

NOKIA Ranking = 7.5/10

Nokia stays in 1st place with the same score of 7.5.

Overall, Nokia does best on the toxic chemicals criteria, followed by energy, and does least well on e-waste issues. Nokia scores very well on toxic chemical issues; all its new models have been free of PVC since the end of 2005, and all new models of mobile phones and accessories launched in 2010 are on track to be free of brominated compounds, chlorinated flame retardants and antimony trioxide, therefore achieving its goal to phase out these substances. However, despite Nokia's support for further restrictions for chlorinated and brominated substances in legislation, it fails to score for its position on the RoHS (Restriction of Hazardous Substances in electronics) Directive, as it does not openly support restrictions on at least PVC vinyl plastic, chlorinated flame retardants (CFRs) and brominated flame retardants (BFRs) in the next 3-5 years i.e. in RoHS 2.0.

Nokia scores maximum points for its comprehensive voluntary take-back programme, which spans 85 countries providing almost 5,000 collection points for end-of-life mobile phones. It also scores top marks for the information it provides to customers on what to do with their discarded products. However, its recycling rate of 3 to 5 percent is very poor; more information is needed on how Nokia calculates these figures; it also needs to start using recycled plastics beyond just for packaging.

Nokia is one of the top scorers on the energy criteria. Nokia scores points for sourcing 25 percent of its total energy needs from renewable sources in 2007 and has a target to increase its use of renewable energy to 50 percent by 2010. Top marks (doubled) are given for product energy efficiency as all but one of its mobile phone chargers exceed the Energy Star requirements by between 30 and 90 percent. It also scores full marks for committing to reduce its own absolute CO₂ emissions by a minimum of 10 percent in 2009 and 18 percent in 2010, from a baseline year of 2006. Nokia provides a third party verification certificate for its disclosed CO₂ emissions and it scores a point for its CEO's statement in support of 30 percent cuts in greenhouse gas emissions in industrialised countries by 2020.

NOKIA Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

NOKIA Detailed Scoring

Chemicals

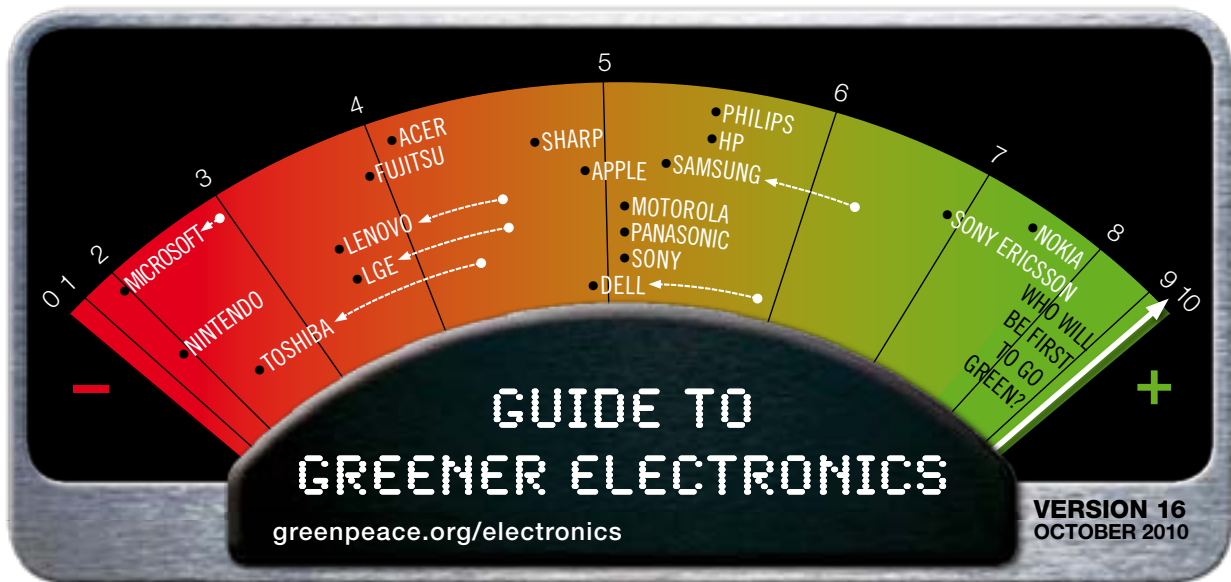
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	GOOD (3+)	PARTIALLY GOOD (2+)	GOOD (3+)
Nokia's definition of the precautionary principle supports taking voluntary steps to eliminate potential hazardous substances despite lack of full scientific certainty. More information. Nokia states that it supports a methodology for further restrictions in RoHS, where restriction criteria are based on <i>potential</i> risk in the <i>full</i> product life cycle. Nokia only scores one point as although it supports further restrictions for chlorinated and brominated substances it does not openly support restrictions on at least PVC, CFRs and BFRs in the next 3-5 years in RoHS 2.0.	Nokia has already phased out some harmful chemicals and identified future substances for elimination. More information. New version (2010) of Nokia's substance list.	Nokia states that all new mobile phones and accessories to be launched during 2010 are on track to become fully free of bromine, chlorine and antimony trioxide. More information. Nokia eliminated remaining uses of PVC in 2006. See PVC elimination case study. More information. Nokia's approach.	Nokia has banned the use of beryllium oxide since 2004 and it is working to restrict beryllium and its compounds in the near future with the exemption of use as gold dopant. The intentional addition of 8 types of phthalates is also banned in new products. More information. All products from 2010 will be free of antimony trioxide. However, there is no target to phase out other antimony compounds. More information.	Nokia gets maximum points as it has achieved its goal to phase out brominated compounds, chlorinated flame retardants and antimony trioxide; Nokia eliminated remaining uses of PVC in 2006. Today a total of 33 new Nokia products are free from these substances; all new models of mobile phones and accessories launched in 2010 are on track to be free of these substances. More information. Eco-declarations provided for all Nokia products. Product details.

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+)	GOOD (3+)	PARTIALLY BAD (1+)	BAD (0)
Nokia has consistently supported and lobbied for IPR. Its current commitment to IPR is unclear and needs to be updated to maintain these points. It should clarify that support for IPR means full internalisation and transparent feedback of its products real end-of-life costs. It also needs to explore options for operationalising IPR and to lobby for IPR, inter alia to ensure the revised EU WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR by enforcing differentiated financing for own-brand real end-of-life costs. More information. See also p.98 of Sustainability Report 2009.	Take-back is offered in 85 countries, including in Africa and Latin America, with almost 5000 Nokia collection points globally, see p 74. More information here and here. Although Nokia has a programme in Argentina this isn't listed on its global website. More information. Take-back points.	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, most recently those launched in 10 Middle Eastern countries and 11 African countries. More information.	Nokia collected 373 tonnes of e-waste in 2009 including 4.7 million mobile phones, compared to 316 tonnes in 2008. See p 90 Sustainability Report. Nokia reports on its collection and recycling achievements in China, Finland, North America, Chile & Peru and Malaysia. More information.	Nokia is still actively researching the use of recycled plastics, which are currently used only in packaging. It's about time Nokia started using recycled plastics in its mobile phones, as its competitors are doing. 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 GOOD (2+)	GOOD (3+)	PARTIALLY GOOD (2+)	GOOD (3+)
Nokia has signed the Bali Communiqué and its CEO states that 'By working together even the goal of achieving 30% cuts in CO ₂ emissions from 1990 levels in industrialized countries by 2020 is possible'. For full marks, Nokia needs to call for global GHG emissions to peak by 2015. More information. For full marks, Nokia needs to call for global GHG emissions to peak by 2015.	Nokia reports on its 2009 GHG emissions as 227,100 tonnes compared to 244,700 tonnes in 2008 in its Sustainability Report, p121, 125 & 126. Independent assurance report p.134 – 137, refers to Ecofys verification of 2008 GHG data. In future, Nokia needs to provide verification of its 2009 GHG emissions according to the GHG protocol. More information. Nokia has published a verification statement of its 2008 data. Nokia provides a life cycle analysis of a typical Nokia device. Also see p 120 Sustainability Report.	Nokia is committed to reducing CO ₂ emissions by a minimum of 10% in 2009 and 18% in 2010, from a baseline year of 2006. Nokia is to ensure that its key suppliers set energy efficiency and CO ₂ emission reduction targets. More information.	In 2009 35% of Nokia's electricity use was provided by renewable energy, compared to 26% in 2008. Most of this is made up of RES-E Guarantee of Origin certificates in Europe and Greenpower certificates in Australia. See Sustainability Report, p 122 & 129. Nokia's target for renewable electricity is to increase its use to cover 50% of its total needs in 2010. See p.49 here. Although Nokia provides details of the various renewable energy certificates that it purchases, it remains on two points because it fails to address concerns about additionality and to provide more information about the EU RECs it is buying.	All Nokia's new models of chargers meet or exceed the EPA's Energy Star requirements. All except one of the currently available chargers exceed the requirements in no load mode by between 30 and 90%. More information and here.



SONY ERICSSON Ranking = 6.9/10

Sony Ericsson remains in 2nd place, with the same score of 6.9. It is the best performer on the toxic chemicals criteria of all the ranked brands, being the first to score full marks on all chemicals criteria. It also does well on energy.

All Sony Ericsson products are already free from PVC vinyl plastic and brominated flame retardants (BFRs), with the exception of a few components that are still being phased out. Sony Ericsson has already met the challenge of the new criterion on chemicals by banning antimony, beryllium and phthalates from new models launched since January 2008. Moreover, Sony Ericsson is proactively lobbying in the EU for the revision of the RoHS (Restriction of Hazardous Substances in electronics) Directive to adopt a 3 to 5 year timeline for further restrictions on organo-chlorine and bromine substances.

It is weakest on waste and recycling issues, scoring nothing on use of recycled plastic. It scores a point for reporting that, in 2008, around 5 percent of its mobile phones (based on sales volume) were collected and recycled through European recycling schemes; figures are also given for programmes in the US, Australia and Canada. Sony Ericsson scores points on its information to consumers about its take-back programme. For more points on e-waste, it needs to continue to increase its lobbying for Individual Producer Responsibility, extend its take-back and recycling programmes, and use recycled plastic across all its products – not just a few models.

On energy, Sony Ericsson scores points for committing to reduce absolute greenhouse gas emissions from its internal activities by 20 percent by 2015 (2008 baseline) and reports that 30 percent of its electricity use globally comes from renewable sources, although it needs to address concerns about the additionality of its renewable energy purchases by clarifying if this is in addition to RE sourced via the Swedish grid. Sony Ericsson has signed the Copenhagen Communiqué, which calls for global emissions to peak and begin to decline rapidly within the next decade; this scenario will require a reduction of 50 to 85 percent by 2050. It also states that developed countries need to take on immediate and deep emission reduction commitments that are much higher than the global average, but provides no concrete numbers. All of its products meet and exceed the Energy Star standard. It reports CO₂ emissions from its own manufacturing and product transportation, but fails to have these emissions verified by a third party.

SONY ERICSSON Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

SONY ERICSSON Detailed Scoring

Chemicals

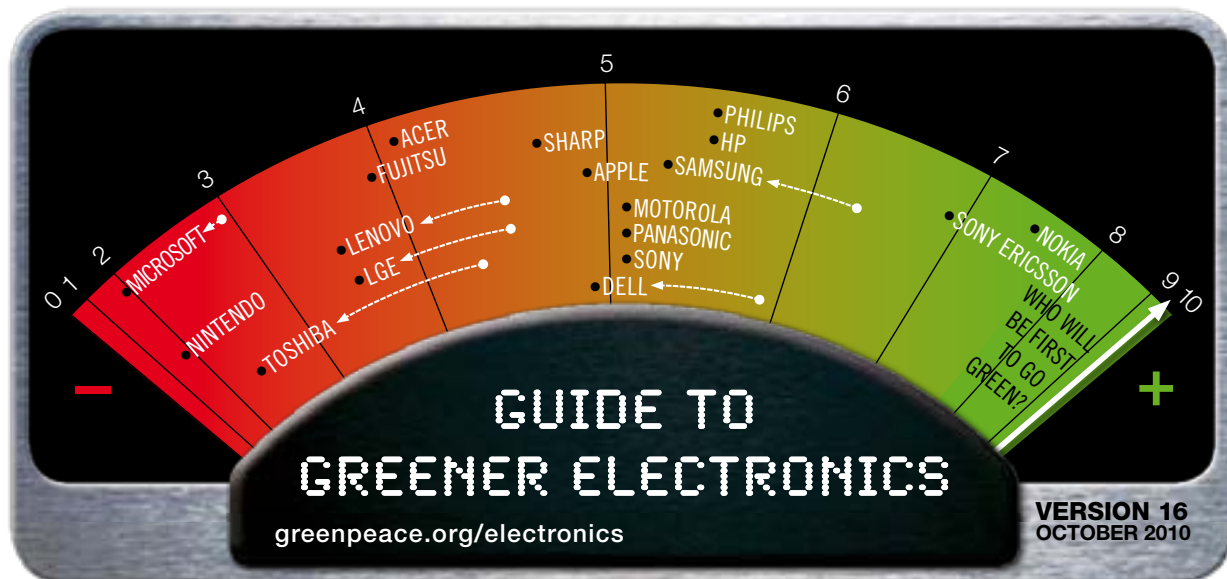
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
GOOD (3+)	GOOD (3+)	GOOD (3+)	GOOD (3+)	GOOD (3+)
Sony Ericsson supports the Precautionary Principle as defined by the Rio Declaration and is implementing it. It also states that it supports the inclusion of BFRs and PVC in the revision of the RoHS Directive, together with a relevant exemption process as well as an improved methodology for further substance restrictions. More information and here. Evidence of Sony Ericsson's position and lobbying on RoHS 2.0. More information. SE stated at a Chemsec conference held at the EU Parliament, attended by Greenpeace, that it supports a 3-5 year timeline for further restrictions on organo-chlorine and bromine substances.	Sony Ericsson is ahead of many companies by already eliminating substances from its new products that others have only identified for future action. More information. SE's pdf List of Banned & Restricted Substances.	Since 2007 all SE products have been PVC free and in 2009 all charger cables except one legacy charger, became completely free of PVC. All models placed on the market after 1 January 2008 are BFR free in circuit boards, casings and cables, older models may still contain BFRs in circuit boards and substrates. More information. Banned & Restricted Substances. See also p 12-13 Sustainability Report 2009.	All new SE products are now beryllium free and phthalate free. Antimony is also banned apart from two minor remaining applications where antimony is used; alternatives have been developed for moisture protection and antimony is being phased out, but the use of antimony in varistors has been exempted from the phase out plan until replacement materials have been identified. More information. There are also a few exemptions for products placed on the market before 1 January 2008. More information.	SE scores maximum points (doubled) on this criterion. All SE products are PVC-free, with the exception of cables in early models of chargers. Since January 2008, all new SE models are BFR-free with the exception of a few components whose phase out is on-going. At present, new Sony Ericsson products are 99.9% free from all halogenated flame retardant. More information. Environmental product declarations for phones and mobile broadband.

