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## U.S. EPA Region 2 Podcast “Summer Energy Savings”

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**John** Hello and welcome to EPA Region 2’s podcast. I’m John Senn of the region’s public affairs division, and I’d like to welcome you to the first of what we hope will be informative broadcasts for people who care about the environment, especially in New Jersey, New York, Puerto Rico, the Virgin Islands and seven tribal nations which are the areas region 2 covers. It’s summer time and it’s starting to get hotter in the area, especially in New York City where we’re located. It’s the perfect time to think about how you can help the environment because summer’s a time where we use a lot of energy in our homes. There are also places around your home that are probably using a lot of energy that you aren’t even aware of. Joining me today to talk about home energy usage are Joe Bergstein and Irene Boland. Joe is an environmental scientist here in Region 2 who spends at least part of his time working on energy efficiency usage. Irene is a program analyst who’s a member of EPA’s sustainability group here in Region 2. So today we’re going to talk about how you can reduce summer energy usage in four key areas of your home; cooling, lighting, electronics and the use of water, and how just a few small changes can save you money on your bills and do something good for the environment. Now, I think most people know that if we use less energy, our bills will go down, but conserving energy, especially in the summer, can have real benefits for the environment. Right, Irene?

**Irene** That’s right. We could make a real difference to fight global climate change by reducing the energy use that we make. As we know, the most inexpensive greenhouse gas reduction that we make is the energy that we never use, and so energy efficiency is the first thing that we can do if we want to be proactive. Normally we think about power plants and the transportation sector as the biggest contributors of greenhouse gas emissions, but, in fact, our residential contribution is not insignificant. For example, in New York and New Jersey it’s 25 percent of the energy consumed by the residential sector and in New York it’s 29 percent, so don’t feel like you can’t make a difference in your own home doing everyday practices that are smart and that would also save you money.

**John** Thanks. I mean I think it’s kind of a big thing. I think you mentioned that a lot of people as you mentioned associate greenhouse gas emissions and that kind of stuff with factories and cars, but it’s really possible to make that kind of change where you live. Now, some of the things we are going to talk about today are things you can do right now, but there’s lots of appliances and products out there that will save energy and money on those utilities bills when the time comes to buy a new air conditioner, fridge or even HD television. Isn’t that right Joe?

- Joe** That's correct John. The Energy Star program is a joint effort of the U.S. EPA and U.S. Department of Energy. It was established in 1992; initially it focused on computers and monitors which were the first energy star labeled products. Now the Energy Star label is on major appliances, office equipment, lighting, home electronics, commercial products. You know there about fifty different product categories and thousands of models of energy star labeled products for the home office to select from. The website for the Energy Star program is [energystar.gov](http://energystar.gov). I just wanted to add that in 2006 with the help of Energy Star products, Americans saved an estimated 14 billion dollars on their utility bills.
- John** Well thanks Joe for that over review of the Energy Star program and again the web address is [www.energystar.gov](http://www.energystar.gov), and that kind of leads us into our first topic for today's podcast: cooling your home during the summer. Now, heating and cooling can account for as much as 40 percent of your utility bills at home, but there are lots of ways to reduce those cost without a lot of effort. Right Irene?
- Irene** That's right. And some of us suffered the old too familiar experience of seeing our energy bill climb up as we get our monthly bill through out the summer time, but don't feel hopeless. Be energy smart, there are so many things we can do. For example, using a fan until it gets really hot, if we do have an air conditioner. And in some cases using a fan all summer, if that's something that keeps you cool. We can also do things to mimic the effects of a tree outside of our building and imagine the shade a tree cast on a building especially if it's on the southern side where the sun is shining the brightest. We can do the same effects if we close our blinds during the heat of the day on those windows that get southern exposure. If you use A/C, don't be blind to the hole in your wallet the A/C is causing. Turn it off when you're not in the house. Set it on a timer so it starts to cool twenty minutes before you get home and turn it up a degree or two and save money. If you are in your house and you're going to prepare food in the heat of the summer consider using a toaster oven instead of using the oven and that also saves energy and doesn't battle with your air conditioner unit to make it more expensive for you.
- John** So air conditioners, appliances in the kitchen, freezers—those are the types of appliances we readily associate with summer time—but it's very important to make sure we have appliances best suited for our needs. Right, Joe?
- Joe** That's correct John. Oversized air conditioners don't necessarily run as efficiently as properly-sized units. What I mean is the appropriate air conditioning unit ties into the insulation type that's used in a room, the size of the windows and floor area. They all factor into appropriately sizing the cooling unit. While I'm on the topic of right size of air conditioners, there are over 1000 models of air conditioners that meet the Energy Star standard or label. Forty brands or companies manufacture these goods and they range in size all the way from 6,000 BTUS per hour to 20,000 or greater BTUS per hour, but again, depending on the size of the room, consumers want to select the appropriate size air conditioner.

