



## LG ELECTRONICS Ranking = 4.5/10 - 1 = 3.5/10

LG Electronics continues to fall down the ranking, from 12<sup>th</sup> place to joint 14<sup>th</sup>, with its score dropping from 3.7 points to 3.5. It is still weighed down by the penalty point imposed for backtracking on its commitment to have all its products free of PVC vinyl plastic and brominated flame retardants (BFRs) by the end of 2010. Now only mobile phones will be free of these toxic substances from 2010; TVs, monitors and PCs have to wait until 2012 and household appliance models until 2014; there is a lack of evidence on how this programme will be implemented. It also loses a point (doubled) for failing to progress on bringing PVC/BFR free products onto the market. LGE still only has one first mobile phone that is free from PVC and BFRs and six models of 'halogen-free' Optical Disk Drives; details about other reduced halogen products are no longer there.

LGE has yet to show support for bans on PVC, BFRs and chlorinated flame retardants (BFRs/CFRs) during the revision of the EU's RoHS Directive (Restriction of Hazardous Substances in electronics). It scores a point for committing to eliminate the use of phthalates and antimony in new mobile phones, TVs, monitors and PCs by 2012, and all new household appliances by 2014. The use of beryllium oxide in mobile phones has already been phased out and other kinds of beryllium compounds will be banned by 2012.

On e-waste issues, LGE scores relatively well for its support for Individual Producer Responsibility (IPR), because it has recently engaged with a European coalition of NGOs and industry in support of this principle, especially during the revision of the EU WEEE Directive, and for reporting its use of (post-industrial) recycled plastic across all LGE products as 11 percent, with plans to increase this to 25 percent by 2025. The company has compiled figures for (increased) e-waste recycling in Europe, Asia and North America and reports its recycling rates for 2008 as a percentage of past sales. However, LGE fails to disclose the source of EU recycling data or how these were calculated, if these were not merely extrapolated from market shares. LGE's voluntary global take-back for products other than mobile phones has been extended to India; it needs to continue to expand its programme for all its products in non-OECD countries

On the energy criteria, LGE scores points for supporting the need for global greenhouse gas (GHG) emissions to peak by 2015 as well as mandatory cuts of GHG emissions of at least 30 percent in industrialised countries by 2020. It discloses externally verified domestic GHG emissions, has committed to reducing GHG emissions by 5 percent (75,000 tons) below the 2008 level by 2012 and by 10 percent by 2020, and gains a point for providing data for its baseline year of 2008. It scores no points on the energy efficiency of its products, for making false claims about the energy performance of its white goods in both the US and Australia; it reports its compliance with the Energy Star standard for its TVs but no longer for chargers and PCs.

## LG ELECTRONICS Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
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 <small>(companies score double on this criterion)</small>				

# LG ELECTRONICS Detailed Scoring

## Chemicals

Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
<b>PARTIALLY BAD (1+)</b>	<b>GOOD (3+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>BAD (0)</b>
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. <b>More information.</b> However, LGE makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions.	LGE's product specs in the updated (v. 5.1) Manual for Preparation of Environmental Regulations earn them top marks. <b>More information here and pdf here.</b> <b>LGE's substance list</b> includes future substances to be reduced, including beryllium and antimony.	LGE has backtracked on its commitment to eliminate PVC and BFRs in all its products by 2010. Now only mobile phones will be free of these toxic substances from 2010; PVC and BFRs will also be banned from TVs, monitors and PCs by 2012. PVC and BFRs will be totally banned from use in household appliance models by 2014. However, there is a lack of evidence to show how LGE will progress towards these objectives. <b>More information.</b>	The use of phthalates and antimony will be prohibited in new mobile phones, TVs, monitors and PCs by 2012, and all new household appliances by 2014. The use of beryllium oxide in mobile phones has already been phased out and other kinds of beryllium compounds will be prohibited in new products by 2012. For maximum points LGE needs to phase out phthalates, antimony and compounds and ALL beryllium compounds and alloys in ALL products by 2012. <b>More information.</b>	LGE has one mobile phone (GD510) that is free from PVC and BFRs. 6 models of Optical Disk Drives are halogen free. In mobile phones BFRs have been removed from all parts used in the housing, packaging and main PCB. <b>More information.</b> Details of the <b>GD510 solar powered mobile phone.</b> However, LGE loses a point as it has made no progress in bringing PVC and BFR products on the market, despite its commitment to phase these out from mobile phones from 2010. Details about LCDs and notebook computers that are partly halogen-free are also no longer published on its website. Environmental self-declaration of many LGE products, although none that were checked were free from PVC or BFRs apart from the GD510. <b>More information.</b>