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)
Sony Ericsson has launched an individual product 'environmental warranty' as part of its commitment to Individual Producer Responsibility, by which it commits to recycle its products in an environmentally sound way when any SE product is taken to any designated collection point globally, regardless of where the product was originally purchased. More information. SE also states that it supports legislation and participates in the process of putting legislation in place. However, it needs to clarify that its understanding and commitment to IPR means supporting full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately, independent of whether that is via its own take-back system or participation in other systems. Also p.14 of 2008 Sustainability Report.	Sony Ericsson has initiated its new 'environmental warranty' programme that includes take-back and recycling in Taiwan, China, Thailand, Singapore, Malaysia, Philippines, New Zealand, India, Australia, Israel, USA and Canada. Sony Ericsson intended to complete this rollout by 2009 in all the countries in which it operates, however, customers in Central and South America, Africa and the Middle East, as well as Russia, Turkey, Ukraine and several South East Asian countries are informed that take-back is 'coming soon'. More information and here.	Sony Ericsson intends to provide information to customers in all the countries in which it operates. More information. Sony Ericsson provides links from its 'support' page to customers in Taiwan, China, Thailand, Singapore, Malaysia, Philippines, New Zealand, India, Australia, Israel, USA, Canada and Europe. Customers in other countries are informed that SE take-back is coming soon. More information.	Sony Ericsson reports that 770,000 mobile phones were recycled through its system in 2009. See p 10 Sustainability Report 2009. Sony Ericsson estimates that in 2008 around 5% of SE phones (based on sales volume) have been collected and recycled through European recycling schemes. This figure is estimated based on the quantities of categories and products recorded by some European countries. Figures are also given for programmes in the US, Australia and Canada, but it is not clear whether the figures given represent Sony Ericsson phones or overall totals. Hundreds of thousands of obsolete mobile phones have been collected since the start of SE's own service operations. More information.	Sony Ericsson's new 'GreenHeart' pioneer phones use a minimum of 50% recycled plastics. The MH300 Green Heart™ headset includes 100% recycled plastics in most plastic parts. More information. Sony Ericsson is looking to use post consumer recycled plastics further in its products. To score points, SE needs to use recycled plastics across all its products and report the amount of recycled plastic sourced as a % of all plastics used. 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 GOOD (2+)	PARTIALLY GOOD (2+)	GOOD (3+)
Sony Ericsson signed up in support of the Bali Communiqué, the Poznań Communiqué and most recently the Copenhagen Communiqué, which calls for global emissions to peak and begin to decline rapidly within the next decade; this scenario will require a reduction of 50-85% by 2050. It also states that developed countries need to take on immediate and deep emission reduction commitments that are much higher than the global average, but provides no concrete numbers. More information here and here.	Sony Ericsson reports its total GHG emissions as 43,160,209 kg CO ₂ , reduced from 57,390,998 in 2008, using the GHG Protocol to calculate its carbon footprint. See p 8 Sustainability Report 2009. For more points Sony Ericsson needs to provide evidence of external verification. More information.	Sony Ericsson has absolute targets to reduce its total GHG emissions. By 2015 it aims to: - reduce emissions from the full life cycle of its products by 15%; - reduce emissions from its internal activities by 20%. Both targets are based on 2008 levels. More information here and here.	From 2008 all Sony Ericsson sites in Sweden purchase renewable energy (wind, solar and hydro), making up about 40% of the total electricity used at all Sony Ericsson sites. More information. Sony Ericsson states that over 30% of all electricity purchased globally has been certified by the Swedish Society for Nature Conservation. However, although this is new information the question of additionality of its renewable energy purchases is not clarified ie. is this in addition to RE sourced via the Swedish national grid. See p 8 Sustainability Report 2009. More information.	All new models after 2005 meet the requirements of Energy Star, and "...67% are better than the EU CoC power requirements. The standby power is not more than 0.1 W for all new charger models after 2005." More information. Also p.10 2008 Sustainability Report .



PHILIPS Ranking = 5.5/10

Philips stays in 3rd place, with an increased score of 5.5, up from 5.1. Philips gains points for launching an LED TV that is free from PVC and BFRs, the first product in this category to be free from these hazardous substances. Philips also has a shaver range and adapters that are PVC and BFR-free, TVs with PVC/BFR-free housings (EU market only so far, for nearly 2 years), as well as PVC/BFR-free Senseo and oral healthcare products and a PVC-free remote control.

Philips scores well on toxic chemical issues; it has committed to eliminating PVC vinyl plastic and all brominated flame retardants (BFRs) in all its new product models by the end of 2010, and six types of phthalates and antimony by 31 December 2010. Beryllium and its compounds are already restricted; arsenic has been eliminated from TV glass and other display products from 2008. However, it fails to support the need for the RoHS 2.0 Directive (Restriction of Hazardous Substances in electronics, currently being revised) to adopt an end-of-life focused methodology for adding new substances and an immediate ban on organo-chlorine and bromine compounds.

Philips is weakest on e-waste and recycling, scoring zero on use of recycled plastic and for no longer reporting on recycling rates based on past sales. It also scores no points for voluntary take-back and recycling as it has failed to expand its take-back programme in non-OECD countries, beyond India, or extend its pilot programmes in Brazil and Argentina. Philips now claims to support Individual Producer Responsibility (IPR), is engaging in a European NGO and industry coalition in support of IPR and is committed to actively working towards developing IPR-based recycling systems and their supporting financial mechanisms, but needs to support full internalisation and transparent feedback of its products real end-of-life costs.

Philips is one of the top scorers on energy, and earns full marks for supporting the levels of cuts in greenhouse gas (GHG) emissions needed to abate dangerous climate change and for committing to absolute cuts in its operational carbon footprint of 25 percent by 2012 (using a baseline year of 2007). Its overall CO₂ emissions dropped 10 percent in 2009 compared to 2008, with emissions from manufacturing decreasing by 6 percent. It also scores points for disclosing carbon dioxide equivalent emissions from its own operations, for sourcing 15 percent of all electricity used in 2009 from renewables and for reporting to the latest Energy Star standard. All TVs sold in the US and 90 percent of European models meet Energy Star v.3.

PHILIPS Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

PHILIPS Detailed Scoring

Chemicals

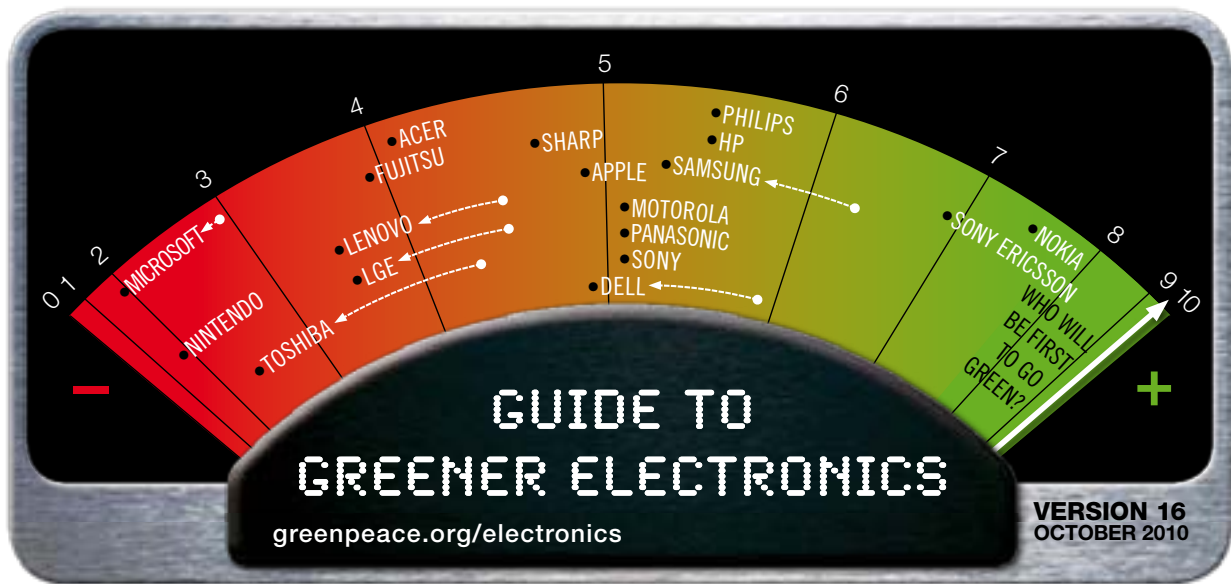
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	GOOD (3+)	GOOD (3+)	PARTIALLY BAD (1+)
Philips' definition of the Precautionary Principle identifies the need to take preventative measures without full scientific certainty. More information. However, Philips states no support for the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine substances (at least PVC, CFRs and BFRs within 3 – 5 years), as well as an end-of-life focused methodology for adding future substance restrictions. Philips statement on RoHS Recast. More information.	Philips scores top marks for providing Product and Process Specs, criteria for identifying 'future substances' for elimination and examples. More information. Philips Regulated Substances List, Version A, replaces the Restricted and Relevant Substance Lists in Products and reflects commitments to phase out PVC and BFRs (see Table 9). Restricted substances in Processes list. Framework document.	Philips had a goal to have certain models of consumer products free of PVC and BFRs by the end of 2008 and aims to phase out PVC and all BFRs by the end of 2010, for consumer products put on the market after that date. Philips has brought a PVC and BFR-free LED-TV onto the market. More information.	Six types of phthalates and antimony will be eliminated by December 31 2010. Arsenic has been eliminated from TV glass and other displays from 2008. More information. Beryllium and its compounds are already restricted with a threshold of 1000 ppm, but include exemptions. See Table 5. Philips needs to provide a timeline for overcoming the exemptions on beryllium and to clarify why other types of phthalates (beyond the six specified) are not scheduled for elimination.	Philips is the first company to introduce a PVC and BFR-free TV; its latest PVC and BFR-free products are the Econova LED-TV and the shaver range RQ12. From July 2010 new adapters for consumer lifestyle products are also PVC and BFR-free. Previously, Philips put on the market TVs with PVC/BFR-free housings (EU market only so far), PVC/BFR-free Senseo and oral healthcare products and a PVC-free remote control. More information. News release announcing Econova TV. Product leaflet.

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+)	BAD (0)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)
Philips supports the principle of Individual Producer Responsibility (IPR) at least as far as differentiation is concerned but not as far as provisions that avoid the costs falling on others. Philips has signed the IPR coalition statement and has pledged to actively work towards developing IPR based recycling systems and their supporting financial mechanisms. More information. For full marks on IPR Philips needs to support full internalisation and transparent feedback of its products real end-of-life costs, to document its operationalising of IPR and continue to lobby for IPR, inter alia by ensuring that the revised EU WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR. It also needs to reject Art 14.2. (continued use of the Visible Fee) of the EC proposal for a revised WEEE Directive.	It is Philips' intention to help establish global collection and recycling systems. More information. Philips has a voluntary take-back programme in India encompassing 8 cities with 27 service centres. More information. Pilot projects have started in Brazil and Argentina, and monitors can be recycled in Canada and New Zealand. In the US, Philips participates in the MRM programme as well as MP3 player recycling via specified retailers. More information.	Philips provides general advice to customers on recycling, contacts for recyclers in most of the EU (excluding some New Member States), and a search tool to locate recyclers courtesy of the Consumer Electronics Association in the US. More information here, here and here. Good information for customers in India.	Philips aims to double the collection and recycling of its end-of-life products by 2015. More information. Philips reports that in 2008 the total amount of WEEE recycled waste in EU countries was 69,818 tons. It no longer provides details of its recycling rate as a % of past sales. More information.	Philips introduced a vacuum cleaner which is made with 50% post industrial plastics and 25% bio based plastic; the use of post consumer plastics is not mentioned. Philips aims to double the amount of recycled materials used in Philips products by 2015, however, this is for all materials, not only plastics. In addition, as Philips does not report on its existing use of recycled plastic it's not clear what this target represents. 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)
GOOD (3+)	PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)
Philips believes that global emissions should peak in 2015 and decline thereafter to achieve a 50-80% cut in 2050. It supports mandatory cuts in domestic emissions in industrialised countries of at least 30% by 2020. More information.	Philips discloses its CO ₂ equivalent emissions to be 1,920 kt in 2009 in its Annual 2009 Report. Some of these emissions are from supply chain inbound logistics. However, Philips loses a point as its verification is for its Sustainability performance as a whole and only provides limited assurance; it does not provide external verification using the methodology for GHG emissions according to the GHG protocol. Philips could also score more points by reporting emissions from a second stage of the product supply chain (scope 3). More information. Data definitions and scope. KPMG verification.	Philips is committed to reducing its operational carbon footprint by 25% by 2012, using 2007 as a baseline. Overall CO ₂ emissions dropped 10% in 2009 compared to 2008, with emissions from manufacturing decreasing by 6%. More information. See Annual Report for baseline year (see 'Improving our Footprint').	In 2008, Philips doubled its purchase of green electricity from 7% in 2007 to 15% currently. By 2012, the number of sites that use green electricity should be raised to the level needed to achieve the 25% carbon footprint reduction target by 2012. For maximum points Philips needs to increase its purchasing of renewable energy. Philips has asked its suppliers to introduce procedures to avoid double counting of renewable energy certificates. More information.	All TVs sold in the US and 90% of European models meet Energy Star v.3. In 2008 all Philips TV models exceeded the requirement for standby power consumption by at least 70%. More information. 10% of Philips current battery charger models fulfil the Energy Star v.2 requirements. These models exceed the technical Energy Star requirements by 5-15%. More information.



