

RESPONSE TO THE REQUEST FOR REVIEW

FROM: FIRENZE ENERGÉTICA S.A

and CARBOTRADER ASSESSORIA E CONSULTORIA EM ENERGIA LTDA

ATTENTION: CDM Executive Board Members.

Reference: “Santana I SHP CDM Project (JUN 1118)” (2793)

In order to respond to the request for review suggested by the members of the Board, a sensitivity analysis was prepared by making a deviation in the key parameters of the financial calculations. The spreadsheet containing the IRR (Internal Rate of Return) calculation and sensitivity analysis is attached to this letter (reference: “Sensitivity analysis at validated IRR spreadsheet”).

The key input values that were variated in this procedure are the following:

- Energy Price (R\$/MWh);
- Investment (R\$);
- Plant Load Factor (MW);
- Operational costs;

The results from the sensitivity analysis is presented in the Table 1 below:

Table 1: Results of the ensitivity analysis.

No.	Item	Original Value	+10%	0%	-10%	Obs
1	Energy Price (R\$/MWh)	158,00	173,8	158,00	142,20	without CERs Revenue
	IRR		13,9%	11,9%	9,9%	
2	Investment (R\$)	41.696.900,00	45.866.590,0	41.696.900,00	37.527.210,00	
	IRR		10,8%	11,9%	13,2%	
3	Maintenance (% over investment)	4,17%	4,59%	4,17%	3,75%	
	IRR		11,6%	11,9%	12,3%	
4	Plant Load Factor (MW)	8,72	9,59	8,72	7,85	
	IRR		13,9%	11,9%	9,9%	
5	Operational costs	4.452.131,69	4.897.344,86	4.452.131,69	4.006.918,52	
	IRR		11,0%	11,9%	12,9%	

Source: “Sensitivity analysis at validated IRR spreadsheet”.

The results above presented shows that the project additionality is not affected by the +/- 10% variation in the parameters. The higher return that the project could reach in the case of variation of some parameter, regards the energy price and Plant Load Factor increase by ten percent. Those deviation present an project IRR of 13,9% per year in both cases. The sensitivity analysis clearly shows that even those variation occuring, the benchmark can not be reached by the virtual project return.

Additional to the standard variation commonly performed in sensivity analysis, which varies +/- 10% over parameters and reflections on project return, a study focused on the breakeven point for the project activity, on the point view where the benchmark can be

overcome, was developed in order to be sure that the project is additional and even if the parameters would have suffered strongly variations the additionality would not be affected. In this way, the same key factors above mentioned were altered until the point where the project IRR can pass (17%) the established benchmark (16.99%) by the project activity. The results of the analysis are presented in the table below:

Table 3: Project's breakeven point to meet benchmark.

Breakeven Point					
	Original Value	Value to overcome benchmark	Original IRR	% of deviation	Benchmark
Energy Price (R\$/MWh)	158,00	200,76	11,9%	27%	16,99%
Investment (R\$)	41.696.900,00	32.165.000,00	11,9%	-23%	16,99%
O&M (% over investment)	4,17%	-1,95%	11,9%	-147%	16,99%
Plant Load Factor (MW)	8,72	11,08	11,9%	27%	16,99%
Operational costs	4.452.131,69	1.963.541,14	11,9%	-56%	16,99%

Source: "Sensitivity analysis at validated IRR spreadsheet".

From the data presented above, a high variation of the parameters should happen for the IRR to pass (17%) the benchmark (16.99%).

Please note that all data presented in the tables can be viewed in the file attached to this letter, reference: "Sensitivity analysis at validated IRR spreadsheet".

Likelihood of scenarios occurrence

The scenarios presented above, considered for the financial calculations, even from the point of view of 10% variation of parameters are not considered likely, due to several factors explained below.

Energy Price (R\$/MWh)

The energy price used in the financial calculations is considered adequate for this type of project and reflect the energy market in Brazil. The variation of this data is unlikely to occur, because it was determined in a Power Purchase Agreement presented to the DOE. From the analysis provided above, the scenario which would make the project's IRR overcome the benchmark was estimated as being R\$200.76/MWh, i.e. -27% higher than the forecasted PPA price related to the electricity commercialized.

Other important information that corroborates this argumentation is that the validated energy price is above the average prices practiced in the first Auction of Alternative Sources of energy, which has occurred in 18/06/2007. The auction promoted by entities from the Brazilian government aims to stimulate the development of generation projects based on renewable energy in Brazil. The results of the auction can be viewed in the following

link:

<http://www.ccee.org.br/cceeinterdsm/v/index.jsp?vgnextoid=2de4f87495bd1110VgnVC>

[M1000005e01010aRCRD](#), on which prices for the energy commercialized ranged from 134.97 to 135.00 (R\$/MWh) for Small Hydro Power Plants. The energy prices in the same auction for other renewable sources (such as biomass) ranged from 138.50 to 139.12 (R\$/MWh).

