



Home	About Us	Magazine	QC	Infocus	Events	TV	Subscriptions	Subscriber Content
------	----------	----------	----	---------	--------	----	---------------	--------------------



Home ▶ Lead Features ▶ Industrial giants home in on cleantech

Industrial giants home in on cleantech

First published in Cleantech magazine 2011 Issue 5. Copyright Cleantech Investor Ltd

SUBSCRIBER LOGIN



Username or email



Password

Remember me

LOGIN

[Forgot login?](#)

No account yet? [Register](#)

SEARCH

EVENTS/INFO

[Events Home](#)



THE CORPORATE VENTURE ACTIVITY AND INTERNAL R&D IN CLEANTECH OF LARGE INDUSTRIALS IS BEING COMPLEMENTED BY M&A ACTIVITY.

Utilities are important players in renewable energy projects. Newcomers to the project development sector include companies such as Google – and there is growing discussion on policy measures which might encourage other energy intensive users to invest in renewable energy projects. For a time, the energy utilities were keen investors in renewable energy technology, with companies such as Scottish & Southern Energy in the UK backing technologies ranging from wave energy (it was a key investor in Aquamarine Power) to smart metering technology. There are active corporate investment arms at many utilities. Germany's RWE, for example, is an investor in vertical axis small wind turbine manufacturer, Quiet Revolution, and earlier this year also invested in Swedish company Airec AB, which specialises in novel brazed plate heat exchangers for gases. However, the pressure on the balance sheets of many utilities has in some instances narrowed their focus to renewable energy projects, reducing their appetite to take risks on technologies.

The biofuel sector has seen activity in both production (where there have been a host of major deals in Brazil by oil giants such as Shell and BP) and next generation biofuel technologies (which have attracted the attention of both the corporate venturing arms of oil companies such as Exxon and airline operators and aircraft manufacturers). There has historically been an important overlap between the defence industry and cleantech, dating back to the 1970s when companies like Lockheed Martin began developing technologies in areas such as marine renewables. Biofuels and fuel cells are important sectors of interest for some large industrials. And the automotive sector is also seeing significant volumes of activity (see EV Industry Alliances feature on page 16). Indeed, an interest in cleantech permeates throughout many multinational firms. Turbine manufacturers like Rolls Royce are natural investors in technologies such as tidal generation. Companies like GE and Siemens are of course already leaders in wind technology – but GE also has a host of cleantech interests through its Ecomagination programme, and Siemens has a well established corporate venturing arm.

In one of the first instances of a wind turbine producer diversifying outside of the wind sector, Spanish manufacturer, Gamesa, recently announced the launch of a €50 million corporate venture capital fund which will also invest in a full range of "new renewable technologies" in sectors including wave and tidal, solar, energy storage, electric vehicles, energy efficiency and off-grid renewables. Ahead of the announcement Gamesa had invested US\$3 million in SkyBuilt Power, a company with products combining small wind and photovoltaic systems, and US\$2 million in WorldWater & Solar Technologies, a water technology company.

Gamesa's decision to search beyond the pure wind space for investment opportunities is perhaps indicative of a trend to explore the opportunities which can arise by combining disciplines. Multinationals are constantly on the look-out for technologies which can enhance their existing portfolios. This was the rationale behind GE's decision in August to invest up to US\$40 million in eSolar, the California-based developer of concentrating solar thermal technology. GE had entered into a licensing agreement with eSolar earlier in the year and has developed its integrated solar combined cycle (ISCC) power plant, which combines the eSolar high temperature tower technology (a field of mirrors, or heliostats, focusing sunlight on to a tower to produce high temperature steam) with GE combined cycle products. ISCC plants are a bridge between natural gas and renewable power, producing energy from the solar field during the day and using natural gas at night or during periods of cloud cover. GE and eSolar are jointly working on a 530MW project in Karaman, Turkey (developed in partnership with MetCap Energy), which will feature 50MW of solar energy integrated with GE's FlexEfficiency 50 combined cycle power plant.