HP Ranking = 5.5/10

HP climbs to 4th place from 8th with an increased score of 5.5 (up from 4.9), as a result of its progress in bringing products that are free from PVC and BFRs onto the market and a new commitment to phase out beryllium and compounds by July 2011. HP now has many PVC and BFR-free products on the market, including a desktop PC with PVC-free power supply, several series of notebooks, another desktop and two LCD monitors. It has also recently launched the first PVC free printer. To gain top marks for its halogen-free products, HP now needs to phase out PVC and BFRs from its whole product line. HP also scores well for its support for improvements to the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics); specifically, to adopt restrictions on PVC vinyl plastic and brominated flame retardants (BFRs) as a focus for the restriction of chlorine and bromine from electrical and electronic products. HP believes restrictions of PVC and BFRs in RoHS may be possible in 2015 as long as specific issues and exemptions are addressed.

HP is weakest on e-waste issues; it scores points for its support and lobby for Individual Producer Responsibility, its free 'Consumer Buyback' recycling programme in the US for HP and Compaq-branded product waste, and the information that it provides to customers on what to do with their discarded products. However, its voluntary take-back programme, although improving, continues to be weak and is still mainly oriented towards business rather than individual customers. The company reports a reuse and recycling rate in 2009 of 16 percent, down from 17.5 percent in 2008, although more information is needed on how this is calculated. HP also needs to prove that energy recovery (namely, waste incineration) is not part of its 16 percent recycling performance and if so, exclude it from future calculations.

HP scores most of its points on energy, because it discloses externally-verified greenhouse gas (GHG) emissions from its own operations and estimates the supply chain GHG emissions of 86 percent of its first-tier suppliers. It also scores points for its goal to reduce GHG emissions of operations to 20 percent below 2005 levels by 2013, and for reporting its 2009 use of renewable energy as 3.6 percent of global energy consumption with a goal to double global purchases of renewable power to 8 percent by 2012. It supports the need for global emissions of greenhouse gases to peak and decline within the next decade although it could earn more points by supporting specific targets for industrialised countries to cut their emissions and the need for global emissions to peak by 2015. On energy efficiency of its products, HP reports that over 90 percent of notebook PC platforms and 41 percent of desktop platforms meet the Energy Star 5 standards.

HP Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
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Amounts recycled				
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Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

HP Detailed Scoring

Chemicals

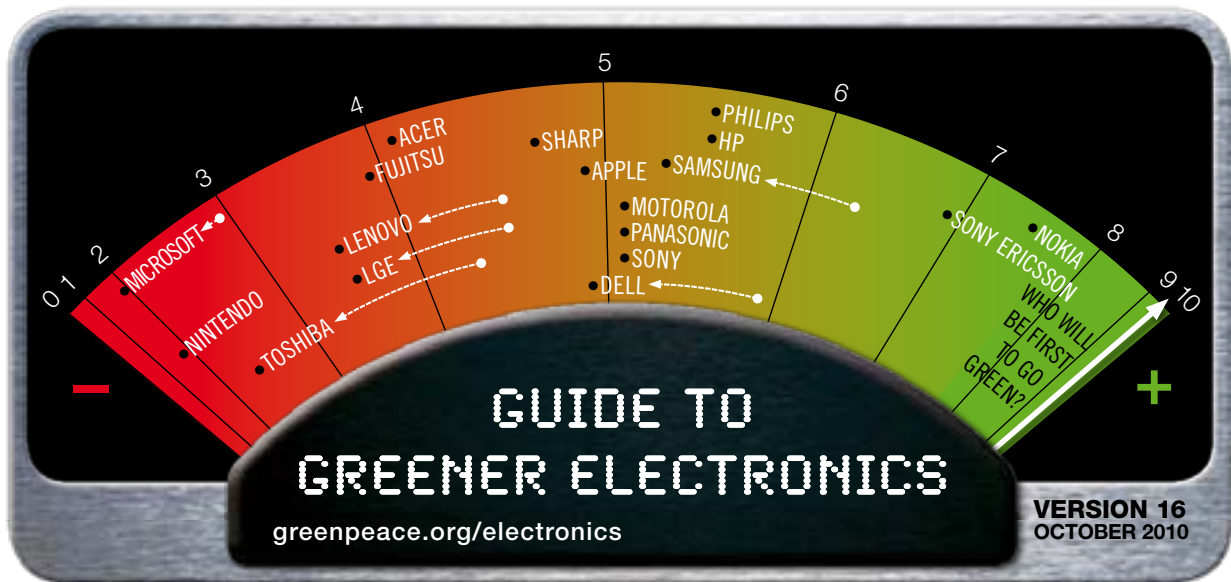
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY GOOD (2+)	GOOD (3+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)
<p>HP's definition of the Precautionary Principle reflects the need to eliminate potentially harmful chemicals even without full scientific certainty of harm.</p> <p>More information. HP supports the need for RoHS 2.0 to adopt restrictions on PVC and BFRs as a focus for the restriction of chlorine and bromine from electrical and electronic products, and believes restrictions of PVC and BFRs in RoHS may be possible in 2015 as long as specific issues and exemptions are addressed.</p> <p>More information. To score full points HP needs to demonstrate proactive advocacy.</p>	<p>HP scores top marks on its chemical management.</p> <p>More information. General Specification for the Environment.</p>	<p>HP will complete its phase out of BFRs and PVC in newly introduced PC products in 2011.</p> <p>More information here and here.</p> <p>In February 2009, HP informed Greenpeace that it would be unable to meet its original commitment to eliminate PVC and BFRs in computing products by end of 2009.</p>	<p>HP has identified three types of phthalates (DEHP, DBP and BBP) to be eliminated from all HP products, but this does not pertain to all phthalates and there is no precise date on the 2009-2015 substitution timeline. Antimony and remaining phthalates have been identified for future possible restriction but no timeline for their elimination is given. However, HP has a goal to remove mercury from notebooks by the end of 2010.</p> <p>More information here and here.</p> <p>Beryllium and compounds are to be phased out by 1 August 2011, although there are several exemptions for beryllium copper, see p.10.</p>	<p>HP scores 2 points for its progress in phasing out PVC and BFRs in its products, including a PVC-free printer. For maximum points HP will need to phase out PVC and BFRs in its whole product range. HP has a desktop that is completely free of PVC and BFRs; the Compaq 8000f Elite. More information here, here and here. Other products that are virtually free from PVC and BFRs are: the Compaq 6005 Ultra Slim desktop, the notebook series ProBook 53110m, 4320, 4420, 4520, and 4720 notebooks and the EliteBook 9440 p/w, 8440 p/w, 8540 p/w and 8740w, 2540p and 2740p, the Envy 13 laptop and the Compaq LE19f and LA22f Widescreen LCD monitors. The HP ENVY 100 e-All-in-One is the first PVC free printer. Products Eco Highlights.</p>

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
<p>HP supports and lobbies for IPR. HP supports the concept of e-waste legislation. In Europe, Hewlett Packard is a founding member of the European Recycling Platform that supports IPR. To gain top marks, HP will need to document its operationalising of IPR and continue to lobby for IPR, inter alia by ensuring that the revised WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR ie. differentiated/ individualised financing for own-brand real end-of-life costs (eg. no longer collective financing such as market share but instead more real and individualised financing such as return share) for WEEE</p>	<p>HP offers hardware recycling services in 46 countries or territories worldwide. A recycling programme has been launched in Brazil and take-back programmes in Australia and New Zealand have been expanded. Existing consumer take-back programmes include China, Costa Rica, India, Hong Kong, Canada and South Africa, although there are major gaps in Africa and South America. More information here and here. HP's consumer take-back programme in India has 15 collection points in 9 cities. HP has a free 'Consumer Buyback' recycling programme in the US for HP and Compaq-branded product waste. Otherwise, HP's voluntary take-back programme is mainly for business customers. Trade in and product reuse.</p>	<p>HP provides information to consumers in the US on voluntary take-back. More information. HP provides information to individual customers in South Africa, India, New Zealand, but not in Latin America or the rest of Asia and Africa. The information provided is good and accessible. New Zealand. Info on a range of options (asset recovery, donation).</p>	<p>HP's reuse and recycling rate in 2009 was 16%, compared with 17.5% in 2008. The slight reduction is explained by customers holding onto products longer and reduced product weight, (as the number of units returned has increased). More information. To score more points, HP needs to prove energy recovery (aka incineration) is not part of the 16% recycling performance figure and if so, exclude it from future calculations. More information. More information is also needed on how the 16% is calculated, specifically for the EU where companies currently pay for recycling collectively, by current market share. To earn more points, HP needs to provide EU figures from own brand sampling of return rate and provide indications of how it intends to expand this sampling in the future.</p>	<p>In 2009 HP used 5,000 tonnes of recycled content resin in printer cartridges, slightly more than 2008. The HP Deskjet D2600 printer is made from 50% recycled plastic material and uses cartridges made from at least 50% recycled plastic. HP exceeded its 2009 goal to triple the amount of recycled materials used in its inkjet printers by 2010 (relative to 2007) and has set a goal to use a cumulative 45,000 tonnes of recycled plastic in printing products by 2011 (relative to 2007). More information.</p>

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)
<p>HP supports the IPCC recommendation that global GHG emissions be reduced by well below half of the emission levels in 2000 by the middle of this century. More information. Most recently HP has signed the Copenhagen Communiqué, which calls for global emissions to peak and begin to decline rapidly within the next decade (requiring a reduction of 50-85% by 2050) and for developed countries to take on immediate and deep emission reduction commitments that are much higher than the global average, but provides no concrete numbers. Note, the disparity between the 2000 baseline in HP's statement and the 1990 baseline of the Copenhagen Communiqué. More information here and here.</p>	<p>HP reports GHG emissions from its operations, estimates its supplier GHG emissions and reports on product transport. HP estimates the supply chain GHG emissions of 86% of its first tier suppliers. More information here and here. In 2009, global GHG emissions from operations were 1,951 MT CO₂-e, a decrease of 10% compared with the combined total for HP and EDS in 2008. More information here, here and here. External verification details.</p>	<p>HP's goal is to reduce absolute GHG emissions from HP-owned and HP-leased facilities by 20% below 2005 levels by 2013. Between 2005 and 2008, HP reduced the energy used in its operations by over 9% towards the previous goal of 16% by 2010. More information. HP's overall goal is to reduce the combined energy consumption and associated GHG emissions of HP operations and products to 25 percent below 2005 levels by 2010. In September 2009, HP met this goal, over a year early. The new goal is to reduce the energy consumption and associated GHG emissions of all HP products to 40 percent below 2005 levels by the end of 2011. More information.</p>	<p>Voluntary purchases of renewable energy represented 3.6% of HPs electricity use in 2009, in addition to the renewable energy available by default in the power grid. In 2008 HP set a goal to increase its purchases of electricity from renewable sources to 8 percent of total electricity usage by 2012. More information.</p>	<p>All HP workstation platforms, over 90% of Notebook PC platforms and 41% of desktop platforms meet the Energy Star 5 standards. More information.</p>



SAMSUNG Ranking = 6.3/10 – 1 = 5.3

Samsung rejoins the leaders in the Guide, rising from 13th place to 5th, as a result of one of its penalty points being lifted and improvements in its score on chemicals. It remains encumbered by one penalty point, which was first imposed in v.14 of the Guide for backtracking on its commitment to eliminate brominated flame retardants (BFRs) in new models of all products by January 2010 and PVC vinyl plastic by end of 2010. The second penalty point, served in v.15 for misleading its customers and Greenpeace by not admitting that it would not meet its public commitment until the timeline for that commitment had passed, has been lifted.

