

## Small Scale Hydropower Project, Honduras

The Babilonia Hydropower Project is located in a rural region of Western Honduras, where it generates renewable energy without any waste and with a minimum environmental impact.

### The Location



The small Babilonia Hydroelectric Project is located over the Babilonia River, and it involves a geographic area consisting of the La Venta, La Paz, Casas Viejas, La Higuera, Pie de la Cuesta and El Ocotal communities, all of them belonging to the El Ocotal Municipality, Olancho Department, with a total of 1,557 inhabitants. The region is located in the northwestern skirts of the Babilonia Mountain belonging to the Agalta Mountain Range in Western Honduras.

### The Project

The Babilonia Hydroelectric Project consists of a run-of river hydroelectric project with high-pressure tubes of 750 and 600 mm diameter and a length of 3,200 meters, a power house and 2.5 km of power transmission lines, which are installed along existing roads connecting the plant to the national grid.

GHG emission reductions are achieved by replacing fossil fuels with sustainable energy, thereby avoiding the release of CO<sub>2</sub> into the atmosphere.

The main purpose of this project is to generate electricity through sustainable means using hydropower resources and selling the generated output to the state owned National Electric Energy Company. The operation of this project not only supports the interconnected system, but it improves the frequency and voltage required and the continuity and reliability of the provision of the service in the area.

The area where the Babilonia Hydropower Project is located is quite mountainous with no direct access by road. Furthermore, there was no road construction involved in this project. Therefore the construction was carried out by simple means, using only animal drawn vehicles, human labor and a cable car to move the materials to the construction area. The project is a pioneer project, under such conditions, that could have a multiplying effect through other projects in the Honduras and Central America region.





## The Benefits

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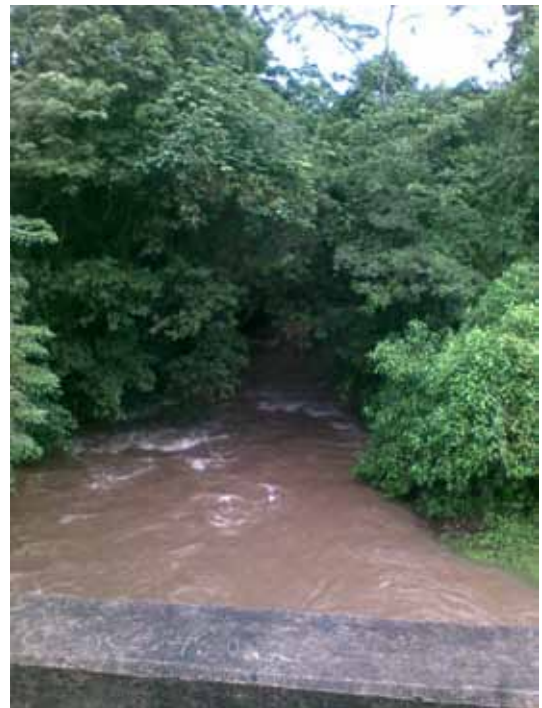
Apart from global warming mitigation this project has brought the following benefits to local communities:

- 400 new jobs were created during the construction phase, and between 19 and 49 jobs will be created during the operation phase in a rural area with few employment opportunities. The income, and consequently, the quality of living of the communities has and will be improved.
- A technical assessment of the population that works in crop cultivation near the river basin is being provided. This assessment aims to reduce the alteration of the flora and fauna through agricultural activities; creating a culture of preservation of natural resources.
- The project sets benchmarks in the quality of community participation of the Guanaco population and its nearby areas in the project planning activities.
- The project financed a comprehensive social outreach program. The project paid for:
  - a) Scholarships for students from the area (elementary, high school and university)
  - b) Rural electrification of 5 isolated villages, which provides new opportunities for economic activities to be set up in the area.
  - c) Construction of a police station and donation of a police car to the local authorities. As a consequence, assaults on the rural highway have decreased by 90%.
  - d) Mobile dental health unit for school children.
- A reforestation program of several hundred hectares with native species has been carried out by the Project Owner.
- This project provides out environmental benefits for the country's air, soil and water resources. As compared to conventional power plants, the project reduces  $\text{CO}_2$ ,  $\text{SO}_x$ , and  $\text{NO}_x$  emissions significantly, thus mitigating air pollution and its adverse impacts on human health.
- The small Babilonia HydropowerProject indirectly leads to foreign currency savings of US\$ 2,500,000.000, which represents savings in the oil bill of the country.





Honduras is a very rich country in terms of natural resources. To use these resources such as water provides Honduras with the potential to reduce its dependence on thermal power plants. For all the above, the project activity is contributing to climate change mitigation efforts and to the sustainable development goals of Honduras.



## The Details

### KEY DATA

Average Emission Reductions per year: 20 000 tCO<sub>2</sub>e

Commissioning date: 2004

Standard: VCS 2007



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