



Criteria on Toxic Chemicals

Greenpeace wants to see electronics companies clean up their act.

Substituting harmful chemicals in the production of electronics will prevent worker exposure to these substances and contamination of communities that neighbour production facilities. Eliminating harmful substances will also prevent leaching/off-gassing of chemicals like brominated flame retardants (BFR) during use, and enable electronic scrap to be safely recycled. The presence of toxic substances in electronics perpetuates the toxic cycle – during reprocessing of electronic waste and by using contaminated secondary materials to make new products.

The issue of toxicity is overarching. Until the use of toxic substances is eliminated, it is impossible to secure 'safe' recycling. For this reason, the points awarded to corporate practice on chemicals are weighted more heavily than criteria on recycling.

Although there are five criteria on both chemicals and waste, the top score on chemicals is 18 points, as double points are awarded for vinyl plastic-free (PVC) and BFR-free models on the market, whereas the top score on e-waste is 15 points.

The criteria on Precautionary Principle and Chemicals Management remain the same. The criterion: BFR-free and PVC-free models on the market, also remains the same and continues to score double points.

The two former criteria: Commitment to eliminating PVC with timeline and Commitment to eliminating all BFRs with timeline, have been merged into one criterion, with the lower level of commitment to PVC or BFR elimination determining the score on this criterion.

A new criterion has been added, namely Phase out of additional substances with timeline(s). The additional substances, many of which have already been identified by the brands as suspect substances for potential future elimination are:

- (1) all phthalates,
- (2) beryllium, including alloys and compounds and
- (3) antimony/antimony compounds

Criteria on e-waste

Greenpeace expects companies to take financial responsibility for dealing with the electronic waste (e-waste) generated by their products, to take back discarded products in all countries with sales of their products and to re-use or recycle them responsibly. Individual Producer Responsibility (IPR) provides a feedback loop to the product designers of the end-of-life costs of treating discarded electronic products and thus an incentive to design out those costs.

An additional e-waste criterion has been added and most of the existing criteria have been sharpened, with additional demands. The new e-waste criterion requires the brands to report on the use of recycled plastic content across all products and provide timelines for increasing content.

Criteria on energy

The five new energy criteria address key expectations that Greenpeace has of responsible companies that are serious about tackling climate change. They are:

- (1) Support for global mandatory reduction of greenhouse gas (GHG) emissions;
- (2) Disclosure of the company's own GHG emissions plus emissions from two stages of the supply chain;
- (3) Commitment to reduce the company's own GHG emissions with timelines;
- (4) Amount of renewable energy used
- (5) Energy efficiency of new models (companies score double on this criterion)

[Click here to see more detailed information on the ranking](#)

Ranking criteria explained

As of the 8th edition of the Guide to Greener Electronics, Greenpeace scores electronics brands on a tightened set of chemicals and e-waste criteria, (which include new criteria) and on new energy criteria.

The ranking criteria reflect the demands of the Toxic Tech campaign to electronics companies. Our two demands are that companies should:

- (1) clean up their products by eliminating hazardous substances; and
- (2) take-back and recycle their products responsibly once they become obsolete.

The two issues are connected: the use of harmful chemicals in electronic products prevents their safe recycling once the products are discarded.

Given the increasing evidence of climate change and the urgency of addressing this issue, Greenpeace has added new energy criteria to encourage electronics companies to:

- (3) improve their corporate policies and practices with respect to Climate and Energy

Ranking regrading: Companies have the opportunity to move towards a greener ranking as the guide will continue to be updated every quarter. However penalty points will be deducted from overall scores if Greenpeace finds a company lying, practicing double standards or other corporate misconduct.

Disclaimer: Greenpeace's 'Guide to Greener Electronics' aims to clean up the electronics sector and get manufacturers to take responsibility for the full life cycle of their products, including the electronic waste that their products generate and the energy used by their products and operations.

The guide does not rank companies on labour standards, social responsibility or any other issues, but recognises that these are important in the production and use of electronics products.

Changes in ranking guide: We first released our 'Guide to Greener Electronics' in August 2006, which ranked the 14 top manufacturers of personal computers and mobile phones according to their policies on toxic chemicals and recycling.

In the sixth issue of the Guide, we added the leading manufacturers of TVs – namely, Philips and Sharp – and the game console producers Nintendo and Microsoft. The other market leaders for TVs and game consoles are already included in the Guide.

In the eighth edition, we sharpened some of the existing ranking criteria on toxic chemicals and e-waste and added a criterion on each issue. We also added five new energy criteria.

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Philips continues to get a penalty point; however, this is no longer for double standards (as the Electronic Manufacturers' Coalition for Responsible Recycling has been dissolved), but for bad lobby in the EU on Revision of WEEE Directive.

