



POWER LEADERS

PV-industry power shifts downstream

BY ALFONSO VELOSA III, GARTNER

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AS THE ECONOMIC CRISIS SPREAD on a global basis, the industry dynamics in 2008 shifted significantly. Early in the year, PV (photovoltaic) solar-cell supply could not meet demand. Looking up the supply chain for PV cells, supply of polysilicon was the critical gating factor for manufacturing PV solar cells.

Spot prices doubled in less than a year, exceeding \$400/kg by mid-2008. As the economy slowed, PV demand quickly shrank. The shortage of polysilicon disappeared, and spot prices have collapsed to less than a quarter of their peak. The critical reason for this change was that manufacturers restricted, canceled, or repriced—at significantly higher interest rates—financing for projects. This change happened in conjunction with other core market changes, including the restrictions in funding in Spain, sharply reducing demand. German, Japanese, and US markets underwent a corresponding slowdown, with a concomitant delay in funding for new PV projects. Thus, those companies with money are in the driver's seat for the solar industry.

their capital expenditures, especially for noncore elements, such as electricity generation. The solar-power purchase agreement supports these companies by providing them with electricity from a renewable PV source (Table 1). The solar-power-purchase-agreement service model enables the host customer to implement a PV solar electric system without the usual capital investment. These companies install and own their PV systems and sell the electricity to end users under typically long-term contracts of 20 years. Beyond the electricity and the ability to make some marketing statements about using renewable energy sources, solar-power-purchase-agreement companies provide design, building, and operating services, which they may outsource, and finance services.

TABLE 1 TOP 10 SOLAR-POWER-PURCHASE-AGREEMENT FIRMS

Rank	Company	2008 projects (MW)
1	SunEdison	25
2	Solar Power Partners	13
3	Renewable Ventures	11
4	SolarCity	9
5	BP Solar	5
6	Perpetual Energy Systems	4
7	GE Energy Financial Services	3
8	Pepco Energy Services	2
9	SunRun	2
10	Honeywell	2
	Others	16
	Total	93

Source: Gartner, August 2009