Samsung gains points on the chemicals criteria, mostly for bringing products on the market that are free from PVC and BFRs; all models of mobile phones and MP3 players are free from BFRs as of January 2010 and PVC from April 2010, all HDD models launched after April 2009 are free from PVC and BFRs and all models of digital cameras and camcorders launched after April 2010 have main PWB and cases free from BFRs and internal wires free from PVC. The housings of some TVs, and all notebooks and monitors are BFR free and since November 2007, all new models of LCD panels are PVC-free. It regains full marks for its SEC Standard after clarifying its definition of 'phase out date' and it has clarified its commitment to eliminate other toxic chemicals, like phthalates, antimony compounds and alloys and beryllium and its compounds. It continues to score poorly for its commitment to eliminate PVC and BFRs in all new models of products; Samsung provides timelines for some product groups e.g. BFRs and PVC will be removed from new models of notebooks from 1 January 2012 (a year later than before), but it no longer plans to fully phase out the use of these substances in its TVs and household appliances. Although Samsung has a statement on the revision of the EU RoHS Directive (Restriction of Hazardous Substances in electronics), it does not specify the need for RoHS 2.0 to adopt a ban on organo- chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions.

Samsung scores well on e-waste; it reports recycling rates of 137 percent for TVs (based on past sales 10 years ago - the average life span - since when, Samsung's TV sales have increased tenfold), 12 percent for PCs (based on a 7-year lifespan) and 9 percent for mobile phones (based on a 2-year lifespan). However, to score top marks Samsung needs to put a reality check on the EU figures of e-waste recycled. It also needs to extend its take-back programme to non-OECD countries. It loses a point on its use of recycled plastic, which has reduced from 16.1 percent in 2008 to 8.5 percent in 2009, (although the proportion of post-consumer plastic has increased from 0.2 percent to 0.4 percent), with a goal to increase to 25 percent by 2025 and use a majority of post-consumer plastic.

On energy, Samsung has committed to reduce its absolute greenhouse gas (GHG) emissions, despite growth in the company's sales; it also supports the levels of cuts required globally and by industrialised countries to keep dangerous climate change in check, and it provides a certificate of verification of its GHG emissions in Korea. Samsung scores top marks (doubled) on the energy efficiency of its battery chargers, most of which exceed the latest Energy Star standard. Samsung continues to score zero for its use of renewable energy; although it now reports its use as approximately 0.23 percent globally, this is too low a rate to score; Samsung needs to boost its investment in renewable energy and set a target with a timeline to increase the percentage of renewable energy it uses globally.

SAMSUNG Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

SAMSUNG Detailed Scoring

Chemicals

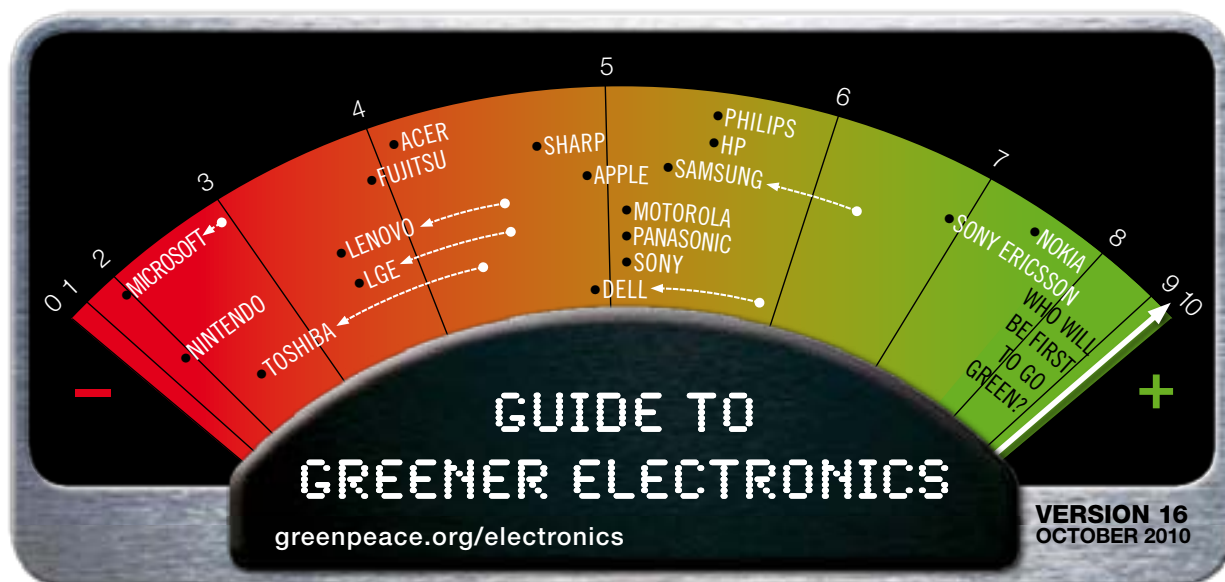
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)
Samsung supports and understands the Precautionary Principle. More information. However, although Samsung states that RoHS 2.0 has an important role in the phase out of PVC and BFRs it does not specifically state that RoHS 2.0 needs to adopt a ban on organo- chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions.	Samsung scores full marks for identifying future chemicals to be targeted for elimination. More information. SEC Standard (revision 13). Eco-Partner Certification Program.	Samsung has backtracked on its commitment to eliminate BFRs in new models of all products by January 2010. It has communicated to Greenpeace that it will not remove PVC by end of 2010. It scores one point for its new timelines for eliminating PVC and BFRs for some product groups, but the commitment no longer covers TVs and household appliances. The timelines beyond 2010 are not acceptable. Samsung has phased out BFRs and PVC in new models of mobile phones and MP3 players. From January 2012, notebooks will be free from BFRs and PVC (except power cord and adapter). In addition, BFRs will be phased out of the main PWB and case of digital cameras and camcorders by July 2010, along with PVC in internal wires. PVC will not be used in the internal wires of TVs by January 2011; and monitors and home theatres by January 2012. More information.	All new models of all products will be free from beryllium from January 2013. There is an exemption on the use of beryllium in connectors and certain electronic components. Phthalates are now to be phased out in mobile phones and MP3 players by January 2011 and otherwise in the same applications as PVC from January 2013. New models of the same list of products and applications will be free from antimony trioxide from January 2013, but with 2 exemptions. For more points, Samsung needs to eliminate these substances from its whole product portfolio as well as antimony and compounds. More information.	All models of mobile phones and MP3 players are free from BFRs as of January 2010 and PVC from April 2010. All HDD models launched after April 2009 are free from PVC and BFRs. All models of digital cameras and camcorders launched after April 2010 have main PWB and cases free from BFRs and internal wires free from PVC. The housings of some TVs, and all notebooks and monitors are BFR free. Since 1st November 2007, all new models of LCD panels are PVC-free. Samsung has developed halogen-free memory chips and semiconductors for certain applications. More information here and here.

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+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)
Samsung supports and lobbies for IPR. More information. Samsung works with governments and industry associations to ensure that the appropriate legal framework is in place to facilitate IPR. More information. To gain top marks, Samsung will need to explore options for operationalising IPR and to continue to lobby for IPR, inter alia to ensure the revised EU WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR - ensuring a shift to differentiated/ individualised financing for own-brand real end-of-life costs for new WEEE.	Samsung provides voluntary take-back for its consumer electronics (except home appliances) in the US. In other countries voluntary take-back is provided for mobile phones and printer cartridges, a small part of Samsung's product portfolio. Samsung is operating mobile product collecting points through ASC (Authorised Service Centre) in India, and plans a voluntary recycling programme in Delhi, Mumbai and Bangalore in 2010. A voluntary programme is also planned for China in 2010. For more points Samsung needs to extend its voluntary take-back for all products to non-OECD countries. Voluntary initiatives. Global mobile phone recycling.	Samsung provides accessible information to consumers on what to do with their discarded products, especially for mobile phones and for the Recycling Direct programme in the US and now Canada. More information here and here. Regional WEEE take-back schemes and contacts. Mobile phone take-back.	Samsung estimates its 2007 recycling rates, based on sales and recycled amounts from Korea, Japan, Europe and North America: TVs - 137% (based on average life-span of 10 years, since when Samsung's TV sales have increased 10-fold). Computers - 12% (7 years) Mobile phones - 9% (2 years). New total data for 2009 is provided. For top marks, Samsung needs 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. More information. Recycling amounts for 2009 by region.	Samsung loses a point as the amount of recycled plastic used in 2009 has decreased from 16.1% in 2008 (15.9% post-industrial plastic and 0.2% post-consumer plastic) to 8.9% (8.5% post-industrial plastic and 0.4% post-consumer plastic), although its use of post-consumer plastic has increased. Samsung has set a target of 25% recycled plastic content out of total plastics used by 2025 and will maximise the use of post consumer recycled plastics over post industrial plastics. It needs to set intermediate targets, to monitor progress towards 2025. 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)
GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)	GOOD (3+)
Samsung Electronics supports global mandatory cuts of greenhouse gas emissions of at least 50% by 2050 (from 1990 levels) and cuts by industrialised countries of at least 30% as a group by 2020. Samsung scores maximum points for also calling for global greenhouse gas emissions to peak by 2015. More information.	Samsung reports its global scope 1 & 2 GHG emissions of 9,115,000 tons for 2009, (down from 9,210,000 tons in 2008) and scope 3 emissions for product use, transportation and business travel. Verification is provided according to the GHG Protocol, however, the certificate needs to be more legible for Samsung to keep these points. More information. Samsung has set up a GHG inventory for suppliers of its LCD division; it plans to manage the GHG inventory for all suppliers in Korea in 2010, which will be extended to global suppliers by 2013. More information. Data is also presented in Samsung's 2010 Sustainability Report, p.42 - 43.	Samsung aims to reduce absolute emissions of GHGs from its global manufacturing sites by 2% by 2011, from a baseline year of 2008, despite a growth in company sales. More information.	Samsung estimates that the amount of renewable energy used globally is approximately 0.23%, however, this is too low a rate to score. Samsung reports that in the US, Samsung Austin Semiconductor purchases 22 million kWh of renewable energy annually. In Europe, several subsidiaries use renewable energy. Samsung also states that it is seeking to increase its use of renewable energy by investing in fuel and solar cells; to score points Samsung needs to boost its investment in renewable energy and set a target with a timeline for increasing its use. More information.	Since November 2008 100% of Samsung models of mobile phone External Power Supplies (EPS) globally have met the latest Energy Star requirements, and 100% of these exceed the Energy Star requirements by 50% or more in no-load mode. 96% of all flat TV models globally have met the latest Energy Star requirements (version 4.1) and 100% exceed them for standby mode by 50% or more. 100% of notebook PCs met the latest ES standard and 14% exceed them for the estimated annual energy consumption by 50% or more. 85% of LCD monitors have met the latest ES standard, with 100% exceeding the standards for sleep mode and off-mode by 50% or more. More information here and here.



MOTOROLA Ranking = 5.1/10

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

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

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

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

MOTOROLA Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

MOTOROLA Detailed Scoring

Chemicals

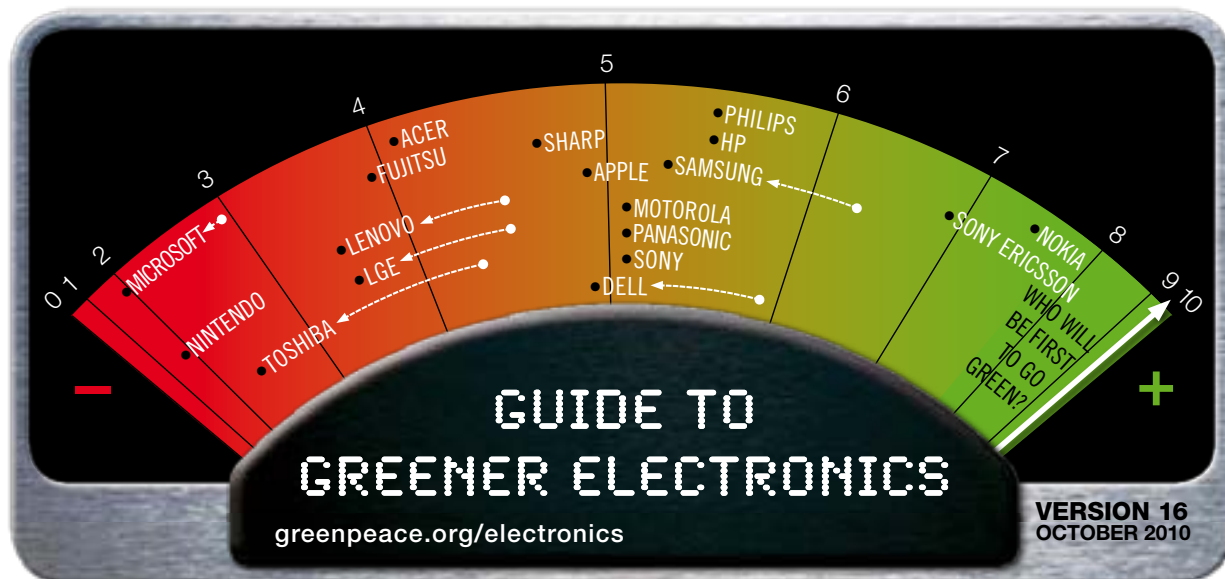
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
<p>Motorola has a definition of the precautionary principle that identifies the preventive measures to be taken to eliminate the use of hazardous substances even when scientific evidence is limited or conflicting. However, Motorola makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions.</p> <p>More information. Motorola also needs to clarify its stance in relation to the position of the trade federation TechAmerica on further restrictions and in particular PVC, CFRs and BFRs within 3-5 years.</p>	<p>Motorola provides a list of banned and reportable substances in its Global Common Specification No. 12G02897W18 (updated 15 May 2008) More information.</p> <p>As a pdf.</p>	<p>Motorola has set a goal to eliminate PVC and BFRs in all new designs of mobile products only, (not all products) introduced after 2010, with such products available in 2010. It expects to meet its goal of eliminating these substances for all new designs introduced after 2010.</p> <p>More information.</p>	<p>Motorola has set a goal to eliminate phthalates in all new designs of mobile phones only, introduced after 2010, with such products available in 2010.</p> <p>More information.</p> <p>To date, antimony and compounds and beryllium and compounds are only listed as reportable in Motorola's list of banned and reportable substances (p 9-10). More information.</p>	<p>As part of implementing its commitment Motorola has launched its second BFR and PVC free phone, the GRASP. More information.</p> <p>Chargers are free of BFRs and PVC; download EcoMoto factsheet.</p> <p>For more points Motorola needs to complete the phase out of BFRs in mobile phones. It also needs to start working on the phase out of PVC and BFRs in its other products, including home network equipment (e.g. set top boxes, wireless routers). More information.</p>

