



### Ranking criteria explained

The ranking criteria reflect the demands of the Toxic Tech campaign to the electronics companies. Our two demands are that companies should:

- clean up their products by eliminating hazardous substances;
- takeback and recycle their products responsibly once they become obsolete.

The two issues are connected. The use of harmful chemicals in electronics prevents their safe recycling when the products are discarded. Companies score marks out of 30, which are then re-calculated to give a mark out of 10 for simplicity.

### Toxic chemicals criteria

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.

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 (five criteria, double points for PVC – and BFR-free models) are weighted more heavily than criteria on recycling, because until the use of harmful substances is eliminated in products, it is impossible to secure 'safe', toxic-free recycling.

Where two companies score the same number of total points, the company with the higher score on the chemicals criteria will be ranked higher.

#### The electronics scorecard ranks companies on:

##### Chemicals policy and practice (5 criteria)

1. A chemicals policy based on the Precautionary Principle
2. Chemicals Management: supply chain management of chemicals via e.g. banned/restricted substance lists, policy to identify problematic substances for future elimination/substitution
3. Timeline for phasing out all use of vinyl plastic (PVC)
4. Timeline for phasing out all use of brominated flame retardants (not just those banned by EU's RoHS Directive)
5. PVC- and BFR-free models of electronic products on the market.

## Policy and practice on Producer Responsibility for taking back their discarded products and recycling (4 criteria)

1. Support for individual (financial) producer responsibility – that producers finance the end-of-life management of their products, by taking back and reusing/recycling their own-brand discarded products.
2. Provides voluntary takeback and recycling in every country where its products are sold, even in the absence of national laws requiring Producer Responsibility for electronic waste.
3. Provides clear information for individual customers on takeback and recycling services in all countries where there are sales of its products.
4. Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled.

**Click here to see more detailed information on the ranking**

**Ranking regrading:** Companies have the opportunity to move towards a greener ranking as the guide is updated every quarter. However penalty points are deducted from overall scores if Greenpeace finds a company lying, practising 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. The guide does not rank companies on labour standards, energy use or any other issues, but recognises that these are important in the production and use of electronics products.

**Ranking guide addition:** 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 have 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.

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

A penalty point has been deducted from Nokia and Motorola's overall score for corporate misbehaviour as a result of Greenpeace testing of the companies' takeback practice in the Philippines, Thailand, Russia, Argentina and India.

# SONY ERICSSON Ranking = 7.7/10

Sony Ericsson moves up from 2nd place to take the lead, by improving on its reporting of quantities of old mobile phones being recycled. The company states its strong support for the precautionary principle and Individual Producer Responsibility. It has a timeline of 1 January 2008 for eliminating brominated flame retardants in two remaining applications and the same timeline for substituting phthalates, beryllium and some uses of antimony compounds.

All new models of mobile phones put on the market since 2006 are free from PVC plastic.

However, Sony Ericsson has lost points on grounds of the information it provides to customers about how to recycle obsolete phones – conclusions reached by Greenpeace assessing Sony Ericsson’s global takeback programme. Enquiries to local Sony Ericsson representatives revealed that no takeback service is offered in Thailand, Russia, Argentina and India.

## SONY ERICSSON Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## SONY ERICSSON Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				<p>Sony Ericsson scores top marks for defining the Precautionary Principle and their commitment to it. <b>More information.</b></p>
Chemicals Management				<p>Sony Ericsson is ahead of many companies in already setting timelines to eliminate substances that others have only identified for future action. The company is to eliminate phthalates, beryllium and some uses of antimony compounds by 1st January 2008. <b>SE's pdf List of Banned &amp; Restricted Substances.</b></p>
Timeline for PVC phaseout				<p>All SE products are PVC free – except for cables in a few early models of chargers and accessories, and these are being phased out. <b>More information. Banned &amp; Restricted Substances.</b></p>
Timeline for BFR phaseout				<p>The SE List of Banned and Restricted Substances sets a deadline of 1st January 2008 for the phase out of two remaining uses, otherwise all products are BFR-free. <b>More information. SE's List of Banned &amp; Restricted Substances.</b></p>
PVC-free and/or BFR-free models (companies score double on this criterion)			<p>All SE products are now PVC-free, with the exception of cables in early models of chargers; and BFR-free with two exemptions until 1st January 2008. <b>More information. Environmental product declaration W300 example.</b></p>	

## SONY ERICSSON Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Sony Ericsson supports Individual Producer Responsibility. <b>More information.</b>
Provides voluntary takeback where no EPR laws exist		Sony Ericsson does not provide a list of countries where it offers voluntary takeback. Instead its Product Declarations inform customers to contact local SE representatives. Testing of SE's takeback by Greenpeace revealed that no takeback services are offered in Thailand, Russia, Argentina or India. <b>More information.</b> <b>Product (Environmental) Declaration</b> (e.g. J100). <b>USEPA's Plug-In To eCycling.</b>		
Provides info for individual customers on takeback in all countries where products are sold		Information on what customers should do with their discarded mobiles is not provided by country. Instead, Product Declarations direct customers to local SE representatives. <b>More information.</b> <b>E.g. for J100.</b> <b>Info for US customers.</b>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			Sony Ericsson now provides estimates of the amount of mobile phones recycled as a percentage of current (not past) sales: 2 - 13% based on sales volume and 1 - 5% based on the number of subscribers. <b>More information.</b>	

# SAMSUNG Ranking = 7.7/10

Samsung has moved up from 8th position to 2nd as a result of introducing products free of the most harmful chemicals; all new models of LCD panels are now free from PVC plastic and all new models of mobile phones have circuit boards that are largely free of brominated flame retardants (BFRs), together with the housing and peripherals. The company scores top marks on all the other chemicals criteria.

Samsung has also improved its reporting on the recycling of obsolete products and supplies good information to consumers on what to do with discarded products – at least for those products for which Samsung offers a takeback service. On the down side, it loses points for providing voluntary takeback of electronic waste in only a few countries and for only some groups of products.

