



# Arab Water World

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Serving the Water, Wastewater, Desalination & Energy Sectors in the Middle East & North Africa - Since 1977  
تخدم قطاعات المياه والصرف الصحي وتحلية المياه والطاقة في الشرق الأوسط وشمال أفريقيا - منذ ١٩٧٧

## SEA BLUE IN THE FACE

Getting under the skin of  
water treatment giant F.B. Leopold

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**New Year's resolutions**

from Rib Loc and ACWA

p.67, 71

**Something to tap about:**

Hydropower, an alternative energy source

p.18

Photo by F.B. Leopold

## At the powerhouse

ENERECO srl deals with renewable energies. It was founded by technicians and commercial experts having more than twenty years of experience in the renewable energies field, supporting leading companies of the photovoltaic, wind, hydroelectric, and biomass and biogas sector. ENERECO srl is a reference point in the market of the energy solutions. The company's team can grant high reliability and professionalism in the development or the supply of equipments and systems using energy from renewable sources.

ENERECO srl wanted to reach a concrete solution for problems concerning water supply for human uses, for breeding and agriculture (irrigation), in addition to the conditioning of water itself in developing areas or, in those not connected to the public electrical grid.

The use of the photovoltaic, wind, and hybrid technology has allowed ENERECO srl, in cooperation with the most important manufacturers of pumps, to develop a series of kits for the water pumping. "SWP" Series pumping kits can be easily installed and they have a very low maintenance.



ENERECO are renewable energy experts

The conditioning of water for human uses has always been an important topic in all inhabited territories. Indeed the springs or the aqueducts are often situated in sites which cannot be easily reached by the public electrical grid, especially on the mountains. In some cases they are even closed because of these difficulties. The use of the photovoltaic and wind technology allows the exploitation of the springs and aqueducts situated in critical areas, thanks to the micro-filtration (osmosis) and UV systems, supplied by batteries.

In the coastal regions and in the islands the production of fresh water can be made available using seawater properly treated. Through the so-called reverse osmosis, the right quantity of salt and impurities are removed so that water becomes pure from the bacteriological and chemical point of view. ■

إن شركة Enerco Srl متخصصة في شؤون الطاقة المتجددة. وتعتبر هذه الشركة موضع ثقة في مجال توفير حلول لمعالجة المشاكل المرتبطة بتوفير الطاقة. توفر الشركة معدات وأنظمة تلجأ إلى الطاقة من مختلف المصادر. وغالباً ما تسعى هذه الشركة إلى التوصل إلى حلول فعالة في ما يخص توفير المياه للإستخدام البشري.

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## Turbines: Unfathomable features to sea



seaflow with motor raised

Marine Current Turbines Ltd is developing revolutionary technology for large-scale generation of clean electricity from the seas using subsea turbines. An experimental system, called "Seaflow" was installed in May 2003 and continues to deliver vital data. This is the world's first offshore tidal turbine and is the first step in developing this entirely new clean method of power generation.

The characteristics of the marine current energy resource makes this technology a potential world-beater since it has real prospects for generating power at a commercially competitive cost within the next few years and moreover of doing it eventually on an oceanic scale. Tidal turbines also have minimal environmental impact and the energy they deliver will be as accurately predictable as the movements of the tides, (unlike the weather-dependent renewables such as wind, wave and solar energy). Energy delivered to a timetable is inherently more valuable than randomly generated electricity.

Marine Current Turbines Ltd has initiated a program of tidal turbine development which started with a seven year R&D program. The commercial system known as "Seagen" is already under development. These 1.2 MW twin rotor turbines incorporate a patented system for raising the rotors and power train above the surface of the sea for ease of maintenance. The commercial prototype is already under construction and due for installation in 2007. The first commercial array is due for completion in 2008. There is world-wide potential to install many gigawatts of MCT turbines to produce copious clean electricity in a truly sustainable and predictable manner. ■

طورت شركة Marine Current Turbines Ltd. توربينات حديثة تولد الطاقة بالجوء إلى مياه البحر. صمم هذه النظام (Sea Flow) في العام ٢٠٠٣. ولا يزال يوفر المزيد من المعلومات المفيدة لذوي الإختصاص. تُعتبر هذه التوربينة المبتكرة الأولى من نوعها في العالم.

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