**The Best Gifts Do Great Things - EPA's Consumer Electronics Podcast for the Holidays**

 **Una Song:** Welcome to the Best Gifts Do Great Things podcast: a collaboration between EPA's ENERGY STAR Program and the Consumer Electronics Association. My name is Una Song; I am the Consumer Electronics Program Manager for ENERGY STAR, and today we are discussing your holiday wish lists, and how they impact energy use and the environment, as well as some tips and trends to help you as you're buying gifts this year.

With me today are Shawn DuBravac, Chief Economist with the Consumer Electronics Association and author of the forthcoming book "Digital Destiny: How the New Age of Data Will Transform How We Work, Live, and Communicate." Also with us is Verena Radulovic, Consumer Electronics Product Manager for ENERGY STAR.

So Shawn, let's start with you. Just a few months ago, CEA, your association released a study: *Energy Consumption of Consumer Electronics in US Homes in 2013*. Tell us more about this study.

**﻿Shawn DuBravac:**﻿Thanks! So there's a lot of really interesting findings in this study. Probably the one that is the most relevant is the fact that consumer electronics have become much more prevalent in homes, as we know, but in fact the energy use, as a share of our total energy use, has actually declined over the last 3 years, from about 13.2 percent, to about 12 percent.

**﻿Una Song:**﻿Wow, that's great news.

**﻿Shawn DuBravac:**﻿Yeah, it is. And we see that these products are becoming more efficient, and the life cycles of the products have consumers replacing them to more efficient products, so that's a trend we expect to see continue.

**Una Song:**﻿That's great. And, Verena, what have you seen regarding efficiency in products?

**Verena Radulovic:** Well, two good examples that I can point to is one, the Smart TV, those that have wireless features and network connectivity, and the second one is 4k. So, I’ll start with the Smart TVs. A couple years ago, we saw this feature be implemented at various degrees of energy efficiency. And really in about 2 or 3 years, we've seen the energy use come down, where many TVs have network connectivity at less than a watt, or maybe even less than 2 or 3 watts. But that's very different than what we were seeing a couple years ago, where they were consuming up to 20 watts. So, it's really exciting that we see a lot innovation in this area, and when it comes to Smart TVs, if you look at the ENERGY STAR qualified products list, you have a lot of options, as most TVs today come with the smart feature enabled.

The second thing to look at is the 4k. And this is something I think is really exciting because a lot of 4ks when they were first introduced maybe a year or two ago, were consuming about 2 to 3, sometimes even four times as much as an HDTV, and we have examples of TVs that are coming out in the marketplace, and a few that are already out there, that consume way less than some of their comparative models. So again, what we see is a lot of innovation with this industry and we expect to see the energy consumption of 4k TVs, those that have a wider color gamut, as well as a higher dynamic range, really coming down as well.

**Una Song:**﻿Yeah, that's great, I mean I think that EPA's partnership with the industry is a strong one, and we're continuing to see energy consumption come down, but you know we continue to see new features added on a regular basis, new products, we saw with 4k, ultra-high definition televisions, that there's an opportunity for energy consumption to go up. So, it's great that we got this partnership focused on energy efficiency so that future generations will be more energy efficient. And the good news is that everyone can participate.

As Verena said, there is a wide variety of products on the ENERGY STAR qualified product list. She talked about some TVs, but we also will have a lot of audio equipment on our qualified product list. Consumers are finding a desire for more audio, better quality audio, then these TVs can provide, and so one product that was hot last year and is again a hot product, or hot gift on people's lists is sound bars. We got a great variety on our product list, and even some of the more cutting edge features or technologies, you can find ENERGY STAR options. You can find wireless speakers or receivers with high-def audio capability, and I think there are lots of opportunities.

So Shawn, I know that CEA recently released your 21st Annual Consumer and Electronics Holiday Purchase Patterns Study, and so what are some of the key points you've found from that?

**Shawn DuBravac:**﻿We're seeing still strong interest in tech as we've seen in recent holiday seasons. It's showing at the top of consumers' wish lists. If you look specifically at tech, some of the products we see showing up on the top of their wish list include things like tablets, laptops, televisions, smart phones, and video game consoles. Beyond that, we really see growth across a myriad of different categories. If you look in the camera segment, there's interest in action cameras; if you look within the television category, we've seen stronger interests there, and much of that is being driven by what we're seeing with 4k ultra HD televisions. You've got strong interest in emerging categories; about 1 in 5 consumers say they want to buy one of what we consider to be an emerging category. These include things like drones, 3-D printers, fitness bands or smart watches. So, not only is it large legacy products that are doing well, where there is already strong ownership, but we're also seeing increasing interest among some of the more nascent categories.

**Una Song:**﻿Well, that's interesting! So is that from early-adopters or are these products being accepted by the mainstream a little earlier than usual?

**Shawn DuBravac:**﻿For some of the categories, clearly it's still an early-adopter market, but many of them are moving towards the mass market. We certainly see that with things like fitness trackers and smart watches. As those become more familiar to consumers, we're seeing uptake increase.

