# Pumpmakers Solar Pump Systems

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1 PUMPMAKERS SOLAR PUMP SYSTEMS

To tackle the global water crisis, the award-winning Austrian solar company PM Pumpmakers GmbH has developed the world’s most innovative solar pump systems, using the latest technology and a patented concept.

Pumpmakers Solar Pump Systems provide people with access to safe, clean drinking water – in urban and rural areas, and even in the remotest corners of the world – and a worldwide network of fellow “Pumpmakers”. Furthermore, Pumpmakers assists all those wanting to use its Solar Pump Systems for their business with installation plans and videos as well as an online shop.

Dietmar Stuck, an experienced Austrian well-builder, founder & CEO of Pumpmakers, has a clear goal: “Pumpmakers aims at providing millions of people all over the world with access to water – and work. We offer a unique opportunity to all those wanting to start their own business. Our concept fosters self-sufficiency as it provides people with the water they need for farming, for their livestock, and for growing their own crops, vegetables and fruit. That way, we help reduce worldwide water shortages and poverty. After all, water boosts life and jobs!”

1.1 The Challenge – Global Water Crisis

Today, almost 800mn people still have no access to safe, clean drinking water. The United Nations estimates that by 2025 up to 1.8bn people will be living in countries or regions with extreme water scarcity. About two-thirds of the world’s population will be affected by the consequences of our global water shortage. Some 3mn people die each year from the consequences of water-related diseases – i.e. about 10,000 people every day - most of them are children under the age of 5.

The reliance on common water pump systems that are simply unsuitable for most local conditions exacerbates the problem:

- Expensive generator-driven pumps that need unaffordable amounts of fuel,
- windmills that only pump water if there is enough wind,
- hand pumps that require a lot of maintenance (which, in many cases, is not available locally) cause more problems than they solve, thus adding to the global water crisis.

“In the Maasai region I saw people walk over 30 miles a day, searching for scarce amounts of water for their families. I saw broken hand pumps because of a lack of maintenance. I saw fuel-driven water pumps not working because of the lack of money to run them. What’s more, many existing water wells were useless.

This sparked the idea for a solar-powered water pump that avoids these disadvantages and that can easily be manufactured locally by companies and entrepreneurs.”

Dietmar Stuck, Founder & CEO
1.2 The Solution – Pumpmakers Solar Pumps

Pumpmakers Solar Pumps were designed and developed against this backdrop. As an innovative solution, offering numerous benefits, the world’s first, easy-to-use DIY Solar Pump or an entire PM Solar Pump System can be used to supply water to urban and rural communities, irrigate crops, breed livestock or run a fish farm.

With the power of the sun, Pumpmakers Solar Pumps

- provide sustainable, cost-effective and flexible alternatives for a steady supply of water effectively pump water out of water wells:
  - up to a depth of 100m / 300ft with a delivery rate of up to 18,000 liters per day (DIY Solar Pump)
  - beyond a depth of 350m / 1,150ft with a delivery rate of more than 50,000 liters per hour (PM Solar Pump System)
- operate up to 10 hours a day
- incur no running costs
- amortize in 2 years at the latest
- require hardly any maintenance (high-quality materials make this possible)
- are affordable and can be installed all over the world to foster local economic development
- can easily be assembled locally, using local skills and parts
- replace already existing generator-driven water pumps, hand pumps and windmill water pumps.

Besides that, the DIY Solar Pump

- allows water to be pumped at night, using the optional hand pump
- is salt water resistant to avoid corrosion
1.3 Benefits

Pumpmakers Solar Pumps make people in need of a constant supply of clean water self-sufficient. The distribution takes place via the easily accessible Pumpmakers Platform (see 1.4 below), which provides all the knowledge, tools and resources needed to build the pumps locally.

This creates an abundance of new opportunities: for setting up a local business, for creating jobs, for educating others in the use of sustainable technology, for establishing know-how transfers, and for helping people help themselves.

Pumpmakers Solar Pumps make people energy independent. They save costs and improve the quality of life for many people with a steady supply of water.