- John** Ok, so if you are not necessarily sure about the type of air conditioner you might need for your room or your home, could someone at one of the electronics stores help you kind of figure the best fit for your needs?
- Joe-** Yeah. Generally they would ask you questions about the size of the room you are going to be cooling. What sort of activities are going on in that room? These will factor into your selection for a unit. And, as I have just mentioned, there are different sizes units of air conditioning units. Small rooms obviously would take smaller air conditioners on the order of 6,000 BTUS per hour, where as larger sized room would take the bigger size 20,000 or greater.
- John** So by using the appropriate air conditioners for the type of area you are looking to cool your kind of maximizing—or I guess making most efficient use of your power—that's going to save money in the long run.
- Joe** Right and just to be clear, Energy Star air conditioners use at least 10 percent less energy than conventional models. So in looking into purchasing an Energy Star labeled unit, consumers would be reducing their energy use, reducing associated greenhouse gas emissions with that purchase.
- John-** Great, that's great, Joe. Now, another area where consumers can really save on energy is lighting, especially with compact fluorescent light bulbs or CFL's as a lot of people know them today. Now Joe, this should kind of be a no brainer for folks, right?
- Joe-** Definitely John. Lighting can be up to 20 percent of a residence's utility cost. CFL bulbs use about 75 percent less energy than standard incandescent bulbs and they last 10 times longer. Savings on compact fluorescent light bulbs can be thirty dollars or more in utility costs over the bulbs life time. Compact fluorescent light bulbs, those that are Energy Star labeled are the ones that we do recommend, since there are some other products on the market that have not gone through the rigorous testing, that may not have as good a performance as Energy Star certified bulbs. Getting into the actual use of the bulbs, these are bulbs that provide the savings if they are used for durations of at least 15 minutes or more so that if they are in a situation—a residential situation—where lights just being flipped on and flipped off, compact fluorescent light bulbs are not going to provide as good a savings as if they are used in a living room situation, a bedroom for reading purposes—applications such as that. The wattages on CFLs differ than the wattages on incandescent light bulbs, and consumers can look at the packaging and find out what they might be able to replace their bulbs with. For example, a 75 watt incandescent bulb can be replaced by an 18 to 25 watt CFL.
- John** Well, it sounds like CFLs really are a great choice for people to use at their homes to save energy and money on their power bills, but they do in fact contain a trace amount of mercury. But that shouldn't stop people from buying them,

right? They just need to know what to do to recycle them or how to handle them if they break.

**Joe** That is correct John. Mercury is a component that allows the CFL to be an efficient light source. There are around 4 to 5 milligrams of mercury per CFL. The average amount of mercury is anticipated to drop by the end of 2007, and, to give listeners and idea of how this compares to other items that contain mercury, a household thermometer that may be sitting in the medicine cabinet could have 500 milligrams of mercury.

**John** Ok, thanks Joe. Now Irene, we talked before about cooling your home but you need to be sure cooling appliances aren't battling your lights. Can you talk a little more about that?

**Irene** Sure, John. As Joe just mentioned, compact fluorescent lights are a great investment for anyone who is looking to save a little cash, and let's face it, they're a little bit cooler when they're in your own home. We normally think of incandescent bulbs as a bright idea, but the truth is that 95 percent of the energy that they consume is actually radiated as heat instead of light. CFLs solve this problem for us, so consider buying CFLs throughout your home and, at the very least, install CFLs in the lamps and fixtures that you use most frequently. It's a good idea to think about where you spend the most time and how you can make those spaces energy efficient. Another way to do this is to increase the day lighting. We think of day lighting as a good quality in a new green building, but it's something we can do in our existing buildings, and that is to use our windows to let in natural light instead of turning on the switch every time. Consider moving your work station to near a window or think of the activities you do and if it's more convenient to make them closer to well-lit spaces so that you don't have to turn on the lights frequently.

