



White Paper #18

Demand vs. Energy

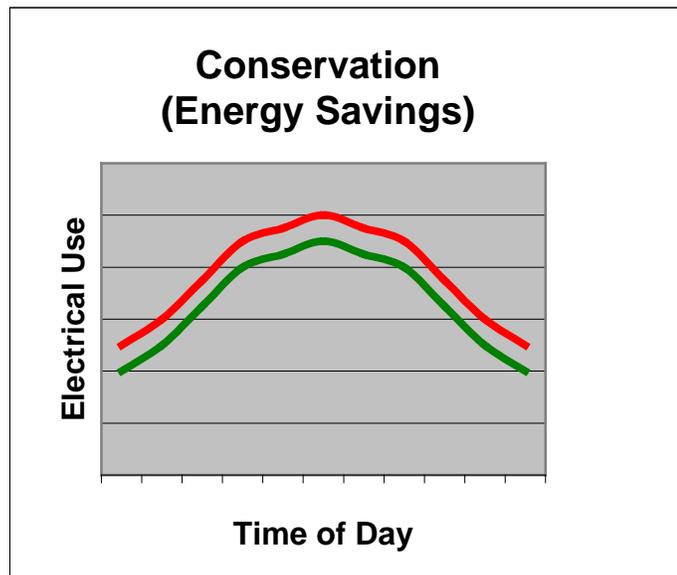
They affect you and the utility differently.
They both can save you money.



By understanding more about how the utility business works, you can understand why we do some of the things we do. Things that save us money save you money too!

Energy Savings (Conservation)

Reducing electrical energy means less fuel we have to put into the generators. Fuel expenses and maintenance are proportional to usage, and are recovered in the commodity charge per kWh (kilowatt-hour). These costs go up and down depending upon how much you use.



Demand Reduction

Our electrical generation system infrastructure consists of prime equipment (generators) and transmission equipment (wires and transformers). These are fixed costs and are paid for by loans which are akin to a mortgage. All customers share in paying for fixed costs of the electrical system. Fixed costs are recovered from a combination of access charges (flat amount per month) and demand charges. Demand charges for residential customers are factored into the rates and this works because residential usage patterns are very similar. But usage patterns for commercial and industrial customers (C&I) vary widely.

To make this equitable, the 'mortgage' payment is apportioned to customers based on demand. The higher the demand (peak loads), the higher the demand charges. Since our 'mortgage' on the equipment is the same each month whether we use it or not, demand charges are collected for the month depending upon the highest demand, even if that demand was only briefly used.

Customers on a 'demand' rate have meters that record the highest kW for the billing period, which represents the greatest portion of our generation and transmission system that is dedicated to that customer. Demands are divided into on-peak and off-peak. On-peak demands requires us to use additional equipment that is there only for on-peak times, which is why on-peak demand charges are higher.

