

Concept Question 8-8: Why is the power factor of a household appliance significant to an electric utility company?

From the perspective of an energy supplier (such as the electric power company) the load has two important attributes: S and P_{av} . The amount of power the company has to supply is S , but it can charge for only P_{av} , because P_{av} is the only real power consumed by the load. The company appears to supply S —hence, the name apparent power—but it gets paid for a fraction of that, and the power factor is that fraction.