## SAMSUNG Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## SAMSUNG Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Samsung scores top marks on its support for and understanding of the Precautionary Principle. <b>More information.</b>
Chemicals Management				Samsung scores full marks on this criterion, by identifying future chemicals to be targeted for elimination. <b>Identification and management of targeted substances.</b> <b>SEC Standard OQA-2049.</b> <b>Eco-Partner Certification Program.</b>
Timeline for PVC phaseout				Full marks for providing a timeline of 2010 for phasing out PVC. The first totally PVC-free mobile phones to be launched in April 2008. <b>More information here.</b>
Timeline for BFR phaseout				Timeline for phasing out BFRs in all new models is January 2010. <b>More information.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)		Since 1st November 2007, all new models of LCD panels are PVC- free. Since 1st July 2007 all new models of mobile phone use BFR-free materials in most if not all circuit boards. The housings of all mobile handsets and peripherals are BFR-free. Samsung has developed halogen-free memory chips and semiconductors for certain applications. <b>More information.</b>		

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Samsung scores top marks for its support for IPR. <b>More information.</b>
Provides voluntary takeback where no EPR laws exist		Samsung provides voluntary takeback only in a few countries and only for some product groups. <b>Voluntary initiatives.</b> <b>Mobile phone recycling.</b> <b>Global recycling.</b> <b>Domestic (Korean) recycling</b>		
Provides info for individual customers on takeback in all countries where products are sold			Samsung scores an extra point for providing accessible information to consumers on what to do with their discarded products. <b>More information.</b> <b>Voluntary programmes.</b>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				Samsung estimates that in 2006 its recycling rate as a percentage of current sales was 3.2%. <b>More information here.</b>

# SONY Ranking = 7.3/10

Sony has made a dramatic rise to 3rd position, moving up from the bottom in the fourth version of the guide and from 6th in the last edition. This time the company has gained points for improving its reporting of the quantities of electronic waste it recycles.

The company receives a good score for providing many examples of products that are free from PVC plastic, including models of the VAIO notebook, Walkman, camcorders and digital cameras. Sony has commitments to phase out PVC and BFRs by 2010. Sony's takeback and recycling programme has good coverage, particularly in the US, and the company provides clear information to its customers about what to do with discarded products.

## SONY Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				



## SONY Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle			Sony scores 2 points for stating that it will take steps to reduce, substitute and eliminate the use of substances that are potentially hazardous to the environment. <b>More information.</b>	
Chemicals Management				Information on SS-00259 (6th edition, March 2007) Management Regulations and Green Partner programme to ensure implementation of the Regulations <b>More information.</b>
Timeline for PVC phaseout			Sony now provides a timeline of end of 2010 to substitute PVC in all new models of Mobile products (excluding accessories). <b>More information.</b>	
Timeline for BFR phaseout			Sony scores 2 points for providing a timeline of end of 2010 to substitute BFRs in the casing and main PWBs of all new models of Mobile products by the end of fiscal 2010. <b>More information.</b>	
PVC-free and/or BFR-free models (companies score double on this criterion)			Sony has added more examples of products that are free of PVC and partly free of BFRs, including many models of the Personal Computer VAIO, "WALKMAN", Camcorder and Digital camera. <b>More information.</b>	

## SONY Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility			<p>Sony is no longer a member of the Electronic Manufacturers' Coalition for Responsible Recycling (EMCRR), so it no longer operates double standards. Therefore, its penalty point has been lifted. Sony scores 2 points on this criterion because it 'respects' rather than supports the principle of extended producer responsibility – rather than individual producer responsibility. <b>More information.</b></p>	
Provides voluntary takeback where no EPR laws exist			<p>Sony has now established a nationwide recycling program in the US, together with WM Recycle America. There is also a Sony Notebook trade-in program in the US and Canada. <b>More information.</b> <b>Sony offers recycling programs in Korea, Taiwan, Brazil and Australia.</b> <b>More information.</b></p>	
Provides info for individual customers on takeback in all countries where products are sold			<p>Sony provides information to individual customers in the EU, North America (including batteries) and Japan. <b>More information.</b> <b>Also see Sony Take Back Recycling Program website for the US.</b></p>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				<p>In fiscal 2006, Sony recovered 36,355 tons of resources from e-waste from Japanese consumers, which included end-of-life TVs and PCs, equating to a "resource reuse/recycling ratio of around 53% based on average lifespan of TVs and PCs. <b>More information.</b> Sony also reports this 36,355 tons recycled figure as a percentage of total current sales (across all products), which is 3%, <b>in CSR Report 2007</b> (p. 62). <b>Sony reports</b> on the amounts of WEEE and batteries collected in N. America, recycling rates for TVs and PCs in Japan and recycling rates for batteries in Asia &amp; Australia. <b>Figures for recycling of TVs and PCs in Japan.</b></p>

# DELL Ranking = 7.3/10

Dell loses its position at number 3 in the ranking to share joint 4th position, mainly because its score has not altered since the last edition of the Guide and it has therefore been overtaken by other companies.

The company has a strong definition of the precautionary principle, timelines for substituting toxic polyvinyl chloride (PVC) and brominated flame retardants (BFRs) and explicit support for Individual Producer Responsibility. Dell has announced its intention to provide free takeback and recycling services globally to individual consumers wherever its products are sold. Dell loses points for having no models free from PVC and BFRs on the market.

