

Smart appliances are coming

It seems like everything is “smart” these days; cars, the grid, watches, houses, phones and ... appliances. When I hear the term “smart appliance,” the Jetsons – with their fully automated home – immediately come to mind. Dinner was cooked, laundry done and dishes washed by a smart machine.

In reality, smart appliances utilize modern communications technology to make functions faster, cheaper and more energy efficient.

The annual Consumer Electronics Show features more smart appliances every year. Refrigerators, stoves and ovens, freezers, washers and dryers, garage door openers, dishwashers, water heaters – the wave is coming.

Even though today's smart appliances can give many of us sticker shock, experts predict these new technologies will deliver major benefits in energy efficiency, convenience and maintenance. So what makes today's smart appliances stand out from others?

From the smart screen on your dazzling new refrigerator, you can check the weather

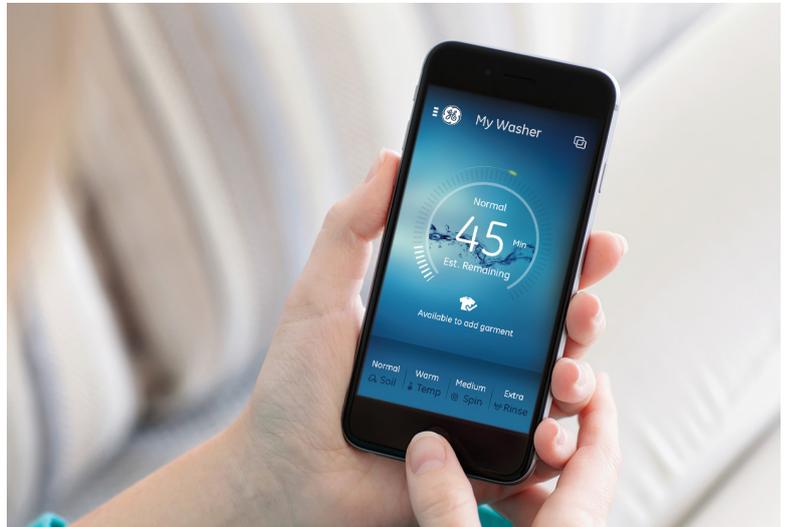
while grabbing your orange juice. You can even browse the Internet for recipes – all on the conveniently placed touchscreen.

Remotely monitor your oven to turn it on and adjust temperatures. Running late from work and need to get the kids somewhere? Stop for a frozen pizza on the way home, and preheat the oven so you can pop it in upon arrival. That's pretty neat. And of course, the panic moment while winging off on vacation of, “Did I leave the oven on” will be a thing of the past.

Got a load of clothes in the washer you forgot to start? Log in and start the cycle from the golf course. Or show off your smarts by scheduling it to run during overnight or while you are away.

How about this one? Wi-fi-connected appliances with clocks will reset themselves for Daylight Saving Time! One less digital device to tinker with twice a year.

Eventually, I see smart appliances becoming extremely useful to the average homeowner. A refrigerator that reads the



Specialty apps allow you to control appliances, like your washing machine, from anywhere in the world.

bar codes of what you put in and tracks consumption could recommend a shopping list if it noticed something getting low or out of date. No more cracking open the milk to sniff for freshness. I can go for that!

Maintenance is an area of huge potential. Let's say one of your smart appliances is feeling sickly. One day it may call the manufacturer and get a diagnosis. You won't have to wait at home for a technician who may or may not find the problem – or have the right parts. With

your permission, the tech can show up to your home with everything needed to make the repair. How convenient that will be!

Finally, from an energy efficiency and load management point of view, smart appliances present an opportunity to manage energy load more discretely in the quest to give members the highest possible quality of service at the lowest possible price. Sure, the Jetsons' flying car is a long way off – but not their appliances.

Renewables require CEC's help

Federal tax incentives for renewable energy equipment make this a good time to “go green.” Before you buy, call Citizens Electric. Prior written approval is required to interconnect with CEC's system when installing any self-generation equipment (i.e., solar or wind).

CEC supports self-generation from renewable resources and allows members to generate their own electricity under

certain guidelines and procedures outlined in Missouri's “Net Metering and Easy Connection Act.” However, members must complete an application and sign an agreement for interconnection and net metering, which is available upon request or at cecmo.com.

Working alongside CEC's engineering and metering personnel will ensure your generating system is wired correctly and the

appropriate safety devices are installed. These steps will avoid dangerous backfeeding into the system that could risk linemen's lives and require costly rewiring for the homeowner.

