

PROJECT BROCHURE

Installation of Solar-Based Water Pumps in Thar (Sindh)

Bringing Clean, Sustainable Water to the Desert Communities of Thar

Project Leader

Ghulam Mujtaba Qadri
President, Sindh Ajrak Welfare Trust



"If Not You, Then Who?"



Registered with PCP

Sindh Ajrak Welfare Trust • If Not You, Then Who?



Project Summary

Sindh Ajrak Welfare Trust proposes the installation of solar-based water pumps across the drought-affected villages of Thar, harnessing the region's abundant sunlight to deliver a reliable, sustainable, and cost-free source of clean drinking water — replacing distant, unsafe water sources and costly diesel alternatives.

LOCATION	Thar Desert, Tharparkar & Umerkot Districts, Sindh
SECTOR	WASH & Renewable Energy
ANNUAL TARGET	50 solar water pumps / year
REGISTRATIONS	PCP & Sindh Charity Commission

At a Glance

500,000 PKR

Estimated cost per pump

50 / year

Installation target

7,500+

Households reached annually

300+

Sunny days powering Thar

What Is the Problem?

- ! Groundwater lies far below the surface and is often brackish or saline — unsafe without treatment.
- ! Villages have no grid electricity, so conventional electric pumps cannot be used.
- ! Women and children walk for hours, leading donkeys, to reach the nearest functioning well.
- ! Diesel pumps, where they exist, are costly to run and frequently break down.
- ! The daily water burden keeps children — especially girls — out of school and exposes women to real risk.



A woman walks across the desert to fetch water — a daily reality in Thar.

87%

of Tharparkar's population lives below the poverty line — water scarcity deepens this daily struggle.

How This Project Solves the Problem

1

Solar panels installed above existing or newly drilled boreholes power a submersible pump directly from sunlight — no grid or diesel needed.

2

With 300+ sunny days a year, Thar's climate makes solar an ideal, free, near-maintenance-free energy source.

3

Water is pumped into an elevated storage tank and distributed via a community tap-stand close to the village.

4

A local Water Management Committee is trained to operate, maintain, and fairly distribute the water long-term.

Potential Long-Term Impact

1

Health

Fewer waterborne diseases from safe drinking water

2

Education

Children — especially girls — regularly attend school

3

Women's Empowerment

Hours reclaimed for income & community life

4

Livelihoods

Reliable water supports livestock & kitchen gardens

5

Sustainability

Zero emissions, zero recurring fuel cost

6

Scalability

Replicable across 2,300+ villages in Thar

Total Cost Per Solar-Based Water Pump

Indicative cost for a complete village-level solar water pump system, including borehole works, solar array, pump, and distribution infrastructure. Final cost is confirmed after a site survey.

PKR 500,000

Estimated Total Cost per Pump (2026 rates)

Component	PKR	%
Borehole / well drilling & casing	120,000	24%
Solar panels & mounting	140,000	28%
Submersible pump & controller	100,000	20%
Storage tank & stand	50,000	10%
Piping & tap-stands	35,000	7%
Fencing & security	25,000	5%
Transport, install & training	30,000	6%

Target of Annual Installation

50

Solar pumps installed / year

PKR 25M

Approx. total annual budget

7,500+

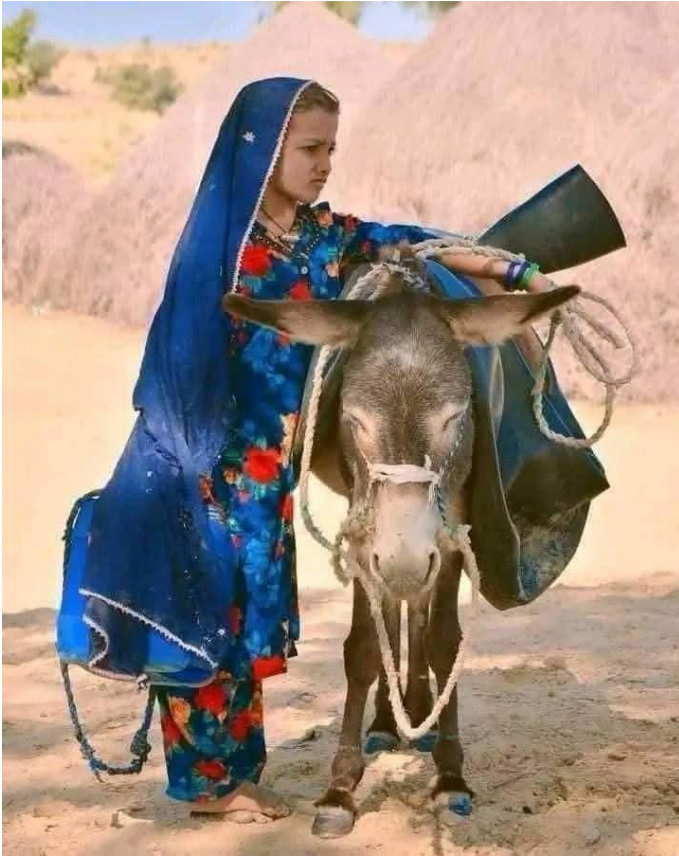
Households reached / year

20+ yrs

Expected system lifespan

At this pace, Sindh Ajrak Welfare Trust will expand steadily across Tharparkar and Umerkot districts — working toward a long-term vision where every drought-affected village in Thar has access to a reliable, solar-powered water source.

Project in Pictures



Glimpses from the communities of Thar this project seeks to serve.



Installation of Solar-Based Water Pumps in Thar (Sindh)

About Sindh Ajrak Welfare Trust

Sindh Ajrak Welfare Trust is a registered non-profit organization working for the welfare of underserved communities across Sindh, guided by the principle: "If Not You, Then Who?" The Trust is registered with the Pakistan Centre for Philanthropy (PCP) under its Seal of NPO Good Practice, and with the Sindh Charity Commission, Government of Sindh — reflecting its commitment to transparency, accountability, and good governance.

For partnership & funding inquiries, contact:

Ghulam Mujtaba Qadri — President, Sindh Ajrak Welfare Trust



Registered with PCP

Sindh Ajrak Welfare Trust • If Not You, Then Who?



SINDH CHARITY COMMISSION
Government of Sindh