



By: Patrick H. Benz, President

Beginning in the summer of 2007, Benz Research and Development installed a 25,000 watt solar panel array and began a comprehensive program to examine energy use. This has resulted in several important energy related projects. We would like to share our energy goals with our colleagues and customers in the IOL and contact lens industries with the hope that this will be a useful guide for conserving energy as well as producing some energy of your own.

Energy Projects at Benz:

1. 25,000 watt photovoltaic system producing 208 volts for lighting coupled with a 208/480 transformer so that when all the 208V power is satisfied it will simply power at 480V for additional plant use. This system will be expanded to 50,000 watts over the next 2 years.
2. Current lighting conservation projects include: changing regular florescent bulbs with magnetic ballast (30 Lumens/watt total) to T8 bulbs with electronic ballast (50 Lumens/watt total). This reduced lighting power by approximately 50%; changing mercury vapor flood lamps to LED flood lamps. This reduced power by 70%; installed solar powered parking lot lighting. This reduced parking lot lighting power by 100%.
3. Additional roof insulation and improved sealing around a large low humidity, workspace. This saved approximately 2-3 tons of cooling (3-4 kW).

4. Project for 2008: install 3 – 65kW 480V natural gas micro turbines to provide 80% of our full load 480V power and 90% of our hot water at 85° C. This co-generation system will operate at 70% total efficiency compared to our local power plant at 35% efficiency.

These changes make a real difference, 45 kW and counting. Find out what you can do to make your company green. It's good for businesses and good for your environment. It will also pay financially long term as energy prices continue to climb.