## DELL Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## DELL Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Definition of precautionary principle reflects need to eliminate potentially harmful chemicals even without full scientific certainty of cause and effect and earns Dell top marks. <b>More information.</b>
Chemicals Management				Dell's chemicals management programme lists substances targeted for substitution and provides a good description of how it manages its supply chain to achieve its substitution goals. <b>Guidance Document on Restricted Materials. More information.</b>
Timeline for PVC phaseout				Dell has <b>committed to eliminate all remaining uses of PVC</b> in new products by 2009.
Timeline for BFR phaseout				Dell has <b>committed to eliminate all remaining uses of BFRs</b> in new products by 2009. <b>Update on progress.</b> Dell's R&D on halogen-free materials, including a joint industry database of halogen free materials listed by suppliers to assist designers. <b>More information.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)	No PVC-free or BFR-free products on the market, but <b>one laser printer (1320c)</b> already with halogen-free laminates. Environmental data sheets for products <b>here</b> and <b>here</b> .			

## DELL Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				<b>Strong support for IPR and legislation embracing IPR. More information on policy.</b>
Provides voluntary takeback where no EPR laws exist			Voluntary takeback service is planned to be virtually global, with timeline of end of 2007 for additional countries in Latin America. <b>More information here and here. Links to various countries and regions.</b>	
Provides info for individual customers on takeback in all countries where products are sold			Information provided to Dell's individual customers, but not yet worldwide: <b>Dell Recycling Program. Asset Recovery Service. Links to various countries and regions.</b>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				Dell scores top marks for reporting its recycling rate based on sales 7 years ago. <b>Dell's latest recycling results</b> show they are ahead of schedule to meet their 2009 goal, and report a recycling rate of 12.4% (as percentage of sales 7 years ago). Figures are presented in their <b>2007 sustainability report</b> (see p.66). In 2006, this <b>recycling rate</b> was over 12%.

# LENOVO Ranking = 7.3/10

Lenovo drops from number 3 to joint 4th position and has been overtaken by other companies, having made no progress on any of the criteria since the last ranking.

The company has good chemicals policies and commitments to eliminate all uses of PVC and brominated flame retardants (BFRs). Lenovo offers an extensive takeback and recycling service but it has weaknesses such as the time-limited takeback offer in Thailand. Lenovo also still fails to score any points for providing models on the market that are free of PVC and BFRs.

## LENOVO Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## LENOVO Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Lenovo scores top marks on its definition of Precautionary Principle in <b>Sustainability Report 06/07</b> (p.41)
Chemicals Management				Lenovo's Engineering Specification 41A7731 reflects its commitments on eliminating PVC and BFRs. <b>More information.</b>
Timeline for PVC phaseout				Lenovo's target for elimination of all uses of PVC by 2009 earns the company top marks, in <b>Sustainability Report 06/07</b> (p.41). See also <b>suppliers letter.</b>
Timeline for BFR phaseout				Lenovo's target for elimination of all BFRs by 2009 earns the company top marks, in <b>Sustainability Report 06/07</b> (p.41). See also <b>suppliers letter.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)		Although Lenovo has added Product Environmental Data Sheets, no products are entirely free of PVC or BFRs. <b>More information.</b>		

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Lenovo scores top marks for their IPR position and for support for legislation, in <b>Sustainability Report 06/07</b> (p.44)
Provides voluntary takeback where no EPR laws exist			Voluntary takeback is now offered in all countries where Lenovo sells products directly, but not in countries where re-sellers sell its products. Moreover, some takeback services are time-limited <b>e.g. Thailand.</b> <b>More information.</b>	
Provides info for individual customers on takeback in all countries where products are sold			Lenovo provides takeback information to both business and individual customers in countries where the company sells its products directly. <b>More information.</b>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				Lenovo provides figures of e-waste recycled based on past sales, but is hampered by many of its business customers selling their e-waste to other companies and the fact that Lenovo's global sales operations are only three years old. <b>See Sustainability Report 06/07</b> (p.45-46)

# TOSHIBA Ranking = 7/10

Toshiba has climbed up the ranking from 10th position to joint 6th by making commitments to phase out PVC plastic and brominated flame retardants (BFRs) from its entire product range by 2009 and improving on its reporting of the quantities of old products it recycles.

Toshiba has now made a commitment to Individual Producer Responsibility for its end-of-life products. However, it fails to score any points for this improvement because, in the US, it is a member of the Electronic Manufacturers' Coalition for Responsible Recycling which does not support IPR but instead demands that consumers pay ARFs (Advanced Recycling Fees).

Toshiba offers models of laptops whose circuit boards are free from BFRs, EcoMark certified products without polyvinyl chloride (PVC) and provides examples of other components and parts that are free from these harmful substances.

## TOSHIBA Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				



## TOSHIBA Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Toshiba scores top marks for committing to the total eradication of specified chemical substances, regardless of lack of full scientific certainty. <b>More information here.</b> <b>See commitment #4.</b>
Chemicals Management				Toshiba has Green <b>Procurement Guidelines</b> for suppliers and ranks suppliers. <b>More information here</b> and <b>here.</b>
Timeline for PVC phaseout				Toshiba has now committed to phasing out PVC from all their products, with a timeline of 2009 – not only from their notebook PCs and mobiles. <b>More information here</b> and <b>here.</b>
Timeline for BFR phaseout				Toshiba is committed to phasing out all BFRs from their whole product range, with a timeline of 2009 – not only from their notebook PCs and mobile phones. <b>More information here.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)		Toshiba make a range of notebook PCs including the 'Dynabook', 'Qosmio', 'Satellite', 'Tecra' and 'Portege' models that have circuit boards free of halogens and antimony. Toshiba also make EcoMark-certified products, some of which do not contain PVC. The information is difficult to access, but can be found in <b>'Factor T' brochure. Halogen-free Notebook PC, the Portégé.</b> <b>Examples of products</b> some of whose components are PVC-free and/or BFR-free, but no product systems totally free of these substances. <b>Info on environmentally conscious products.</b> <b>See Factor T brochure pdf.</b> <b>Product information in Japanese here</b> and <b>here.</b> <b>More information in Japanese.</b>		

