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Peering out of the gloom Solar power companies change strategy **Page 15**

Week 35

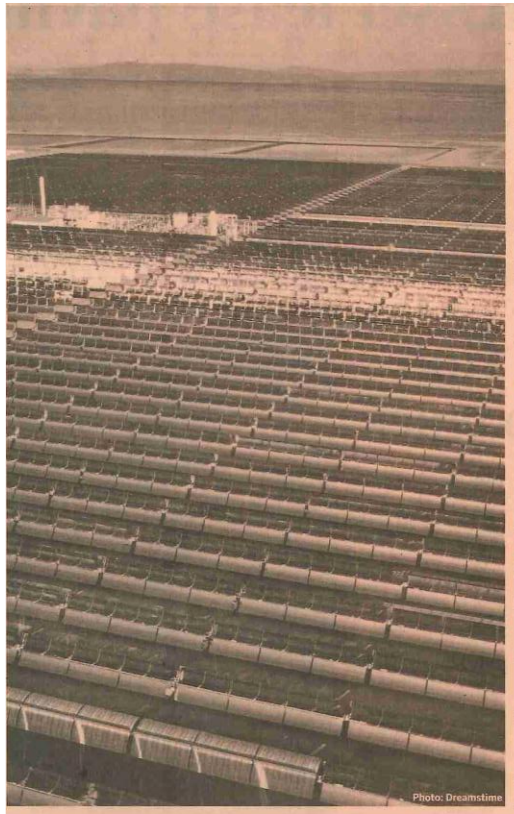
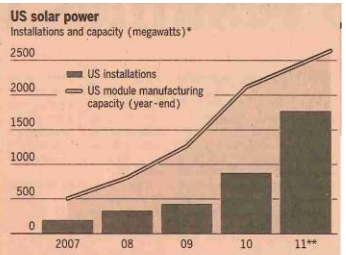


Photo: Dreamstime



Solar power companies' share prices

Since Jan 2011 (% change)

First Solar	▼ 24.2
Trina Solar***	▼ 36.1
Suntech Power***	▼ 36.4
MEMC	▼ 38.7

* Based on photovoltaic generation ** Estimate *** ADRs

Sources: GTM Research/Greentech Media; Bloomberg

Solar power peers out of the gloom

ELECTRICITY

News analysis

As the industry comes of age companies are retuning strategies, writes **Ed Crooks**

After the failure of Solyndra, a much-hyped Californian solar power company heavily backed by the US government, there has been a renewed spate of speculation that the American solar industry is in terminal decline.

Reports of its death have been exaggerated. However, the market segments and technologies where money can be made are changing. Companies that are badly positioned, particularly high-cost manufacturers, are likely to see further closures, bankruptcies and rationalisation.

As Jeremy Leggett of Solar Century, a British solar equipment company, says: "It's the inevitable shake-out of an industry that is coming of age."

On Wednesday Solyndra sought Chapter 11 bankruptcy protection, making it the third US solar company to collapse last month, following Evergreen Solar of Massachusetts and SpectraWatt, a spin-off from Intel.

Yet while these failures have cast a pall over the industry, the worst of the gloom is concentrated in one area: the manufacture of solar modules.

This relatively labour-intensive business has become dominated by Chinese production, from companies including Suntech Power, Trina Solar and Yingli Green Energy, backed by loans from the state-controlled China Development Bank. Aggressive expansion by Chinese and other companies worldwide has created huge oversupply of modules: there is enough capacity to supply the expected global market this year twice over.

As a result, prices of modules have plummeted, from $3.50 per watt of generation in 2008, to $1.43 today, according to GTM Research. The Chinese companies have suffered a margin squeeze and higher-cost manufacturers are being forced to adapt or die.

One strategy has been to move "downstream", into project development and engineering, procurement and construction. MEMC, the silicon wafer manufacturer, has been buying solar developers to build up its project portfolio, starting with SunEdison in 2009. "If you build a pipeline of projects, it helps to insulate you," says Steve O'Rourke, the group's chief strategy officer.

Arizona-based First Solar, the world's largest solar company by market capitalisation, started out as a manufacturer of thin film modules but has also been increasingly shifting into project development and EPC contracting. That business will provide about a quarter of its revenues this year, with the same again coming from module sales for those projects.

Rob Gillette, First Solar's chief executive, says it will continue producing modules to sell to other developers but he expects projects, including EPC work, development and tied module sales, to rise to two-thirds of total revenues.

Being vertically integrated in this way, and being large enough to benefit from economies of scale, will help the company thrive in the shake-out he expects over the next couple of years. "People got used to chasing a piece of a pie that kept getting bigger, but now it has gone flat," he says. "There's not enough room for as many people to be in the industry as there are now."

Moving downstream has not prevented these companies from being battered by the fall in prices. First Solar's shares have lost 61 per cent of their value over the past three years, and MEMC's have lost 86 per cent. But they are both still in business.

The cheapness of photovoltaic solar modules has also encouraged a shift by some projects away from concentrating solar power – using the sun to heat water to drive a turbine – and towards PV. Solar Trust, the US project developer 70 per cent owned by Solar Millennium of Germany, recently said that it was switching the 500MW first phase of its Blythe project in California, one of the world's largest, from CSP to PV. Uwe Schmidt, Solar Trust's chief executive, says both technologies still have a role, but the plunging cost of PV has made it more attractive. "Different companies have different models, and those that can't adapt to market changes will have a difficult time.

"Those that can adapt will have a bright future."

US producers have found profitable niches in other industry segments.