Also, in the last Auction of New Energy the sale price for the electricity practiced under the CCEE conditions, for one SHP in Brazil was R\$144/MWh (source: http://www.ccee.org.br/StaticFile/Arquivo/biblioteca_virtual/Leiloes/8_energia%20nova/Resultado%20por%20vendedor.pdf), such data is below the price presented in the financial spreadsheet of the project activity.

Therefore, considering the informations provided above the energy price (input value) validated by the DOE is considered adequate as well as conservative.

Investment (R\$)

Regarding the Investment costs, the input value was assessed and validated by the DOE on the basis that the data come from the Eletrobrás Standard Budget (from the Portuguese *Orçamento Padrão Eletrobrás - OPE*) presented by the Project Participants. This budget follows the standard used by Eletrobrás for its projects and is widely used in Brazil to assess SHP projects. The OPE is part of the executive project of the SHP, which has to be assessed by the National Electric Energy Agency (from Portuguese Agência Nacional de Energia Elétrica – ANEEL, sector regulatory agency in Brazil), in this way a third part agency in Brazil.

Something that must be emphasized is that the OPE, has to take into account SHP's technical characteristics and this is important because it is considered difficult to compare investment costs among SHPs in Brazil, considering it is a country of continental dimensions.

After observing the data presented above, it can be considered that the input value for investment costs used in the financial analysis adequate/suitable as well as conservative, considering that it reflects the input values presented at the time of validation.

Plant Load Factor (MW)

The Plant Load Factor is considered adequate because the data comes from the Dispatch number 3301 issued on 2008/09/05 by ANEEL – the Brazilian regulatory agency for the electric sector.

Is unlikely to occur an increase above the factor showed in the Table 3 (11.08 MW), due to it's determination to be in accordance with historical inflow series including critical periods in hydrological terms.

Operational costs

The costs were determined by a third part (Correcto Contábil), which is the financial/accountant consultant contracted by Firenze to perform the financial calculations to the project.

It is important to reiterate that the project activity is the very first energy project from the Interalli Group (investor of Firenze Energética S.A, which is the owner of the SHP). Hence, there was the need to hire specialized companies in the electric sector to assist them in conducting the project, considering the maintenance and operation issues, insurances, etc.

Although the guidance in EB41/Annex 45 states that only parameters which represent more than 20% of total costs shall be subject to variation in the sensitivity analysis, we decided, in a conservative way, to perform the variation with all administrative and operational costs.

The sensitivity analysis provided clearly shows that variations of +/- 10% over these costs do not influence the project additionality and the breakeven point to the project IRR pass the indicative benchmark requires a 56% reduction over the total costs to overcome the benchmark.

The project activity is located in the city of Nortelândia, Mato Grosso state, Midwest region – remote area in Brazil, distant around 2,000 kilometers from the Interalli Group administrative headquarters (located in the city of Curitiba, Paraná State, south region in Brazil), which negatively affects the project, making more difficult its implementation.

Another important factor that has influenced the implementation of energy projects in Brazil is the lack of well-educated workforce in geographically remote places in towns which do not have activities related to construction of hydroelectric power generation and electricity generation. For such cases, the project developer shall shift a big part of the workforce to the place of project implementation. This fact has been occurring in the present project activity, due to the scarce well-educated / well qualified workforce in Nortelandia and vicinities.

In the case of maintenance services, it will be required extensive maintenance of the civil areas (constructed areas, such as dam, canal and tunnel), because of the SHP technical characteristics associated to the location of the project, which must be accomplished by specialized entities. The regional climate with high incidence of strong rainfalls, the soil characteristics in the region, etc, influence the costs of maintenance of the civil areas.

The distance of service providers and equipment (most of which are located in the South/Southeast of Brazil), and the need of intense maintenance of the civil areas, contribute to raise this kind of cost.

As mentioned above, there was necessary contract specialized companies to assist Firenze Energética in the conduction of the project and administration. For example, is

necessary to hire total legal advice and advanced accountant consultants and advisors, which are third parties. Insurances related to the project construction, equipments, energy warranty, etc, is required for energy projects in Brazil, mainly because for project considered brand new.

Further services are required to conduct the entrepreneurship. Services for electricity commercialization is required for the project activity, due to the high complexity in this process, for example the contracted company will represent the project owners in the CCEE, will offer structure to elaborate and negotiate contracts, advise the company along the regulatory and fiscalization agencies, and also advise in the entire process of receiving, filing and storing data from the energy/electricity accounting and billing.

Conclusion

Therefore, considering the explanations, informations and evidences provided, the IRR of the project activity without being registered as a CDM project is below the average SELIC (risk free rate - government bonds) rate of 16.99%, evidencing that project activity is not financially attractive or cannot overcome the benchmark. The income from CDM was the key point to go ahead and to begin implementation of the project activity.

Confident that the above comments will support you to adequately address the raised issues.

FIRENZE ENERGÉTICA S.A

CARBOTRADER ASSESSORIA E CONSULTORIA EM ENERGIA LTDA

(Project Participants).