

# Currents

Your Link to Sussex Rural Electric Cooperative



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## High Voltage. . .



### Dehumidifiers - calculating the cost of operation

By Tom Tate

A lot of variables come into play here but there are some basics that will help. First, we need a victim, er, candidate for analysis. A quick search of Kenmore produced a perfect match, the Elite 70 pint dehumidifier with built in pump and remote monitoring station (yes, gadgets!). Just feast yer eyes on this beauty! But, I digress.



According to the DOE, their Energy-Star ratings are based upon liters of water removed per kWh. Standard (smaller) capacity units remove 1.2 - 1.8 l/kWh while high (large) capacity units remove 2.5 l/kWh.

Let's assume the Kenmore is in the 2.5 range. It has a 70 pint per day capacity. That converts to 33.122353075 liters!. You can round to 33 for simplicity. Dividing this by 2.5 means, theoretically, the unit must run for 13.2 hours to remove that much moisture.

We charge \$.112/kWh. Therefore,  $13.2 \times \$.112 = \$1.48/\text{day}$  or \$44.35 per month. In my experience, I have

*continued on page 4*

## Commentary by the President & CEO



### Working together to keep costs down

by Jim Siglin  
President & CEO

**B**y the time most of you read this, the annual meeting for 2010 will be past. A key component of the message at that meeting involved one of the cooperative principles, member economic participation. As a cooperative, the actions of the members can have positive impacts on the costs of operation. Since this benefits themselves and the rest of the members, it becomes a component of economic participation.

The examples we gave at the meeting included the electric water heater load control program, the Our Energy Our Future campaign and the online/electronic bill payment options we offer. The load control program has been offered for over twenty years. In excess of 1300 members are part of this program and their participation reduced our power costs by \$124,358 in 2009. The efforts of these 1300 yielded a nice savings for everyone. This program is going to become even more important as pressure on energy prices increases in the coming years. We ask you to seriously consider joining the program. Call, mail in the coupon below or download the form from the web,

we'll do the rest. It costs you nothing and you'll receive a one time \$25.00 bill credit for your trouble.

Our Energy Our Future is a campaign coordinated nationally to let our representatives in Washington know that affordable, reliable electricity is vitally important. Since its inception, 516,000 consumers have contacted their representatives about affordability and reliability. Congress has not taken final action on a bill so there is still time to make your voice heard. It is especially important to act now as the EPA is poised to regulate carbon under existing regulations and statutes which were never intended nor designed to deal with carbon emissions. If this happens, the consequences for American business and families will be far from affordable. Participation is easy at [www.ourenergy.coop](http://www.ourenergy.coop). As the only cooperative in NJ, our role is even more important. Encourage other utility customers to get involved as well.

The last example dealt with our electronic bill payment options. Our website offers a highly secure application that allows you to pay your electric bill from the comfort of your home, office or web-enabled device. If you are using your financial institution's bill payment service, let me encourage you to consider ours. Going through our system is the lowest cost alternative in terms of processing costs for the cooperative. You can find the application at [www.sussexrec.com](http://www.sussexrec.com) where the link is on the left side of the home page.

Your cooperative is in a strong financial position. We will be facing increased power costs and rising interest rates which will put upward pressure on our rates. We will keep you informed about these pressures, their implications and let you know how you can help. Our primary objective remains the delivery of the highest possible quality electric service at the lowest possible cost.

## SIGN ME UP...

- I am interested in the Sussex Rural Electric load control program. Please contact me to schedule the installation.
- I already have a load control unit. Please contact me to schedule the upgrade.

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_ Best time to call: \_\_\_\_\_

*Remember, you will receive a one time \$25 bill credit for your participation.*

# REAL TIME HOME ENERGY MONITOR

By Tom Tate

In the March Currents we introduced our new online access to your daily energy consumption. At that time I hinted at another capability that would let you see your actual consumption in real time. I am happy to introduce you to the CurrentCost Envi Home Energy Monitor. All right all you gadget enthusiasts; listen up because this is a gadget lover's dream.

Just what does this device do? In a nutshell, it monitors your energy consumption as you are using it and displays the consumption on an attractively styled monitor in both dollars and kWh. This basic capability, by itself, can be a powerful tool for pinpointing the energy hogs in your home (or business) and provides an excellent opportunity for education. But that is just one of the features of this unit.

It has the ability to monitor nine individual appliances. By incorporating additional transmitters and sensors, you can see how much electricity that old freezer in the basement is using or how much the aquarium draws. When you turn an appliance on or off, the display tells you how much you just reduced or increased your cost.

