

## Case study

# CASA DE LA MUJER – CHEJURU (SARRAPIA)

## Colombia

### The challenge

10% of Colombia's 49 Million population live in the country's border areas without access to the national grid. Power supply in these areas is typically generated from community diesel generators that supply power for a few hours a day when diesel is available.



HEMEVA S.A.S.

The small textile factory "Casa de la Mujer - Chejuru" in the Selva del Mataven Unified Indigenous Reservoir (composed of 92 communities), is only accessible by boat during the winter when the water level in the rivers are high enough for transports. During summer the supply of diesel is scarce and it is impossible to generate electricity, even for a few hours.

For a sustainable development of these areas Colombia's government has launched the initiative "Plan Fronteras para la Prosperidad" led by the Ministry of Foreign Affairs. The goal is to encourage the development of income generating companies creating a financially sustainable solution over time by providing a reliable and continuous power supply during the working day through off-grid electrification.

### Why STUDER

STUDER is a recognised brand in solution systems for isolated installations owing to the robustness and reliability of its equipment, as well as the high integrability of its equipment for optimal operation and local monitoring. The most important reasons are that they feature a very low fault level and an operating logic designed and developed to extend the life of the batteries.

### System components

The system contains the following components:

- 1 x XTH 6000-48-01 STUDER inverter/charger
- 22 x 320Wp ETSolar solar panels
- 8 x SIND 06 1225 stationary battery elements
- 1 x VS-120 STUDER solar controller
- 1 x BSP 500 STUDER battery monitor
- 1 x RCC-03 STUDER display
- 1 x battery cabinet
- 1 x guard cabinet

### The Solution

The 7 kWp PV system at "Casa de la Mujer – Chejuru" provides reliable and stable energy supply to power the operation of 25 sewing machines and two filleting machines to produce, market and sell clothing to the local population.

The offered solution based on solar generation and battery storage avoids the use of diesel electric generators, saving 100% of diesel consumption and thereby reducing the CO2 emissions with 90 to 100 MT per year. The repayment time for the project is estimated to less than 5 years and the installation's life-time to 25 years, with a planned replacement of the batteries after 12 years (with adequate maintenance).

The local community actively participated in the project for a concerted, inclusive and adequate solution in line with their expectations, needs and long-term vision.

### Project outcome

Project sustainability will be achieved through commercialisation of the produced clothes to nearby communities and additional economic benefits is obtained by sharing the electricity with the community's other company "Cooperativa de Artesanos" sending handicrafts to local and international markets.

By encouraging the development of a durable financial solution for these communities the Colombian government also seek to counteract the deforestation of these areas vital for the environmental balance of our planet.

### The Company

HEMEVA

Hemeva S.A.S has been supplying high-quality material and services to the industry since 1978. Due to their interest in the importance of the industry's development and progress, in 2003 the company expanded its services with the creation of the energy and environment division. Hemeva specialises in the turnkey structuring and implementation of generation systems based on renewable energy sources, mainly in non-interconnected zones (ZNI) and vulnerable communities.

### For more information please contact:

Studer Innotec SA

[www.studer-innotec.com](http://www.studer-innotec.com) / [alain.perez@studer-innotec.com](mailto:alain.perez@studer-innotec.com)

Studer Contact: **Alain PEREZ**

HEMEVA

[www.hemeva.com](http://www.hemeva.com)