## 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
<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY GOOD (2+)</b>
LGE supports individual producer responsibility, and has recently signed the IPR statement, although it recognises that for IPR to be operationalised, technically and economically feasible identification solutions are needed. For more points, LGE should clarify it understands IPR as full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately, document its operationalising of IPR and show evidence of lobby for IPR. <b>More information.</b>	LGE provides take-back of its discarded mobile phones in some 50 countries with 392 drop off points globally. About half of these countries represent voluntary take-back. However, large gaps still exist in Africa, Middle East and Latin America. <b>More information.</b> LGE has a nationwide <b>recycling program</b> in the US for LG, Zenith and GoldStar brands of TVs, computer monitors and other consumer electronics products. For more points, LGE needs to provide voluntary takeback of more product types and in more non-OECD countries. LGE is now offering take-back of its products in <b>India</b> , in addition to mobile phone take-back.	<b>Information</b> to customers on what to do with discarded mobile phones, including a new text service in the US. <b>More information.</b> Information on take back of consumer electronics other than mobile phones in the US <b>here.</b>	LGE reports its recycling rates for 2008 (as a percentage of past sales) as: 159% for TVs, 59% for computers and 7.1% for mobile phones. LGE has also compiled its 2009 figures for e-waste recycling in Europe, Asia and North America; it recycled 152,160 tons of e-waste in 2009, compared to 108,135 tons in 2008. <b>More information.</b> 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% by 2025. It needs to set intermediate goals, to check progress towards 2025. <b>More information.</b>

## 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)
<b>GOOD (3+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>BAD (0)</b>	<b>BAD (0)</b>
LGE supports that global GHG emissions are to peak by 2015 and the need for global mandatory cuts of GHG emissions proposed by the UN and others (specifically to "reduce CO <sub>2</sub> emissions by at least 50 percent below 1990 levels by 2050), as well as mandatory cuts of at least 30% in industrialised countries by 2020. <b>More information.</b>	LGE reports global GHG emission data for 2007 – 2009. Verification by DNV of 12 Korean operations in 2008 is provided, and two operations in China for 2010. However, the certificates are not legible. <b>More information.</b> 2008 domestic emissions data by scope (716,658 tons GHGs) are provided in LGE's Sustainability Report 2008 (p 42-43). Global emissions data by scope are provided for 2007 – 2009 (1,279 k-ton CO <sub>2</sub> -e in 2009, compared to 1529 k-ton CO <sub>2</sub> -e in 2008), in <b>LGE's Sustainability Report 2009 (p 35-36)</b> . LGE's <b>verification certificate</b> for its GHG inventory 2005 – 2007 is still accessible. To continue to score 2 points LGE's latest verification certificates should be accessible and legible.	LGE aims to reduce GHG emissions from manufacturing by 5% (75,000 tons) below the 2008 level (of 1,529,000 tons CO <sub>2</sub> -e) by 2012 and by 10% (150,000 tons) by 2020. LGE gains a point as global data for its baseline year are now provided. <b>More information.</b> More details of LGE's plan are in its 2008 sustainability report (p.42–45). LGE's GHG emissions decreased 8.1% from the previous year; LGE should provide information on how these reductions have been achieved. In 2009 emissions of GHGs were reduced by 250,000 tons compared to 2008 from manufacturing and by about 5,450,000 tons from customers product use compared to the business as usual emissions in 2007. <b>See LGE's Sustainability Report 2009 (p 35-36).</b>	LGE is launching a solar cell business with an annual capacity of 240MW. <b>See LGE's Sustainability Report 2009 (p.37)</b> . LGE also aims to use renewable energy in its products as part of its green product strategy. <b>More information.</b> LGE no longer provides information on its use of renewable energy, although previously it reported that 1.6% of total electricity purchased in Korea in 2008 is renewable energy; however, this is based on renewable energy supplied through the national grid. There are no specific targets for increasing use of renewable energy.	LGE reports that about 78% of its TVs comply with Energy Star 4.1, but has not reported on compliance of its other products. <b>More information.</b> However, LGE fails to score as it has been caught making false claims about the energy efficiency of its white goods, resulting in <b>Energy Star</b> labels being removed from the products. Also, in <b>Australia</b> , fridges were found to contain an illegal device that activates an energy saving mode when it detects room conditions similar to those in a test laboratory. To score points, LGE needs to make a strong statement in support of more stringent ES verification standards.

## 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 first criterion has been sharpened to require companies not only to have a chemicals policy underpinned by the Precautionary Principle, but also to support a revision of the RoHS Directive that bans further harmful substances, specifically BFRs, chlorinated flame retardants (CFRs) and PVC. The criterion on Chemicals Management remains 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. In the fourteenth edition the criteria for the Precautionary Principle was made more challenging.

For the latest version [greenpeace.org/greenelectronics](http://greenpeace.org/greenelectronics)

Toshiba, Samsung, LGE, Dell and Lenovo continue to be penalised in this latest version of the Guide for backtracking on their commitments to phase out vinyl plastic (PVC) and brominated flame retardants (BFRs). Toshiba is served with a further penalty point for misleading its customers and Greenpeace by not admitting that it would not meet its commitment. In addition, Microsoft is served with a penalty point for the first time for backtracking on its commitment to phase out PVC and BFRs by the end of 2010.