## TOSHIBA Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	<p>Toshiba believes that IPR provides incentives for Design for Recycling.  <b>More information.</b>                      For full marks, a stronger commitment to IPR is needed. However, Toshiba scores no points on this criteria because in the US, it is a member of the Electronic Manufacturers' Coalition for Responsible Recycling which does not support EPR, but is demanding that consumers pay ARFs (Advanced Recycling Fees).  <b>More information.</b></p>			
Provides voluntary takeback where no EPR laws exist			<p>Voluntary takeback of PCs and TVs as well as (B2B) business equipment is offered in US. PC takeback is also provided in Canada, South Korea and Australia and New Zealand. Toshiba claims to have "recycling programs in regions that cover 80% of total sales volume."  <b>More information here and here.</b></p>	
Provides info for individual customers on takeback in all countries where products are sold			<p>Improved geographical coverage and comprehensive information to customers in those countries with takeback programmes in place. <b>More information.</b></p>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				<p>Toshiba now reports its ratio of "recycling weight to the sales weight" for specified products (including TVs, PCs and 3 types of home appliances) based on current (not past) sales. For 2006, the recycling rate is 12.4%.  <b>More information here.</b></p>

# LG ELECTRONICS Ranking = 7/10

LGE is down from 5th position to joint 6th. Having made no progress on any of the criteria since the last ranking, LGE has allowed competitors to overtake.

LGE scores well on all the chemicals criteria and has also launched models of mobile phones with components free from brominated flame retardants (BFRs). It also scores well for its policy on Individual Producer Responsibility and has improved its voluntary product takeback and recycling efforts. But LGE needs to provide more takeback services for discarded products other than mobile phones.

## LG ELECTRONICS Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## LG ELECTRONICS Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				LGE provides a strong definition of the precautionary principle reflecting the need to take action to eliminate harmful chemicals even though their effects may not be scientifically proven. <b>More information.</b>
Chemicals Management				LGE's product specs in the Manual for Preparation of Environmental Regulations earn them top marks. <b>More information here and pdf here.</b> LGE provides a substance list that includes <b>future substances to be reduced</b> , including beryllium and antimony.
Timeline for PVC phaseout				The first PVC-free products are to be launched in 2008; the remaining uses of PVC are to be phased out by the end of 2010. <b>More information here.</b>
Timeline for BFR phaseout				All new models released in 2010 are to be BFR-free. <b>More information here.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)		LGE's mobile phone division now has three models sold during and after 2006 that contain no BFR in their main PCB, and all handsets developed since June 2007 have a halogen-free main PCB & FPCB (excluding camera/LCD module etc). <b>More information.</b> LGE's Chocolate Phone has a halogen free circuit board and a PVC free cable. <b>More information.</b>		

## LG ELECTRONICS Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				LGE are no longer a member of the Electronic Manufacturers' Coalition for Responsible Recycling (EMCRR) so the penalty point for double standards has been lifted. <b>More information.</b>
Provides voluntary takeback where no EPR laws exist		LGE now provide voluntary takeback of its discarded mobile phones in many countries, but large gaps still exist in Africa, Middle East and Latin America. <b>More information.</b> <b>More info about takeback of other end-of-life products here.</b>		
Provides info for individual customers on takeback in all countries where products are sold		<b>Improved information</b> to customers on what to do with discarded mobile phones. <b>Information on other discarded products here.</b>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			LGE has now compiled figures for e-waste recycling in Europe, Asia and North America . <b>More information here.</b>	

# FUJITSU-SIEMENS Ranking = 7/10

FSC drops one place from 7th to 8th position in the ranking, and has made no progress on any of the criteria since the last ranking.

The company has a good position on the precautionary principle and sells PCs which do not use brominated flame retardants (BFRs) in several components. Despite this, it has not yet set timelines for the phase out of polyvinyl chloride (PVC) and all brominated flame retardants (BFRs) in all of its products.

FSC has yet to report on its recycling rate as a percentage of past sales. The coverage of its takeback and recycling programme has also improved, but not sufficiently to gain extra points.

## Fujitsu-Siemens Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## FUJITSU-SIEMENS Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				FSC's definition of the precautionary principle recognises the need to eliminate potentially harmful substances "even if the full extent of harm has not been definitively established". <b>More information.</b>
Chemicals Management				Fujitsu Siemens provides comprehensive lists of banned and restricted substances, materials specifications and associated documents and gets top marks. <b>More information.</b>
Timeline for PVC phaseout		No final timeline for complete PVC elimination. <b>More information.</b>		
Timeline for BFR phaseout		No final timeline for complete elimination of all BFRs. <b>More information.</b>		
PVC-free and/or BFR-free models (companies score double on this criterion)			The presentation of information on 'Green Products' has improved and the number of products has increased. 'Green Products' use halogen-free flame retarded plastics and halogen-free circuit boards for mainboard and power supply. They include e.g. FUTRO thin clients, ESPRIMO professional PCs and CELSIUS workstations. <b>More information.</b> <b>History of green products.</b>	

## FUJITSU-SIEMENS Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				FSC makes a <b>clear statement</b> in support of Individual Producer Responsibility.
Provides voluntary takeback where no EPR laws exist			FSC will extend its voluntary takeback and recycling programme to the whole EMEA region (Europe, Middle East and Africa) and provides an e-mail address for countries outside EU and South Africa. NOTE, the FSC brand is only marketed in EMEA. <b>More information here and here.</b>	
Provides info for individual customers on takeback in all countries where products are sold			FSC now provides a list of <b>recycling schemes</b> in the 30 countries it covers (EU + 3 non-EU). Customers outside the EU (except South Africa) are provided with an email address to contact FSC about provision of takeback and recycling. <b>More information here and here.</b>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			FSC reports a reuse & recycling rate of over 75% at their own recycling centre in Germany. But, data provided only for the one recycling centre in Germany and not as a percentage of previous sales. <b>More information here and here in German. 2005-06 Environmental Report.</b>	



# NOKIA Ranking = 6.7/10

Nokia loses its top position, falling down to 9th position. This is due to the penalty point for corporate misbehaviour on its takeback and recycling practice. Testing of Nokia's takeback programme by Greenpeace revealed confusing web information and Nokia staff who are not informed about the takeback in the Philippines, Thailand, Argentina, Russia and India. In Thailand, Russia and Argentina, information on Nokia's takeback service is not available in the local language. Also, Nokia scores badly for poor reporting on the quantities of discarded mobiles that it recycles as a percentage of past sales.