Pumpmakers Solar Pumps are an ideal solution for development aid organizations, striving for sustainability and increased self-sufficiency among the population through self-help assistance. Dietmar Stuck explains: "For the first time ever, a solar pump system can be manufactured on the African continent. No organization in Africa has to buy and import expensive pump systems. We are convinced that showing people how they can help themselves to sustainably access water will help them build better lives for themselves and future generations."

1.4 Pumpmakers Platform – Globally Connected

While access to water is limited in developing regions, many people use mobile devices to communicate and access the Internet.

The Pumpmakers Platform is a virtual marketplace that connects and supports people all over the world to help themselves by providing quick and easy access to safe, clean drinking water. Individuals, local companies, NGOs, volunteers and supporters can join the global network and receive free information to implement and manage water supply projects with Pumpmakers Solar Pumps.

- Everyone can become a pumpmaker by simply downloading the installation plans and videos available in the Toolbox!
- Entrepreneurs and companies have the opportunity to use the business concept to start their own Pumpmakers business.
- Pumpmakers businesses, water well construction companies and NGOs can present their work and projects in their own profile, on the world map and TV Channel.
- Individuals can support each other and pinpoint already existing water wells as well as regions that still lack a steady supply of water, on the world map and TV Channel as well as in their own profile.

Pumpmakers Platform – Key Features

- Social Network – connecting fellow pumpmakers, organisations, private people and media
- World map, showing pumpmakers, organisations, water well construction companies and water places with & without water pumps
- DIY installation plans, videos and books for the DIY Solar Pump, water wells, its uses for agriculture and even fish farms.
- Shop to purchase the gear & piston unit as well as further products and information for water well construction, agricultural purposes and marketing
- Business concept for (new) entrepreneurs to start their own business, assisting them each step of the way
- The latest events and awards in the water sector
- TV Channel with videos and pictures
- Support
1.5 Customers

Pumpmakers is an innovative concept. It combines the Pumpmakers Solar Pump Systems for the supply of clean drinking water with the globally accessible Pumpmakers Platform. Used as a knowledge-sharing platform, it enables local entrepreneurs to start and run their own business, and supports NGOs and companies.

The main customers and cooperation partners are:

- **Entrepreneurs** - to produce and install pump systems
- **Companies** – e.g. drilling companies, pump distributors, installation companies, electricians - to produce and install pump systems
- **Development aid organizations** - to produce and install pump systems on their own or to supply communities with water through local pumpmakers contracts to build and install the pump systems for the communities
- **Microfinance institutions / organizations / funds** – to support local pumpmakers to start their own business
- **Governments** – to supply remote areas with water through local pumpmakers contracts to manufacture and install the pump systems in communities
2 REFERENCE PROJECT - Clean Drinking Water for Cameroon

Since April 2016, Pumpmakers Solar Pumps have been supplying the remote village Ndoki near Douala in Cameroon with clean drinking water. With a capacity of up to 15,000 liters of water being pumped out from a depth of 50m each day, the system has opened the door to a brighter future for some 5,000 local people.

3 SOCIAL IMPACT

Pumpmakers Solar Pumps can supply millions of people around the world with clean drinking water and give people the opportunity to create their own jobs.

The Pumpmakers concept helps people to start a meaningful business and to strengthen the local economy. This holds a huge untapped economic potential. More importantly, this concept supplies communities in even the remotest corners of the world with clean drinking water in the most efficient and sustainable way.

A single small pump system can supply more than 1,000 people with safe, clean drinking water.
4 CORPORATE BACKGROUND & EXPERTISE

Dietmar Stuck has been active in the water well drilling industry since 2000. He worked for S&K Brunnenbohr in Austria where he drilled more than 350 drinking water wells in over 7 years as well as for the Bunbury Drilling Company in Western Australia where he drilled water wells for dewatering and drinking water purposes up to a depth of 1,000 metres.