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)
<p>Motorola supports Individual Producer Responsibility, but there is no reference to the need for brand differentiation and no evidence of active lobbying for IPR. Motorola needs to clarify that its support of IPR means full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share) for new WEEE. More information.</p>	<p>Motorola offers recycling services in 72 countries, representing over 90% of global mobile phone unit sales. Motorola also operates take-back services for network equipment, on request. In the US it is now taking back modems, routers and cordless phones.</p> <p>More information here and here.</p> <p>Motorola has established a take-back programme for US business customers for radios, mobile computers, barcode scanners, imagers, in-vehicle mobile workstations, accessories, network infrastructure equipment and computers, laptops and monitors. More information.</p>	<p>Information is provided to individual customers in the countries where Motorola offers voluntary programmes. However, information for customers in countries such as Singapore could be improved. For some countries, e.g. Nigeria, South Africa, Motorola provides only one to three drop off locations, with no telephone or email information. Motorola also takes back network equipment if requested by customers.</p> <p>More information.</p> <p>Motorola's take-back programme for modems and routers.</p> <p>More information.</p> <p>Cordless phones.</p>	<p>Motorola's global take-back rate for 2009 was an estimated 2.5% of mobile phones sold in 2007 (compared to 3% in 2006). The quantities recycled increased by 100% from 2,560 tonnes to 5,162 tonnes. Although Motorola provides the source of data for calculation, there is no explanation of how EU figures were calculated. To increase its score Motorola has to provide EU figures from own brand sampling of return rate, undertaken in at least one Northern EU country, one Southern EU country and one new Member State country – and provide indications of how it intends to expand this sampling in the future. More information.</p>	<p>Motorola is increasing the proportion of recycled materials used in its products. Percentages of recycled material content are given for 4 models.</p> <p>More information.</p> <p>25% of the housing of the MOTO W233 Renew and MOTO CUBO A45 Eco mobile phones is made using plastics comprised of recycled water bottles.</p> <p>More information.</p> <p>The DCX3501 set top box uses recycled plastics.</p> <p>More information.</p>

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
BAD (0)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
<p>Motorola supports global mandatory greenhouse gas emission reductions by at least 50 percent below 1990 levels by 2050. Motorola needs commitments to short term targets: to call for global GHG emissions to peak by 2015 and for industrialised countries as a group to accept mandatory cuts of at least 30% by 2020.</p> <p>More information.</p>	<p>Motorola calculates that in 2008, its carbon footprint (scope 1 and 2 emissions from the Greenhouse Gas Protocol) totalled 531,661 tonnes CO₂ equivalent, compared to 671,791 tonnes in 2005. But there is no data about product supply chain emissions.</p> <p>More information.</p> <p>Motorola's 2007 emissions are reported annually, audited and verified by the Financial Industry Regulatory Authority, through the Chicago Climate Exchange.</p> <p>More information.</p>	<p>As a founding member of the Chicago Climate Exchange (CCX), a voluntary emissions-reduction program, Motorola has committed to a 6 percent reduction in its absolute greenhouse gas emissions by 2010, compared with 2000.</p> <p>More information.</p>	<p>In 2010 about 20% of Motorola's electricity was purchased from renewable sources, with a goal to increase this to 30% by 2020. About 15% of electricity purchased in 2009 came from voluntary purchases, with an additional 5% from the power grid (which does not contribute to Motorola's score). Direct purchases of renewable energy include RECs from wind power in the US and hydro power directly from the generator in Germany. In the US renewable energy certificates are purchased from NativeEnergy.</p> <p>More information.</p>	<p>From 1 November 2008, 100% of newly designed Motorola mobile phone chargers meet the new ES2 requirements and exceed by 67% the requirements for standby/no-load modes. All of Motorola's newly designed chargers meet the new EU CoC target of 0.25 watts for standby power. Many of Motorola's set top boxes also meet the latest Energy Star standards.</p> <p>More information.</p>



PANASONIC Ranking = 5.1/10

Panasonic stays in 6th place (together with Sony and Motorola) with an increased score of 5.1, up from 4.9. It gains points on the voluntary take-back of its products for launching the first programme for the take-back of TVs in a non-OECD country. Despite this it is still weakest on the criteria relating to e-waste and recycling and scores best on the chemicals and energy criteria.

Panasonic's score on use of toxic chemicals is boosted by many models of PVC-free products on the market, including notebook computers, mobile phones, home cinemas and lighting equipment; it gives two examples of products free of brominated flame retardants (BFRs) – fluorescent ceiling lamps and a kitchen lamp; however, it needs to show more progress in bringing new products onto the market that are free from these hazardous substances in order to keep these points. Despite putting these PVC-free and BFR-free products on the market, Panasonic has yet to commit to fully eliminating all PVC and BFRs across its whole product portfolio. It also fails to show support for improvements to the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics); specifically, a methodology for further restrictions of hazardous substances, and an immediate ban on BFRs, chlorinated flame retardants (CFRs) and PVC vinyl plastic.

On e-waste criteria, Panasonic only scores well for the voluntary take-back of its products which has recently been expanded to India, where Panasonic has initiated the first non-OECD take-back programme for TVs; it also has a voluntary take-back programme for TVs and consumer electronics in the USA, which is now nationwide; otherwise its take-back programme does not cover all of Panasonic's product groups. Panasonic needs to improve its information to consumers about its voluntary take-back programmes and clarify its support for Individual Producer Responsibility.

On energy, Panasonic scores top marks for reporting to the latest Energy Star energy efficiency standards for external power supplies and TVs. All new models of TVs meet the latest Energy Star requirement, with most of them exceeding the standby mode requirement by 70 percent or more. It also scores points for supporting cuts of greenhouse gas (GHG) emissions of up to 30 percent by 2020 and peaking by 2020 (not the required 2015); committing to absolute reduction in emissions and disclosing GHG emissions from its own operations which are verified by a third party. However, its new target for reducing GHG emissions is impossible to assess as it includes emissions from product use in the target, but not in the baseline year; Panasonic needs to set a target specifically for GHG emissions from its own operations.

PANASONIC Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

PANASONIC Detailed Scoring

Chemicals

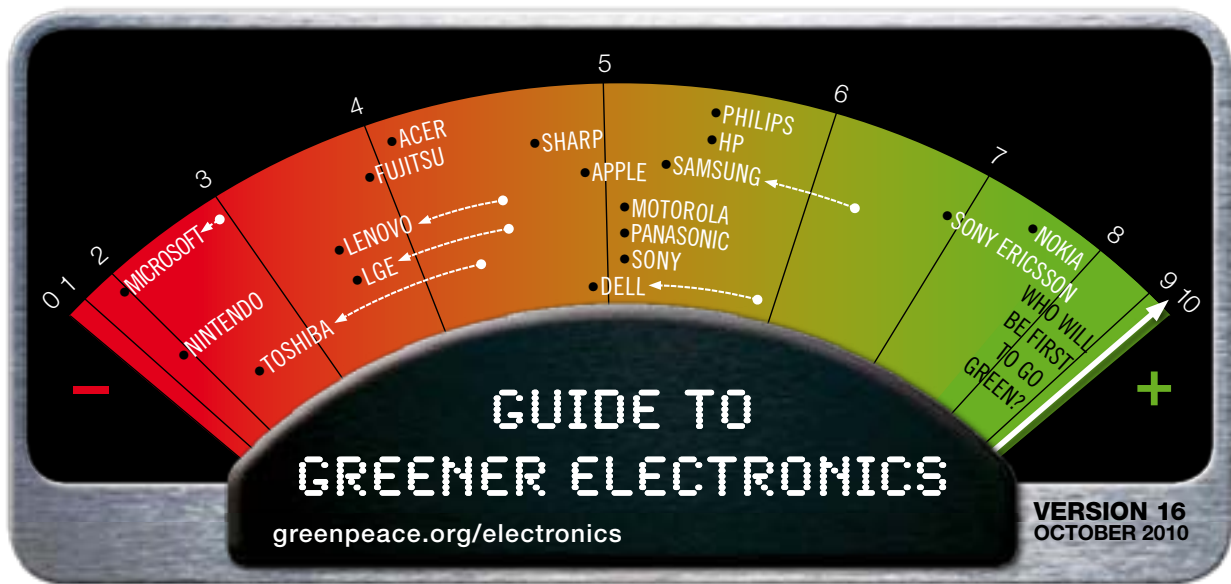
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY BAD (1+)	BAD (0)	PARTIALLY GOOD (2+)
<p>Panasonic refers to the need to assess potentially hazardous substances with a view to discontinuing them despite scientific uncertainty. However, Panasonic makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. More information.</p>	<p>Panasonic's web pages on chemicals management contain a lot of detailed information. Summary explanation on management of chemical substances here. More information. Chemical Substances Management Rank Guidelines Ver.7 (for Products)</p>	<p>Panasonic has committed to eliminating PVC in internal wiring of all products for the Japanese market by end of March 2009 and globally by the end of March 2011. However, 54% of products – such as washing machines, are exempted due to technological problems, and the commitment is limited to internal wiring. More information. Panasonic plans to eliminate the use of PVC in notebooks by the end of 2011 globally. All new models of mobile phones and computers should be free of BFRs by 2011, but there is no commitment to eliminate BFRs and PVC from Panasonic's whole product portfolio. More information.</p>	<p>Panasonic states that its commitment to eliminating PVC will reduce or eliminate the use of phthalates, used primarily as softeners in PVC. Likewise, use of antimony trioxide will be reduced as BFRs are eliminated. No timelines are given. More information. Beryllium is a Managed Substance whose use (above 1000 ppm) needs to be monitored. However, no time line for total elimination. More information. There is no plan to phase out the use of beryllium and compounds.</p>	<p>All mobile phones (sold in Japan only) have been PVC-free (excluding internal wiring in a charger) from FY2005 models onwards. Since April 2007, Panasonic has been selling PVC-free notebook computers (excluding separate AC cord), in Japan only. More information. There are many examples of PVC-free models including healthcare products and LCD projectors. Panasonic gives two examples of lighting products free of BFRs and is manufacturing halogen-free printed wiring boards for certain applications and markets. Panasonic needs to show progress by bringing new PVC and BFR free products onto the market to keep these points.</p>

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
<p>Panasonic supports Individual Producer Responsibility as the ultimate and ideal way to promote recycling and demonstrates this by creating recycling companies in Europe and in the US. To gain more marks Panasonic needs to clarify that it supports IPR and that this means it supports full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share).</p>	<p>Voluntary take-back programmes are not worldwide and do not cover all Panasonic's product groups, mainly mobiles, PCs and toner cartridges. Panasonic's recycling services for PCs now offered in countries where 95% of sales of new PCs. Panasonic's US take-back programme is nationwide, includes TVs and is now available in all 50 States at 310 drop-off points. More information. Information on the different regions including China. Panasonic India has launched voluntary take-back for TVs in 3 cities in India and plans to expand this to other cities, gaining a point for the first voluntary take-back for TVs in a non-OECD country. It needs to continue to expand its take-back programme.</p>	<p>Information to customers is available in European countries with EPR laws and for electronics, batteries and toner cartridges in US, plus there is information on its take-back programme in India. However, the information on how to recycle is not easily accessible to customers. No information is available to consumers about the recycling programmes in China and Japan. More information here and here. See here for US and here for India.</p>	<p>Panasonic provides data on home appliances and PCs recycled in Japan in fiscal 2010 (by product weight but not as a percentage of past sales) and recycling quantities for the US (PCs, batteries and other) and Korea. More information. For PCs. For a breakdown of data on specified home appliances. For Europe information on recycling rates (2007 & 2008) based on current sales is provided for 18 countries. Panasonic has undertaken sample tests for the return share of TVs in seven European countries. Recycling quantities for the US and Korea are also provided. For more points Panasonic needs to calculate the quantities recycled in relation to past sales for other regions and set a target to increase this. More information.</p>	<p>Panasonic states that in fiscal 2010 it used 3,759 tons of recycled resin. 2,500 tons of recycled resin from its own end life products is used, mainly in washing machines and refrigerators. The ratio of recycled resin usage in two product lines (washing machines and refrigerators) decreased from 18.7% in fiscal 2009 to 13.8%. No target for increasing use of recycled plastics. Panasonic needs to provide a target and timeline for increasing use of recycled plastic. More information. Details about recycling technology.</p>

