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## Brazil Energy Training and Outreach Program

Activity: Brazil Energy Training and Outreach Program  
Program Area: Energy Sector Governance  
Implementer: Institute of International Education  
Geographic Focus: Latin America  
Countries: Brazil  
Duration: October 2002 – September 2003

### Project Background

Brazil's energy sector broadly affects the future of the country's national development and its environment. Because Brazil's rainforests constitute the largest carbon sinks in the world, government efforts have historically been concentrated on obtaining environmental benefits through both energy efficiency and private sector participation in the energy sector. This has led to increasingly measurable greenhouse gas mitigation efforts in Brazil. While improved energy sector management has led to improvements in quality of life, there is still much more work to do.

### Objective

Three vital issues — finance, regulation and energy efficiency — must be addressed in order for Brazil to fully deliver on the promise of environmental

and energy savings. The successful development of these three factors — which are key to increasing both the production and use of clean energy technologies — will have a lasting and strategic impact on the overall Brazilian energy and environmental energy sector. The Brazil Energy Training and Outreach Program (BETOP) addressed these critical factors and provided training and outreach for clean and efficient energy in Brazil and building the capacity of Brazilian institutions to meet the challenges of protecting the environment for long-term sustainability. BETOP was focused on providing technical assistance that builds, optimizes, and develops the capacity of key actors in meeting the challenges of providing clean and efficient energy production and private sector participation.



## Approach

A training needs analysis (TNA) was carried out and twenty-seven (27) workshops, courses and seminars were conducted in various cities in Brazil, twelve invitational travel requests were awarded, a BETOP web site was established and the Brazil Energy Training Alumni Association was established. Over 1,211 participants were trained in the areas of energy efficiency, renewable energy, and global climate change. This training helped Brazil to weather the energy crisis that occurred in 2002.

## Partners

- Brazilian Association of Distributors of Electricity
- ANEEL Brazilian Regulatory Agency Banco de Nordeste
- BNDES
- CEMIG Minas Gerais Utility Co.
- COELSCE
- PROCEL
- Institute of Environmental Research of Amazon

### Excerpt from a letter from an Efficientia official:

“ We have made a formal partnership with Plantar S A. As Plantar attended the BETOP course in Belo Horizonte and I had the opportunity to talk a lot to them. From then on their President met with us and we closed a deal on environmental business prospecting which resulted in a business deal with an Efficientia client in the Triangulo Mineiro area. We were able to develop a broader business model that not only suited energy efficiency, but also the development of tree planting deal in the client's large until then untapped area. Due to this, we signed partnership agreement with Plantar for the continuation of business prospecting which may involve eco-businesses and energy efficiency.

We are planning a large project to change the energy base of another client. This client consumes approximately 300.000 liters of diesel fuel per day. With high emissions of carbon and GEGs. Our project intends to substitute electricity for this input. We are now in the calculation phase for the baseline, but the numbers are very promising. Once the analysis of the carbon and financial matrix is formatted, we are going to present the project to the Prototype Carbon Fund (PCF) for financial support.

As Efficientia has been sought by other companies (including oil petroleum) that intend to make partnerships the dissemination of the CDM and eco-business concept that we learned in the BETOP courses has enabled us to become multipliers of these concepts to those companies.”

## Project Activities and Results

Eight training workshops were held in 2003. Approximately 475 participants representing over 150 companies, governmental agencies, universities and non-governmental organizations received training in renewable energy, energy efficiency and the economics of climate change. The training focus in 2003 was on energy efficiency. As a result, all of the training workshops presented in 2003 were energy efficiency related. The Brazil Energy Training Alumni Association was formalized and registered as an NGO in Brazil. A business plan was developed to make the organization self-sustaining within five (5) years. The BETOP web site was continued and some of the training materials are now available on the web site.

Efficientia is the ESCO that was started by the electric utility in Minas Gerais State. As a result of the course in Belo



Horizonte, Efficientia found and established a new business opportunity by linking their energy efficiency work to CDM.

### Lessons Learned

The greatest lesson learned from BETOP is the value of having cost sharing co-sponsors. This allowed almost double the number of courses and workshops to be presented in Brazil with the available budget and led to BETOP becoming one of the most cost efficient training USAID programs.

Planning for much longer than six months results in many changes and disruptions postponed and cancelled workshops and consequently higher costs.

Use of local instructors builds sustainable energy and environmental training capability in country. Several of the Brazilian instructors have been college professors that used the materials from the workshops for their college courses. Exposure to foreign instructors also allowed Brazilian instructors to update their materials on what other countries are doing in the fields of energy efficiency and renewable energy. In one case, a BETOP

alumnus was an instructor for other BETOP course.

Using instructors that speak Portuguese or Spanish reduces or eliminates expensive interpretation fees. It allows participation by non-English speaking participants making the workshops available to a broader and more diverse audience.

The use of participant working groups to develop sample projects based on what they have learned during the lectures has done much to create and maintain interest in the subject matter and has given the participants valuable skills that they can use in their every day tasks. It also provides the instructors feedback on how well the concepts and skills have been learned and what areas need reinforcement. It places the instructors in the role of consultants that can advise the work groups on specific details that need to be worked out in a practical way to make a project successful. The instructors' knowledge and experience can be tapped in a more meaningful way as these participants, who are often business people, interact on a one-to-one basis with the instructors.

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