**John** Ok, well those were some great tips. So, basically, just try to think about how you match up the activities in your home kind of where the light comes in and more natural ways to work around the light. Now you mentioned the importance of simply turning off lights when you're not in the room, and that goes for all of our gadgets and chargers, too, I'm sure, doesn't it?

**Irene** Yeah, great point. All the chargers that we use similarly are costing us little bit of money even though we aren't thinking about them. I personally have a cell phone charger, I use rechargeable batteries. Some of us also have MP3 players, PDAs, all kinds of hand held game systems, and these have chargers that suck energy even when the device isn't actually being charged. The same goes for the TVs, the alarm clocks—anything with a blinking digital clock on it is using energy. It's not so hard for us to take some steps to reduce this cost. One of the things we can do is put all of our chargers on a power strip and the power strip has one single switch, so that when you're not actually charging things, you can flip it off. For computers, when you're away from it turn it off. Some studies show that we can

consume more energy by computer in the 20 hours that were not using it then the 4 hours we are using it.

**John** Now, Irene just mentioned computers, and that's something that virtually everybody has in their home and it's something that people upgrade every couple of years. Now Joe, there is a tool out there where people can learn about energy-efficient computers and other types of electronics, right?

**Joe** Right John. That tool was developed over the last few years. It provides good information on performance of computers of 8 different areas, that include energy conservation, but also packaging, product longevity, material selection, design for end of life, as well as several other features. There is a system that has been developed where products can be classified and certified into three different groups. There are a total of 566 different computers and peripherals that are included in these high performance options. This information can be found at [www.epeat.net](http://www.epeat.net). EPEAT stands for electronic products environmental assessment tool.

**John** Great, Joe, and another area I know that is becoming more popular are high definition televisions, plasma and LCD TVs, and I looked on the Energy Star web site and I saw that there are more than 300 Energy Star-certified plasma and LCD TVs out there. Now those TVs do use more energy than regular TVs but they're a product that's in high demand. And one final place that we will talk about today where we can save energy and money, again, it's something you might not know about, but it's hot water heating in your home. Irene can you start off by telling us a little bit about that?

**Irene** Sure, John. Water use, hot water specifically, actually takes energy. We have to use gasoline or natural gas to heat up water and that is a significant portion of energy. For example, with a washing machine, 90 percent of energy that a washing machine consumes is for the hot water that's being produced to clean the laundry. And we don't have to use hot water; only 10 percent of that energy is the motor of the machine. In this case we can put the washing machine on cold water mode. And there are products out on the market now, both liquid and powder cold water detergents that are specially designed for cleansing the clothes more effectively in cold water. All told, hot water consumes about 11 percent of household energy use. We don't normally think about paying for that, and hot water is important when we need it, but when we don't need it, it's an expensive cost that we can avoid.

**John** Great, that's great, Irene. Now Joe, it's really easy for people out there to find these types of products and where they can purchase them near their home, right?

**Joe** That's right, John. Locations for all the Energy Star products I have discussed today can be found using online tools on the Energy Star web site. The site lists certified products that include appliances, fans, heating and cooling home

electronics, lighting products, office equipment, and even the home envelope, which could deal with instillation and window material. If you go to [energystar.gov](http://energystar.gov) you'll be able to locate a retail store that sells Energy Star-certified products by typing in your zip code. And you'll be able to fine retail locations from zero to 250 miles from your zip code.

**John** So [energystar.gov](http://energystar.gov) is basically a one stop shop for consumers who are interested in seeing the whole range of Energy Star certified products, which is now in the thousands, finding out stores in their area where the products are available and also a summery of rebates and incentives. Now that brings us to the end of our broadcast today, and I would like to thank our participants Joe Bergstein, an environmental scientist here at EPA Region 2, who talked about a lot of the different Energy Star products that are out there today. And Irene Boland who is in our sustainability group, and who talked about some of the methods to save you money and energy around the house. But it's really important to combine those methods with the products. That's the best way to really deliver cost savings on utility bills and energy savings, which are great for the environment and the easiest way and most important ways that you can combat climate change. My name is John Senn, and I hope you enjoyed our broadcast and please visit us online at [epa.gov/region2](http://epa.gov/region2).