On the chemicals criteria, Nokia does much better, having already eliminated PVC from new models of mobiles. It is now eliminating brominated flame retardants (BFRs) from remaining applications in new flexible circuits. Nokia gets top marks for its support for Individual Producer Responsibility. Every company should assume responsibility for the electronic waste arising from its own-brand discarded products).

## NOKIA Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## NOKIA Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				<b>Nokia's definition of the precautionary principle earns them top points.</b>
Chemicals Management				Nokia has already phased out some harmful chemicals and identified future substances for elimination, including beryllium, nonyl phenols and NPEs (nonyl phenol ethoxylates), antimony trioxide. <b>Nokia substance list.</b>
Timeline for PVC phaseout				Nokia has now eliminated remaining uses of PVC. <b>PVC elimination case study.</b>
Timeline for BFR phaseout				The substance list shows that 'bromine and compounds' are being eliminated, schedule shows components where BFRs are already restricted. <b>More information.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)			New models are PVC-free since the end of 2005. From January 2007, Nokia will launch the first products without components containing BFRs, although some models will still contain components with BFRs. <b>More information.</b> E.g. the <b>new N95</b> is PVC free and has no BFRs in main PWB and casing. <b>Eco-declarations</b> are provided for all Nokia products.	

## NOKIA Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Nokia scores top marks for supporting IPR. <b>More information.</b>
Provides voluntary takeback where no EPR laws exist			Still many gaps on Nokia's global takeback map of the world especially in Latin America and Africa – but more service points are now listed in North Africa and Middle East. <b>More information.</b> E.g. <b>free mail-back for US. Greenbox, China.</b> A penalty point has been deducted from Nokia's overall score for corporate misbehaviour as a result of Greenpeace testing of the company's takeback practice in the Philippines, Thailand, Russia, Argentina and India.	
Provides info for individual customers on takeback in all countries where products are sold			<b>No information in countries where no takeback services.</b> The information on the website has deteriorated. <b>The earlier link</b> provided country-specific information on collection points. This information can no longer be found on the site.	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		Nokia now provides a figure of 2% for mobiles recycled, but it unclear if this is as a percentage of all Nokia sales, or all brands of mobiles returned – and over which period. Nokia provides data on production waste, but the Guide ranks on end-of-life product waste. <b>More information here and here.</b>		

# HP Ranking = 6.7/10

HP moves up from 13th position to number 10, having finally provided a timeline of 2009 for eliminating PVC and all brominated flame retardants. However, this refers solely to computing equipment and not for the entire product portfolio.

HP's support for Individual Producer Responsibility has improved and it once again scores top marks on this criterion. HP was the first company to devise an electronic waste takeback/recycling metric based on a percentage of past sales but it has still to improve coverage of its voluntary takeback programme to score full marks on all waste criteria.

## HP Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## HP Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				HP's definition of Precautionary Principle reflects the need to eliminate potentially harmful chemicals even without full scientific certainty of harm . <b>More information.</b>
Chemicals Management				HP scores top marks on its chemical management. <b>More information.</b> <b>General Specification for the Environment.</b>
Timeline for PVC phaseout			HP has finally provided a timeline for eliminating PVC in 2009 from its new computing products, but not for its entire product portfolio. <b>More information.</b>	
Timeline for BFR phaseout			HP has finally provided a timeline for eliminating BFRs in 2009 from its new computing products, but not for its entire product portfolio. <b>More information.</b>	
PVC-free and/or BFR-free models (companies score double on this criterion)	No BFR-free or PVC-free models on the market. <b>More information here and here.</b> <b>List of eco-labelled products More information here and here.</b>			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				HP supports and lobbies for IPR. In Europe, Hewlett Packard is a founding member of the European Recycling Platform that supports IPR.
Provides voluntary takeback where no EPR laws exist			Voluntary takeback - not for all products and not in every region of the world. For PC hardware takeback, major gaps in Africa and South America. <b>More information here and here.</b> <b>Global map of recycling programs, return and recycling choices.</b> Byteback programme in <b>Victoria Australia, China, Thailand.</b>	
Provides info for individual customers on takeback in all countries where products are sold			No information for HP's individual customers in Latin America, Africa, India, New Zealand. <b>More information here, here and here.</b> <b>Info on a range of options (asset recovery, donation).</b>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				HP reports a reuse and recycling rate in 2006 of 10% of relevant sales. <b>More information.</b> <b>A July 2007 press release reports that HP recovered 187 million pounds of e-waste globally in 2006 &amp; sets a new target of 2 billion pounds by 2010.</b>

# APPLE Ranking = 6/10

Apple moves up one place to 11th position, having posted new information that all new iMacs and many of the iPods are now sold with bromine-free casings and printed circuit board laminates as well as PVC-free internal cables.

The company has committed to eliminate all uses of PVC and brominated flame retardants (BFRs) in its products by the end of 2008. Apple also provides examples of additional substances that it plans to eliminate (with timelines), such as arsenic in LCDs and mercury as well as providing "Material Safety Data Sheets" for all of its products.

But Apple still needs to provide a strong commitment to the precautionary principle and to Individual Producer Responsibility, post its Restricted/Banned Substance list on the web and improve coverage of its takeback programmes.

