

Renewable Energy Jobs & Access

A SERIES OF CASE STUDIES

Honduras

PROJECT PROFILE

Hydro Company A, a Honduran E+Co portfolio company, developed a 13.5 megawatt (MW) run-of-the-river hydroelectric project in a rural town in the Department of Intibucá in western Honduras (with a population of about 45 000), close to the border with El Salvador. The project entails a cascade of three powerhouses on the Intibucá River. The hydroelectric plant was constructed on the site of an abandoned earlier facility in 2004-2008. In phases, the capacity was increased from 1.4 to 13.5 MW.

Electricity generated by the plant is fed into the national grid, which supplies an estimated 11 000 people in the local community with power. In addition, two local communities are grid-connected as a result of this project, allowing an additional 1 200 people to use electricity for lighting instead of relying on candles, kerosene and batteries.

JOBS AND TRAINING

The total workforce at the hydropower plant comprises 83 persons, including seven technicians and 62 workers/labourers. Workers and administrative staff earn USD 250-350 per month; the technicians earn 25-30% more than labourers. The company does not make manager income data available.

In 2004-2008, more than 100 workers were hired from the community when the plant was constructed. These were temporary jobs, however, and employment ended when the plant was completed. Now, specialised contractors are hired as needed for tasks such as building construction, turbine installation, or pipe layout. Management consists of trained and experienced engineers. The managers have trained maintenance and nursery labourers to perform their jobs.

SUPPLY CHAIN

Upstream Linkages

The company bought the main technology components, the Pelton turbines, from an international supplier. But construction materials were sourced in Honduras and thus provided employment locally along with the direct (but temporary) construction jobs. No data are available to quantify the impact on the supply chain.

Downstream Benefits

Because it is virtually impossible to trace the point of power generation origin to the specific households that use grid-electricity, only generic observations are possible with regard to downstream linkages. However, with a more reliable supply of energy, shopkeepers in Intibucá are able to operate their businesses past dark. This includes small snack shops, restaurants, or bars, as well as micro-enterprises like barber shops and tailors.

Among local households, better access to energy improves the quality of life and allows children to read and study longer. Reduced use of kerosene, candles and batteries saves families money, which can be spent to greater benefit of the local economy.

The hydropower project has also helped improve local road conditions, which may be assumed to be of overall economic benefit to the community.

Finally, the company offers a micro-credit program to its employees, which has helped generate additional local economic demand.





PROJECT SNAPSHOT

The project is a commercial 13.5 MW run-of-the-river hydroelectric project on the Intibucá River. It is connected to the Honduran national grid and helps ease frequent blackouts in the country. Two local communities are newly grid-connected.

- » **Technology**
Hydropower
- » **Employment**
83-person workforce; more than 100 temporary workers during construction

COUNTRY INFORMATION

- » **Population**
7.6 million people
- » **GDP/capita**
USD 2 026
- » **Electrification rate**
70.3% average
45% rural
97.9% urban
- » **Access to modern fuels***
45.2%

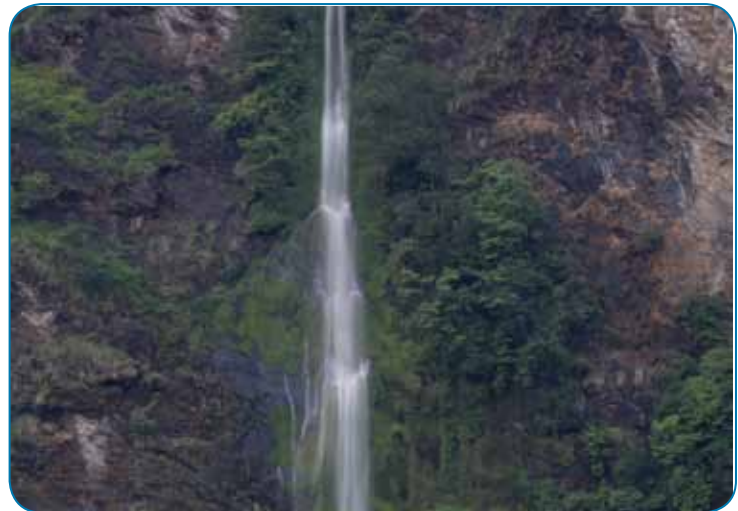
*The data from the case study was provided by E+Co. Population and GDP data are from the World Bank Indicators (<http://data.worldbank.org/indicator/>). Energy access data from United Nations Development Programme and World Health Organization (2009) report, *The Energy Access Situation in Developing Countries: A Review Focusing on the Least Developed Countries and Sub-Saharan Africa*.*

** Modern fuels refer to electricity, liquid fuels, and gaseous fuels such as LPG, natural gas and kerosene.*

FINANCING

Total project cost was USD 16.5 million. It attracted finance from local banks and international development finance institutions, and played a crucial role in demonstrating more broadly to local banks the investment opportunity in the hydro sector. E+Co made debt and equity investments of USD 1.35 million.

The Company signed an agreement to sell carbon-offset credits generated by the hydro plant. The project is one of few privately owned projects to successfully do so. This has helped to increase the company's net cash flow.



The Policy Advice and Capacity Building Directorate (PACB) welcomes your comments and feedback at pcb@irena.org. These local case studies were prepared by IRENA in cooperation with the organisations described. They intend to explore the employment dimension of renewable energy development and deployment in rural areas in the developing world. For a more detailed version of this case study, please see IRENA (2012), *Renewable Energy Jobs and Access*, which is available at: http://www.irena.org/DocumentDownloads/Publications/Renewable_Energy_Jobs_and_Access.pdf. The views expressed in this publication are those of the author(s) and do not necessarily represent those of IRENA or its Member States.