In 2009, he shifted his focus towards sustainable development. He carried out surveys for water projects on behalf of humanitarian aid organizations in remote areas of six African countries. On many occasions he saw that the water pumps in use were unsuitable for the local conditions.

Dietmar Stuck founded NSP Solar Pump e.U. in May 2010. In line with the vision to provide clean water and a sustainable technology to developing countries, the company name was changed to PM Pumpmakers GmbH in 2014.

PM Pumpmakers GmbH is an Austrian solar company, specializing in the research and development of power and water solutions, using renewable energy sources. To meet the needs of a fast-growing market, Pumpmakers focuses on innovative solar pump systems for the supply of rural and urban drinking water, water well construction, water well drilling, and agricultural purposes.

A team of engineers and constructors tackles the challenges posed by the global water crisis head-on to design and develop truly self-sustainable water pump systems – with a clear goal: millions of people all over the world should have access to safe, clean drinking water.

The patented DIY Solar Pump is the very first maintenance-free and corrosion-resistant water pump system that can be manufactured locally, runs entirely on solar power, needing no back-up electricity and incurring no additional costs. To meet the growing demand for complete systems, we have also developed the PM Solar Pump System.

Pumpmakers Solar Pumps can easily be set up to replace pre-installed water pumps, such as hand water pumps, generator-powered water pumps or windmill water pumps that are typically found in rural and remote areas.

Pumpmakers collaborates with a diverse team of specialists:

- Water well driller & builder as well as fellow technicians and engineers
- Draftsmen
- IT specialists
- Graphic designers and filmmakers
- Translators and copywriting specialists
- Turneries and universities
5 AWARD-WINNING CONCEPT

Over the last few years, Dietmar Stuck’s innovative concept has won numerous awards:

- **Sustainable Entrepreneurship Award 2015**
- **“Vote for a Better Planet” Award 2015**
- **Green Business Award 2014**
- **TUN Fonds 2014**
  - The non-profit TUN-Fonds is committed to the protection of the environment and sustainable development. In this regard, projects are sponsored if they contribute to energy efficiency and the protection of the environment, environmentally conscious use of telecommunications and the conservation of the environment, nature and species. The potential of telecommunications and mobile devices should be used creatively in these projects.
- **Ben & Jerrys – Join our Core 2013**
  - **EUROPE’S BRIGHTEST SOCIAL ENTREPRENEURS**
    - A panel of judges, led by the brand’s co-founder Jerry Greenfield, selected the nine winners from over 400 entries across the UK, Ireland, Denmark, Sweden, Germany, the Netherlands, Finland, Austria and Switzerland.
  - **SUSTAINABLE, FAIR AND EFFICIENT SOLUTIONS**
    - “This year’s Join Our Core competition was extremely competitive,” says Jerry. “All of the finalists are worthy entrepreneurs with aspirations of operating businesses formed to directly address social or environmental problems in our global community.”
    - “The Join Our Core winners show a motivation from deep within to serve the whole and to make sure solutions are sustainable, fair and efficient,” adds Bill Drayton, Founder and CEO of Ashoka.
- **TedX Speaker 2013**
- **Innovation-Slot 2012**
- **Social Impact Award 2011**
- **build! Ideenwettbewerb 2011**
  - In recognition of new ideas, services, products and sustainable innovations, the Start-up Center build! organizes an annual competition. Its goal is to promote the development of ideas and to transform them into sustainable start-up projects. The winner for 2011, Dietmar Stuck Jr., was awarded **first place** for his innovative idea of a maintenance-free Solar Pump that secures the supply of drinking water as part of the theme "Water is Life" in developing countries.
- **Energy Globe Award 2011**
- **Mehrblick Idea Lounge 2010**
6  PICS AND VIDEOS

PHOTOS & VIDEOS:

LIVE:
Click http://tv.pumpmakers.com/live-view to see the uninterrupted operation of a DIY Solar Pump.

“Water is our most precious resource. Water is life. That’s why we came up with the DIY Solar Pump.”

Dietmar Stuck, Founder & CEO

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