## APPLE Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## APPLE Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle		Definition of precautionary principle reflects poor understanding of this principle in chemical policy. <b>More information.</b>		
Chemicals Management			Apple now provides examples of additional substances that it plans to eliminate with timelines e.g. arsenic in LCDs and mercury by moving to LEDs. It also provides Material Safety Data Sheets for its product portfolio. However Apple still fails to disclose its Substance Specification 069-0135. <b>More information.</b>	
Timeline for PVC phaseout				Apple plans to completely eliminate the use of PVC in its products by the end of 2008. <b>More information here and here.</b>
Timeline for BFR phaseout				Apple plans to completely eliminate the use of brominated flame retardants by the end of 2008. <b>More information here and here.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)		All new iMacs have bromine-free enclosures and printed circuit board laminates as well as PVC-free internal cables. Millions of iPods now have bromine-free enclosures and printed circuit board laminates. <b>More information.</b> Also MacBook Pros with mercury-free LED backlit displays in Chronology. <b>More information.</b>		

## APPLE Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility		Apple refers to its “individually responsible approach” to recycling through its own takeback initiatives and national collective take-back programmes. The definition of IPR needs to be more explicit. <b>More information.</b>		
Provides voluntary takeback where no EPR laws exist			Most of Apple’s voluntary takeback programmes are in <b>US and Canada</b> including <b>free recycling for iPods &amp; mobile phones</b> of all brands. <b>New free recycling</b> of old monitors and PCs of any brand from Apple stores & online sales (seems to be still US only). <b>Apple product batteries takeback</b> (US only)	
Provides info for individual customers on takeback in all countries where products are sold		Information to customers in US and ‘Old Europe’ is much improved, but what about the ‘New Europe’ and customers outside US? <b>More information here</b> and <b>here</b> . <b>US &amp; Canada.</b> <b>Europe.</b> <b>Japan.</b> <b>Taiwan.</b>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				Apple scores top marks for reporting its recycling rate as a percentage of sales 7 years ago. In 2006, Apple recycled 9.5% of the weight of all products sold seven years earlier and has set goals to recycle 13% in 2007, 20% in 2008 and nearly 30% in 2010. <b>More information.</b>



# ACER Ranking = 5.7/10

Acer drops one place to 12th position because its score has not altered since the last ranking and it has therefore been overtaken by competitors. It scores top marks on chemicals but has yet to start selling products free of PVC and brominated flame retardants (BFRs).

Acer has improved communication of its waste policy and practice but still needs to do more on providing voluntary takeback and recycling of its end-of-life products. The only change since the last edition of the Guide is that consumers in India no longer need to pay 1000 Rupees (about Euro 24) for the return of their PC for recycling – recycling is now free, but shipping costs are still incurred. Acer has yet to report on recycling rates as a percentage of past sales.

## ACER Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## ACER Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Acer scores a 'yes' on its statement on the precautionary principle that recognises the need for preventive action, even if scientific evidence is not conclusive. <b>Precautionary principle.</b>
Chemicals Management				Top marks for describing the mechanisms for identifying <b>future substances of concern.</b> <b>Supply chain management HSF Plan.</b>
Timeline for PVC phaseout				Acer pledges to prohibit PVC from use in new products by 2009, in their <b>Hazardous Substances Free (HSF) plan.</b> <b>HSF implementation report.</b>
Timeline for BFR phaseout				Acer pledges to prohibit BFR from use in new products by 2009, in their <b>Hazardous Substances Free (HSF) plan.</b> <b>HSF implementation report.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)	No PVC-free or BFR-free models on the market <b>More information.</b>			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Acer scores top marks for supporting IPR. <b>More information.</b>
Provides voluntary takeback where no EPR laws exist		Acer provides takeback services where required to do so by national EPR laws. Exceptions are US where Acer provides contacts to SVTC and India, where Acer now takes back and recycles for free. <b>More information.</b>		
Provides info for individual customers on takeback in all countries where products are sold		Recycling information provided for EU, Japanese, Taiwanese, Indian and US customers only. <b>More information here, here, here and here for India.</b>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No information on the amounts of e-waste collected and recycled.			

# PANASONIC Ranking = 5/10

Panasonic moves up one place to 13th position, although its score has not changed since the last ranking.

Panasonic provides a large and growing list of products that are free of PVC, including DVD players and recorders, home cinemas, and video players. It has also added two models of lighting equipment free of brominated flame retardants (BFRs) and is manufacturing halogen-free printed wiring boards for certain applications and markets. Panasonic has committed to eliminating all uses of PVC in its products – starting with internal wiring - and has set a timeline of 2011 for eliminating PVC from its notebooks. But on BFRs, the company has yet to commit to their elimination in all products, although a timeline of 2011 has been set for ending use of BFRs in notebooks and mobiles – a fraction of Panasonic’s large product range.

Panasonic scores poorly for its lack of support for Individual Producer Responsibility and its limited voluntary takeback programmes. Panasonic has yet to report on its recycling rate as a percentage of past sales.

## PANASONIC Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## PANASONIC Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Panasonic endorses the Precautionary Principle as defined in the 1992 Rio Declaration. <b>More information.</b>
Chemicals Management				Panasonic's web pages on chemicals management contain a lot of detailed information. Managed substances include: antimony, beryllium, bismuth and phthalate esters. <b>More information.</b> <b>Chemical Substances Management rank guidelines Ver. 4 for products.</b> <b>Green Procurement Standards.</b> <b>Chemical Substances Management Rank Guidelines for Factories.</b>
Timeline for PVC phaseout			Panasonic has committed to eliminating PVC in internal wiring of all products for the Japanese market by end of March 2009 and globally by end of March 2011. No timelines yet for substitution of PVC external cables, except for notebooks which should be globally PVC-free (including AC power cords) by 2011. <b>More information.</b>	
Timeline for BFR phaseout		All new models of mobile phones and computers should be free of BFRs by 2011, but there is no commitment to eliminate BFRs from Panasonic's whole product portfolio. <b>More information.</b>		
PVC-free and/or BFR-free models (companies score double on this criterion)		As of March 2007, Panasonic has many examples of PVC-free products, including DVD players and recorders, home cinemas, video players and lighting equipment. Panasonic has now added two examples of products free of BFRs – fluorescent ceiling lamps and a kitchen lamp, & are manufacturing halogen-free printed wiring boards for certain applications and markets. <b>The PVC free models are listed here.</b>		

