SYNWATER®

Water Treatment & Transport Systems

directly powered by solar & wind energy

Technology specifics:

- Continuous power adaptation by highly flexible SYNWATER® modules
  Controlled by integrated load management SYNWATER®*LM*

- Power controlled for solar/wind supply and/or
  Price controlled for spot market power purchase

- Modular pre-configured applications for medium capacities and
  Tailor-made applications for large capacities

- System options: water transport package, off-grid package, medium/high penetration choice

- Technology focus: seawater desalination (other water technologies implementable)

SYNWATER®
desalination by renewables

Water production at lowest and long-term stable cost level with minimal CO_2 footprint

Scope of services offered for SYNWATER® projects:

Development Phase

- Package 1: Feasibility
- Package 2: Rights & Permissions
- Package 3: Ready to Build Status

Implementation Phase

- Package 4: Third Party Consultancy
- Package 5: Engineering, Procurement & Construction
- Package 6: Operation & Maintenance

SYNWATER®
desalination by renewables

Cost efficient and sustainable water technology for Mining Industry

SYNWATER® project (intake and desal plant) – wind powered

SYNWATER® for Mining

Situation
Mining industry often faces limitations of using surface and ground water resources.

Seawater desalination – combined with long distance water pumping up to the mining regions – offers a promising option for water supply in coastal areas. Since both industrial processes are energy intensive, the total water costs will be significantly influenced by the respective energy costs.

Challenge
Coastal regions usually exhibit excellent solar and wind resources enabling a renewable energy supply on a lower and more long-term stable cost level than conventional grid power.

Running water processes primarily with fluctuating renewable energies (FRE) requires specific technologies.

Solution
The highly flexible SYNWATER® processing continuously FRE adapted offers water treatment and transport systems – directly and up to 100% solar and/or wind powered.

SYNWATER® reservoirs (without flowting covering)

SYNWATER® pumping stations

SYNWATER® for Mining

SYNWATER® projects for mining sites usually require large capacities and consist of the following components:

- Marine/Intake Structures
- Water Treatment/Desalination Plants
- Water Storage Tanks
- Piping Systems
- Pumping Stations
- Water Reservoirs
- Internal/External Grid Structure
- Solar and/or Wind Power Plants
- Load Management System/Control Center

Individual and complex planning and development activities are necessary in order to reach the ready-to-build stage for these projects. As SYNWATER® system integrator, project developer and general planner we offer the service packages and sub-packages separately or as full service.

Package	**Sub-Package**			
Feasibility	Fact Finding Mission	Conceptual Design	Feasibility Study (Technology & Economics)	
Rights & Permissions	Project Data Compilation (Surveying, Soil Investigation)			
	Front End Eng. Design	Permissions (EIA, Grid, Building)	Rights (Property, Others)	
Ready-to-Build	Basic (& Detail) Design	Tendering (Docs, Bids, Awards)	Economics (Costs, Pricing)	Financial Services

SYNWATER® project (intake and desal plant) – solar powered

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