



Solar Powered Water Systems: An Overview of Principles and Practices

Workshop Overview

This 5-day in-person workshop offers an immersive introduction to the principles and practices of Solar Powered Water Systems (SPWS). Using case-based learning and the Technology Applicability Framework (TAF), participants will examine why SPWS schemes succeed or fail based on key stakeholders across six critical dimensions of sustainability – social, economic, environmental, legislative, skills and knowledge, and technology (including spare parts availability). The workshop addresses common misconceptions about SPWS and builds critical thinking skills regarding the applicability and long-term sustainability of these systems in diverse contexts. Through interactive sessions, group discussions, scenario-based activities, and a site visit to an existing SPWS, participants will identify risks and opportunities and recommend concrete improvements to existing or proposed SPWS schemes. Participants leave equipped to make informed decisions about SPWS within water supply programs and to champion equitable, sustainable outcomes for the communities they serve.

Target Audience

This workshop is designed for professionals who are involved – or planning to be involved – in the planning, managing, or monitoring of water supply programs that utilize SPWS, including:

- Engineers and technical professionals
- Program managers and project coordinators
- Non-technical professionals working in water, sanitation, and hygiene (WASH)
- Staff working in rural or underserved contexts where water service sustainability and equity are ongoing challenges

No prior technical design experience is required. Participants who wish to advance to hands-on system design after completing this workshop are encouraged to continue with the SPWS Design Workshop.

Learning Outcomes

By the end of the workshop, participants will be able to

- Evaluate the need, applicability, and feasibility of a SPWS scheme within a specific local context.

- Analyze the opportunities and risks associated with SPWS schemes across social, economic, environmental, legislative, skills and knowledge, and technology dimensions.
- Inspect an existing SPWS and identify strengths, weaknesses, and areas for improvement.
- Recommend concrete improvements to existing or proposed SPWS programs to enhance sustainability and equity.
- Apply the Technology Applicability Framework (TAF) to support informed decision-making about SPWS in water supply programs.

Agenda Overview

Day #	Topic
Day 1	Introduction to Solar Powered Water Systems (SPWS) and the Technology Applicability Framework (TAF)
Day 2	On-Site Visit Evaluating a SPWS
Day 3	Key Stakeholders and Dimensions of Sustainability for SPWS
Day 4	Case Based Application of the TAF
Day 5	Procurement, Operations and Maintenance, Life Cycle Costing Action Planning, Next Steps