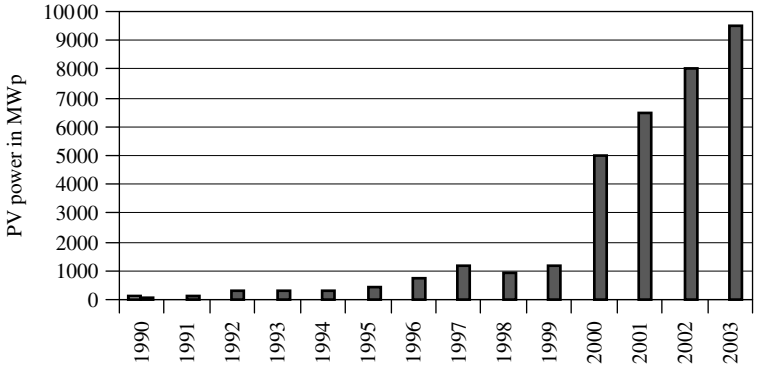

Figure 17.26 Installation already done and prospects of grid-connected photovoltaic systems in Germany (*Source*: Deutscher Fachverband Solarenergie DFS)

installation done in the year 2002 "only" 95 Pfennig will be valid and for an installation finished in 2003 and connected to the public electricity grid 90 Pfennig will be valid. This law expires when a cumulative power of 350-MW photovoltaics has been reached.

17.2.4 Central Grid-connected Photovoltaic Systems

17.2.4.1 Utility systems

Whereas the photovoltaic systems discussed earlier are usually small decentralised systems in the lower kilowatt range, it is also possible to build large central photovoltaic power stations in the higher kilowatt to megawatt range. It is then possible to feed directly into the medium- or high-voltage grid.

One of the most impressive installations done in the late nineties was the megawatt power plant at Toledo in Spain (Figure 17.27).

Another architectural well-designed solution is the megawatt power plant on the roof of the new fair in Munich, installed in 1999 (Figure 17.28).

17.2.4.2 Joint ownership

In Germany, 60% of the total population live in rented apartments. Consequently, they will generally not be able to install grid-connected PV plants on the rooftops of their house. When these people become interested in PV, they can only become PV owners if PV projects are established with "joint ownership". To create this, a legal entity is set up to deal with the project management as well as with the related financial questions and the distributing scheme of the profits generated through the investment. In most cases, contracts are signed between various project partners to resolve management issues during project realisation (see Figure 17.29).

Contracts contain operational, financial and legal items concerning the collaboration of the different parties in project realisation. Signing parties are mostly the project