

with successful Initial Public Offerings (IPOs) by Astropower and Evergreen Solar in the United States and Solar World in Germany. Other venture-capital-backed PV companies, not yet publicly traded, include Solar Electric Light Company (SELCO), First Solar, and Global Solar in the United States, Solar Fabrik in Germany, and Solar Century in the United Kingdom. There is a tremendous influx of new venture start-ups in photovoltaics, especially in Europe and Asia where there are booming markets. Venture capital funds that have invested in photovoltaics include Arete Ventures (the Utech Funds) and Nth Power Technologies in the United States; Swiss Re, the Sarasin Fund, and UBS Energy Fund, all in Switzerland; and Gerling Insurance in Germany. Other US VC funds that have expressed interest in new energy technologies include the Commons Fund, Beacon Energy Funds, Energy Ventures Group, Kinetic Ventures, and Perseus Capital.

24.7.1 Financing Working Capital in the Distribution Channels

One of the more challenging aspects of financing PV growth will be how to capitalize the distribution channels to reach the widely dispersed end-use markets. There are several sources of financing for these firms:

Local lenders: Small business financing is inherently a local lending business. The vast majority of funds for financing the working capital requirements of the PV distributors and dealers will be from local banks, NBFCs, and microcredit lenders.

PV manufacturers: Most of the major PV manufacturers have extended credit programs for their best distributors and dealers.

World Bank/IFC: The IFC and GEF have collaborated on the deployment of two programs, PVMTI and SDG, to finance "PV enterprises" in developing countries. Over 200 such businesses have been identified by SDG as of mid-2001. The number of firms that will be required to support worldwide development of PV markets will, according to E&Co, be as high as 16 000 companies.

24.8 GOVERNMENT INCENTIVES AND PROGRAMS

A wide range of government incentives and programs has been adopted for photovoltaics around the world, stimulating demand for PV systems and affecting the financing of photovoltaics.

24.8.1 Potential Impact of Financing as a Government Policy Option

Looking at financing in the context of government policy shows that low-cost financing programs can actually have more impact on PV markets *in the immediate future* than technology research or manufacturing cost reductions. For example, Figure 24.3 illustrates the monthly payments for the 2.5 kW grid-connected, residential rooftop PV system. The PV system is assumed to cost \$8/watt (\$20 000 total cost), with a total system