## PANASONIC Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	Although Panasonic has clarified its support for recycling, the company fails to embrace Individual Producer Responsibility. <b>More information.</b>			
Provides voluntary takeback where no EPR laws exist		Voluntary takeback programmes are not worldwide and do not cover all Panasonic's product groups, mainly mobiles and toner cartridges. Panasonic's recycling services for PCs now offered in countries where 95% of sales of new PCs. <b>More information. Information on the different regions. B2B takeback systems in US and the EU.</b>		
Provides info for individual customers on takeback in all countries where products are sold		Information to customers is available in European countries with EPR laws and for electronics, batteries and toner cartridges in US. Information on takeback and recycling programmes in China (mobile phones), Korea (many product groups) and Australia (TVs and printer cartridges) and Japan (PCs and household appliances). <b>More information here and here. US trade-in programme. Recycling events in US. Battery recycling here and here.</b>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			Panasonic provides data on home appliances and PCs recycled in Japan (2007) and recycling quantities for the Americas and Korea; information for Europe is in its infancy. <b>More information here and here.</b> Data on fiscal year 2007 for Japan: <b>link 1, link 2, link 3, link 4.</b> <b>Recycling PCs in Japan. Notebooks in the US.</b>	

# MOTOROLA Ranking = 5/10

Motorola is in free fall, down from 9th place to 14th position. This is due to the penalty point for corporate misbehaviour regarding its takeback and recycling practice. Testing of Motorola's takeback programme by Greenpeace revealed that Motorola staff are poorly informed about this service in the Philippines, Thailand, and India. No takeback service is available in Russia.

Although the company offers its customers an increasing number of models of mobile phones whose circuit boards are free from brominated flame retardants (BFRs), their 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. Motorola has still to provide information on PVC-free models and to commit to timelines for eliminating all BFRs and PVC from its entire product portfolio.

Motorola now provides voluntary takeback/recycling services in 57 countries, accounting for more than 90 per cent of global mobile phone sales. Top marks to Motorola for reporting its recycling rate of 3.32 per cent, as a percentage of sales 12-24 months before – the average lifespan of a mobile phone.

## MOTOROLA Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## MOTOROLA Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Motorola has a definition of the precautionary principle which identifies precautionary measures to be taken. <b>More information.</b>
Chemicals Management				Motorola provides a list of banned and reportable substances in its Global Common Specification No. 12G02897W18 (updated August 2007) <b>More information. As a pdf.</b>
Timeline for PVC phaseout	No commitment to eliminating all uses of PVC. <b>More information.</b>			
Timeline for BFR phaseout	No commitment to eliminating all uses of BFRs. <b>More information.</b>			
PVC-free and/or BFR-free models (companies score double on this criterion)		Motorola list 55 models of mobile phone whose circuit boards are free of BFRs. No 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>		

## MOTOROLA Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Motorola makes a clear statement in support Individual Producer Responsibility. <b>More information.</b>
Provides voluntary takeback where no EPR laws exist			Motorola offers recycling services in 57 countries, representing over 90% of global mobile phone unit sales, in line with their goal for 2007. However, African countries are missing, as are markets like Russia. However, testing of Motorola's takeback programmes by Greenpeace in Philippines and Thailand revealed that Motorola staff are not informed about the takeback service or provide misleading information – which is why Greenpeace is deducting a penalty point from Motorola's overall score. <b>More information.</b> Motorola's goal for 2007 is to provide take-back in 90% of countries where it has sales (see their 2006 Corporate Responsibility Report, p.23).	
Provides info for individual customers on takeback in all countries where products are sold			Information is provided to individual customers in the countries where Motorola offers voluntary programmes. <b>More information.</b>	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				Motorola is reporting its recycling rate of 3.32%, as a percentage of sales, comparing them with sales 12-24 months prior – the average lifespan of a mobile phone. <b>More information.</b>



# SHARP Ranking = 4.7/10

As a newcomer to the ranking Guide, Sharp comes in at number 15 (out of 18). The company scores well on most of the chemicals criteria, already providing examples of models most of whose components are free of PVC and brominated flame retardants (BFRs). For example, all Sharp mobiles (sold in Japan) and many models of LCD TVs are free of PVC, except accessories.

Sharp scores top marks for setting a timeline of the end of 2010 by which it intends to eliminate vinyl plastic (PVC) and all BFRs from its entire product portfolio. To improve its score, Sharp needs to sharpen up its policies and practices on e-waste.

## SHARP Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## SHARP Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Sharp scores top marks for its commitment and understanding of the Precautionary Principle. <b>More information.</b> <b>Basic Environmental Philosophy</b> (point 2.2).
Chemicals Management			To achieve top marks Sharp needs to define the criteria for identifying substances for future elimination. <b>Manual for Survey of Chemical Substances and Green Procurement Guidelines.</b> <b>Manual for Survey of Chemical Substances Contained in Parts and Materials.</b> <b>Green Procurement Guidelines.</b>	
Timeline for PVC phaseout				Sharp commits to eliminate PVC from all products by the end of 2010, provided it can find suitable alternatives. <b>More information.</b>
Timeline for BFR phaseout				Sharp commits to eliminate BFRs from all products by the end of 2010, provided it can find suitable alternatives. <b>More information.</b>
PVC-free and/or BFR-free models (companies score double on this criterion)		All Sharp mobiles and many models of LCD TVs are free of PVC, except accessories. Many models of LCD TVs, DVD projectors, audio and video products have casings free of BFRs, but none are totally free of BFRs. <b>More information.</b>		

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to Individual Producer Responsibility. <b>More information.</b>			
Provides voluntary takeback where no EPR laws exist	The only voluntary takeback programme is in US, as part of EPA's 'Plug-in To eCycling'. <b>More information.</b>			
Provides info for individual customers on takeback in all countries where products are sold	Information is provided in Japanese for customers in Japan. <b>More information.</b> For European consumers, information on recycling is provided with the user's manual supplied with the product. Otherwise there is no information for individual customers. <b>More information here and here.</b>			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		Figures are given for recycling of TVs, copiers, PCs and washing machines in Japan only, for 2006. <b>More information here and here.</b>		

# MICROSOFT Ranking = 2.7/10

Another newcomer to the ranking Guide, Microsoft comes in at number 16 (out of 18). The company scores points for its chemical management and for setting a timeline by which it intends to eliminate vinyl plastic (PVC) and all BFRs, but only by 2011.

