



sun2water™ solutions off-grid water treatment

by The meeco Group



Overview

sun2water™ solutions provide potable water to communities and businesses (e.g. agricultural, industrial) dependent on unreliable, expensive, or difficult-to-maintain water and power sources. These off-grid, turnkey solutions integrate proven technologies and utilize industry leading equipment and expertise.

sun2water™ solutions are custom-designed, utilizing a variety of water treatment, power generation, and energy storage technologies to meet local water and energy needs, while minimizing investment, maintenance, and operating cost.

sun2water™ off-grid solutions can purify various sources of water such as:

- Unsecured distribution network
- Spring or sources
- Surface capture
- Rivers
- Lakes

With over 400 water treatment systems and 200 MW of clean energy installed, meeco has the experience required to deliver reliable solutions anywhere, anytime.

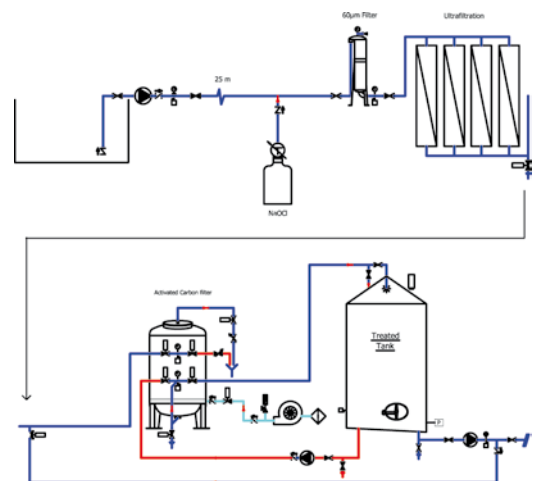
Technologies

sun2water™ solutions can use a wide range of **water treatment** technologies to address local water conditions and requirements:

- Reverse osmosis
- Nano filtration
- Ultra filtration (UF)
- Micro filtration
- Specific ion removal
- Chlorination

Based on local environmental conditions and electricity consumption requirements, we select from a wide range of **power generation** and **energy storage** technologies:

- Solar PV power generation
- Supplemental power sources (if necessary)
- State-of-the-art battery storage technologies
- Web-based system monitoring and failure prevention
- Top-tier electrical components (e.g. inverters)



Ultra-Filtration pre-treatment for biological and particle safety (© ICE)

Benefits

sun2water™ solutions have a number of benefits including:

- Wide range of possible water sources
- Self-cleaning system
- Reliable electricity 24/7
- Customized solutions to minimize investment and operating cost
- Engineered to install quickly and operate/maintain easily
- Online, 24/7 performance monitoring
- Robust design and construction to maximize useful life and system reliability



About The meeco Group

As a leader in clean renewable energy, meeco™ has provided clients with services and solutions for over 200 MW across three continents.

We work behind the scenes with project developers, businesses, governments, technology providers, and EPC contractors to structure, finance, and commission highly bankable projects. By providing the optimal set of services and solutions for each project, we generate attractive returns for clients and other stakeholders.

Some of these services and solutions include:

- **clear advisory services:** strategic consulting, project services, financial advisory and communications
- **oursun™ turnkey solutions:** grid-connected and off-grid solutions, sun2go™ portable solutions, cellcube™ energy storage solutions
- **asset management services:** on-going site services

The meeco Group delivers these services and solutions via regional offices located worldwide to ensure we address local requirements and community needs.



Technical Data

■ Infeed water flow to treatment

500 to 1,500 Liters per hour (average flow)

■ Output water flow to user

Peak flow 1,200 Liters per hour
700 Liters per hour (average flow) - depending on raw water quality

■ 7 m³ treated water tank

Collapsible water storage tank included.
Stores treated water for up to 10 hours.

■ Raw water feeding

Raw water pump. Adapted for water table depth less than 5 m.
Automatic auto priming pump: Liquid temperature 0 to 40°C. Anti dry-work system, anti hammering. 2.3 to 3.8 bar. Stainless steel-head. Suction kit with strainer and 7 m flexible hose.

■ Integrated UF backwash system

■ PV components

Module: Polycrystalline module. Suntech (or equivalent)
Mounting: Marine-grade aluminum. Anti-theft screws
Foundation: Screw-in or concrete depending on ground typology

■ Battery components

GEL: Sealed lead-acid deep cycle GEL technology (maintenance free). Power: 100-3000 Ah. Sonnenschein (or equivalent).

cellcube™: Vanadium RedOx Flow technology. Discharge power: 10 kW. Storage capacity: 100 kWh. Response time: < 60 ms. Waterproof housing

■ Other electrical components

Inverter: Capacity: 2-20 kW. Output: single-phase or three-phase. Surge protection. Studer Innotec (or equivalent)

Charge controller: Capacity: 20-150 Amps. Steca Solar (or equivalent)

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