eSolar's technology is designed to be built as a modular, scalable, prefabricated solution – but with advanced software algorithms controlling the heliostats to focus the sun's energy precisely. The investment from GE will fund the development of modular solutions with improved cost competitiveness, such as molten salt storage technology. The links with GE are an endorsement of the technology developed by eSolar, which was founded in 2007 and which built the 5MW Sierra SunTower plant, North America's only commercial CSP tower

CLEANTECH OFFERS

[Renewables: A Practical Handbook \(book offer\)](#)



[READ BOOK REVIEW](#)

[WATCH VIDEO INTERVIEW WITH EDITORS](#)

[25% off the 2011 Preqin Private Equity Cleantech Review](#)



AND annual subscription to Cleantech magazine

[Free subscription to Cleantech magazine](#) with purchases of the 2011 Preqin Private Equity Cleantech Review

CLEANTECH MAGAZINE

Subscriptions
Advertising
Forward Features

CONTENT

Lead Features
Deal Tracker
Cleantech Funds
Spotlight
Interviews
AIM Investor
Australian Cleantech
Book Reviews

CLASSIFIEDS

OPIC

EDITORIAL

facility, in 2009. Earlier this year the company linked up with Singapore-based Flextronics, a NASDAQ-listed design and engineering company, to collaborate on the design of next generation heliostats and solar collector systems. It has received investment of over US\$170 million to date from VC firms including NRG Energy, Google, ACME Group, Oak Investment Partners, Idealabs and Quercus Trust.

At the corporate venture level, GM is one of the backers of Frankfurt Xtra DAX-quoted Sunlogics (Xtra: 18L), a Michigan-based company which is developing thin-film photovoltaic solar cells based on amorphous silicon. In September Sunlogics acquired Phoenix Solar Holdings Corp and its operating subsidiaries, EPV Solar Germany GmbH and New Millennium Solar Equipment Corp. The deal involved the acquisition of a 55,000 square feet, 30MW photovoltaic manufacturing facility which has been in production since 2008, in Brandenburg, Germany. This plant will serve as the base for Sunlogics to expand in Europe. The funding for the acquisition is understood to have been provided by an investment of US\$6 million by GLG Partners LP, Tenor Capital, Atlas Investment Fund and Catalyst Investment Management Co. LLC – in addition to a further investment by General Motors Ventures. GM had previously invested US\$7.5 million in Sunlogics in July and, in conjunction with that investment, announced that it would use Sunlogics panels for solar charging canopies at Chevrolet dealerships. Sunlogics is opening manufacturing plants in Detroit and Ontario.

Interest in technologies in the solar space also comes from chemicals multinationals. In July this year DuPont acquired Innovalight, a California company specialising in advanced silicon inks and process technologies which improve efficiency in crystalline silicon solar cells. DuPont claims to achieve sales of over US\$1 billion from photovoltaic related products – and aims to double that volume by 2014. And Belgium's Solvay is also expanding in the space. In July it became the largest single investor in Plextronics, a Pennsylvania-based company which has developed technology for producing printed electronics including organic solar cells and OLED lighting, with a US\$15 million investment.

In another solar sub sector, glass manufacturer Saint-Gobain recently announced that it was buying Solar Gard from the Bekaert Group of Belgium. Solar Gard manufactures solar coated films for architectural glazing in buildings and in automotive and industrial applications. Last year Saint-Gobain acquired a 50% stake in SAGE Electrochromics, which has developed a technology for the tinting of electrochromic glass using low-voltage current, for US\$80 million.

Elsewhere, ABB has been an active investor in cleantech, recently acquiring fellow Swiss wind power transformer firm, Trasfor Group. Trasfor, which manufactures dry-type transformers and inductors for low-voltage and medium-voltage applications and speciality products for offshore wind, had revenues of US\$130 million last year. ABB also recently acquired Dutch fast-charging technology company, Epyon – and in May ABB Technology Ventures bought Validus DC Systems, the producer of direct current (DC) power infrastructure equipment for data centres, with an option to purchase the company in full. Last year, ABB acquired Power Assure, another data centre infrastructure company, which has technology to reduce the energy consumption of servers by up to 50%.

