



### 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.

From this version of the Guide, Fujitsu Siemens Computers will no longer be scored. Fujitsu will acquire the Siemens share in Fujitsu Siemens Computers (FSC). The new company will operate under the brand Fujitsu from April 1, 2009. Fujitsu will be evaluated in the next Guide due in June 2009.

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

In this version of the Guide, PC manufacturers HP, Lenovo and Dell have been served a penalty point for backtracking on their commitment to eliminate vinyl plastic (PVC) and brominated flame retardants (BFRs) from their products by the end of 2009.

## MOTOROLA Ranking = 5.3/10

Motorola drops from 7th to 8th place, with a score of 5.3 points, losing points on reporting its recycling rate and on energy, for failing to publish its third party verification certificate of CO2 equivalent emissions. However, it also gains points on energy for reporting that from 1 November 2008, all newly designed Motorola mobile phone chargers meet and exceed by 67% the new Energy Star v.2.0 requirements for standby/no-load modes. Motorola also discloses greenhouse gas emissions; commits to cuts of 6% in its absolute greenhouse gas emissions by 2010, compared with 2000; and reports a 9.7% renewable energy use (as proportion of all electricity purchased) in 2007, although it needs to commit to increase the use of renewable energy with a timeline.

Motorola also scores relatively well on the chemicals criteria and now has a goal to eliminate PVC and BFRs in all products introduced after 2010, joining the other mobile phone brands in the ranking that make this commitment. It has launched 59 models of mobile phone with BFR free circuit boards, but only two models are free of PVC.

On waste issues, Motorola scores well for its take-back and recycling service in 73 countries, representing over 90% of global mobile phone unit sales and for providing good information to its individual customers. It reports a global take-back rate of 3% of total handsets sold in 2005 but it needs to explain how its EU figures are calculated.

## MOTOROLA 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				

# MOTOROLA 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)
<b>GOOD (3+)</b>	<b>GOOD (3+)</b>	<b>GOOD (3+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY BAD (1+)</b>
Motorola has a definition of the precautionary principle that identifies the preventive measures to be taken to eliminate the use of hazardous substances even when scientific evidence is limited or conflicting. <b>More information.</b>	Motorola provides a list of banned and reportable substances in its Global Common Specification No. 12G02897W18 (updated 15 May 2008) <b>More information.</b> <b>As a pdf.</b>	Motorola has set a goal to eliminate PVC and BFRs in all new designs introduced after 2010, with such products available in 2010. <b>More information.</b>	Motorola has set a goal to eliminate phthalates in all new designs introduced after 2010, with such products available in 2010. <b>More information.</b> Antimony and compounds and Beryllium and compounds are listed as reportable in Motorola's list of banned and reportable substances. <b>More information.</b>	Motorola lists 59 models of mobile phone whose circuit boards are free of BFRs. Two models free of PVC are listed. Moreover, Motorola's product portfolio includes home network equipment (e.g. set top boxes, wireless routers) and network equipment (e.g. base stations), as well as walkie-talkies. <b>More information.</b> Product Eco Facts for the MOTO W233 Renew are <b>here</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 BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>BAD (0)</b>
Motorola supports Individual Producer Responsibility, but there is no reference to the need for brand differentiation and no evidence of active lobbying for IPR. To stay on one point Motorola needs to improve its understanding of individual producer responsibility. It confuses responsibility for products that Motorola sells with shared responsibility of stakeholders. <b>More information.</b>	Motorola offers recycling services in 72 countries, representing over 90% of global mobile phone unit sales. Motorola also operates take-back services for network equipment, on request. In the US it is now taking back modems, routers and cordless phones. Motorola has extended its Ecomoto take-back programme to Argentina. <b>More information.</b>	Information is provided to individual customers in the countries where Motorola offers voluntary programmes. <b>More information.</b> Motorola also gives a list of the equipment other than mobile phones it takes back in a few countries eg: India, Malaysia. <b>More information.</b> Modems, routers and cordless phones can be returned with a pre-paid mail label in the US. <b>More information.</b>	In 2007 Motorola's global take-back rate was an estimated 3% of total handsets sold in 2005. The end-of-life mobiles are collected via regulatory and voluntary programmes, including Motorola's own 'bring back' events. Although Motorola provides the source of data for calculation, there is no explanation of how EU figures were calculated To regain 2 points, Motorola has 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 country – and provide indications of how it intends to expand this sampling in the future. <b>More information.</b>	One of Motorola's product design goals is to increase the use of recycled materials in its products. However, no examples or quantities are given. <b>More information.</b> The MOTO W233 Renew is made using plastics comprised of recycled water bottles. <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>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>GOOD (3+)</b>
Motorola makes no reference to supporting global mandatory cuts of GHG emissions. <b>More information.</b>	Motorola calculates that direct and indirect greenhouse gas emissions were 375,324 tonnes CO2 equivalent. Motorola's emissions are reported annually, audited and verified by the Financial Industry Regulatory Authority, through the Chicago Climate Exchange, although Motorola loses a point as there is no copy of this verification. In addition, there is no data about product supply chain emissions. <b>More information.</b>	As a founding member of the Chicago Climate Exchange (CCX), a voluntary emissions-reduction program, Motorola has committed to a 6 percent reduction in its absolute greenhouse gas emissions by 2010, compared with 2000 – not 2006-2008 baselines specified by Greenpeace. <b>More information.</b>	Currently 9.7 percent of Motorola's total electricity purchases are from renewable energy sources. Motorola will continue to try to increase use of renewable energy globally. Motorola needs to commit to a target and timeline for increasing RE use globally. <b>More information.</b>	From 1 November 2008, 100% of newly designed Motorola mobile phone chargers meet the new ES2 requirements and exceed by 67% the requirements for standby/no-load modes. <b>More information.</b>