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)	GOOD (3+)
<p>Panasonic in general supports the GHG reduction target of 25% by 2020, announced by the Japanese Prime Minister, the adoption of the year 1990 as the baseline year and the need for industrialised countries to reduce emissions by 30% by 2020. Panasonic supports the view that global GHG emissions must peak out around ten to fifteen years from now. For more points, Panasonic needs to support the call for GHG emissions to peak by 2015; for industrialised countries to reduce emissions by AT LEAST 30% and not Japan's insufficient target. More information.</p>	<p>Panasonic reports its total GHG emissions as 3.31 million Global Warming Potential tons in FY2010 (compared to 3.67 million GWP in FY2009). There is no data from its product supply chain. More information. Japan data. Emissions from transportation for fiscal 2010 are reported: 0.78 million tons globally and 0.16 million tons in Japan. Emissions data are also presented in Panasonic's Environmental Data Book 2009, p.3. Verification.</p>	<p>Panasonic's goal for fiscal 2019 is to reduce its CO₂ emissions by 120 million tons, which is 50% of its fiscal 2006 levels. More information. However, the goal includes emissions from product use whereas data from its baseline year of 2006 does not. The proposed reductions of GHG emissions from manufacturing therefore cannot be assessed. Panasonic needs to set a new target specifically for its scope 1 & 2 GHG emissions. More information here and here. For further details see slide 10. Panasonic continues to score 1 point for its existing commitment: its target for fiscal 2010 was 0.48 million tonnes of CO₂, which was exceeded by achieving 0.84 million tons reduction. It aims to lower CO₂ emissions to the level of FY2001 by the end of FY 2011. More information. See p.3</p>	<p>Panasonic reports that the renewable energy consumed in Japan in fiscal 2010 was 173,000 KWh, up from 53,000 KWh in fiscal 2009. The figure isn't given as a percentage of electricity consumption and no targets are set. More information.</p>	<p>Panasonic gets full marks for reporting that 100% of new models of TVs meet the latest ES requirement, and most models (nearly 84%) exceed the standby mode requirement by 70% or more. 100% of External Power Supplies for mobile phones for the Japanese market (Panasonic only sells mobile phones in Japan) meet the previous Energy Star requirement and exceed it in no load mode by approx. 85%. 100% of currently sold PCs meet the latest Energy Star requirement and one representative series exceeds a Typical Energy Consumption standard by 33%. More information.</p>



SONY Ranking = 5.1/10

Sony stays in joint 6th place, tying with Panasonic and Motorola, with an increased score of 5.1, up from 4.9. Sony gains a point for providing verification for its CSR report that also includes its calculations of greenhouse gas (GHG) emissions.

Sony does relatively well on chemicals, with its score boosted by having models on the market that are partially free of PVC and BFRs, including all models of the VAIO PC, and many models of video recorder, Walkman, camcorder and digital camera. However, to keep these points it needs to show more progress in bringing new products that are free from these hazardous substances onto the market. It still needs to set a timeline for eliminating all phthalates, beryllium copper and antimony and its compounds. Sony has yet to show support for bans on PVC vinyl plastic and brominated/chlorinated flame retardants (BFRs/CFRs) during the revision of the EU's RoHS Directive (Restriction of Hazardous Substances in electronics)

On waste issues, Sony's score is boosted for reporting use of some 17,000 tons recycled plastics annually in various products, representing 10 percent of all plastics used in the 2008 financial year. Almost 90 percent of the recycled plastic was post-consumer and not the less challenging post-industrial (factory scraps). It reports a recycling rate of 58 percent based on past sales of TVs and PCs, but this information is only for Japan and separate data need to be reported for TVs and PCs. Sony scores no points for its voluntary take-back of its products as it has failed to expand this programme to non-OECD countries.

Renewable energy now accounts for 8 percent of the total amount of energy purchased globally each year, up from 2.5 percent a year ago. Sony also scores a point for disclosing GHG emissions from its own operations. On the energy efficiency of its products, about 95 percent of Sony PCs sold between January and March 2010 conform to the latest Energy Star standards, and 94 percent of models sold from July 2009 comply. The AC adapter released in FY 2009 meets ES 2 standards. All new models of TVs released in the US comply with the latest ES standards (4.1). Sony also reports absolute cuts in GHG emissions, down 17 percent over the 8 year period 2000-2008 and has a commitment to an absolute reduction of 30 percent over 2001 levels by 2016.

SONY Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
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 (companies score double on this criterion)				

SONY Detailed Scoring

Chemicals

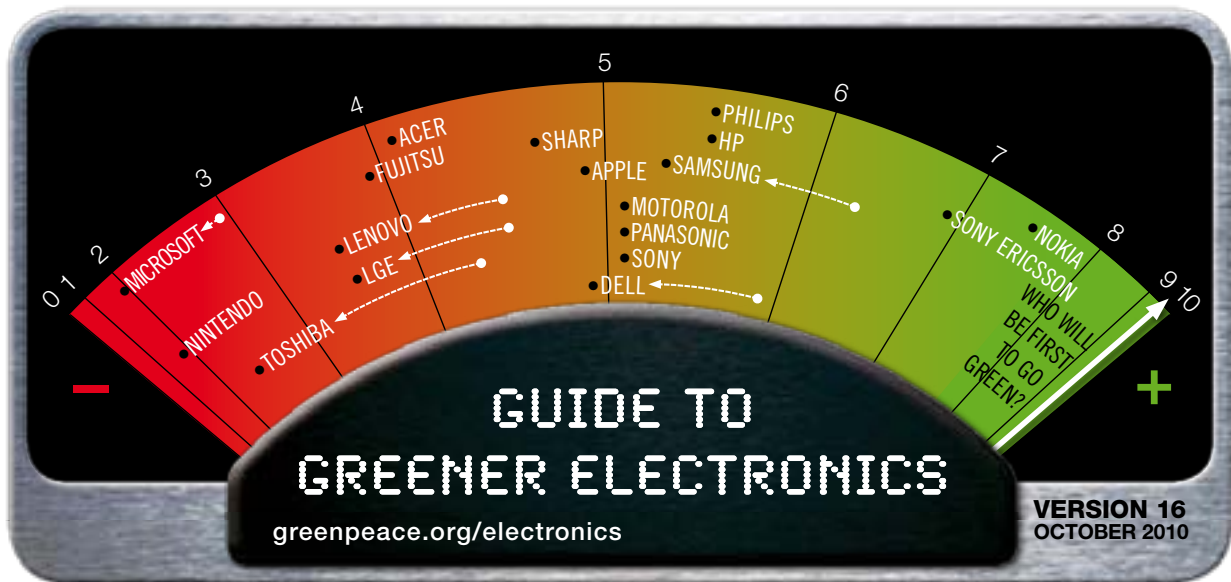
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY BAD (1+)	BAD (0)	PARTIALLY GOOD (2+)
Sony references the precautionary principle and clarifies that this means taking action to substitute a chemical even where the scientific evidence is not fully proven. However, Sony makes no mention of the need for RoHS 2.0 to adopt a ban on organo- chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years) as well as an end-of-life focused methodology for adding future substance restrictions. More information.	Sony provides information in SS-00259 (9th edition, March 2010) Management Regulations and Green Partner programme to ensure implementation of the Regulations. More information here and here.	Sony provides a timeline of end of Fiscal Year 2010 which means April 2011 to substitute PVC in all new models of mobile products (excluding accessories), and BFRs in the casing and main PWBs of all new models of mobile products. Sony loses points as it needs to bring forward its timeline by one quarter to end of CY 2010 and substitute these harmful substances in all its products, not just mobile devices. More information.	Sony is working to eliminate specific phthalates used as a plasticiser in PVC, although a timeline for all products isn't specified. More information. Sony has banned beryllium oxide from April 2008 with exemptions, although beryllium copper is listed as a controlled substance with no timeline for elimination. Antimony is not listed. More information.	All VAIO PCs have BFR-free casings and PWBs, many are also free of PVC in casings and internal wiring. Other Sony products that are partially free of PVC and BFRs, include many models of Walkman, Personal Navigation Systems, IC recorders, Video Cameras, Video Recorders, HD Snap Cameras, Digital Cameras, SLR Cameras, Digital Photo Frames, Memory Sticks, Memory Cards, and PSPs; the casings and internal wiring are PVC free but not external cabling, and casings and main printed wiring boards are BFR free, but not all wiring boards. Sony has successfully eliminated PVC in many other internal and external components. More information. Sony needs to show progress by bringing more PVC and BFR free products to the market in order to keep these points.

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+)	BAD (0)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)
Sony supports the principle of Individual Producer Responsibility. For full marks, Sony will also need to document its operationalising of IPR and continue to lobby for IPR, inter alia by ensuring that the revised EU WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR. More information. Sony is a member of the European Recycling Platform established to implement IPR. More information.	Sony has expanded its nationwide recycling program in the US, together with WM Recycle America and has recently established the GreenFill initiative for recycling small electronics via retailers. Sony fails to score as it has failed to expand its take-back programme in non-OECD countries. More information. In Canada, all Sony handheld products are accepted for recycling, and notebook PCs can be traded in, at its Sony Style stores across Canada. 29 non-retail locations accept all Sony products for recycling at no charge. More information. Sony offers battery take-back and recycling in Brazil, Australia, New Zealand and Argentina.	Sony provides information to individual customers in the EU, US (including on batteries) and Japan, but not in Canada. More information. Also see Sony Take Back Recycling Program website for the US.	In fiscal 2009, Sony recovered 112,122 tons of end-of-life products from Japan, Europe, North America and South Korea, including TVs and PCs from Japanese consumers; the collection rate for TVs and PCs in Japan was approximately 88%, based on their average lifespan. But this figure is only for Japan and there is no differentiation for TVs and PCs. More information. Sony reports on the amounts of WEEE and batteries collected in N. America, recycling rates for TVs and PCs in Japan and recycling volumes for batteries in Asia & Australia. More information here and here. Recycling in Europe and ERP	Sony currently uses approximately 17,000 tons recycled plastics annually in various products, representing 10% of all plastics used (by FY 2008). Approximately 89% of this is post consumer plastic, with 11% post industrial plastic. Sony has set its reused/ recycled materials ratio targets at 12% or higher, by FY 2010. More information. Green Management 2010 recycled plastic progress and target.

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
BAD (0)	PARTIALLY GOOD (2+)	GOOD (3+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)
Sony fails to score points because the Tokyo Declaration it co-signed calls for emissions to peak in 10 to 15 years, rather than by 2015, uses a baseline year of 2000 (not 1990) and fails to differentiate between the higher cuts in GHG emissions required by industrialised countries. More information.	Sony discloses GHG emissions totalling approximately 26 million tons in fiscal 2008, of which 2.072 million tons are Sony's own emissions. The increase of 16% since fiscal year 2007 is due to CO ₂ emissions from consumer use of LCD televisions whose sales have risen sharply. More information here and here. Methods and approach. Sony regains a point as independent verification of its GHG emissions is provided by Bureau Veritas Group. Verification.	Sony has committed to an absolute reduction of 30% over 2001 levels by 2016 and scores maximum points. Road To Zero. Sony is committed to reducing emissions from business sites by 7% or more by 2010, but using emission data from 2000 as baseline. More information here and here. Sony cut GHGs by 17% over the 8 year period 2000-2008. In the period 2000-2007 GHGs fell only 6.6%. More information. As part of its 'Road to Zero' commitment, Sony is aiming for a 14% reduction in total CO ₂ emissions associated with all transportation and logistics (compared to fiscal 2008).	Renewable energy now accounts for 8% of the total amount of energy purchased globally each year, rising from 2.5% a year ago. CO ₂ emissions in FY 2008 were reduced by approx. 92,000 tons through the use of the Green Power Certification System in Japan and solar power. As of March 2009, Sony's US renewable energy purchases make up around 21% of its monthly electricity purchases. More information. However there is no commitment and timeline to increase its use. In FY2008 renewable energy accounted for 100% of the total power consumption by Sony's European sites. More information.	About 95% of Sony PCs sold between January and March 2010 conform to the latest Energy Star standards, and 94% of models sold from July 2009 comply. The AC adapter released in FY 2009 meets ES 2 standards. All new models of TVs released in the US comply with the latest ES standards (4.1). However, Sony needs to report on Energy Star compliance for TVs released outside the US. More information.



APPLE Ranking = 4.9/10

Apple drops to 9th place from 5th, with the same score of 4.9.

Apple does best on the toxic chemicals criteria, where it scores most of its points. All Apple products are now free of PVC vinyl plastic and brominated flame retardants (BFRs), with the exception of PVC-free power cords in countries where their safety certification process is still ongoing. For this Apple continues to score full marks (doubled). Apple scores points for its chemicals policy informed by the precautionary principle and for lobbying the EU institutions for a ban on PVC, chlorinated flame retardants and BFRs during the current revision of the EU's RoHS Directive (Restriction of Hazardous Substances in electronics), but for full marks it needs to provide a public position on its support for immediate restrictions in RoHS 2.0 on organo- chlorine and bromine compounds. It also needs to clarify its stance regarding the position of the trade federation TechAmerica on further immediate restrictions and in particular PVC and BFRs. Apple scores only one point on information about its management of chemicals and its supply chain communications; this criterion evaluates disclosure of information flow in the supply chain. Apple also continues to score poorly for the minimal information it provides about its future toxic chemical phase-out plans.

It scores substantially less on the e-waste criteria than on toxic chemicals. Apple has improved coverage of its take-back programme with take-back and recycling services now extended to Brazil and to the Asia-Pacific region, including India, China, Hong Kong, Malaysia, Singapore, New Zealand, Korea and Australia. It reports a 2008 recycling rate (as a percentage of sales seven years ago) of 41.9 percent, up from 38 percent in 2007 and 18 percent in 2006; however, it needs to provide details on how this is calculated. Apple has set a goal of achieving a 50 percent recycling rate by 2010.

