

TO CDM Executive BOARD  
c/c Paolo Teramo - RINA

Belo Horizonte, July 9, 2009

Subject: The ERSA Airuroca Small Hydro Project in Brazil does not meet the requirements for the Clean Development Mechanism.

Dear Sirs,

We would like to contest ERSA's Aiuruoca Small Dam Project under a few comments:

ERSA says it is developing and implementing an environment and social management system – but the environmental bodies (IBAMA, IEF and SUPRAM-Varginha) have not recommended the environmental license for the project, as you can read in the attached report. ERSA does not demonstrate that they plan to comply with the recommendation of environmental authorities for a participatory process in *all* activities related to the conditions for completing the Preliminary License and for the Plan for Environmental Control needed to apply for the Construction License.

ERSA – contrary to what it affirms– is not acting legally, is not promoting sustainability, and continues to disrespect the local population. We call your attention to the following points:

- The area where the planned dam is located includes fragments of the Atlantic Coast Forest, which is protected by diverse laws. Besides being considered a World Heritage Site under the 1988 Federal Constitution/Art. 225, it is worth mentioning that, among the various laws and decrees intended to protect and preserve the area, the site is part of the Mantiqueira Mountains Environmental Protection Area (APA), instituted by Federal Decree 91.304/1985, and is also within the buffer zone of the Papagaio Mountains State Park, a conservation unit created by State Decree 39.783, in August, 1998.
- A Preliminary License (LP) was approved despite the technical opinion of the State Environment Foundation of Minas Gerais State (FEAM), which considered the project to be environmentally unviable given the relevance of the area for protection of biodiversity. The counselors who approved the license did not present any justification for their votes, and the only counselor, representing the scientific community, who voted against licensing reaffirmed in his justification FEAM's technical position.
- The conditions imposed by FEAM following the approval of the Preliminary License mention problems in the plan for the dam, which also places into question its economic viability.

- The previous owner of the Project, Eletroriver S. A., during the three years following the issuance of the Preliminary License, did not take any action to meet the conditions imposed by FEAM, and much of the data concerning the project is out of date (from the 1990s). Despite this fact, in 2007, the company requested an extension of the Preliminary License for two years. An extension of only one year was granted, and during this year, the project was sold to ERSA. Obviously, other potential buyers have recognized the problems surrounding this project.
- ERSA in its note AIU #002 08 says that it “purchased the Aiuruoca Small Hydroelectric Project following exhaustive diligence...” How then could it escape ERSA’s attention that, besides the technical opinion of FEAM, **there are two outstanding lawsuits** questioning the legality of the licensing process (**Ações Civis Públicas n<sup>os</sup> 001207007002-9, 001207007008-6, Ação Popular de n<sup>o</sup> 002407386060-3**)?

ERSA says that projects like Aiuruoca Dam “contribute to the construction of an energy generation scenario in Brazil which is aligned with the concepts of sustainable development, principally considering the current state of climate change.”

However, in the case of Aiuruoca Dam, it is not possible to calculate positive effects regarding climate change. This is because the energy generated by SHP Aiuruoca will have difficulty counter-balancing the emissions caused during the construction and operation of the dam:

- According to the Environmental Impact Assessment, 86 % of the area that would be flooded by the dam is native forests. The building of the work site will also affect native vegetation. Deforestation and/or the flooding of these forests will cause emission of greenhouse gases, including methane.
- The materials used to build the dam (especially cement) and logistical movements consume energy from fossil fuels, and will also contribute to climate change.
- The hydroelectric dam will generate energy only at peak hours (three hours per day). Besides, it is located in a region of high climatic instability, which will not guarantee the permanent functioning of the power plant.
- Data regarding the dam’s effective life presented by Eletroriver S. A. are based upon two mathematical methodologies that were not ratified by field research on sedimentation in the Aiuruoca River, which is located in a mountainous region with high levels of erosion, especially when there are heavy storms. The lack of field research to research these effects generally results in an over-estimation of the effective life of tropical dams, a fact recognized in specialized literature (ZAUKE, G. P. et al: Limnologie der Tropen und Subtropen, Landesberg/Lech: ecomed, 1991). To make this situation worse, there is a significant increase in hiking tourism to the Papagaio Peak, resulting in the opening of new dirt roads,

civil construction, and consequently in an increase in sewage effluent with a direct path to the future reservoir. In this way, there is a high risk of accumulation of sediments and organic material in the reservoir, resulting in anaerobic processes and emissions of methane gas, which is a more potent greenhouse gas than CO<sub>2</sub> (ibid, 1991).

- The current Brazilian government program providing incentives for construction of small dams is part of an unwise policy that envisions increasing electrical generation capacity no matter what the cost, with the argument of accelerating economic growth. In this scenario, the government plans to construct mega-dams, coal-fired power plants, and to resume the nuclear energy program of the military dictatorship. There is no real proposal for alternative energy sources, or for energy efficiency or demand-side management. It is important that initiatives be undertaken to promote the rational use of energy and strategies to increase technological efficiency – both potential “growth” sectors that could generate more sustainable economic growth than the eternal increase in the offer of apparently inexpensive energy. This is because the social and environmental costs are not included in the accounting. The current acceleration in construction of small hydro projects blindly follows this concept, aggravating Brazil’s tendency for under-development.
- According to Article 5 of the National Environment Council (CONAMA) 001, of Jan. 23, 1986, which regulates the structure of environment impact assessments:

