, access to financing, etc.

As the alternative to the project activity is the continuation of the current (previous) situation of electricity supplied by large hydro and thermal power stations, the common practice analysis will be held for two sides: analyze similar Small Hydro plants being constructed in the region by similar companies, as well as the common practice of the power supply in the grid.

Sub-step 4a. Analyze other activities similar to the proposed project activity:

For similar SHPs being constructed by similar companies:

As described in the PDD, in all Rio Grande do Sul State, there are 142 small hydro power plants in operation or in license process. Among them, 37 are owned by cooperatives like the project owners of this project activity.

The 3 (three) project participants cooperatives are part of the Federation of Energy, Telephone and Rural Development Cooperatives (FECOERGS – Federação das Cooperativas de Energia, Telefonia e Desenvolvimento Rural do Rio Grande do Sul), that organizes studies and meetings to help developing cooperatives activities and has started study about CDM since its beginning.

FECOERGS[5] is composed by 15 (fifteen) cooperatives of electric energy distribution and generation activity acting in the agriculture and livestock production regions of Rio Grande do Sul State, encompassing 358 cities benefiting more than 1 million citizens.

The 3 (three) cooperatives participating in this project activity are the pioneers in executing CDM project activity among the Federation. All other associates are waiting for the result of registration of the 3(three) small hydro powers of the project activity to engage the CDM.

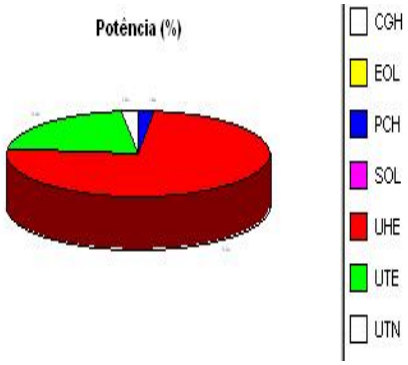
For the electricity supply to the grid

As described in the response of the Request 2 above, most of the SHPs constructed in the last years, most of the developers which funded their projects outside of Proinfa have taken CDM as decisive factor for completing their projects. Therefore, to the best of our knowledge, the vast majority of similar projects being developed in the country are participating in the Proinfa Program, and those not are participating in the CDM.

Updating the data in the PDD, only 1.*70*% of Brazil's installed capacity comes from small hydro power sources (1.6 GW out of a total of 98.1 GW). Also, from the 3.6 GW under construction in the country, only 948 MW are small hydro. Many other projects are still under development, waiting for

[5] Reference: website of the Federation http://www.fecoergs.com.br/index.php

better investment opportunities. Common practice in Brazil has been the construction of large-scale hydroelectric plants and, more recently, of thermal fossil fuel plants, with natural gas, which also receive incentives from the government. Already 21.3% of the power generated in the country comes from thermal power plants, and this number tends to increase in the next years, since 42% of the projects approved between 1998 and 2005 are thermal power plants (compared to only 14% of SHPPs)[6].



Legend	
CGH	Hydroelectric Generator Center
CGU	Undi-Eletric Generator Center
EOL	Wind Generator Center
PCH	Small Hydroelectric Power Plant
SOL	Solar Generation Center Photovoltaic
UHE	Hydroelectric Power Plant
UTE	Thermoelectric Power Plant
UTN	Thermonuclear Power Plant

Figure – Operational types of project (Source: ANEEL, 2007)

Moreover, in the most recent energy auction, which took place on December 16th, 2005, in Rio de Janeiro, 20 concessions for new power plants were granted, of which only two are for SHPPs (28 MW). From the total of 3,286 MW sold, 2,247 MW (68%) will come from thermal power plants, from which 1,391 come from natural gas fired thermal power plants, i.e., 42% of the total sold[7]. Brascan Energética, the group that controls Lumbrás Energética S/A, has 14 small hydro power plants and 11 are CDM Project Activities.

Sub-step 4b. Discuss any similar options that are occurring:

As described above, there are no similar options occurring in the region, considering the characteristics of a small hydro being implemented by an agricultural cooperative.

Also for the grid side, it was demonstrated that SHPs construction is not a common practice in the country.

It is clear that, in the absence of the incentive created by the CDM, this project would not be the most attractive scenario.

[6] ANEEL – *Agência Nacional de Energia Elétrica* (Brazilian power regulatory agency)
[7] Rosa, Luis Pinguelli. Brazilian. Newspaper "Folha de São Paulo", December 28, 2005.

4. The calculation of the emission reductions should clearly demonstrate how the net electricity generated by the project activity was determined.

From the query above, project participant understand that EB wants to know how the net electricity was ex-ante calculated to the CERs estimation.

Net electricity was calculated from the installed capacity multiplied by the load factor defined by ANEEL (Brazilian Energy Agency) according to among others, river and local climate characteristics.

For the verification/monitoring process, net electricity will be calculated as the: monitored total amount generated, minus the losses from the transformer.
Grid line transmission and distribution losses are not accounted because there will be no major transmission loss as the power plant is located very close to the existing distribution network that is owned by the same cooperative.

Monitoring of the net electricity is explained in the following query 5.

5. The monitoring plan should clearly outline how the net electricity generated by the project activity will be monitored, the number and location of meters and how losses will be accounted for.

As explained in the request 4, above, net electricity is calculated as the generated energy minus the losses in the transformer.

The generated energy meters are specified by the energy distribution company and approved by ONS and are installed as follow:

- SHP Linha Três Leste: For both the main plant and the mini-generator, there are 2 (two) ELO meters (one back-up) with GPS synchronism and remote access;
- SHP Cascata das Andorinhas: At the moment of validation, one WEG relay in the control panel was installed since the operation start. Presently one Nansen new independent electronic electricity meter is installed to cross-check the relay data.
- SHP Caraguatá: At the moment of validation only one COMAP Inteligen *relay* was installed to meter the energy generation. Presently two (one back-up) new independent electronic electricity meters are installed in parallel with the COMAP.

Transformer losses will be estimated from the historical monitored amount, or from the equipment manufacture data sheet and data will be audited by the validation team.

Review Form 2

Questions 1, 2, 3 and 5 are the same from Request 2

4. The PDD states that the project activity may import power from the grid, however this is not included in the emission reduction calculations.

As the project activity are small hydro plants, one of them a run-off-river type, that is not possible to operate continuously 24hours for 365 days in a year. Periodically shut down is necessary to maintenance and/or due to low level of the reservoir/river.

The applied approved methodology ACM0006, do not considers the importation of electricity nor as project emissions nor as leakage. However, if necessary project participants could monitor the imported electricity by the energy bill, and reduce from the generated energy amount, leading to the net electricity generated.