Over the last several years, electricity costs have risen in some areas to 20-year highs. Due to high demand, some cities have suffered brownouts and blackouts. Over 60% of a manufacturing company's electricity bill is consumed by running electric motors and this increased cost hurts profitability.

At Baldor,we view our electricity cost as a cost we can control. We're consuming one million fewer kilowatt hours today than we were five years ago. Reducing costs by conserving electricity is something every manufacturing company can do. It is good for profitability and the environment.

Since 60% of a manufacturing company's electric bill comes from operating electric motors, this is a good place to start your conservation efforts. Many efforts to conserve energy involve unpopular tradeoffs. The use of high-efficiency motors and drives does not.We can turn up our air conditioning thermostats and sit in buildings that are too hot, or we can reduce the costs of running our air conditioning by using high-efficiency electric motors and drives.

An industrial electric motor will sometimes use 40 times its original cost in electricity in the first year. To put this another way, over 97% of the lifetime cost of a motor is its electricity consumption. With this in mind, industrial motor users should select a motor with the highest efficiency when replacing failed motors or purchasing new equipment.

The small premium you pay for a high-efficiency motor is often earned back in the first few months, depending on the duty cycle and the cost of power. The savings in electricity will then continue year after year. Since motors often last 15 to 20 years, the savings can be substantial–if the right decision is made up front.

Further savings can be achieved by using adjustable speed drives to control the performance of motors in applications, such as pumps and fans. In some cases, an adjustable speed drive connected to a high-efficiency motor can save as much as half the electricity consumed by that motor.Today, only 5 to 10% of all industrial motors are equipped with adjustable speed drives–and according to the U.S. Department of Energy, as many as 25% should be.

A recent Department of Energy study concluded that if all motors were replaced with today's high-efficiency motors, and if drives were used where appropriate, up to 18% of our electricity consumption in industry could be saved. This would be over a billion dollars of savings that could be used to improve industry's profitability or competitiveness in world markets. If we lower electricity consumption, perhaps we wouldn't see blackouts, brownouts and high electricity costs.

As United States industry faces more competition from producers around the world, and as we try to manufacture products that can be competitively sold in the global marketplace, we must always remember that electricity is a substantial part of our cost. But, once again, it is one you can control. In doing so, you will be benefiting both your bottom line and our environment. **MT**