



Title: Utilization of Solar Radiation in High Energy Intensive of the World by PV System

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Abstract: Solar energy can be converted directly into electricity by means of solar cells. Solar cells currently cost around \$3.50 per watt for crystalline cells and \$2 per watt for thin-film wafers, which are less efficient but can be integrated into building materials. Industry analysts note that between 2000 and 2005, each doubling of cumulative production resulted in a price drop of 20%. Some maintain that prices may fall even more dramatically in the future. Meanwhile the conversion efficiency has been increased more than expected. Furthermore improvements and cost reductions are expected, not only of cells but also of the solar cell modules and solar cell systems. In the development of PV much attention is given to however, the present market which is still dominated by crystalline silicon. The market might grow until multi-thousand MW a year in the next century. PV module can be a return by the same cost after five year installed the high energy consumption rate per m² and the intensive utilization of Arab World. Assessment studies indicate that on houses and building (roofs, walls) it might be possible to install a PV generating capacity of 50,000 Megawatt, assuming a conversion efficiency of the system of 14.7%. Such a system might be able to produce 50 Terra-watt, hour per year, about 70% of the electricity consumption we are facing today.