The display cycles through a series of outputs

that show you consumption for today, the last seven days and the last thirty. A bar chart shows you how much you have used in the last 24 hours in three 8-hour blocks. It holds seven year's worth of data and has the ability to interface with a PC to upload this data for manipulation in Excel or a couple of third party applications.

Installation is actually quite simple. From start to finish, it took me 15 minutes to get the system up and running. Here's the drill. Step 1: Read the directions (yes, I did this). Step 2: Sync the transmitter and display. Step 3: Remove the cover of your electric panel (if you are uncomfortable working inside your electric panel, ask for some help). Step 4: Clip the sensors, or CTs in utility parlance, around the large wires that feed each side of your breakers. Step 5: Plug the sensors into the transmitter and install the transmitter using the Velcro tape. Step 6: Program your display with your date, time, utility rate and stand back to watch the magic.

If all went well, you will be looking at your real time energy consumption. Gather the family and demonstrate how their use of electricity affects your budget. If the kids won't turn off the TV,

show them a before and after sample of cost and suggest their allowances be used to fund the excess. Experiment with various combinations of use to see what uses what in your home. If you want to get elaborate, download and play with the different software packages. The free ones were a bit obtuse for my taste (in other words, hard to configure and use) but the Techtoniq package which sells for about \$15.00 is terrific and I think well worth the price.

Are there alternatives to the Envi? I did a fair amount of research and for our specific style of meter; the Envi is the only option today. Will you save money? The jury is still out on this. I suspect several doctoral candidates will write their thesis on the topic. I can tell you this, even after three months of use, I follow it closely and my awareness of just how much power I am using remains high. I think it is a great tool, for both the gadget lover and the conservationist alike.

If you want to take the Envi home, send a check made payable to Sussex Rural Electric Cooperative in the amount of \$120. I will accumulate the orders and get them in your hands ASAP.

Let me just say at the get-go, I do like a fine piece of bacon, several in fact. *Mmm - mmm - good.* I must not be alone in this, judging from the rash (not rasher, although that is apt) of bacon-based products hitting the market. Let me list those currently gracing the pages of [www.Uncrate.com](http://www.Uncrate.com). To find them for yourself, navigate there and type bacon in the search field. What follows is what you'll get as of this writing. Members of the American Heart Institute may advise against over-indulging in these bacon fantasies.

with bacon and bourbon? What's not to like? If you try to sneak it into a theater bring enough to share if you get caught. You just tagged the food pyramid with a score in four food groups. Nutritionists, where are you on this amazing product?

**Zoku popsicle maker** - Where's the bacon here? Why, in the bacon-apple popsicle recipe that accompanies the product. If an apple a day keeps the doctor away, bacon can only make it better.

**Bacon popcorn** - For those with young-uns at

Forget the mess of frying bacon to go with those pancakes. Plus add in the health benefit of chocolate. Add maple syrup and you're good to go.

**Bigs Bacon-Salt Sunflower Seeds** - Ah, the boys of summer have a new treat for the dugout and infield. Scrap those 20th century seeds for some with bacon. You might have to fight your teammates and the team mascot, especially if the latter is of the true canine variety.

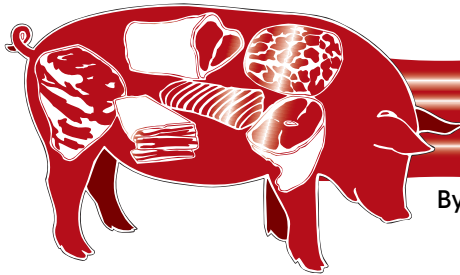
**Bacon soap** - Not sure why anyone needs this, especially if they take advantage of all the other products on this page. You should practically reek of bacon. However, for that big date to the NJ State Fair to show off your prize pig, go hog-wild and smell the part. Be advised that the other entrants might find you simply irresistible.

**Tactical Canned Bacon** - Get ready for the end of the Mayan calendar in 2012 with cans of delicious, precooked bacon. Sporting 50 slices per can with a ten year shelf life, lay a few aside to ward off the hunger that may accompany the end times. Be sure to have a manual can opener because this bacon can rolls old style - can't keep that bacon goodness in a pop top can!

**J&D's Bacon Lip Balm** - When you can't get to the skillet for some of those bacon drippings, carry a roll of bacon lip balm. Schuss the slopes or bike the trails with just a hint of bacon. Attraction of coyotes or bears is not the responsibility of the manufacturer.

