“TROJAN BATTERY PROVIDED THE DURABLE, LONG LASTING ENERGY STORAGE REQUIRED FOR THIS SELF-CONTAINED PV SYSTEM TO WORK PROPERLY WHILE AVOIDING THE NEED TO USE DIESEL. WITH THEIR ROBUST DESIGN AND DOUBLE CASING, TROJAN’S SOLAR INDUSTRIAL BATTERIES SAFELY SHIPPED TO THIS REMOTE LOCATION AND FIT PERFECTLY IN THE OFF-GRID SYSTEM.”

DANIEL MEDINA ➔ OWNER AND FOUNDER OF HEMEVA S.A.S.

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<th>LOCATION</th>
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<td>Sarrapia, Colombia, South America</td>
<td>Provide reliable and continuous power supply during the working day through off-grid electrification.</td>
<td>PV system provides electric operation of sewing and production machines by replacing diesel power.</td>
<td>Development of a sustainable textile factory that no longer requires diesel consumption.</td>
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8 SIND 06 1225 BATTERIES

PROVIDE POWER TO OFF-GRID TEXTILE FACTORY

BATTERY REPLACEMENT SCHEDULED AFTER 12 YEARS
**LOCATION**

The small textile factory, "Casa de la Mujer - Chejuru", in the Selva del Mataven Unified Indigenous Reservoir (composed of 92 communities). The factory is only accessible by boat during the winter when the water level in the rivers are high enough for transporting goods.

**CHALLENGE**

During summer, the supply of diesel is scarce and it is impossible to generate electricity, even for a few hours, in this remote location. For 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 and create a financially sustainable solution over time. This is achieved by providing a reliable and continuous power supply to the factory during the working day using off-grid electrification.

**SOLUTION**

The 7 kWp PV system at "Casa de la Mujer – Chejuru" provides a 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 Alliance for Rural Electrification awarded this project site an ARE Award in 2019 for outstanding achievement in a developing country.

**SYSTEM SPECIFICATIONS**

- Batteries: (8) Trojan SIND 06 1225, 1,225Ah @ C100-Hr, deep-cycle, advanced lead-acid with Smart Carbon®TM
- Battery Life: 17 years (per IEC 61427)
- Solar System Capacity: 7 Kwp
- Battery Bank Configuration: 48V
- Solar Modules: (22) 320Wp ESTSolar modules
- Inverter-chargers: (1) XTH 6000-48-01 STUDER inverter/charger
- Controller: VS-120 STUDER solar controller
- Battery Monitor/Display: (1) BSP 500 STUDER monitor / (1) RCC-03 STUDER display
- Total Microgrid, Installed: 1
- System Integrator: Hemeva S.A.S.

**OUTCOME**

Project sustainability was achieved through the commercialization of the clothing produced and sold to nearby communities and the sharing of produced electricity with an adjacent company.

**BATTERY SOLUTION**

- 17+ Year Life Span
- Withstands Harsh Conditions
- Lowest Levelized Cost of Energy

**PARTNERS**

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