Thin film solar modules, which are less labour-intensive, can be viable in higher-cost locations. First Solar is building a new plant in Arizona, and General Electric is looking for a location for its move into the thin film industry.

Polysilicon, the raw material for crystalline silicon PV modules, is also difficult to make, and US factories owned by MEMC, REC of Norway and Hemlock Semiconductor, majority owned by Dow Corning, have been highly successful, accounting for almost half of US solar exports.

The industry's trade balance was $1.9bn in the black last year, according to the Solar Energy Industries Association.

This year the balance is likely to have shrunk but will probably still be in surplus.

Additional reporting by Sylvia Pfeifer

Factfile

Solar power technology:

- **Photo-voltaic** – uses panels of materials that create an electric current when exposed to light
- **Crystalline silicon PV** – the most common form of PV. Uses polysilicon wafers made into cells, which in turn are assembled into modules or panels
- **Thin film PV** – less common, but attracting a growing interest. Modules are made by coating a sheet of glass with a photovoltaic material, such as cadmium telluride
- **Concentrating solar power** – also sometimes known as solar thermal. Uses reflectors to focus sunlight and heat water, making steam to drive a turbine

Trader confirms interest in taking over South Africa's Optimum Coal. **Page 15**

August sales from a year ago while Costco, the sector leader by revenue, posted a 6 per cent rise in US sales.

The strong performance of discount warehouse clubs in recent months suggests that middle-income Americans continue to economise on groceries as they face worries over jobs, debts, house prices and inflation.

Source: Retail Metrics

after last-minute changes

By David Gelles and Dan McCrum in New York

the deal at the last minute and began talks with other investors. The deal collapsed after

People close to the team said the Mets would now pursue 10 investments of $20m from new

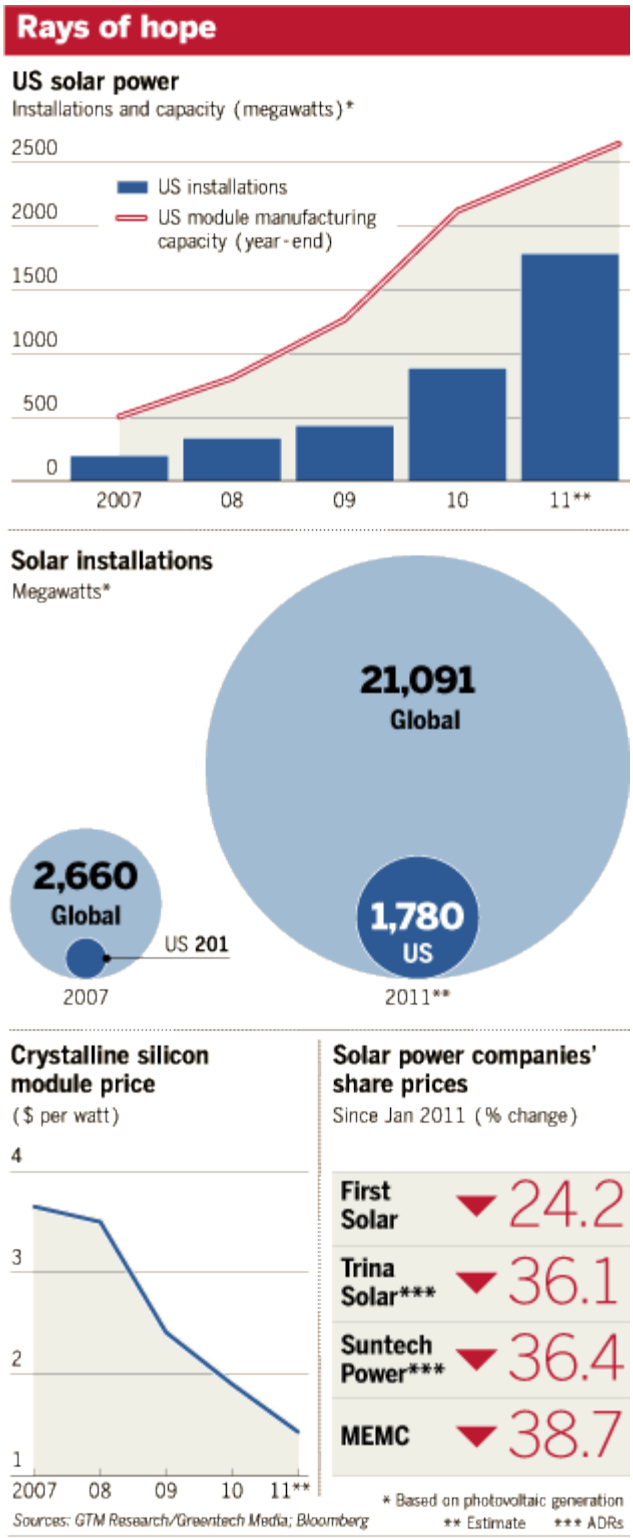
started 15 years ago.

Investors have focused on the expansion or contraction of manufacturing as a vital indicator of economic health. But a low PMI is often a false signal, as is the gap between new orders and inventories.

What matters to share prices

Solar power peers out of the gloom

By Ed Crooks in New York



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The outlook for global demand is clouded by further cuts in government support expected next year, including lower guaranteed feed-in tariffs in Germany and the end of the "Section 1603" grants in the US.

But Mr O'Rourke argues that falling costs provide the industry's only long-term hope. "What is important is that the industry can create a product that doesn't need government support, but has standalone economic viability," he says.