On the energy criteria, Apple discloses full product lifecycle emissions, including supply chain and reports on the amount of CO₂-equivalent emissions saved through use of renewable energy (RE) in 2008. However, it provides no indication of the amount of RE used as a portion of Apple's electricity use, which depends on the fossil fuel source displaced by this RE use. Apple scores a point for reporting that its greenhouse gas (GHG) emissions were reduced by 3 percent year over year from 2006 to 2007. Despite having left the US Chamber of Commerce over differences in climate policy, it is disappointing that Apple has yet to make a statement on the need for mandatory reduction of GHG emissions. Its score on the energy efficiency of its products would improve if it provided data on what proportion of its products exceeds the latest Energy Star standards and by how much.

Apple's web-site has been updated since this assessment was made.

APPLE Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

APPLE Detailed Scoring

Chemicals

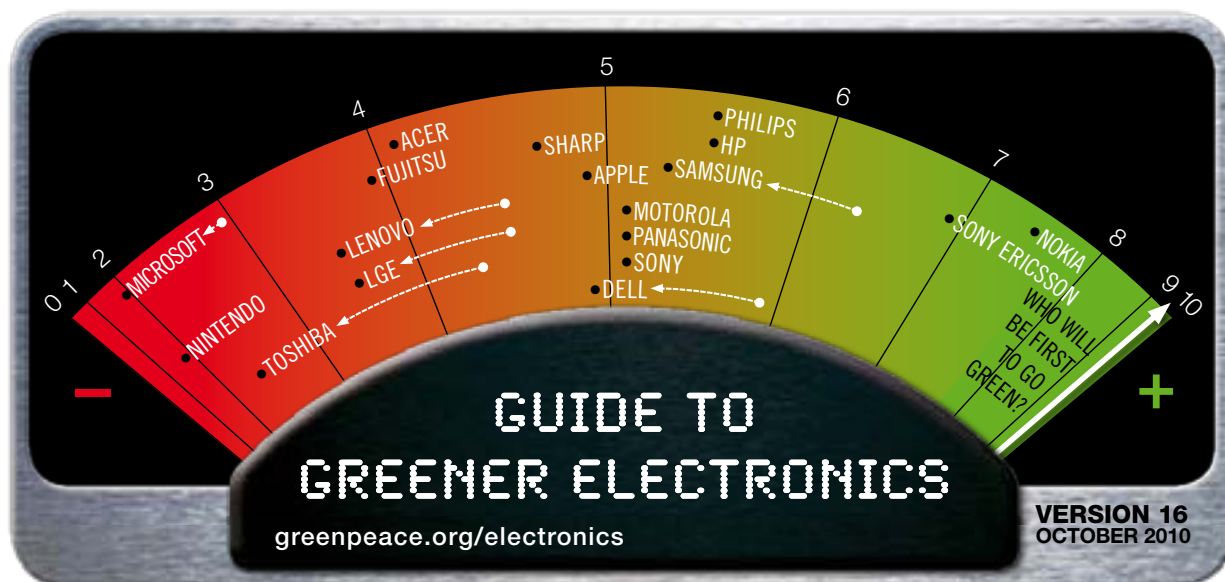
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	GOOD (3+)	BAD (0)	GOOD (3+)
Apple refers to its 'precautionary approach' to substances. Its progress in eliminating hazardous substances seems to be guided by three important elements of this principle: preventive action, voluntary elimination and proactive search for safer substitutes. More information. Evidence of lobbying on RoHS 2.0. To score full marks, Apple needs to provide a public position on its support for immediate restrictions in RoHS 2.0 on at least PVC, BFRs and CFRs (within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. It also needs to clarify its stance regarding the position of the trade federation TechAmerica on further restrictions of hazardous substances.	Apple provides examples of substances that it has eliminated e.g. arsenic in LCDs and mercury by moving to LEDs. It plans to have all products free of elemental bromine and chlorine – not just PVC and BFRs but there is little information about Apple's communications with its suppliers. C2 evaluates disclosure of information flow in the supply chain. More information. Apple refers to its Regulated Substances Specification which details a broad range of substances that are restricted or banned, yet still fails to disclose its Substance Specification 069-0135.	Apple planned to completely eliminate the use of PVC and brominated flame retardants in its products by the end of 2008. Currently all Apple products are free of BFRs and PVC. Apple plans to eliminate all forms of chlorine and bromine, not just those in PVC and flame retardants. More information here and here.	Apple is banning DEHP and other phthalates from all new product designs (although the other types of phthalates are not specified). Arsenic in glass and mercury in backlighting are in the process of being eliminated. However, no timeline for completing phase-out of the above substances is given. Antimony is not mentioned and Beryllium is no longer referred to. More information.	All Apple products are now free of BFRs and PVC; all iPod, iPhone and iPads ship with PVC-free cables worldwide; all notebook, Apple TV, Mac mini, iMac, and 27-inch LED Cinema Display products ship with PVC free cables in the U.S. and in other countries where agency approvals are granted. Apple scores full marks on this criterion as there is no intentional use of these substances. More information. Mercury and Arsenic have also been eliminated from MacBook Pro notebooks. More information. See Environmental reports and specs for desktops, notebooks, cinema display, server, iPhone and iPod.

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
BAD (0)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	BAD (0)
Apple no longer refers to its "individually responsible approach" to recycling its own take-back initiatives and participates in national collective take-back programmes. To score points, Apple needs to explicitly support and demonstrate an understanding of IPR, for example clarifying that it understands IPR as full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share) for WEEE, and refer to the eco-design benefits of IPR. More information.	Apple now operates or participates in recycling programs in countries where more than 95 percent of its products are sold. Apple has recently added India, China, Hong Kong, Malaysia, Singapore, New Zealand, Korea and Australia to its voluntary take-back programmes that accept all Apple branded e-waste. More information. Free recycling for iPods & mobile phones of all brands (US only). In the US Apple offers a gift card for new equipment if an old computer is suitable for re-use, or free recycling for Apple branded equipment. Links to programs in Canada, Europe, Japan, Asia Pacific/ Australia and Brazil are provided.	Information is provided to individual customers on how to recycle e-waste in the US, Canada, Europe, Japan, Asia Pacific, Australia and Brazil; however, no information is available to customers in 'New Europe'. More information. US here and here. Canada. Europe. Japan. Asia Pacific & Australia. Brazil.	Apple recycled 30.5 million pounds of electronic waste and reports a recycling rate of over 41.9% in 2008, as a percentage of sales 7 years ago. This has surpassed its 2009 and 2010 goals and Apple has now set a new goal of achieving a 50% recycling rate by 2010. Apple exceeded that goal in 2009 with a rate of 66.4%. Apple's goal is to reach 70% in 2010, and to meet or exceed this thereafter. For more transparency, Apple needs to provide a breakdown of the recycling quantities of its various products (eg. iPods, PCs) that make up these figures. More information.	No information on overall amount of recycled plastic used. Apple products are designed using recyclable materials. More information.

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
BAD (0)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)	PARTIALLY GOOD (2+)
Despite having left the US Chamber of Commerce over differences in climate policy, it is disappointing that Apple has yet to make a statement on the need for mandatory reduction of GHG emissions.	Apple reports on the metric tons of GHG emissions for manufacturing (45%), transportation (5%), product use (46%), recycling (1%) and facilities (3%). For full marks Apple needs to supply external verification. More information. Apple has estimated the life cycle GHG emissions, including a breakdown of their source, for individual models of products in Product Environmental Reports. More information here and here.	Apple seeks to minimise GHG emissions by setting stringent design-related goals for material and energy efficiency per model of product. However, there are no details of these goals. More information. Apple scores one point as its emissions were reduced by 3 percent year over year from 2007 to 2008, but it is not clear if this reduction was absolute or relative (per employee). More information.	Apple does not provide data on renewable energy sourced globally as a proportion of total electricity use. It reports that 8.3 million kgs (8,300 tonnes) of CO ₂ emissions were saved through renewable energy in 2008 (out of 275,718 metric tons of GHG emitted from facilities). The amount of RE used as a portion of the electricity use by Apple depends on the fossil fuel source these renewables displaced. Apple fails to score any points as it needs to disclose information on its renewable energy in a transparent and comparable way. More information here and here.	Apple states that its entire desktop and notebook product lines meet the strict requirements set by Energy Star, and met the ES version 5 standard before its July 09 effective date. More information. All Apple iPod and iPhone power adapters also exceed Energy Star efficiency requirements. See Product Environment Reports for details on Energy Star 5.0 compliance.



DELL Ranking = 5.9/10 - 1 = 4.9/10

Dell increases its score to 4.9 from 4.3, maintaining its position in 10th place, gaining points on both the chemicals and the e-waste criteria. However, Dell continues to be hampered by the penalty point imposed for backtracking on its commitment to eliminate PVC vinyl plastic and brominated flame retardants (BFRs) in all its products by the end of 2009.

Dell now scores full marks for demonstrating proactive advocacy in its support for restrictions on PVC and BFRs in the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics). Dell's first completely PVC and BFR-free products on the market are the G-Series Monitors, although PVC and BFR-free cables are currently available only in North America, Japan, Europe/Middle East and Africa. In total it has 35 PVC/BFR reduced or PVC/BFR-free products, including laptops and a desktop. Dell has also released a BFR/PVC-free mobile phone, the Mini 3i, which is sold only in China. However, its current commitment to eliminate PVC and BFRs by the end of 2011 is limited to computing products.

Dell also gains points on the e-waste criteria, for clarifying its support for Individual Producer Responsibility (IPR); it states that IPR requires it to internalise the end-of-life costs of its products and factor them into its product design decisions. It also scores well for its relatively comprehensive take-back programme and for providing information to its customers on what to do with their discarded electronics. It reports the use of 3,720 tonnes of post-consumer recycled plastic in 2009. Dell reports on the total figures of e-waste recycled quarterly, but it no longer provides data on recycling rates based on past sales.

On the energy criteria, Dell scores full marks for committing to reduce global absolute GHG emissions from its worldwide facilities by 40 percent by 2015, from a baseline year of 2007 and should be credited for continuing to reduce emissions in the financial year 2009 – 2010. It reports its greenhouse gas (GHG) emissions from global operations for financial year 2010, and provides verification for its 2009 GHG emissions. Renewable energy makes up 26 percent of its global electricity use, up from 20 percent in 2008, although it no longer provides a breakdown of its certified renewable energy credits globally. On the energy efficiency of its products Dell reports that 59 percent of laptop models and 63 percent of desktop models are Energy Star 5.0-compliant. Almost all of Dell's desktops, workstations and laptops consume less than 5 watts in a low-power mode, exceeding current Energy Star efficiency requirements. It is encouraging that Dell is making continuous steps to improve the efficiency of its models. Dell still needs to specify the need for cuts in GHG emissions of at least 30 percent by industrialised countries and support the call for global emissions to peak by 2015.

DELL Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

DELL Detailed Scoring

Chemicals

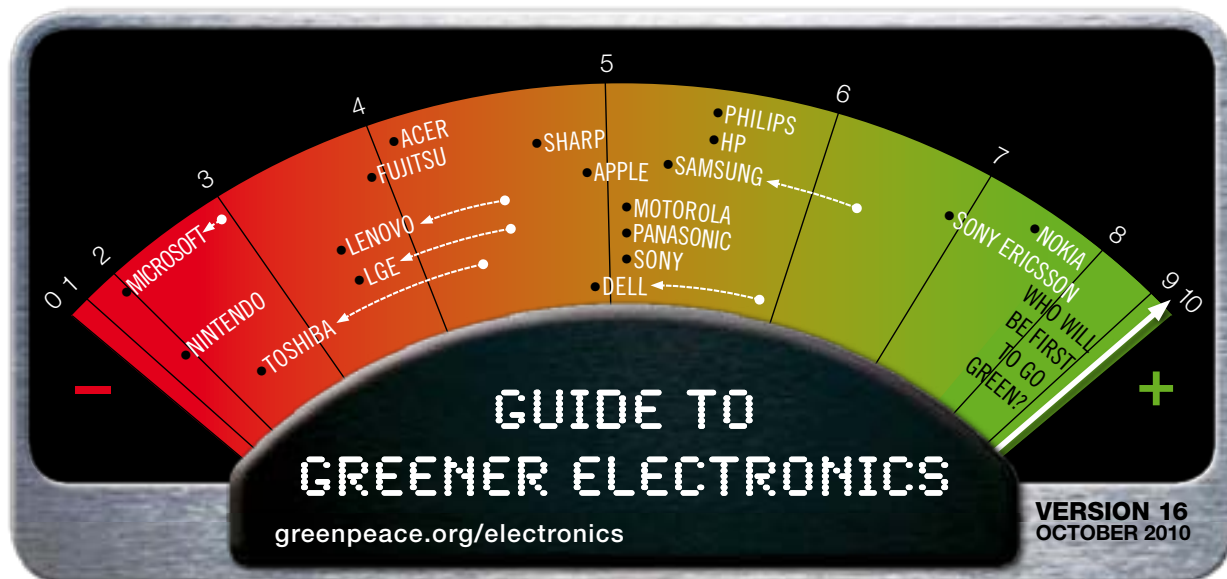
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
GOOD (3+)	GOOD (3+)	PARTIALLY BAD (1+)	BAD (0)	PARTIALLY BAD (1+)
<p>Definition of precautionary principle reflects need to eliminate potentially harmful chemicals even without full scientific certainty of cause and effect. Dell supports restrictions of PVC and BFRs as a focus for the restriction of chlorine and bromine from electrical and electronic products, and supports restriction under the current RoHS recast provided that some critical technical and supply chain issues can be overcome or addressed by specific exemptions. More information here and here. Dell scores full marks for demonstrating proactive advocacy. More information here and here. See also p 35, Corporate Responsibility Summary Report 2010.</p>	<p>Dell's chemicals management programme lists substances targeted for substitution and explains how it manages its supply chain to achieve its substitution goals. Guidance Document on Restricted Materials (2009).</p>	<p>By the end of 2011, all newly introduced Dell personal computing products will be free of PVC and BFRs. Dell no longer commits to removing these substances from all products and the timeline is unreasonable, which is why Dell loses a point. More information. Dell's original timeline for eliminating PVC and BFRs in all products was end of 2009. It subsequently backtracked on this commitment initially providing no new timeline and now setting end of 2011 as its new target, but no longer for all products, just computing ones. Dell has provided assurance that its new target will be met.</p>	<p>An update to Dell's January 2009 version of its Materials Restricted for Use Specification (6T198) restricts 3 phthalates (DEHP, BBP, DBP) as from July 1 2010 for newly launched parts and products and by July 2012 for sustaining products. Other phthalates, antimony and beryllium are identified as substances of concern, but they are not currently restricted. Instead they are listed in a table entitled: Future Material Declaration Requirements. See p.11 Guidance Document on Restricted Materials. Dell also plans to expand its mercury-free LED based products and introduce arsenic free display glass. More information.</p>	<p>In late February 2009, Dell launched the G-Series Monitors (G2210 and G2410), its first completely PVC and BFR free products on the market (although PVC/BFR/CFR free cables are currently available only in North America, Japan and EMEA). Since 2007 Dell has introduced more than 35 BFR/PVC reduced or BFR/PVC free products, including: Latitude Z laptop, many internal components that are free of BFRs and PVC. - Latitude E4200 laptop (all configurations) - The Adamo XPS 13 laptop, free of BFRs and PVC (excluding the power cord, external power adapter, 3 internal daughter cards, and several motherboard components). Studio Hybrid (all configurations) Dell has also released a BFR/PVC-free mobile phone, the Mini 3i, which is sold only in China. More information. Product details can be found at Dell's Green Store.</p>

