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Typical Power Production Percentages

Sometime throughout the selling process you will inevitably be asked by a potential customer how much of his or her building's electrical requirements can be fulfilled by your Solar Panel System. There are of course many factors that affect this but some very general guidelines are listed below for your use.

- For commercial buildings, the average annual electricity usage is approximately 11.7 to 17.4 kWh per square foot of floor area. It is lowest in the West, and highest in the Southeast. Many other things affect this value, including type of occupancy, number of floors, operating hours, etc. Office buildings range a bit higher, from about 15-19 kWh/sf of floor area. For rough estimating purposes, you can use a value of 15 kWh/sf of floor area, with the understanding that this can vary considerably for a specific building.
- For residential buildings nationwide, the average house uses about 11,000 kWh of electricity each year. Obviously this is dependent on the size of the house, and the location (SE again being the highest). We have seen other estimates that use 1000 kWh per month, and this seems like a good (though very rough) estimate. So a 5kW residential system would typically provide about 1/3 to 1/2 of the total annual electricity needs for an average house.

To compare these rates with the power production of your Solar Roofing System you can use an estimated power output of approximately 5,000 to 8,000 kWh per year for a standard 5kW system. The above information was gathered from the following sources:

*Energy Information Administration – 2003 Commercial Buildings Energy Consumption Survey: Consumption and Expenditures Tables

*Energy Information Administration – 2001 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables