

# Project Plan: Solar for Schools: Beating the Heat for Jacobabad

## 1. Organization & Project Overview

**Implementing Organization:** Community Development Foundation (CDF)

**Partner:** Sindh Education Foundation (SEF)

**Location:** District Jacobabad, Sindh, Pakistan

**Target:** 20 Girls' Schools / AALTP Learning Centers

## 2. Executive Summary

Jacobabad is one of the hottest regions on Earth, with temperatures in May, September, and October making classrooms unbearable. This project provides a sustainable, off-grid solution by installing solar power systems to run fans and lights in girls' schools. By removing the barrier of extreme heat and frequent power outages, we ensure that education for female learners and the 64% female staff remains uninterrupted.

## 3. Problem Statement

- **Extreme Climate:** High temperatures lead to heat exhaustion and health risks for students.
- **Energy Poverty:** Frequent grid failure means classrooms have no ventilation or lighting.
- **Educational Impact:** These conditions directly cause high absenteeism and dropout rates among adolescent and adult female learners.

## 4. Proposed Solution & Technical Details

We will install independent solar units to provide a "Cooling Hub" in each school:

- **Solar Infrastructure:** 580W+ High-efficiency Mono Perc Solar Panels.
- **Cooling:** 2 DC/AC Solar Fans per classroom for immediate temperature relief.
- **Storage:** Hybrid Inverters and Deep Cycle Batteries to ensure power during outages.
- **Lighting:** Energy-efficient LED bulbs for improved classroom visibility.

## 5. Estimated Budget Summary (20 Classrooms)

Category	Estimated Cost (PKR)	Estimated Cost (USD)
Solar Hardware (Panels/Inverters)	1,100,000	\$3,950

Category	Estimated Cost (PKR)	Estimated Cost (USD)
Cooling & Lighting (Fans/LEDs)	428,000	\$1,530
Battery Storage & Wiring	690,000	\$2,470
Installation & Logistics	290,000	\$1,040
<b>Total Project Cost</b>	<b>2,508,000</b>	<b>~\$8,990</b>

## 6. Potential Long-Term Impact

- **Retention:** Significant reduction in dropout rates for female students in Sindh.
- **Climate Resilience:** A replicable model for green, climate-adapted schooling.
- **Empowerment:** Improved working conditions for female educators and staff.
- **Sustainability:** Zero monthly electricity costs for underserved community schools.