LG ELECTRONICS Ranking = 5.7/10

LG Electronics remains in 6th position, but increases its score to 5.7, gaining extra points for energy efficiency of its products; LGE reports that 100% of its chargers exceed the Energy Star standard (v.1.1) by 50%, and data provided for energy efficiency of TVs is for models introduced since the latest Energy Star standard, which came into effect July 2005.

LGE has launched new models of mobile phones with halogen-free housings, packaging and main printed wiring board. It now provides a timeline of 2012 for eliminating phthalates and antimony – but only in new models of mobile products.

LGE scores well on e-waste by starting a take-back programme for its products in the US, including LG, Zenith and GoldStar brands of TVs. It also reports its use of (post-industrial) recycled plastic across all LGE products as 11%, with plans to increase this to 25%, but without a timeline. The company has compiled figures for e-waste recycling in Europe, Asia and North America and reports a recycling rate in relation to current sales for all regions. Globally, the recycling rate for total IT and telecom equipment is 13.2% and consumer equipment (that includes TVs) is 13.7%. However, LGE fails to disclose the source of EU recycling data or how it was calculated, if this is not merely extrapolated from market shares.

LG ELECTRONICS Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models				

LG ELECTRONICS Detailed Scoring

Chemicals

Precautionary Principle	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
GOOD (3+)	GOOD (3+)	GOOD (3+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
LGE provides a strong definition of the precautionary principle reflecting the need to take action to eliminate harmful chemicals even though their effects may not be scientifically proven. More information.	LGE's product specs in the Manual for Preparation of Environmental Regulations earn them top marks. More information here and pdf here. LGE's substance list includes future substances to be reduced, including beryllium and antimony.	The first PVC-free products are to be launched in 2008; the remaining uses of PVC are to be phased out by the end of 2010. All new models released in 2010 are to be BFR-free. More information.	The use of phthalates and antimony will be prohibited in new mobile products from 2012. Beryllium is listed as a substance that is to be either monitored or reduced. To score higher, LGE needs to expand the scope of products to which the substance bans apply. More information.	Mobile phones now have halogen-free housing, packaging and main printed wiring board. More information here and here.

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)
LGE supports individual producer responsibility, although it recognises that for IPR to be operationalised, technically and economically feasible identification solutions are needed. To stay on 2 points, LGE needs to provide evidence of lobbying for IPR and make efforts to operationalise IPR. More information.	LGE provides voluntary take-back of its discarded mobile phones in some 50 countries with 392 drop off points globally. However, large gaps still exist in Africa, Middle East and Latin America. More information. LGE has a nationwide recycling program in the US for LG, Zenith and GoldStar brands of TVs, computer monitors and other consumer electronics products. More information. To stay on 2 points, LGE needs to provide voluntary takeback of more product types and in more non-OECD countries. Info about takeback of other end-of-life products.	Information to customers on what to do with discarded mobile phones. Information on other discarded products here. Information on take back of consumer electronics other than mobile phones in the US here.	LGE reports its recycling rates for 2007 (as a percentage of past sales) as: 110% for TVs, 25% for computers and 4% for mobile phones. LGE has also compiled figures for e-waste recycling in Europe, Asia and North America. More information. To get full marks, LGE needs to provide EU figures from own brand sampling of return rate, undertaken in at least one Northern EU country, one Southern EU country and one new Member State – and provide indications of how it intends to expand this sampling in the future.	LGE reports its use of (post-industrial) recycled plastic across all LGE products as 11%, with plans to increase this to 25%, but with no timeline. To stay on 2 points, LGE needs to provide a timeline for increasing use of recycled plastics to 25%. More information.

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
BAD (0)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)	GOOD (3+)
LGE makes no reference to support for global mandatory cuts of GHG emissions. More information.	LGE reports GHG emissions of 464,449 tonnes in 2007 from its Korean operations. Verification of these emissions is in progress. LGE reports that an inventory of emissions from overseas manufacturing units and part of the product supply chain will be complete by the end of 2009. More information.	LGE has no commitment for absolute reduction of emissions of GHG. LGE has reduced some 5000 tons of GHGs at its Chang-Won facility and will begin reduction activities for all its other domestic facilities. More information. More details of LGE's plan for reducing energy costs are in its 2005 sustainability report (p. 20). More information.	LGE gives some examples of its use of renewable energy. Solar panels at one of its facilities are capable of producing 0.00072% of the electricity used by all LGE factories in 2007. But there are no specific targets for increasing use of renewable energy. More information here and here.	All LGE mobile phone chargers launched since January 1, 2005 meet the Energy Star standard and exceed the requirements of the ES standard by more than 50%. All LGE's PCs launched since July 2007 meet ES4 and 40% exceed the sleep mode by 30% and 27% exceed the standby mode standard by 30%. More than 85% of monitors meet the ES standard and more than 80% exceed its requirements. For TVs, around 90% of products satisfy the ES standard and more than 30% exceed. More information.