

ABOUT TTA

- ✓ **Engineering and Consulting Firm**, in business since 1986 (+35 years experience)
- ✓ Specialized in **energy access** and **renewable energy distributed generation**.
- ✓ Headquarters in **Barcelona (Spain)**.
- ✓ Around **35 full-time staff**.



CONSULTANCY

- Energy **planning**
- Development of **Policy and regulatory frameworks**
- Definition of **delivery models**
- **Transaction Advisory**



ENGINEERING

- Technical and financial **feasibility studies**
- Concept and detailed **engineering designs**
- **Owner's Engineering**



KNOWLEDGE HUB

- Tailor made training and **capacity building**
- Conference on Solar Technologies & Hybrid Mini Grids (**S-@ccess Conference**)



WORKS

- **Supervision of Construction Works**
- **EPC**
- **Operations & Maintenance**



PRODUCT DEVELOPMENT

- **Research & Development**



INTERNATIONAL
Microgrid
SYMPOSIUMS

Mirwais Hospital

Kandahar, Afghanistan

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MIRWAIS HOSPITAL: BASIC INFO

Basic Hospital Info

- Built by China in 70's. 74,000 m². 650 beds and around 755 staff.
- Built to serve 400,000, it is the referral hospital for 4 provinces and about 5 million people rely on its services. Main hospital in the southern region of Afghanistan. 'an oasis within the oasis'.
- Power supply: grid + diesel gensets.

Project:

- TTA Scope: design and construction supervision of power system hybridization with solar PV and storage (grid-connected microgrid)
- Started in July 2021, construction about to start.



MIRWAIS HOSPITAL: SYMBOL OF RESILIENCE

- ✓ **Unreliable power supply.** Power from grid available 9h per day on average, with poor power quality.
- ✓ **Warfare.** Armed conflicts for decades.
- ✓ **Climate.**
 - ✓ Extremely hot and dry weather (hot desert climate), with increasing temperatures
 - ✓ Design for wide range of temperatures.
 - ✓ Design for dusty environment
 - ✓ Flash flooding. Decreasing rain and increasing precipitation anomaly.
 - ✓ Design for heavy rain
 - ✓ Shelter for population



S-@CCESS CONFERENCE



SAVE THE DATE !

**Solar Technologies & Hybrid Mini Grids
to improve energy access
- 4th edition -**

www.energy-access-conferences.com

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Thank You

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