*The environmental impact study, besides complying with the law, especially with the principles and objectives expressed in the National Environmental Policy Law, will obey the following general directives:*

***I – To analyze all alternatives regarding technologies and the localization of the Project, including the hypothesis of not building the Project;***

***II – Analyze the environmental impacts of the Project and its alternatives, through the identification, prediction of the magnitude and interpretation of the importance of probable relevant impacts, identifying: positive and negative (benefits and impacts), direct and indirect, immediate and middle and long-range, temporary and permanent, degree of irreversibility, cumulative and synergic properties, and the distribution of damages and social benefits.***

Observing this resolution, the undersigned residents and organizations have already drawn up an alternative proposal to resolve problems of energy supply in the region where the Aiuruoca Dam would be built. For the EIA to be complete, our understanding is that all technical alternatives within a radius of 35 km from the localization of the project (the distance between the dam and the Liberdade substation, where the energy would be introduced to the electric grid) must be analyzed. Our proposals include:

1. The re-activation and retrofitting of three small hydro dams in this region;
2. Verification of wind generating potential in the mountains and hills that have already been deforested. Research on the costs of wind farm installation through companies that have already built wind generating units show that the installation of a generating capacity equivalent to that of the Aiuruoca Small Hydro Project would not exceed the costs of the dam's construction;
3. Use of agricultural residues for production of bio-energy;
4. Research on rooftops with appropriate exposure to the sun for installation of solar hot water heaters to replace electric showerheads, which are responsible for the greatest portion of domestic electrical energy consumption in the region.

Despite the fact that the positions of local groups are supported by the above-mentioned legislation, Eletroriver S.A. did not propose to carry out such studies at the time, nor does ERSA at present.

It is important to mention that Aiuruoca's population has developed initiatives to economically explore environmentally sound tourism as an alternative form of local development. These ecotourism activities have created jobs and great opportunities for the local people, whilst contributing to the protection of the environment. The landscape is very beautiful and attractive to tourists around the country. There is no sign that the Dam would provide more jobs and economic benefits to the local people.

Due to ERSA's political networking, it has acquired the means to buy the properties of the landowners, although the environmental body has not yet issued the construction permit. This has put tremendous pressure on the technical team and also the local people. One landowner has made a police report (Boletim de Ocorrência) because there were burglars on her property and she strongly suspects that ERSA is behind the invasion, since nothing was stolen from her. There is an atmosphere of terror in town. In 2008, a letter was written to the US and German investors denouncing ERSA's behavior in Aiuruoc. The supreme court of Minas Gerais has revoked the decision of the local judge who had given ERSA ownership of the land.

On the issue of additionality, the alternatives to the project analyzed by ERSA are too limited in their scope. Brazil's best and cheapest alternative to its current energy generation matrix, dominated by large hydroelectric dams and natural gas and oil-burning thermoelectric plants is improved efficiency, according to studies by the World Bank. A study commissioned by the World Wildlife Fund Brazil found that at least 38% of Brazil's additional energy needs over the next decade could be met by measures to improve energy efficiency, making thousands of MW in new installed capacity unnecessary.

Brazil also has an exceptional potential for wind and biomass energy generation that has not been given adequate incentives from the government, which claims that hydroelectricity is "cheaper." However, new concessions are being prepared for later this year exclusively for new wind energy projects.

It is difficult to believe that ERSA, which has been steadily buying up small hydro projects throughout Brazil, requires CDM credits to make those projects financially viable. ERSA owns approximately 30 projects and enjoys investments from an enormous US-based hedge fund (Eton Park Capital), as well as DEG Germany (Deutsche investitions- und Entwicklungsgesellschaft mbH). There is no apparent additional need for this plant. Energy consumption is lower in 2009 in Brazil, and there is no critical need for expansion of energy generation that could not be met by increased efficiency and non-conventional renewable sources. The Decade Plan of Energy Expansion has been severely criticized, including by the Federal Public Attorney's office, on the basis that it favors expansion of generating capacity, while providing nearly no incentives for improved efficiency, which provides an additional "offer" of energy, without any greenhouse gas emissions. Brazil wastes 16% of all energy generated at the source, and has a significant potential for retrofitting old dams already in operation. A new government plan would provide a trade-in for electric showerheads, which account for 20-25% of all peak power demand, in favor of solar hot water systems, creating an enormous incentive for the development of a domestic solar industry and eliminating the need for peak power generation expansion, especially through hydropower.

In terms of the distinction between this plant and similar activities, there is a small hydro boom in Brazil, driven by legislation that fast-tracks projects through the licensing process. Hundreds of new small hydro plants are being favored by fast-tracking the licensing processes.

Given the failure of the Project to comply with environmental laws, the unsustainability of the Project being planned, and the existence of alternative technologies in the region planned for construction of the SHP Aiuruoca which could really contribute to decreasing greenhouse gas emissions, we urge you to withdraw financing for ERSA and instead invest in modern technical solutions that can lead to the construction of an electrical system which is adapted to the social and environmental conditions in the region, based upon the principles of optimizing management in energy use and efficiency.

Sincerely,

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Marcos Arantes – Association of Tour Guides

Dr. Andréa Zhouri - GESTA/UFMG – Study Group on Environmental Themes – Federal University of Minas Gerais

Dr. Klemens Laschefski – GESTA-UFMG and Federal University of Viçosa

Advisors to the dam-affected population

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