Before you buy, research the equipment and feasibility of producing power at your location. Suggested resources include the Missouri Department of Natural Resources, the U.S. Department of Energy and the American

Solar Energy Society.

Once generation equipment is in place, CEC will install net metering at no extra charge. The amount of generation used in the home and delivered back into the power grid is tracked. Members receive a credit for the amount of electricity generated that exceeds their home's needs.

For more information, call 877-876-3511.

Clean Power Plan and reliability

Since the Environmental Protection Agency (EPA) released its Clean Power Plan for reducing greenhouse gas emissions in August, several objections have been raised – from its effect on the economy to whether it actually has the authority to regulate carbon dioxide emissions.

An especially significant concern came from the organization responsible for making sure our electricity stays on. The North American Electric Reliability Corporation (NERC), reacting to a 2014 draft of the EPA plan, said in April 2015 that the electric utility industry “needs more time to develop coordinated plans to address shifts in generation and corresponding transmission.”

NERC cited concern about the electric transmission grid, noting that some of the emission reductions would begin in the year 2020, even though, NERC said, “transmission projects require between six and 15 years to engineer, site, permit and construct.”

EPA’s final rule released in August responded to that concern by extending the deadline two years, setting a 2022 start date and phasing-in the limits through 2030. Is that enough time? NERC responded in a statement that acknowledged the EPA had changed its deadlines and that NERC will analyze the EPA’s final rule and issue a report in mid-2016.

Among those challenging the EPA

rules in court is the National Rural Electric Cooperative Association (NRECA), concerned that the Clean Power Plan would hurt electric reliability and raise costs for electric co-op members. “We believe the EPA has overstepped its legal authority with the Clean Power Plan, and, along with many other interveners, have challenged [the] EPA’s rules in the courts,” says Paul McCurley, NRECA chief engineer and acting executive director of Energy and Power. “If the legal challenge is successful, then perhaps we can get [the] EPA to write regulations that address more than just environmental concerns – but also consider economic impacts to consumers and do not threaten the reliability of the electric grid.”

Money saving options

February is one of the coldest months of the year. For many people, this means higher electric bills due to heating. February is also the month when credit card bills are coming in from Christmas shopping and Uncle Sam is eyeing the previous year’s earnings. This can make February the shortest and most expensive month of the year. However, you can fight back against these high bills by taking advantage of the programs offered by Citizens Electric.

One of the easiest ways to save is by participating in PowerShift. This demand response program enables participating members to save more than \$40 per year by allowing CEC to reduce power to central air-conditioning units and electric water heaters during times of peak demand.

Looking for a long-term return on a small investment? POWER MOVES is once again offering a rebate on LED lighting. An energy efficient ENERGY STAR® bulb uses 51 watts less than a standard 60 watt bulb. While these bulbs cost more, much of the cost can be offset through rebates. You will save money by reducing the amount of electricity that you use, and thanks to their long life, you will also save on replacing bulbs. Imagine a bulb that uses a fraction of the electricity and can last ten years or more! Visit cecmo.com to find out about POWER MOVES rebates for LED lighting.

If you are little short on cash and CEC is holding a security deposit on your account, think about making that money work for

you with Prepaid Metering. When you make the switch to Prepaid Metering, CEC will apply your current deposit to your bill and add the remainder to your account as a credit. Go from being in the red to being in the black by simply changing the way you pay! All Prepaid Metering participants receive a text, email or voice mail each day alerting them to how much energy they have used and how much credit they have remaining. This allows you to monitor your electric bill more closely and to pay when it is convenient for you. As long as you carry a credit, you can pay each month, week or even each day. Payments are easy to make online, through our app, in person or over the phone.

While it won’t reduce your bill, Level Pay will take the surprise out of it. Level Pay eliminates the roller coaster of high summer and winter bills by averaging them against lower spring and fall usage. Level Pay makes it easier to set and manage your budget. Find out more about Level Pay at cecmo.com.

Citizens Electric is dedicated to helping our members by offering a large number of options, programs and rebates. Call 877-876-3511 to find out more about these and other programs.

Outage?

CEC members can now report a power outage simply by texting “Outage” from their cell phone. Outage must be the first word in your text.

To register, visit Member Center and click on Outage Information at cecmo.com. From there, you can sign up for outage texting, find our outage number, read about outage safety, and much more.

After registering, the member can program his or her phone with the code to report an outage (**55050**). If you have multiple meters, you can even specify if the outage is at your home, barn or well. Once power is restored, a text will be sent notifying the member.

