



## MOTOROLA Ranking = 5.1/10

Motorola drops from 4<sup>th</sup> place to joint 6<sup>th</sup>, with the same score of 5.1, as a result of other companies rising up the ranking.

Motorola scores relatively well on the chemicals criteria and has a goal to eliminate PVC vinyl plastic and brominated flame retardants (BFRs), though only in mobile devices and not all its products introduced after 2010, despite the fact that Sony Ericsson and Nokia are already there. All of its mobile phones are now PVC-free and it has two PVC and BFR-free mobile phones, the A45 ECO and the GRASP; all chargers are also free from PVC and BFRs. For more points Motorola needs to complete the phase out of BFRs in mobile phones and start working on the phase out of PVC and BFRs in its other products. It also fails to support the need for RoHS 2.0 (EU Directive on the Restriction of Hazardous Substances in electronics, currently being revised) to adopt an end-of-life focused methodology for adding new substances and an immediate ban on organo-chlorine and bromine compounds. Motorola needs to clarify its stance regarding the position of the trade federation TechAmerica on further restrictions and in particular PVC, chlorinated flame retardants (CFRs) and (BFRs) within 3 to 5 years.

Motorola scores fewer points on waste issues, with weak support for the principle of Individual Producer Responsibility for e-waste and no reporting on use of recycled plastic. Motorola scores well for its take-back and recycling service in 72 countries, representing over 90 percent of global mobile phone unit sales, and for providing good information to its individual customers. It reports a global take-back rate of 2.5 percent of total handsets sold in 2007 but it needs to explain how its EU figures are calculated; it did not achieve its goal to increase the collection of e-waste by 5 percent, although the quantities recycled increased by 100 percent from 2,560 tonnes to 5,162 tonnes.

The company does relatively well on the energy criteria, scoring points on all the criteria with the exception of support for strict global and industrialised country cuts in greenhouse gas (GHG) emissions. Its reporting of its GHG emissions has external verification, and it gets maximum points on the energy efficiency of its products, reporting that from 1 November 2008, all newly designed Motorola mobile phone chargers meet and exceed by 67 percent the new Energy Star v.2.0 requirements for standby/no-load modes. It reports that 15 percent of the energy it purchased in 2009 is from renewable sources, but its goal for increasing its use of renewable energy to 30 percent by 2020 does not exclude renewable energy available by default in the power grid. It also commits to absolute cuts of 6 percent in its GHG emissions by 2010, compared with 2000.

## MOTOROLA 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>				

# MOTOROLA 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 GOOD (2+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY BAD (1+)</b>
<p>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. However, Motorola 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.</p> <p><b>More information.</b> Motorola also needs to clarify its stance in relation to the position of the trade federation TechAmerica on further restrictions and in particular PVC, CFRs and BFRs within 3-5 years.</p>	<p>Motorola provides a list of banned and reportable substances in its Global Common Specification No. 12G02897W18 (updated 15 May 2008) <b>More information.</b></p> <p><b>As a pdf.</b></p>	<p>Motorola has set a goal to eliminate PVC and BFRs in all new designs of mobile products only, (not all products) introduced after 2010, with such products available in 2010. It expects to meet its goal of eliminating these substances for all new designs introduced after 2010.</p> <p><b>More information.</b></p>	<p>Motorola has set a goal to eliminate phthalates in all new designs of mobile phones only, introduced after 2010, with such products available in 2010.</p> <p><b>More information.</b></p> <p>To date, antimony and compounds and beryllium and compounds are only listed as reportable in Motorola's list of banned and reportable substances (p 9-10). <b>More information.</b></p>	<p>As part of implementing its commitment Motorola has launched its second BFR and PVC free phone, the GRASP. <b>More information.</b></p> <p>Chargers are free of BFRs and PVC; <b>download EcoMoto factsheet.</b></p> <p>For more points Motorola needs to complete the phase out of BFRs in mobile phones. It also needs to start working on the phase out of PVC and BFRs in its other products, including home network equipment (e.g. set top boxes, wireless routers). <b>More information.</b></p>

## 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>
<p>Motorola supports Individual Producer Responsibility, but there is no reference to the need for brand differentiation and no evidence of active lobbying for IPR. Motorola needs to clarify that its support of IPR means full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share) for new WEEE. <b>More information.</b></p>	<p>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.</p> <p><b>More information here and here.</b></p> <p>Motorola has established a take-back programme for US business customers for radios, mobile computers, barcode scanners, imagers, in-vehicle mobile workstations, accessories, network infrastructure equipment and computers, laptops and monitors. <b>More information.</b></p>	<p>Information is provided to individual customers in the countries where Motorola offers voluntary programmes. However, information for customers in countries such as Singapore could be improved. For some countries, e.g. Nigeria, South Africa, Motorola provides only one to three drop off locations, with no telephone or email information. Motorola also takes back network equipment if requested by customers.</p> <p><b>More information.</b></p> <p>Motorola's take-back programme for modems and routers.</p> <p><b>More information.</b></p> <p><b>Cordless phones.</b></p>	<p>Motorola's global take-back rate for 2009 was an estimated 2.5% of mobile phones sold in 2007 (compared to 3% in 2006). The quantities recycled increased by 100% from 2,560 tonnes to 5,162 tonnes. Although Motorola provides the source of data for calculation, there is no explanation of how EU figures were calculated. To increase its score 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></p>	<p>Motorola is increasing the proportion of recycled materials used in its products. <b>Percentages of recycled material content are given for 4 models.</b></p> <p><b>More information.</b></p> <p>25% of the housing of the MOTO W233 Renew and MOTO CUBO A45 Eco mobile phones is made using plastics comprised of recycled water bottles.</p> <p><b>More information.</b></p> <p>The DCX3501 set top box uses recycled plastics.</p> <p><b>More information.</b></p>

## 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 GOOD (2+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
<p>Motorola supports global mandatory greenhouse gas emission reductions by at least 50 percent below 1990 levels by 2050. Motorola needs commitments to short term targets: to call for global GHG emissions to peak by 2015 and for industrialised countries as a group to accept mandatory cuts of at least 30% by 2020.</p> <p><b>More information.</b></p>	<p>Motorola calculates that in 2008, its carbon footprint (scope 1 and 2 emissions from the Greenhouse Gas Protocol) totalled 531,661 tonnes CO<sub>2</sub> equivalent, compared to 671,791 tonnes in 2005. But there is no data about product supply chain emissions.</p> <p><b>More information.</b></p> <p>Motorola's 2007 emissions are reported annually, audited and verified by the Financial Industry Regulatory Authority, through the Chicago Climate Exchange.</p> <p><b>More information.</b></p>	<p>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.</p> <p><b>More information.</b></p>	<p>In 2010 about 20% of Motorola's electricity was purchased from renewable sources, with a goal to increase this to 30% by 2020. About 15% of electricity purchased in 2009 came from voluntary purchases, with an additional 5% from the power grid (which does not contribute to Motorola's score). Direct purchases of renewable energy include RECs from wind power in the US and hydro power directly from the generator in Germany. In the US renewable energy certificates are purchased from NativeEnergy.</p> <p><b>More information.</b></p>	<p>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. All of Motorola's newly designed chargers meet the new EU CoC target of 0.25 watts for standby power. Many of Motorola's set top boxes also meet the latest Energy Star standards.</p> <p><b>More information.</b></p>

## 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.