building a new schoolroom and the like. A more detailed description of the Mexican PV rural electrification program can be found in the literature mentioned in References [28, 51, 52].

23.4.5 Sri Lanka

An estimated two million households lack access to grid electricity in this country. Recent studies indicate that at least 10% of these households could afford a SHS at current prices, based on a monthly household income of Rs. 5000 [53]. A market study commissioned by the National Development Bank of Sri Lanka in 1991 indicated that a market of 360 000 households could afford a PV system [54]. However, so far only about 15 000 such systems have been sold commercially for cash through a retail network.

Many reasons have been cited for this low penetration level. As in other places, the biggest barrier for the exploitation of this market has been a lack of consumer financing. Political promises for grid extensions in rural areas and the government sponsored "Electricity for all by the Year 2000" campaign, which was perceived as *grid electricity* for all, have also been major barriers. Lack of government-level endorsement for solar photovoltaics, along with other renewables, was a hindrance to both private sector and NGO promoters. Nevertheless, four companies retail PV systems in Sri Lanka: Shell Renewables, Resco Asia (subsidiary of the US Selco), Alpha Thermal Systems and Access International. Sarvodaya SEEDS, a local NGO, provides microfinancing in partnership with some of these companies.

In the late 1980s, solar PV modules, 12-V lamps and simple electronic charge controllers were assembled in Sri Lanka by Solar Power & Light Company (SPLC), a private venture established as Power & Sun in 1986. However, manufacturing of solar modules ceased as the advantage over imported products was eroded, in part because of the high import duties on raw materials. Thus, SPLC essentially developed into a marketing organization by creating an infrastructure to market, install and maintain PV systems in rural areas. SPLC uses retailers to stock solar home systems; trained technicians and individual agents, called *corresponding agents* (CA), are used to canvass sales, install systems and provide customer service. SPLC, which has just been bought over by Shell International Renewables, has sold over 3000 PV systems directly to consumers, mostly for cash.

Apart from cash sales of SHS, there are examples in Sri Lanka of both successful and "deemed as failed" projects, using loan repayments by the consumer as the measure of success. Projects implemented with total community involvement by NGOs, such as Sarvodaya and Solanka, have been quite successful. Sarvodaya's already successful microcredit operation was adapted to market SHS, and implemented a pilot project with 250 installations through its Rural Technical Services branch, with assistance from the US-based NGO Solar Electric Light Fund (SELF, now the private company Selco) and a seed fund from a US foundation. Further activities by Sarvodaya using funds from a credit line for renewable energy provided to Sri Lanka by the World Bank, led to the installation of 300 more systems. Plans to install 5000 more within the next five years are already drawn. Sarvodaya SEEDS has become a Participating Credit Institution of the Energy Services Delivery Project. It can now access the fund directly and on-lend to customers. In January 2001, it has been reported that Sarvodaya SEEDS' lending portfolio exposure is Rs. 89 million (about US $1 million) for solar photovoltaics.