



# Earth911®

More Ideas, Less Waste

[How to Recycle](#)

[Where to Recycle](#)

[Business & Policy](#)   [EcoTech](#)

Reading time: 3 mins

## TCO Certification for Greener IT Products

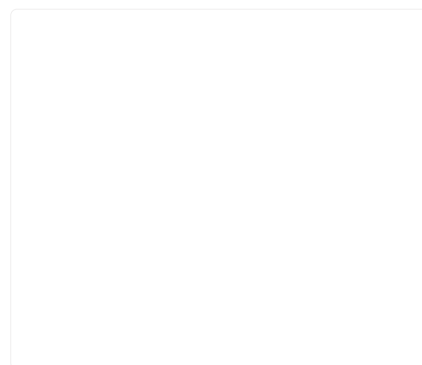


By [Gemma Alexander](#)

© JUN 15, 2022



When the market is full of greenwashing or when information on environmental impacts is hard to find, conscious consumers rely on third-party certifications to find out which products are the most sustainable. We trust that **LEED-certified homes** are greener, **USDA organic** foods are cleaner, and **EWG verified** personal products are safer. Unfortunately, there is not always one certification that everyone trusts. That's the case with IT products – electronic devices ranging from tablets and smartphones to data storage and servers. But one sustainable electronics certification system, called TCO, is looking pretty promising.

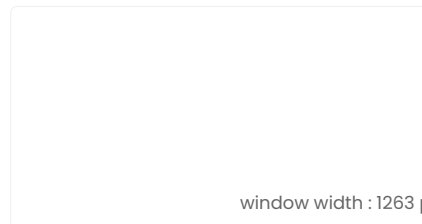
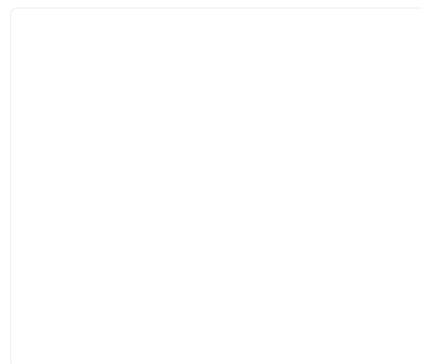


What Do You Think?

**Are you considering moving because of climate change?**

- I'm researching my options to decide
- Yes
- No

NEXT



window width : 1263 px

## Electronics' Environmental Effects

Despite their often diminutive size, electronic devices contain a plethora of hazardous substances. A single device includes a variety of heavy metals – beryllium, [cadmium](#), chromium, [lead](#), nickel, [mercury](#), lithium, and zinc – many of which are health and environmental toxins. Electronics also contain brominated [flame retardants](#). And of course, they contain a variety of nonrecyclable, fossil fuel-based [plastics](#).

Electronics also use precious metals and rare earth minerals that are not necessarily harmful on their own. But they are obtained through mining, often in developing nations where environmental controls are lax. Residents of these nations are left with the [environmental impacts of mining](#) while rarely enjoying the economic benefits, which is an [environmental justice](#) problem.

## Recycle Electronics

Another environmental justice issue results from electronics waste. Electronics [should not be disposed](#) of as garbage. Incineration of electronics generates greenhouse gas emissions and air pollution, while landfilling or stockpiling results in soil and water pollution. But electronics recycling often takes place in what is known as the [informal waste sector](#) in developing countries. Up to 31 million women and children work in this sector. While recovering materials like copper and gold, they are exposed to more than 1,000 harmful substances without protective gear or health benefits.

## Sustainable Electronics

When the better disposal option exposes the world's most vulnerable citizens to poison, we need to look upstream. Many of the harmful materials are necessary to the function of electronics and their batteries. But there are some safer options. Good design can minimize the quantities of heavy metals and plastic in each device. Less toxic flame retardants are equally effective.

A handful of certification systems identify more sustainable electronics. [Energy Star](#) does not address overall sustainability but does ensure that a product is more energy efficient than others of its type. [EcoLogo UL](#) is a multi-attribute system based on life-cycle impacts. EPA maintains a list of [preferred certifications](#) for a variety of electronic products. Their list is dominated by [EPEAT](#), a third-party verified registry of products that meet life-cycle-based standards developed through a

[Westlake Home - Luxury Organic Bedding](#)

voluntary consensus process. EPEAT standards are different for each electronic product class. Office supply chain Staples has their own [Eco-ID label](#) that relies on other certification systems combined with requirements for recycled and bio-based content and recyclability.

## TCO Certification for Electronics

[TCO certification](#) is not the best-known system, but its third-party verified standards are comprehensive, relatively transparent, and cover 3,500 products in [11 electronic product categories](#). Updated every three years, TCO looks at five issues: conflict minerals, social responsibility, hazardous substances, electronic waste, and circular economy.

Most people are familiar with the term “[conflict diamond](#)” or “blood diamond,” but [conflict minerals](#) include materials as prosaic as tin. Tin, tantalum, tungsten, and gold (collectively known as 3TG) as well as cobalt are vital components in tech products. Unfortunately, they are connected to armed conflicts and human rights abuses where they are extracted, often in [unregulated artisanal mines](#). TCO sets criteria for supply chain diligence and responsible sourcing of tantalum, tin, tungsten, gold, and cobalt.

TCO standards for [social responsibility](#) require manufacturing to follow the eight [ILO core conventions](#) and the [UN Convention on the Rights of the Child](#) as well as the national laws in the country of manufacture; an independently assessed anti-corruption management system; and continuous monitoring of health and safety practices.

Criteria for TCO certification aim to reduce or eliminate the use of heavy metals, halogens, non-halogenated flame retardants, and plasticizers. Any flame retardants and plasticizers used must receive [GreenScreen for Safer Chemicals](#) verification.

Addressing [e-waste](#) and [circular economy](#) together, TCO standards require products to be repairable and upgradeable, with at least a 1-year warranty and standards for battery life and replaceability. Software for [data deletion](#) must be included with the product. [Producer responsibility](#) through take-back programs is required. TCO focuses its marketing efforts on corporate procurement, but individuals can [search for TCO-certified products](#) on their website.

---

advertising

[Edit](#)



Reading time: 3 mins

## [Earth911 Podcast: Adapting to Smoke Season's Health Impacts With Dr. James Crooks](#)



By [Gemma Alexander](#)

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).

### Related Post

[Business & Policy](#) [EcoTech](#) [Health & Beauty](#) [Home & Garden](#) [Podcasts](#)

## [Earth911 Podcast: Adapting to Smoke Season's Health Impacts With Dr. James Crooks](#)

🕒 Jun 15, 2022 📍 [Earth911](#)

[Business & Policy](#)

## [IKEA Launches Buy-Back Program](#)

🕒 Jun 13, 2022 📍 [Gemma Alexander](#)

[Featured](#) [Business & Policy](#) [Food & Beverage](#) [How & Buy](#) [Inspire & Motivate](#)

[Living & Well-Being](#) [Podcasts](#)

## [Earth911 Podcast: Wild Planet Founder & CEO Bill Carvalho on Making Seafood Sustainable](#)

🕒 Jun 13, 2022 📍 [Earth911](#)