The smart grid space has been the target of many multinationals. In May this year, Toshiba was successful in acquiring Swiss smart meter company Landis+Gyr for US\$2.3 billion. GE, Honeywell, ABB and private equity firms TPG Capital and EQT had reportedly also been considering bids for Landis+Gyr, which has sales of over US\$1.3 billion and claims to have more than 8,000 clients.

Toshiba has also invested in a wind turbine manufacturer, acquiring an interest in Unison, of South Korea, through a KRW40 billion (US\$36.5 million) convertible bond issue. Toshiba receives the global distribution rights to Unison's direct drive turbines, which are produced in sizes ranging from 750kW to 3.6MW. Unison, which has annual production capacity of 1GW, will collaborate with Toshiba for the development of high efficiency wind turbines.

France's Schneider has also been on something of a spending spree over recent months. Schneider is acquiring Spanish company Telvent, which has a strong presence in the smart grid space, for US\$2 billion. Telvent, with sales of €753 million, is active in monitoring systems for natural resources, agriculture and transport as well as electricity distribution. The offer by Schneider was approved by the company's board and by Abengoa, which owned 40% of Telvent. Schneider has also recently acquired building energy management firms Vizelia and D5X, data centre developer Lee Technologies (for US\$268 million), cabling systems company DigiLink (for US\$113 million) and a 74% stake in Indian power systems firm Luminous (for US\$310million). Luminous, which operates in China as well as India, had sales of US\$45 million in the year to March 2011.

Schneider is not the only company focusing on energy efficiency. Other deals in the space have included the mPhase acquisition of 81% of Energy Innovative Products (EIP), which has developed technology to reduce energy consumption in refrigeration, HVAC and compressor systems. The EIP technology is reported to cut energy use in legacy refrigerated drinks vending machines by over 50%.

COMMENT

Anne McIvor
Felicia Jackson
Guest Editors

PEOPLE MOVES
Spencer Ogden on
renewables recruitment
Women in Cleantech

ELECTRONIC
MAGAZINES

Scientific Conservation (SCI) is acquiring NASDAQ-listed Servidyne, which offers energy efficiency and demand response services for commercial buildings, for US\$12.9 million. SCI, which manufactures building automation technology, itself recently raised US\$19 million in a funding round from investors including GE Energy Financial Services, Intel Capital, DFJ Ventures, The Westly Group and Triangle Peak Partners.

M&A activity has been high in the LED technology area. GE announced in July that it would acquire Israeli LED firm Lightech, which produces LED electronic drivers and halogen transformers. And some of the established LED manufacturers have also been active in M&A. In August, Cree acquired Ruud, a North Carolina firm which produces residential, commercial and industrial lighting fixtures, for US\$525 million. The UK's Dialight, which specialises in industrial and hazardous lighting, acquired its Japanese distributor, I-Spec, in June this year. And Ireland's Nualight, which concentrates on lighting for the food retail sector, has acquired Lumoluce, a Dutch LED lighting technology company, in a deal valued at just under €11 million. Nualight itself is financed by ESB Novusmodus, the corporate venture arm of Irish utility ESB, alongside other venture investors including Climate Change Capital Private Equity.

M&A between relatively young, VC-backed companies such as Nualight and Lumoluce may become more commonplace as the sector matures, but the acquisition of cleantech companies by large industrials will remain an important exit for VC investors – especially while the IPO market remains difficult. Cleantech is becoming increasingly embedded in the fabric of large industrial companies – and throughout industry generally.

[Next >](#)

SEARCH CONTENT IN CLEANTECH INVESTOR PUBLICATIONS

[Search](#)

[EV-150](#)

[Batteries 100+](#)

[Solid State Lighting Comanies](#)