**Una Song:**﻿Very interesting! You know another trend that we're seeing and I know that CEA also put out a study on a video content consumption, is streaming video over the Internet. Now, while most people still get their content from traditional programming providers, it's no longer the only game in town. And, for my family at least I can say, we discovered streaming this summer. So, we went to the beach, and my sister brought her digital media player, and we were just blown away at how easy it was to stream. I just thought you needed a Smart TV and all of these different gadgets, but it wasn't complicated at all! And one of the things that our team looked at was the energy consumption because there are so many different ways you can stream content, and we found that streaming through a game console uses up to 10 times more energy than streaming on a laptop or a tablet. So, here's something to consider. And if you're using some other kind of device to stream, like a Blu-ray player, cable box, or Smart TV, one thing to ensure that you use the least amount of energy is to choose an ENERGY STAR certified version of these products. These combinations will use 23 to 30 percent less than standard equipment. Just take, for example, using your standard cable box, modem, and TV uses over 30 watts more power than models that have earned the ENERGY STAR.

So Verena, are there some other ways that consumers can reduce their energy use of their consumer electronics?

**Verena Radulovic:**﻿One feature we like to highlight is the integrated set-top box in the TV itself. And this eliminates the need for multiple set-top boxes around the house, so if you have multiple TVs. We have a few TVs on the market today, like Sony's or Samsung's that do that, that have this feature. And, with it, you only need one set-top box for your main TV, which delivers content via the network connection throughout the house with the other TVs. And I think it's this creative thinking and design that delivers more functionality for less energy, less cost to the consumer, and less impact on the environment. When we look at other options for how consumers can configure their TV settings, one feature I like to draw to people's attention to is the picture settings. Earlier, when we were working with a lot of the creative brands and manufacturers, we agreed to highlight picture settings that have the ENERGY STAR feature enabled, and to highlight for consumers when other picture settings may or may not have that feature. And the idea behind it is that with consumers having more and more options about how to configure their TVs, and TVs are becoming more intuitive, and how their used, really trying to deliver information to the consumer so they can make the most informed choice.

We've seen the energy consumption of these TVs come down significantly and it's been really exciting. So, as we begin to see additional features and functionality, like integrated set-top box and more picture settings with energy efficiency, those are things that make me think consumers should really look for.

**Una Song:**﻿So Shawn, as we wrap up this podcast, how about a look ahead? Your book, *Digital Destiny* answers the question "What happens when everything is digital?" Are electronics already there?

**Shawn DuBravac:**﻿Well, we're seeing a move from literally millions of devices to billions of objects, and we're starting to add connectivity sensorization, and ultimately digitization to the objects in our homes and the objects around us. So, some of the things we've talked about today are paramount for this transition. Now, we need to have network capabilities inside of our homes to move these digital bits across different devices and across different objects. We're seeing these objects show up in every room in the home. From the living room, to the bedroom, to the kitchen, we're seeing them capture data that was perhaps already there, but wasn't being captured in a systematic digitized way. And then, the real value, ultimately, is moving that data across objects and across devices. So, it's controlling your lights from your devices; it's monitoring your baby who has a connected onesie on, it's measuring the caloric intake from your mod, which is now connected to the Internet. All of these devices are going to start to interplay with each other to inform the decisions that we make, to influence the things that we do inside of our home, and ultimately outside of our home, as we become increasing mobile consumers. So, in that I think you really see the future of a lot of things we've talked about. It's innovation, but that innovation also produces a tremendous amount of competition, and in that innovation and competition is where we start to get more efficient products, more efficient use of energy across a variety of products. So, the future of these trends are playing out, not just in the devices we carry today, but increasingly in the objects that surround us that will, over time, will become digitized and connected to the internet.

**Una Song:**﻿Very interesting. So, really changing the way that we live.

**Shawn DuBravac:**﻿Definitely. Changing the way we communicate, changing the way we live on an hourly basis.

**Una Song:**﻿Great! Something to look forward to in the future. So, I'd like to thank our guests today: Verena Radulovic, Consumer Electronics Product Manager for ENERGY STAR, and Shawn DuBravac, Chief Economist with the Consumer Electronics Association and author of the forthcoming book *"Digital Destiny: How the New Age of Data Will Transform How We Work, Live, and Communicate*." So, I'm Una Song with the ENERGY STAR program. Thank you for listening to us, and if you'd like more information about ENERGY STAR certified consumer electronics, head to the website energystar.gov. There, you'll find the latest energy efficiency information, along with tools and other resources to help you save energy and money while protecting the climate. There's a great Product Finder tool that can help you quickly and easily find the right ENERGY STAR product for your needs.

**Shawn DuBravac:**﻿And also, please visit CEA's environmental website GreenerGadgets.org. You can use the Consumer Electronics Energy Calculator to estimate how much energy your household devices use each year. Also, use the zip code locator to find the third-party certified electronics recycling location closest to your home. Again, all of that can be found at GreenerGadgets.org.

**Una Song:**﻿**﻿**﻿From all of us at ENERGY STAR and the Consumer Electronics Association, thank you for joining us, and happy holidays!