**Bacon heart t-shirt** - If you are a true aficionado, this T is for you. Perfect under a navy blazer or at a pig-picking (that's a bar-b-que for you non-Southerners). Get a couple in case you drip grease on one.

**Theo's Mad Science** - What's this? Mutant pork? Zombie hogs? No, plans for making a thermic lance using bacon and a high powered air hose. Don't ask me, I am happy with my spud gun.



By Tom Tate

**Bacon flavored toothpicks** - Perfect for that meat tooth where bacon bits get lodged. You'll get another burst of bacon flavor. I'm thinking bacon breath mints are on the horizon somewhere.

**Bacon vodka** - Sounds like a perfect ingredient for a tasty new Bloody Mary. If you are tempted to replace the traditional celery stick with a strip of bacon; please, use moderation - enough is enough!

**Bacon potato chips** - Crunchy bacon in a potato form. Two food groups at once! Savor the flavor of fried potatoes and bacon anytime.

**Maple-bacon lollipops** - My jury is out here but it sure sounds like it might be good with pancakes.

**Bacon-bourbon caramel corn** - Caramel corn

home where the bourbon edition is inappropriate, go right for the bacon flavored popcorn. Ever had beer cheese soup, a Midwestern treat? It is best when served with popcorn. Bacon popcorn and beer cheese soup - a new menu item has been born.

**Mmmvelopes** - Combining the great taste of bacon with productivity...the glue has a great bacon flavor for when you have to send something via snail-mail. Personally, this sounds better than glue that tastes like snails. Next up is e-mail that tastes like bacon.

**Bacon jam** - Yup, just what you think it is. If you have a knife, this'll spread. Or just grab a spoon and dig in! Spread some on the bacon potato chips!

**Mo's Bacon Chocolate Chip Pancake Mix** - Wow!

# SUMMER DEHUMIDIFICATION

By Tom Tate

Summer will hopefully have arrived by the time you read this which means many of us will be doing battle with humid, damp and otherwise repulsive basements. In anticipation of such a situation, a member asked me to investigate a fan-based product that is advertised to remove damp air from your basement creating an oasis of perfect humidity in an otherwise humid world. The concept? Pull warm air from the upper reaches of the house into the basement when it displaces the damp and cool air, reducing humidity. The pitch is that it uses less energy than a dehumidifier and therefore is a more cost effective solution. Since "it costs less to run" is a common refrain these days, I eagerly pounced on the opportunity to verify the veracity of the claim.

Basically, the experts felt that the product would be ineffective at the task. First of all, it is a small fan and may or may not be able to draw air into the basement. Secondly, the air being brought down could be as humid, just warmer. And if your house is so leaky as to allow this much air flow, you may have other issues in play. This was bad news for the member since they

**Baconnaise** - You read this right, mayonnaise and bacon in one tasty condiment. Stock up as the neighbors will be by begging cups of this rather than sugar. Pair it with pears and shredded sharp cheddar cheese (my recipe).

**Bacon salt** - As if bacon isn't salty enough already, now you have salt that tastes like bacon. I think it'll be a hit on scrambled eggs and pretty much anything you'd like Tabasco on. Use both together - double the goodness.

**Bacon Peanut Brittle** - Made with bacon, peanuts, maple syrup, spices, and herbs, turn your childhood favorite snack (well, its mine anyway) into an upper crust, hoity-toity goodie. Nah, its just plain good. I wouldn't mind breaking a tooth on this batch.

**Torani Bacon Syrup** - What better compliment to your bacon pancakes than bacon syrup? Might as well go whole-hog. Described as, "a sweet, smoky, salty syrup that can be used in everything from milkshakes to manhattans." I won't be looking for this on the Dairy Queen menu anytime soon but it would be tasty mixed with the bacon vodka and some fine bloody Mary mix. Stir with a piece of crisp bacon for the total experience.

**Chocolate and bacon** - I am saving the best for last - milk or dark chocolate with crunchy bits of bacon from a small purveyor in NYC. This is simply outstanding and a perennial stocking-stuffer.

Well, I'm glad I wrote this after lunch otherwise I'd be off at the local diner for a big stack of pancakes and, yes, bacon. Enjoy - your pork marketing industry should be proud. And, to quote the tag line of a State College eatery, "Herwig's...where bacon is an herb."

had no floor drain for a dehumidifier, could not give up their window for a window fan to draw air out and were not real keen on schlepping containers of water up to the sink to empty.

