

White Paper #18

Conservation Versus Curtailment (Energy Savings Versus Demand Reduction)

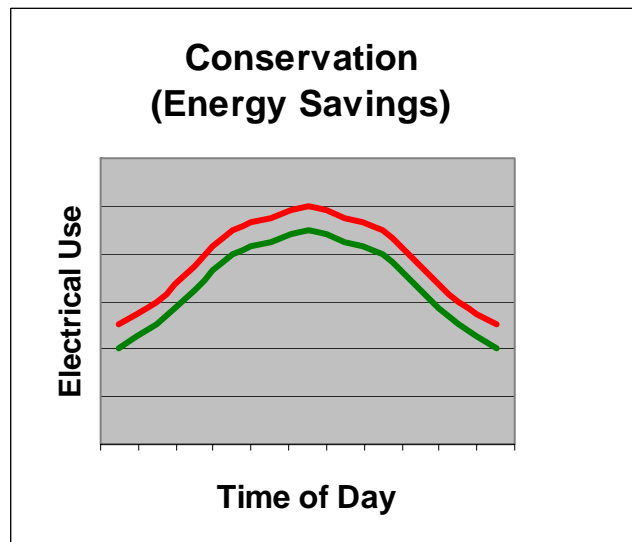
They affect you and the utility differently. They both can save you money.

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!

Conservation (Energy Savings).

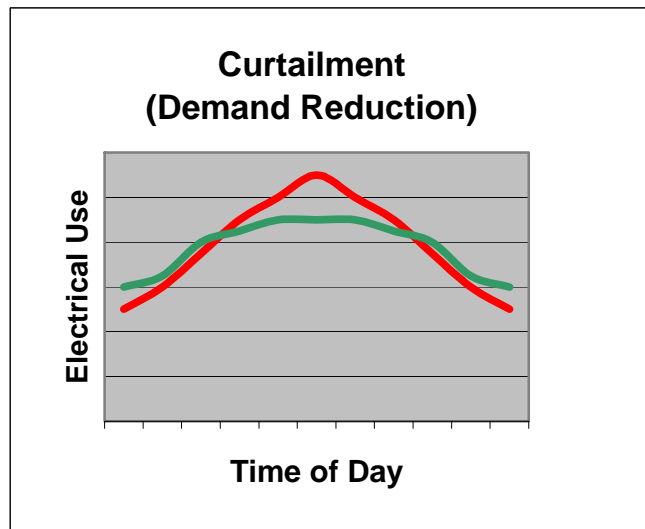
Reducing electrical energy means less fuel we have to put into the generators. The less fuel we use, the less emissions come out of the tailpipe, and the longer the natural resources last. And, the less fuel we use, the less fuel we have to buy and the less you get charged. Fuel-type expenses are a “pay as you go” expense, and are compensated for when we charge you “per kWh” (kilowatt-hour). Each one of these used represents a unit of fuel our equipment consumed.

Use less, pay less....and feel good about it too, because we all share the environment we live in!



Curtailment (Demand Reduction.)

Our electrical generation system infrastructure consists of prime equipment (generators) and transmission equipment (wires and transformers). These are capital expenditures and are paid for by installment loans. We pay a certain amount each month, like a mortgage. The size of the equipment we buy is determined by engineering planning, based on the customers served and their loads – and specifically the maximum aggregate loads we anticipate at our peak time. The larger the peak loads, the larger the equipment, cables, etc. and the higher the mortgage.



We can generate most, but not all, of our maximum peak demands. When there is a very high demand period (or if part of our generation system is down for repair) we buy the excess from other utilities. When we buy power, it costs more than when we generate it. Also, if we have generation capacity “sitting around” and only used occasionally on maximum days, it represents a large expense to us, like having a motor home parked in the driveway that we make payments on but only use for one month out of the year.

The concept of equipment utilization is important since it affects our expenses, which end up being passed along to you in the form of rates. The perfect scenario would be equipment running near full capacity almost all the time – the closer to that we can get to, the higher our utilization factor, which amounts to getting the most value for your utility infrastructure dollar.

If the demand peaks can be reduced consistently, it saves us money – keeping rates down. When you see utility incentives for “demand reduction”, these are either to avoid buying spot market power (which costs more) or buying excess peak generation equipment (more cost). Some of the things we do to reduce demand and ‘flatten our load curve’ may be:
On-Peak and Off-Peak electric rates (more expensive on peak, cheaper off peak).
Incentives to change equipment that will, in turn, reduce demand consistently.
Incentives to allow us to curtail (cut off) load at will, during periods of high demand.

For our larger customers, special meters record the greatest “demand”, which represents the greatest portion of our generation and transmission system that is dedicated to that customer. The greater the demand, the higher the percentage of the equipment mortgage payments are attributable to that customer. Customers with higher demands, especially when On-Peak, pay higher demand charges, because that is what is equitable to all of us who share ownership of the generators.