



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.

For the latest version greenpeace.org/greenelectronics

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.

NOKIA Ranking = 6.9/10

Nokia stays in 1st place with a total score of 6.9, dropping slightly from 7. Although its score for its support of Individual Producer Responsibility has dropped, Nokia now scores maximum points for its comprehensive voluntary take-back programme, which spans 124 countries providing almost 5000 collection points for end-of-life mobile phones. However, its recycling rate of 3-5% is very poor and more information is needed on how Nokia calculates these figures.

Nokia scores very well on toxic chemical issues, launching new models free of PVC since the end of 2005 and aiming to have all new models free of brominated flame retardants and antimony trioxide by the end of 2009.

Nokia's energy score is boosted by sourcing 25% of its total energy needs from renewable sources in 2007 and by having a target to increase use of renewable energy to 50% by 2010. Nokia commits to reduce its energy use but loses a point for not providing a commitment to reduce greenhouse gas emissions. Top marks (doubled) are given for product energy efficiency as all its mobile phone chargers exceed the Energy Star requirements by 30-90%.

NOKIA 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				

NOKIA 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 GOOD (2+)	PARTIALLY GOOD (2+)
Nokia's definition of the precautionary principle earns them top points.	Nokia has already phased out some harmful chemicals and identified future substances for elimination. More information. New version (2008) of Nokia's substance list.	Nokia has eliminated remaining uses of PVC. See PVC elimination case study. More information. Nokia aims to have all new products launched after the end of 2009 free of restricted flame retardants (all brominated and chlorinated compounds and antimony trioxide). More information.	Antimony trioxide, beryllium oxide and phthalates (with one exemption) are banned in mobile phones and accessories. For all Nokia products, other antimony and beryllium compounds and phthalates are expected to be reduced or gradually phased out. However, no timeline is specified. More information here and here.	New models are PVC-free since the end of 2005. As from January 2007, the first products without components containing BFRs have been introduced. Nokia aims to have all new products launched after the end of 2009 free of these substances. More information. Eco-declarations provided for all Nokia products.

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+)	GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)
Nokia supports and lobbies for IPR. To regain top marks, Nokia will need to explore options for operationalising IPR. More information.	Take-back is offered in 124 countries, including in Africa and Latin America, with almost 5000 Nokia collection points globally. More information here and here and here. Nokia has announced on their Argentine website that they will soon roll out a take-back programme in Argentina. More information.	The information provided is very good, with addresses, phone numbers and directions to Nokia Care Centres and updates about the development of new take-back programmes. For full marks Nokia needs to resolve some minor problems with its provision of information. More information.	Nokia states that it gets back just 3 percent of redundant phones. But it is unclear if this is as a percentage of all Nokia sales, or all brands of mobiles returned – and over which period and geography. More information here and here. Nokia's consumer survey to identify the fate of end-of-life mobile phones.	Nokia is actively researching the use of recycled plastics, which are currently used only in packaging. 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)
PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	GOOD (3+)	GOOD (3+)
Nokia has signed the Bali Communiqué. For full marks, Nokia needs to support specific targets (numbers) and industrialised countries cutting emissions by at least 30% by 2020. More information.	Nokia reports on energy consumption, direct and indirect CO2 emissions. Although it states that calculations are third party verified, neither the certificate nor information about the auditor are provided. More information.	Nokia is committed to reducing the overall energy use of its sites by 6% by 2012 – using data from 2006 as baseline, but there is no commitment to reduce GHG emissions. More information. Nokia is to set energy efficiency and CO2 emission reduction targets for key global suppliers by 2009. More information.	Nokia's target for renewable electricity is to cover 25% of its total needs during 2007 – 2009, increasing to 50% in 2010. The 2007 target has been achieved. More information.	All Nokia's new models of chargers meet or exceed the EPA's Energy Star requirements. Currently available chargers exceed the ES1.1 requirements in no load mode by between 30 and 90%. More information.