Not satisfied to leave the member in such a predicament, I promised to cogitate on the matter and come up with a workable solution. While my gray matter was so engaged, I received an inquiry from another member (thank you for seeking my advice - it provides a perfect opportunity to hone my gadget skills) about the cost to operate dehumidifiers.

First a little background on the nemesis, humidity. Know your enemy if you want to defeat it thoroughly and completely! That's from the "Art of War" or some other military text, I'm almost sure. Humidity problems stem from two basic sources. One, actual water seeping into the basement due to structural issues or from a significant temperature differential. Structural issues represent a more serious problem, in my opinion, because you have water invading your home and generating humidity. Sump pumps, patching cracks with hydraulic cement, diverting run off away from the foundation, and so forth are all possibilities, depending upon the nature of the problem. There is little need to invest in dehumidification equipment until such issues are corrected.

Temperature-based humidity is an easier beast to tackle. You can introduce heat but that is a bit counterproductive in summer weather. Warm air will rise and now you are adding heat to the upper areas of your home. Scratch that. Besides, I enjoy escaping into my basement lair on a hot day to beat the heat. That leaves mechanical and chemical dehumidification. Chemical options involve tubs of desiccant that absorb moisture. You pour off the liquid as it accumulates and eventually add more chemical. This works for small confined spaces. For an entire basement I can envision hundreds of little plastic tubs scattered around, like mushrooms, merrily absorbing water. Sure they use no electricity but they also only absorb about 2 ounces of water in 24 hours versus several pints for a mechanical solution. Strike that as well, except for small closets and such.

Seems the best alternative is a mechanical, electrically powered dehumidifier. Sure, you say, you work for the electric company. You WANT me to run that energy hog. Now, what a thing to think. Of course I don't want you to use an energy hog - you'll call and fuss at me. I want you to use a nice, highly efficient, EnergyStar rated model, properly sized for your needs and properly configured. Comfort, convenience and affordability are the goals here.

Let me use my basement as an example. It is 100% below grade with three small windows. It stays in the 50s or 60s all summer. The temperature is nice but the humidity was not. I had so much condensation on my well pipes I had small floods. So I insulated those pipes and purchased a medium sized dehumidifier. Online sources recommend a humidity level of 50%. However, I found that I get by quite nicely at 65%. Some days I need to ratchet it down a bit

but generally this is a comfortable level. Experiment and set it as high as you comfortably can. You'll use less energy.

That leads me to the solution for the first member's inquiry. In my home, I have no floor drain or basement laundry tub. I do have a lovely French drain under the house so I had the builder drill a hole in the slab and I slipped a garden hose into that. The condensate simply runs into the drain and away from the house. Since everyone will have a different situation, I have created a brief application matrix for your use.

Situation	Solution
<i>Floor drain or sump pit</i>	Run hose to drain or sump pit.
<i>No drains or sump but do have laundry tub</i>	Elevate or suspend (securely) the dehumidifier so gravity can carry the condensate to the tub to drain.
<i>None of the proceeding but have French drain</i>	This is my situation - drill and drain!
<i>No nothing - now what?</i>	Glad you asked - a condensate pump.

Since I hadn't intended to do a thesis on dehumidification, let me cut to the solution for the first member. Invest in the size of dehumidifier (small, medium, large) for your space, get one with the proper controls (gadget alert - many have some cool digital controls) and that has a high efficiency / EnergyStar rating. I discovered that some models (Kenmore and DeLonghi) come with pumps built in. If you find one you like with a built in pump, excellent. If not, get your plumber to help you locate a condensate pump. Two manufacturers showed up online repeatedly - Hartell and the Little Giant Pump Company. Just for the name alone I gravitate to the second firm. Situate the dehumidifier, route the condensate line up and away from the unit to the great outdoors. Be sure to have it discharge some distance from the house so it doesn't create problems with water invasion. This solution will require someone with plumbing knowledge but is worth it if you fall in the last category of my table. Enemy vanquished!

But wait, what about the member who asked about cost of operation? Fear not, move to the High Voltage column and I'll show you how to calculate the cost of operation. Oh, don't shy away from larger models. According to Consumer Reports, larger models are actually more energy efficient. Just match the unit to your needs. And, may I say one more thing? Don't buy the extended warranty. If something is going to fail these days, it will generally fail in the first 30 - 90 days when it is still under warranty. Save your money for other, more productive uses. If you are looking at a product with less than a 30-day warranty, just walk away.

