

2. BP Solar (a unit of British Petroleum, that merged with the US firm Solarex and presently has plants in US, Spain, Australia, and India) 54.4 MW_p
3. Kyocera (a major Japanese electronics, equipment, and materials company) 54.0 MW_p
4. Siemens and Shell Solar GmbH (investments by German/Dutch conglomerate Shell and Siemens AG whose main production is in the US) 48.3 MW_p
5. AstroPower (independent US manufacturer) 26.0 MW_p
6. RWE Solar (a unit of the German Utility RWE that merged with ASE Americas) 22.7 MW_p
7. Isofoton (independent Spanish manufacturer of PV and solar thermal technology) 18.7 MW_p
8. Sanyo (a major Japanese maker of electronic consumer products, semiconductors, batteries, etc; PV products made by Solec International division) 16.0 MW_p
9. Mitsubishi (a Japanese conglomerate providing a wide range of products and services) 14.0 MW_p
10. Photowatt (a unit of Matrix Solar Technologies, owned by a Canadian corporation ATS) 13.5 MW_p.

Despite the changes in the makeup of the industry, progress has been sustained by gains in performance and reductions in cost. PV module prices in $\$/W_p$ declined by an order of magnitude over the nearly 20-year period ending in 1994[11]. This experience, shown in Figure 21.8, is based primarily on data for crystalline-silicon modules, but is said to be representative of other flat-plate module technologies as well. The projection beyond 1994 is based on a fit of the data for module price versus cumulative

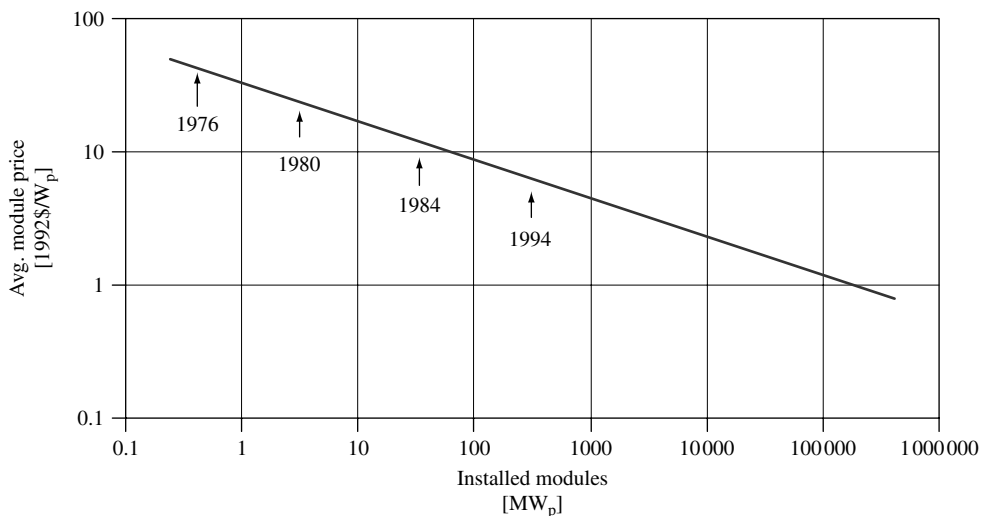


Figure 21.8 PV module price trends. Adapted from [11]. Copyright © 2002. Electric Power Research Institute. EPRI TR-109496. Renewable Energy Technology Characterizations, Topical Report