

## **A \$36.76 Power Bill in July? You CAN Do It, Too**

### ***Each of us can fight Global Warming and Help SAVE THE BAY by Conserving Energy***

By Former Senator Gerald W. Winegrad

Our latest BGE bill dated July 11 is for a total of \$36.76 for 32 days of summer. Our previous bills were for \$23.80 and \$38.60. How did we do this? Read on.

For all concerned about global warming as well as the Chesapeake Bay, energy conservation is the most critical way each of us can act to better protect the environment. The recent huge utility rate increases give an added impetus for consumers to cut back on electrical energy use.

Why conserve? Besides saving money, remember that 54% of the electrical supply we are using comes from burning coal, while only 1.8% comes from renewables, mostly from hydro (dams) and burning solid waste. At least 94 large, new coal-fired electric power plants with the capacity to power 62 million American homes are now planned across 36 states. These new plants would add another 20% to the U.S.'s current coal-generating capacity greatly increasing global warming gases.

*Each time you turn on your heat or A/C or leave a light on, think global warming, nitrogen pollution of the Bay, massive forest and stream destruction, acid rain, mercury contamination, and human sickness and deaths.*

Electrical generating power plants produced 36% of the carbon dioxide (the main global warming gas). Nearly 48 tons of mercury is emitted each year by coal burning power plants, more than 40% of all human-released mercury. One of ten women of childbearing age has mercury levels high enough to damage their babies' brains. Mercury has contaminated our state fish, the rockfish, and human consumption advisories suggest limits on its consumption.

Roughly 700 premature deaths, 30,000 asthma attacks, and 400 pediatric emergency room visits per year are linked to fine particulate pollution from six of the seven power plants covered by the Healthy Air Act enacted in Maryland in 2006. Power plant combustion is also a major contributor of one of the key pollutants affecting the Bay--the nutrient nitrogen. Together with vehicle exhausts, power plants and other air emissions contribute 28% of the total nitrogen to the Bay system, creating dead zones.

The mining of coal creates environmental devastation with mountain tops in Appalachia blown off and stream valleys filled with mining waste. Energy conservation can also help our nation's national security as the majority of our oil comes from unstable regions of the world.

**What can you do**--during the One Green Hour and throughout each and every day?

Below is an outline of how you can live comfortably with limited energy consumption.

Our 1988 two-story home in Annapolis is 1,730 sq. ft. and is an all-electric home, heated and cooled by a heat pump. We frequently entertain. Our total electricity cost, including heat and A/C, for the past 12 months was \$583, plus \$350 deferred under the higher BGE rates, for a total of 7,346 kw used. The U.S. average cost for home energy use is about \$1,980 a year. Using an Energy Star calculator, our energy use is more efficient than 98% of comparable households. How do we do it without the installation of solar panels or a wood stove?

### **Turn off the A/C**

First, the greatest use of electrical energy in the home is for heating and cooling, accounting for 50% or more. We replaced our dying old heat pump with a high SEER-rated Energy Star heat pump. We have it maintained and regularly change furnace filters. I insulated the pipes from the heat pump going into the house and under the house in the crawl space. We don't run the heat pump unless absolutely necessary. We keep the heat and A/C off from about Labor Day to mid-November, and from mid-April until July. In cold weather, we wear sweaters and keep the drapes and shades open during the day to allow the sun in, closing them at night. In warmer weather, we close the drapes and shades during the day, leave all windows open, and use fans where we cook, eat, and sleep, turned on only when we are present in that room. We use plastic register covers to direct air flow away from the drapes and into the room.

Our A/C is never set lower than 80 and is turned off when outside temperatures reach 85 or less. In winter, our thermostat is set at no higher than 62 and at 64 before guests arrive. We have replaced energy inefficient windows and sliding doors with high energy efficient windows and sliders. If we are out of the house for eight hours or more on very cold or hot days, we keep the thermostat at lower or higher levels than normal. On other days, we turn the heat pump off while away. When away for three days or more, we turn off all lights, the hot water heater, all clocks, DVD players, etc., and never leave the A/C on. If necessary, we keep the heat at 50 to prevent freezing.

### **Sign-Up For BGE Energy Saver Switch**

We are among 225,000 of BGE's 1.2 million customers who participate in a program in which energy saver switches are connected to central air conditioners and electric water heaters. During periods of high demand for electricity, a radio signal activates the energy saver switch to cycle the compressor or water heater on and off in 15-minute intervals. This typically only occurs in the summer months, during the work week between 10 a.m. and 8 p.m. I have never noticed this occurring and it saves us \$15 a month for four months and prevents the most polluting power plants from having to crank out juice. It costs nothing to hook-up. You can sign-up by calling BGE.

### **Insulate and Seal Cracks**

I have properly insulated the attic and crawl space and have sealed all cracks. Good attic insulation, good windows, storm doors, and electrical socket insulators are all important and these all are in place in our home. We rarely turn on the kitchen or bathroom air ventilators as they can suck out a lot of heat or A/C. I close the fireplace flue damper in winter and open it in summer. We rarely use the fireplace.

The hot water heater is the next major user of energy. I placed a thermal blanket on the water heater, insulation around the pipes, and set and keep the water temperature no higher than 120 degrees F. I installed flow restrictors on all faucets and water conservation shower heads. This saves hot water and on water and sewerage.

### **Buy Energy Saving Appliances**

We have an Energy Star high efficiency refrigerator and always keep the temperature settings in an energy conservation mode and not too cold for the freezer and refrigerator. We try not to leave the door open very long and keep the coils clean from dust accumulation. We also replaced our old dishwasher with an Energy Star high efficiency model, although I prefer to wash dishes by hand. My wife uses it sparingly and with full loads. We also replaced a drying clothes dryer with a more efficient Energy Star model and use it only with full loads, cleaning the lint filter with each use. We use only cold water in the washing machine.

### **Buy Compact Fluorescent Bulbs**

We have replaced nearly all lighting with compact fluorescent bulbs (about \$1.50 each at discount houses) and never leave any lights on when we are not in a room or when out of the house. Home computers now use 9%-10% of all energy in a home and many people leave them on 24/7. I always turn my computer off when not in use and also turn off the power bar to which it is connected.

### **Recycle**

We recycle more than 75% of household waste, including yard waste.

### **Minimize Use of Your Energy Efficient Cars**

I average less than 6,000 miles a year in my used, fuel-efficient vehicle, and always carpool and use public transit when I can. I save \$113 a year on my car insurance for the low-mileage discount. Our cars are always well tuned, tire pressure is checked regularly, and any unnecessary items adding weight in the car are taken out. My 14 year old compact averages 33 mpg.

Once you and your home are energy efficient, work to do the same in your office.

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*Senator Gerald W. Winegrad is a former State Senator from Annapolis and was the leading environmentalist in the Legislature who was responsible for many Bay initiatives including the phosphate detergent ban. He Chaired the Senate Environment and Chesapeake Bay Subcommittee and served on the Chesapeake Bay Commission for 12 years. In 2002 he was presented the prestigious Life Time Achievement Award by the Chesapeake Bay Foundation. He is a Professor at the graduate School of Public Policy, University of Maryland, where he teaches a course on Bay restoration.*