



### 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.

## LENOVO Ranking = 4.1/10 - 1 = 3.1/10

Lenovo climbs to 14th position despite its score dropping to 3.1 points, encumbered by a penalty point imposed for backtracking on its commitment to eliminate PVC and brominated flame retardants (BFRs) in all its products by the end of 2009. Lenovo has now moved the timeline for meeting this commitment to end of 2010.

Lenovo scores well on most of the toxic chemical criteria. Although it has recently put on the market a monitor largely free of brominated flame retardants and PVC vinyl plastic, this one model is insufficient to score a point. It also needs to commit to the phase out of beryllium (including alloys and compounds), antimony and its compounds and all phthalates.

Lenovo now has a take-back programme in the US and reports a recycling rate of 2.16% of the weight of products shipped in 2007 and 7.74% of the weight of products shipped in 2000. However, Lenovo loses a point as almost 80% of that data is based on the amount of EU e-waste whose recycling was financed by Lenovo – by current market share – and may bear no relation to the amount of Lenovo branded e-waste actually recycled. Lenovo regains a point for improving information to individual customers in all the countries where take-back is provided.

Lenovo scores poorly on the energy criteria; it discloses greenhouse gas (GHG) emissions from global operations in 2007, although these are not externally verified. It also scores points on energy efficiency, for having all global models of notebook, desktop and monitor introduced since the effective date of Energy Star 4 meeting the current Energy Star requirements, either in the basic models or as an option. However, Energy Star compliance is not supplied as standard for all models; for some models, customers can opt for non-Energy Star compliant PCs.

### LENOVO 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				

# LENOVO 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 GOOD (2+)</b>	<b>BAD (0)</b>
Lenovo scores top marks on its definition of the Precautionary Principle in its <b>Sustainability Report 07/08, p47</b> .	Lenovo's Engineering Specification 41A7731 reflects its commitments on eliminating PVC, BFRs, and beryllium, antimony and their compounds. <b>More information here and here</b>	Lenovo has backtracked on its end of 2009 commitment on eliminating PVC and BFRs and now states that the use of these substances in all products is to be phased out only by the end of 2010. All business units to have at least one product announcement in 2009 supporting the PVC/BFR phase out goal. <b>See p. 45 Sustainability Report.</b>	Antimony and beryllium and their compounds have a phase-out target date of 2012. Most phthalates are listed as reportable substances, which may be candidates for further restrictions in the future. The threshold for reporting is 1000 ppm except for beryllium that is 200 ppm, due to the requirements of European recyclers. <b>More information. pdf file (p.17).</b>	It's good to see Lenovo bringing out one model of monitor, ThinkVision L2440x wide, with trace levels (less than 900ppm) of PVC and BFRs, currently available for the US and Japanese markets only. Information about this model is not yet available on Lenovo's Environmental Data Sheets page. <b>More information.</b> To score on this criterion, Lenovo needs to bring out more models of monitors and PCs free of BFRs and PVC. <b>Information on ThinkVision L2440x wide monitor here and 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>PARTIALLY BAD (1+)</b>
Lenovo supports IPR legislation that allows manufacturers to recover their own brand products. However, for more points, Lenovo needs to provide examples of where it is doing advocacy and details of operationalisation of IPR. <b>See Sustainability Report p. 49.</b>	<b>Voluntary take-back is offered</b> in 51 countries where Lenovo sells products directly, but not in countries where re-sellers sell its products. Moreover, some take-back services are time-limited e.g. all those in Latin America. <b>More information.</b> Product take-back has been extended in <b>India</b> and in <b>China</b> . Lenovo now has a free take-back programme in the US. <b>More information.</b>	Lenovo provides take-back information to both business and individual customers in countries where the company sells its products directly. Lenovo regains a point for providing information to individual customers in all the countries where take-back is provided. <b>More information. Information about Lenovo's free take-back programme in the US.</b>	Lenovo recycled 2.16% of the weight of products shipped in 2007 and 7.74% of the weight of products shipped in 2000. The majority of this was EU e-waste for which Lenovo financed the recycling based on current market share. To earn more points Lenovo 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 – and provide indications of how it intends to expand this sampling in the future. <b>See Sustainability Report p. 52 – 54.</b>	Recycled resins, ranging in recycled content from 10% to 50%, are used in a number of Lenovo hardware applications. See p. 8, Environmental Report. In 2007/8, 1% of the total plastic used came from recycled sources. Lenovo's goal is to use 4% post consumer recycled plastics in 2008/2009. <b>See Sustainability Report p 46-47.</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>BAD (0)</b>	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>
Lenovo does not refer to support for global mandatory reductions in GHG emissions. <b>More information. See Sustainability Report p 48 – 49.</b>	Lenovo reports GHG emissions of 73,566 metric tons from global operations in 2007; this includes scope 1 and 2 emissions, and scope 3 emissions from employee travel. No reference to external verification. <b>See Sustainability Report p 55 – 59.</b>	Lenovo has pledged to increase carbon efficiency by 10% by 2012 based on 2007 emissions. However, these reductions are not absolute. <b>More information. See Sustainability Report p 55.</b>	Lenovo estimates that over 10% of its total electricity usage comes from renewable sources, as the majority of its electricity usage is in China, where 17% of electricity comes from renewable sources. However, other than this, the percentage of renewable energy that Lenovo has invested in is not given and there is no global target for increasing its use. To score points on this criterion, Lenovo needs to report on renewable energy use sourced through its own efforts. <b>See Sustainability Report p 59.</b>	All Lenovo notebook, desktop and monitor global models introduced since the effective date of Energy Star 4 satisfy the current Energy Star requirements, either in the basic models or as an option. However, ES compliance is not supplied as standard for all models; for some models customers can opt for non-ES compliance. <b>See Sustainability Report, p 49.</b>