Solar Powered Water Systems Course Overviews

SPWS: An Overview of Principles and Practice (SPWS 101)

This online course offers an overview of the principles and practices of Solar Powered Water Systems (SPWS). Using a fictional but realistic scenario, the course aims to build critical thinking skills regarding the applicability and sustainability of SPWS.

The course will address common misconceptions about SPWS and equip participants to use existing standards and job aids, including the Technology Applicability Framework (TAF). Through this course, you will learn how to improve the sustainable and equitable impacts of SPWS.

This course is for engineers and individuals with a non-technical background who are involved or considering involvement in planning, managing, or monitoring water supply programs that utilize SPWS.

Instructional Approach

The instructional approach taken in this course may be different from what you are used to. Using a case-based simulation, you will take on the role of an SPWS expert who has been tasked with evaluating a specific context where existing SPWS are failing. To work through the simulation, you will use a modified version of a tool called the Technology Applicability Framework (TAF).

You will work through the case study by doing interactive modules and completing specific assignments. In the final assignment, you will analyze the feasibility of an SPWS in a context where these systems have not been used. By analyzing both existing and new SPWS systems, you will gain the skills to assess the applicability of SPWS in specific contexts, identify the risks and opportunities associated with the technology, and recommend improvements to an existing system.

Your contributions to discussion forums are a significant element of the course. You should be prepared to spend between 5 - 8 hours completing the requirements for each unit.

Learning Outcomes

By the end of the course, you will be able to:

- Assess the need and applicability of a SPWS scheme.
- Assess the opportunities and risks associated with SPWS schemes in a rural context where water services are unsustainable or inequitable.
- Recommend improvements to programs that utilize SPWS.
- Promote SPWS as a means of improving the sustainability and equity of water supply schemes.

Expectations

This course is highly participatory. While you will study the content on your own time, you will be required to engage in active discussions each week. These discussions will enrich your understanding of the content and allow you to interact with other professionals.

You will be assessed on three components to receive a certificate for the course:

- Participation: You must complete all units.
- Quizzes: A minimum score of 80% is required to pass, but you may retake the quizzes as many times as you like.
- Discussions: Your posts must be 75 - 150 words. You are also required to respond to two of your classmates' posts.

Course Structure

The course has been structured as follows:

Unit	Week #	Activities
Introductory module & Unit 1: What's the Problem?	1	• Pre-course survey • Course Introduction Lessons • E-Learning Module 1 • Discussion Forum • Quiz

Unit 2: What's Working? What Isn't?	2-3	• E-Learning Module 2 • Group Work • Discussion Forum • Quiz
Unit 3: What Can We Do About It?	4	• E-Learning Module 3 • SPWS Champion Online Game • Discussion Forum • Quiz
Unit 4: Where Do We Go From Here?	5	• E-Learning Module 4 • Discussion Forum • Final Exam • Post-Course Survey