# Tips for Beating the Summer Heat and High Monthly Bills



Don't let the warmer weather turn into "summertime blues" when the monthly electric bill arrives. Here are some tips on keeping your electric bill in check.

Adjust the Thermostat. Lowering a thermostat in the winter can save as much as \$85 a year. During warmer months, raising the thermostat a few degrees can save money, too. Set the temperature between 78-80 degrees Fahrenheit, and you could save up to 8 percent on monthly cooling bills.

Programmable thermostats make it easy to save by offering pre-programmed settings to regulate a home's temperature throughout the year. You may know I think Honeywell makes the best 'stat on the market. Look for one that offers plenty of flexibility to meet your specific needs.

Be a "fan-atic". While they don't replace an air conditioner or a heat pump, fans move the

air so everyone feels more comfortable. On milder days, fans can save as much as 60 percent in electric bills. Fans cool people, not rooms, so turn them off when you leave. Be sure your fans blow down to create a cooling draft (in the winter, they need to blow up to avoid creating that very same cooling draft.)

Regular maintenance is essential. We recommend that our members have their HVAC systems serviced annually by a NATE (North American Technician Excellence)-certified technician. This HVAC professional will check the entire system to make sure it is running efficiently. This will help to extend the life of the system and save money.

Look for ENERGY STAR equipment. When it's time to replace that cooling system, replace it with an ENERGY STAR qualified model. This could reduce energy costs by as much as 30 percent. Tax credits and rebates on qualifying

ENERGY STAR models may be available so check with the dealer or the NJ Clean Energy website for more information.

Bigger isn't always better. Too often, cooling equipment isn't sized properly and could lead to higher electric bills. A unit that is too large for your home will not cool evenly and might produce higher humidity indoors. That's why it is important to talk to your installer for proper sizing.

Instead of getting burned this summer with high energy bills, check out our website, [www.sussexrec.com](http://www.sussexrec.com) for more energy saving tips and to use our excellent home energy audit.

## Cost of Operation *continued from page 4*

not seen my summer bill increase that much but I also run my unit at 60 - 65% vs 50%.

Method two is to take the wattage of the unit and use this formula: (((wattage x hours of operation per day)/1000) x \$.112) x 30) = cost per month. As they like to say in the ads for investments, "your results may vary" and they most certainly will.

You can monitor your cost in two ways. You need to record the date on which you start the dehumidifier for the first time. After a week of operation, go to our website and check your

daily consumption through our e-bill application (see the March 2010 Currents for details - available online if you didn't keep your copy). Compare the days with the dehumidifier with those before you started using it. You can calculate its cost impact from there. Option two is to get a whole house energy monitor (call me and I'll point you to the one I use) and watch how it impacts your bill in real time.

*Have a happy and dry basement summer this year.*

### Kenmore features, notes:

ENERGY STAR® qualified appliance. Remove up to 70 pints of water every day with the Kenmore Elite 70 Pint Dehumidifier. Built in pump and wireless monitoring station allows it to be used in any room. Auto restart feature remembers previous setting in event of power failure. Microban® Antimicrobial technology inhibits odor-causing bacterial growth on bucket surface. AHAM Certified.

• **Auto Mode** takes the guess work out of selecting the right humidity level. The unit sets and automatically maintains a comfortable humidity level

• **The Cycle Timer** feature allows your unit to

run when you're at work and turn off when you return home

- **Automatically restarts** to previous setting if power goes out
- **Built-in pump** - works in any room
- Wireless control station for easy remote monitoring
- **ENERGY STAR®** Qualified
- **Removes up to 70 pints** of water from the air every day
- **Quick-connect**, double seal drain hose helps prevent leaks
- **Microban®** antimicrobial technology inhibits odor-causing bacterial growth on bucket surface

<sup>1</sup> 1 pint = 0.4731764725 liters <http://www.calculateme.com/Volume/Pints/ToLiters.htm>

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**64 Route 639 • P.O. Box 346 • Sussex, NJ 07461**  
**973.875.5101 / Fax: 973.875.4114**  
Hours: 8:00 a.m. - 4:30 p.m., Monday through Friday

Website: [www.sussexrec.com](http://www.sussexrec.com)  
 E-mail: [info@sussexrec.com](mailto:info@sussexrec.com)

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NJ LIC. ELECTRICAL CONTRACTOR # 6262A  
 973-875-1365

**After Hours: 877.504.6463**