Renewable Energy

1. Assuming 10% efficiency for a 1400 sq ft =130 sq m roof, and 240 W/m^2 of solar energy, how much energy would a single solar roof generate? How does that compare with household usage (approximately 6500 kWh/year)?

2. What factors might contribute to the efficiency of the system?

3. At present, California utilities allow a zero electricity bill but they won't send a check? What criteria would you use to optimize a household system?

4. How do household systems compare with industrial scale solar systems located in the desert? What are advantages and disadvantages?