Microsoft scores poorly on most waste criteria, but is reporting on amounts of e-waste recycled, albeit only for Europe.

## MICROSOFT Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## MICROSOFT Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle	No reference to the Precautionary Principle. <b>More information.</b>			
Chemicals Management			Microsoft lists its Chemical Specifications but fails to provide information on mechanisms for identifying future substances for elimination and no examples of future substances to be eliminated. <b>Restricted Substances Specifications. Restricted Substance Specification for Hardware Products and Packaging (H00594). Restricted Substance Control System (H00642).</b>	
Timeline for PVC phaseout			Microsoft is committed to eliminating PVC from all of its hardware products by or before 2011. <b>More information here and here.</b>	
Timeline for BFR phaseout			Microsoft is committed to eliminating brominated fire retardants from all of its hardware products by or before 2011. <b>More information here and here.</b>	
PVC-free and/or BFR-free models (companies score double on this criterion)	No products free of PVC and BFRs.			

## MICROSOFT Detailed Scoring

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility		Although Microsoft supports producer-funded recycling programmes, it does not explicitly support that these allocate costs to individual producers, so as to drive product design change. <b>More information here and here.</b>		
Provides voluntary takeback where no EPR laws exist	No voluntary takeback programmes, although Microsoft announced that it is extending its refurbishment MAR program to include OEM and refurbisher partners that sell refurbished PCs to the open market – thus extending the lifespan of otherwise obsolete PCs. <b>More information.</b>			
Provides info for individual customers on takeback in all countries where products are sold	Links are given for all EU countries (as part of WEEE Directive), but no information is available for customers anywhere else in the world. <b>More information.</b>			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		In 2006, Microsoft funded the direct recovery and recycling of over 1.3 million kgs of consumer electrical and electronic goods from European households, which represents some 37% of their year 2000 hardware sales volume in Europe. This metric available only for Europe. However, in Europe Microsoft pays for recycling historical waste by current market share and not for the actual amount recycled. So, there is no relationship between what Microsoft pays for recycling and the amount actually recycled. <b>More information.</b>		

# PHILIPS Ranking = 2/10

Philips, another newcomer to the ranking Guide joins at 17th position out of 18. Philips scores points for its chemicals management and for committing to the precautionary principle, although its understanding of this principle needed to be clarified.

Philips has committed to eliminate brominated flame retardants from its product range but, so far, without a timeline. No such commitment is made for eliminating PVC. Philips scores zero on all the e-waste criteria, so there is plenty of scope for improvement in the future.

## PHILIPS Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

## PHILIPS Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle			Philips' understanding of the Precautionary Principle fails to embrace the need to take preventative action before full scientific certainty of a suspect chemical's potential to cause harm. <b>More information. Environmental Policy.</b>	
Chemicals Management				Philips scores top marks for providing Product and Process Specs, criteria for identifying 'future substances' for elimination and examples, namely 'reported' substances. <b>More information. Restricted substances in Products list. Restricted substances in Processes list. Criteria for identifying 'future' substances for phase out. List of "reported" substances.</b>
Timeline for PVC phaseout	Philips have phased out PVC from packaging and will continue to investigate options to replace PVC in products, but fail to commit to eliminating PVC altogether. <b>More information.</b>			
Timeline for BFR phaseout		Philips has already eliminated BFRs in TV housings and will transition to alternatives to BFRs. <b>More information. Lists of Restricted &amp; Relevant Substances here and here.</b>		
PVC-free and/or BFR-free models (companies score double on this criterion)	Green Flagship products are listed but there are no examples of BFR free or PVC free products. <b>More information. See Sustainability Report 2006, p 72 – 73.</b>			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	Philips favour the "visible fee for take back and recycling, which consumers pay at the time of purchase". <b>More information. Sustainability report 2006 (p.55).</b>			
Provides voluntary takeback where no EPR laws exist	No voluntary takeback offered.			
Provides info for individual customers on takeback in all countries where products are sold	Philips only gives customer information on takeback within the EU. <b>More information.</b>			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No figures on post consumer waste collected & recycled are given. <b>More information.</b>			

# NINTENDO Ranking = 0/10

Nintendo joins the Guide in bottom place. The company scores zero on all criteria, allowing infinite room for future improvement.

## NINTENDO Overall Score

	<b>BAD (0)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>GOOD (3+)</b>
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				



## NINTENDO Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle	No reference to the Precautionary Principle. <b>More information.</b>			
Chemicals Management	No Product Specification or List of Banned/ Restricted Substances. No information on how Nintendo communicates with its supply chain. No mechanism for identifying substances for future elimination or examples of these substances. <b>More information.</b>			
Timeline for PVC phaseout	No policy on use of PVC. <b>More information.</b>			
Timeline for BFR phaseout	No policy on use of BFRs <b>More information.</b>			
PVC-free and/or BFR-free models (companies score double on this criterion)	No information			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to Individual Producer Responsibility or recycling of used Nintendo products. <b>More information.</b>			
Provides voluntary takeback where no EPR laws exist	No information			
Provides info for individual customers on takeback in all countries where products are sold	No information			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No information			