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## Building Operators Training Program

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### Energy and Facts

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**"The fate of the living planet is the most important issue facing mankind". -  
Gaylord Nelson**

**Energy = Stored work = Work waiting to happen = Ability to do work.**

Energy can't easily be reused. Usable forms of energy are limited.

- ◆ Coal, Nuclear, Hydroelectric, etc.
- ◆ Creating electrical energy is costly.
- ◆ Using the electrical energy costs more.

#### Why is electrical energy cheaper at night?

- ◆ Demand for electrical energy is highest during the day (factories and offices are at their peak).
- ◆ If the local electrical suppliers can't keep up, they must buy from other plants. This costs the supplier more.
- ◆ To keep demand lower, the electrical suppliers provide an incentive to reduce use of electricity during the day.

Energy is always conserved but once it is used as a usable form, it is considered lost. So, the less energy that we use, the less that is lost.

#### Misuses of the term "Power"

- ◆ Power is not energy.
- ◆ Power cannot be used up.
- ◆ It is merely a rate.
- ◆ Power cannot be lost.

Power cannot be put into a battery any more then velocity can be put into a gas tank of a car.

**Breakdown of average  
energy usage**

