

# The Red, Blue & Green



## Energy, Carbon Dioxide, and Pizza Went Fishing Together . . .

Have you noticed how hot it is? The electric bill associated with this newsletter is likely the biggest one you will get this year (if it isn't, the one you get in September probably will be). Did you ever wonder how your consumption compares to your neighbor down the street or your friends in nearby towns? If so, read on and we will tell you where you stand.



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In Glasgow the average electric power usage for the month of July was 1,500 kWh (of course if you buy your power from Farmers RECC we do not have statistics for you, but it is quite likely that this figure is about the same for you). Take a look at your electric bill. If your home used more than 1,500 kWh for last month, you are using more energy than the average home in Glasgow uses. You should be pleased to know that Glasgow's average residential consumption is considerably lower than the average for all the homes served by TVA across portions of seven states. Actually our average consumption at homes in Glasgow is about 18% lower than the average for our TVA neighbors. Some of that is because we are among the

northernmost consumers of TVA power so that helps some in the summer. Another reason is that we have a very large number of homes that heat with natural gas and that lowers our consumption some in the winter.

To meet the demands for electric power in Glasgow, TVA burns a lot of coal. They also use nuclear power, hydroelectric power, power purchased from neighboring utilities, and they burn a lot of natural gas during peak hours to meet our growing demand for power. Did you ever think about the environmental impact of our demand for electricity? Perhaps you should sit down. If you are that average residential customer who used 1,500 kWh in July, then TVA burned coal and natural gas (and purchased power

from neighbors doing the same thing) that resulted in emitting just more than 2,000 pounds of carbon dioxide (CO<sub>2</sub>) into the atmosphere just to serve your home last month. There are about 5,300 homes in Glasgow and Glasgow is just one small city in North America. A ton of CO<sub>2</sub> emitted just for your home for one month . . . I hope you find that as staggering as we do.

Of course burning fossil fuel emits a lot of other noxious chemicals as well, but a lot of technology is applied toward the goal of removing those chemicals and they are doing a quite fair job. Nothing is being done to reduce the emission of CO<sub>2</sub> and there is an overwhelming consensus in the scientific community that CO<sub>2</sub> gas emissions are the central cause of our changing climate. When carbon dioxide drifts into the atmosphere it acts like the blanket of insulation you have in your attic, it traps heat that would otherwise radiate out into space, and we are all seeing and feeling the effect of that insulation.

So, are you interested in thinking globally and acting locally? Would you like to know what you can do to start reducing your "CO<sub>2</sub> footprint?" There are a number of things that can help and they are all quite simple really. In short, use less energy that is derived from coal, natural gas, and petroleum. Learn how to be comfortable with the thermostat on 79 instead of 70 would likely make the biggest possible impact over the remainder of the summer. There is also a new electric rate structure which TVA is going to allow us to pilot with some of our customers. This rate is called a Time-Of-Use (TOU) rate and it is made possible because of our 20-year-old initiative to associate a broadband network with our electric power network. One by one, we are converting our old electric meters to new meters which can be constantly monitored via the broadband network. As a result, we can monitor how much energy each customer consumes during the different hours of the day (old meters only could tell you how much energy had passed since the last reading, they had no idea what time of day you might have used the energy).

That level of data allows us to offer a TOU rate which will reward customers for reducing their demand during the hours of the day when TVA is pressed for capacity. That is when they are burning the most fossil fuel and contributing the most CO<sub>2</sub> to the atmosphere. This rate would also penalize customers with higher rates for electricity during those peak hours. In other words it giveth and it taketh away, so one would not want to go

into this pilot program if they are not prepared to really try to change their energy usage pattern.

It would really not be so hard to make those changes. For the remaining summer months, all you would really have to remember is that all electric power consumption between 2:00 p.m. and 8:00 p.m. on weekdays is *bad*. So, you would want to install a programmable thermostat so that you could tell it that 80 degrees in the house is okay, Monday through Friday, from 2:00 until 8:00. After 8:00 you could tell the thermostat to cool the house down for comfortable sleeping. You could also have it cool the house down to 68 degrees shortly before the peak time starts at 2:00. This "pre-cooling" could keep your home cool for quite a while during the hot afternoon while you avoid additional cooling during the peak period. At the same time you would want to avoid running the washer, dryer, dishwasher, and all heat generating kitchen appliances during those weekday hours. Of course, that would pretty much render the kitchen useless for cooking dinner, but there are ways to get around that problem as well.

One way to avoid using the oven or stove in the afternoon and early evening is to go outside and use the grill! If you employ this solution, you get the dual advantage of saving electric energy during peak hours and also taking a load off of your air-conditioning system. You also get great grilled-out food! Everyone knows that food off of the grill with those great looking grill marks on it tastes better than anything from the kitchen. Grill marks rock! But what if you don't have a grill or just don't yet possess all of the skills you need to cook food in the great outdoors? Be not afraid. There are other solutions. Obviously you can eat out, and there are plenty of great local restaurants that would be very happy to see you. But one of my personal favorite solutions involves the use of the internet to procure . . . pizza!

That's right. You can go online using the EPB's amazingly fast LAN service and order up your favorite custom-made pizza pie right here in Glasgow. I love this process. Just go to the website of your favorite pizza establishment, click on the size pizza and the ingredients you want, tell them who you are, and you get an email back in a flash telling you how much it will cost and what time you can pick it up! It is so cool, and it does not heat up your kitchen at all. In fact there is a coupon at the end of this newsletter to give you a discount for trying it!

If you are interested in learning more about the TOU rate pilot, please email me, call me, or otherwise get me a message. We still have some details to work out on exactly how this new rate structure will work, but we are feverishly working on it because there is not that much summer left and we want to see some results this year. So, let me know if you think you might be interested in saving some money by changing your energy use habits. Glasgow has a history of leadership in many adaptations of technology. This is another opportunity for us to shine and to start the process of leaving a better world than the one we found.

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