



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.

MICROSOFT Ranking = 2.9/10

Microsoft remains in 17th position with an improved score of 2.9 points, which it earns mainly on the toxic chemicals criteria. The company has committed to removing PVC vinyl plastic and brominated flame retardants (BFRs) from its hardware products by or before 2010, and phthalates by the end of 2010.

On e-waste, Microsoft scores only on its weak support for Individual Producer Responsibility and on reporting that it financed the collection and recycling of e-waste equivalent to 17% of worldwide sales in 2007, without elaborating on how the figure was calculated. On energy, the company gets points for reporting its total carbon dioxide equivalent emissions from its own operations, and that in 2007, 24.4% of all the electricity used was from renewable sources.

MICROSOFT 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				

MICROSOFT 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+)
Microsoft has a definition of the Precautionary Principle, as defined in the UN Rio declaration. More information. Select Precautionary Principle Word file. (may require software)	Microsoft lists its Chemical Specifications and a procedure for identifying future substances for elimination. More information. See Section D, page 14 of H00594 Restricted Substances Specification. Suspect substances for potential future elimination include those on the Canada Environmental Protection Act Domestic Substance List and California Proposition 65 List. However, the latter List includes 100s of substances, most of which are not used by the electronics industry.	Microsoft is committed to eliminating PVC and brominated flame retardants from all of its hardware products by or before 2010. More information. Select 'business practices' & 'Sustainability Fact Sheet' (may require software).	Microsoft provides a timeline of the end of 2010 for eliminating phthalates. See Section D, page 13 of H00594 Restricted Substances Specification. Microsoft currently restricts certain phthalates and antimony in line with the EU Toys Directive, for use in selected products such as game controllers Beryllium compounds, antimony and phthalates are all listed as reportable substances. See p.10, 11 & 12 of Restricted Substances Specification.	No products free of PVC and BFRs.

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 BAD (1+)	BAD (0)	BAD (0)	PARTIALLY BAD (1+)	BAD (0)
Although Microsoft now states that it "supports the mandatory collection and recycling of consumer electronics funded by individual producers...", for full marks, Microsoft needs to support the principle of Individual Producer Responsibility more explicitly and lobby for its operationalisation. More information. Select 'business practices' & 'Sustainability Fact Sheet'.	Microsoft's Authorised Refurbisher (MAR) Programme extends the lifespan of otherwise obsolete PCs. More information here and here.	Microsoft provides links to various recycling initiatives by Microsoft (MAR, Digital Pipeline), other organisations (eg. CEA's myGreenElectronics) and other electronic manufacturers but it still does not provide free take-back for its own products. More information. A link listing Microsoft's recycling partners in the EU requires software to download.	Microsoft states that in 2007 it funded the collection and recycling of over 2.46 million kgs of consumer electrical and electronic goods, approximately 17% of worldwide sales in 2007. More information. Select 'business practices' & 'Sustainability Fact Sheet'. To stay on one point, Microsoft needs to clarify how it calculated the figure of 17%, whether this relates to global take-back & recycling facilities or just in Europe. If only Europe, Microsoft pays for recycling historical waste by current market share and not for the actual amount recycled. So, in the European recycling schemes there is no relationship between the fee paid by Microsoft for recycling and the amount actually recycled.	Microsoft is using recycled plastics in product packaging but no details are given about its use in hardware products. 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)	PARTIALLY GOOD (2+)	BAD (0)
Microsoft now has a Climate Change Policy Statement which supports government actions to transition to a low-carbon economy. However, the need for mandatory reduction of GHG emission is not mentioned. More information. Performance.	Microsoft reports its total CO2 equivalent emissions in 2007 at 15100 metric tonnes (scope 1), 152480 metric tonnes (scope 2) and 255370 metric tonnes from employee business travel (scope 3), but these are not third party verified. More information. Link to Carbon Disclosure Project , see question 2 (b) (i) to question 2 (d), (note log in is required to view). More information.	Microsoft has not set specific emissions reduction targets. More information. Link to Carbon Disclosure Project , see question 3(a), (note log in is required to view).	Microsoft reports that in 2007, renewable energy supplied 24.4% of its total electricity load associated with its facilities and data centres; it is currently investigating opportunities to boost this percentage. Microsoft needs to commit to increase its use of renewable energy with a timeline in order to keep these points. More information. Examples of its use of renewable energy are also given 'Sustainability Fact Sheet' (may require software).	Microsoft does not report on Energy Star compliance but states that it is collaborating with the Natural Resources Defense Council to help make the Xbox 360 more energy-efficient; energy use has been lowered by 34% from product launch in 2005 through 2008. Microsoft has committed to reduce energy consumption of the Xbox 360 by an additional 10% by 2010. More information. 'Sustainability Fact Sheet' (may require software).