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
<p>Dell regains two points for clarifying its IPR policy; it states that IPR requires it to internalise the end-of-life costs of its products and factor them into its product design decisions. More information. Dell describes its policy advocacy and compliance. To gain top marks, Dell will need to explore options for operationalising IPR and show evidence of its advocacy for IPR, inter alia to ensure the revised EU WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR - ensuring a shift to differentiated/individualised financing for own-brand real end-of-life costs for new WEEE.</p>	<p>Dell is striving for a free global voluntary take-back service. 60 countries are listed as offering take-back services for individual customers on Dell's recycling page, including India, Malaysia, Columbia, Hong Kong, Mexico, Brazil and Chile. More information. Dell offers free recycling in most places where it does direct business. See 2010 Corporate Responsibility Report, p 34, p. 21. The Reconnect Program, which Dell runs in partnership with Goodwill, is now available throughout the US and in selected communities in Canada. More information.</p>	<p>Information is provided to Dell's individual customers, but not yet worldwide. More information. Dell's US programme. The "Dell recycling" link can be accessed from each regional homepage, with the exception of some Central and Latin American and Caribbean countries, apart from Brazil.</p>	<p>Dell no longer reports its recycling data as a percentage of sales 7 years ago. Instead, it is using a new system for reporting recycling and take-back information. Total figures are given quarterly. Dell's data does not include e-waste recycled via collective programmes anywhere in the world. Corporate Responsibility Summary Report 2010, p 33 - 34. Dell needs to report its recycling data as a percentage of sales 7 years ago and 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.</p>	<p>Dell shipped over 3,270 tonnes of post consumer recycled plastic in 2009 and will increase this amount in 2010. Dell provides a few models of products with 25% or more recycled plastic content, but no information on the % of total plastics sourced and although Dell has internal targets for use of recycled plastics in certain product lines, it has no public target for increasing use. In 2008 Dell launched several monitors and one desktop (OptiPlex 960) which feature an external chassis with post-consumer recycled plastic content. More information here and here.</p>

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)	GOOD (3+)	PARTIALLY GOOD (2+)
<p>Dell supports the call for global reductions of 50-85% by 2050 from 2000 levels. Greenpeace believes that there is strong evidence to support going for the upper range now. Dell calls for the United States to take a leadership role by developing a national GHG emissions reduction programme. It also states that the solution requires action from both developed and developing countries, however, it needs to support cuts of at least 30% by industrialised countries and call for global GHG emissions to peak by 2015. More information.</p>	<p>The latest FY2010 figures for scope 1,2 & 3 are summarised and compared to previous years. See also FY2010 Corporate Responsibility Summary Report p 38 - 39. Third party verification is reported to the CDP project. (see Dell 2009, section 18.4, registration required or pdf file here) Dell is now requesting GHG accounting and reporting from its Tier I suppliers. More information.</p>	<p>Dell is committed to reduce global absolute emissions of GHGs from its worldwide facilities by 40% by 2015, from a baseline year of 2007. Scope 1 GHG emissions have reduced by 5% and Scope 2 GHG emissions by 10% from FY2009 to FY2010. See FY2010 Corporate Responsibility Summary Report p 38 - 39.</p>	<p>Dell has announced that 26% of its global electricity use now comes from renewable energy sources, up from 20% in 2008. More information here and here. Dell's goal is to use energy that is 100% generated by clean and renewable sources, although there is no timeline. More information. Dell provides a breakdown of its energy consumption and links to the US EPA's Green Power Partnership rankings, which details its providers of renewable energy in the US. However, it no longer provides a breakdown of its certified renewable energy credits. More information.</p>	<p>59% of laptop models and 63% of desktop models are Energy Star 5.0-compliant. Almost all of Dell's desktops, workstations and laptops consume less than 5 watts in a low-power mode - this exceeds current energy efficiency requirements set by the EPA. Dell needs to provide percentages of computers that have left the factory non-compliant and release the information on its global website (not a blog). More information. All Latitude, Precision and OptiPlex systems can be configured for Energy Star compliance. See p.36 CR Summary Report. PCs need to leave the factory with the most energy efficient settings, which should not go out of ES compliance when consumers tweak power management settings.</p>



SHARP Ranking = 4.7/10

Sharp drops to 11th place from 9th with an increased score of 4.7, up from 4.5 points, as a result of other companies rising up the ranking. It gains a point for the verification of its CSR report which includes calculation of greenhouse gas (GHG) emissions.

Otherwise, Sharp scores relatively well for its policy and practice on toxic chemical issues, although it specifies the end of fiscal 2010, rather than calendar year 2010, for its phase-out of PVC and BFRs. It provides a timeline of financial year 2010 for eliminating phthalates and antimony, but there is a lack of clarity on whether the commitment to eliminate phthalates relates to all phthalates or just three. Sharp has launched many models of LCD TVs and solar modules free of PVC (except accessories) and now has 14 models of LED lightings that are BFR-free. However, it fails to show support for improvements to the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics); specifically, a methodology for further restrictions of hazardous substances, and an immediate ban on brominated flame retardants (BFRs), chlorinated flame retardants (CFRs) and PVC vinyl plastic. It continues to score poorly for Chemicals Management as its Manual for Survey of Chemical Substances Contained in Parts and Materials is no longer available to the public. Its new 'Green Procurement Guidelines' are more confusing about eliminating BFRs than the earlier version and the 'List of Substances' document no longer presents criteria for identifying future substances for elimination.

Sharp is weakest on the e-waste criteria. It scores points for its voluntary take-back programme for TVs and consumer electronics in the US, which is nationwide, for providing information to consumers in a few countries on what to do with their discarded Sharp branded products and for reporting on the use of small amounts of recycled plastic. Sharp supports Individual Producer Responsibility (IPR) but needs to clarify this support, as well as show evidence of lobbying for it.

Sharp earns most of its points on energy. It gets maximum points for reporting that all of its TVs meet the latest Energy Star standard and at least half exceed it in standby mode; its external power supplies are not included in the assessment as Sharp has informed us that a universal charger is used in Japan. Sharp's absolute greenhouse gas (GHG) emissions were 103Kt (6 percent) lower in 2008 than 2007. On other energy issues Sharp only 'contributes' to, rather than explicitly 'supports', a mandatory global initiative that requires industrialised countries to reach their peak GHG emissions by 2015 and cut their GHG emissions at least 30 percent by 2020. Sharp discloses GHG emissions from its own operations which are externally verified and reports that 0.5 percent of the electricity it used worldwide in financial year 2009 came from renewable energy sources.

Note: Sharp has updated some of the information on its website since this assessment was made..

SHARP Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

SHARP Detailed Scoring

Chemicals

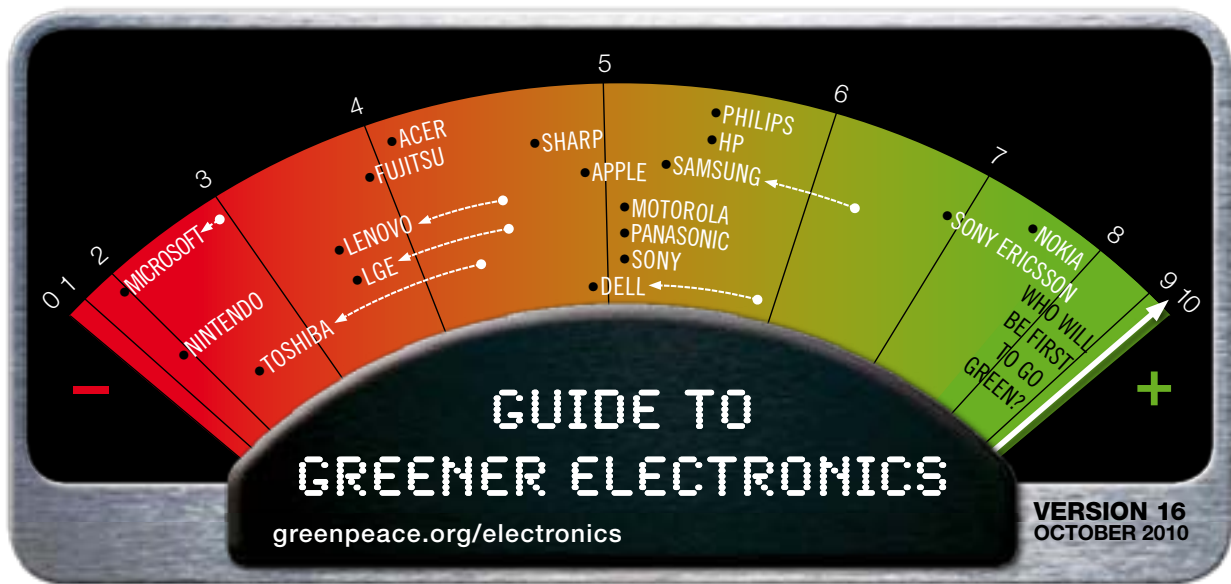
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)
Sharp shows strong support for and understanding of the Precautionary Principle. Although Sharp will proactively support the revision to the RoHS Directive to ban HBCD and some other specified substances, Sharp fails to score more points as it makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. More information. Also in Fundamental Orientation Concerning the Environment (point 2.3).	Sharp's Green Procurement Guidelines are more confusing on eliminating BFRs than the previous version and the List of Substances no longer presents criteria for identifying future substances for elimination. More information. List of substances. Green Procurement Guidelines. Sharp scores one point as its Manual for Survey of Chemical Substances Contained in Parts and Materials is no longer available to the public.	Sharp commits to eliminate PVC and BFRs from all products by the end of fiscal 2010 i.e. end of March 2011, provided it can find suitable alternatives. To regain top marks, the phase-out date needs to be moved forward by one quarter to the end of calendar year 2010. More information.	Sharp commits to eliminate phthalates and antimony from all products by the end of fiscal 2010, provided it can find suitable alternatives. More information. However, Sharp's 'Confirmation of Use Form' refers only to phthalates in contact with humans. More information. Sharp has phased out the use of antimony compounds used as antifoaming agent in LCD glass. The company has already banned beryllium, but there are many exemptions for which Sharp needs to find substitutes.	Sharp has added LED lightings and small household appliances to its list of products that are PVC free (except accessories), that already includes many models of LCD TVs, solar modules and mobile phones. Many models of LCD TVs, DVD projectors, audio and video products and mobile phones have casings free of BFRs. All AQUOS LCD TVs put on the Japanese market since May 2004 have PVC-free internal wiring and power cords; since 2001 all AQUOS TVs in Japan have housings free of BFRs and antimony. Sharp now has 14 models of LED lightings that are free from BFRs. More information.

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
Sharp states that it promotes environmentally conscious product design according to the principle of Individual Producer Responsibility. Sharp needs to clarify that it supports IPR and that this means it supports full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share) for WEEE; it also needs to show evidence of lobbying for IPR. It is taking a lead in recycling e-waste and designing more recyclable products. It is actively participating in the design of recycling systems now being considered in China and other parts of Asia. More information.	Sharp offers nationwide recycling in the US, including TVs and consumer electronics, which covers all US States. More information here and here. In the US, Sharp is part of US EPA's Plug-In To eCycling. Offers voluntary take-back of toner cartridges in Canada, France, Japan, Australia and New Zealand, and mobiles (Mobile Muster) in Australia.	Links to local Sharp contacts for customers in EU, US, Canada, Japan and Australia are provided but Sharp needs to expand take-back services to non-OECD countries so that it can serve more of its customers. More information. US MRM recycling network.	Sharp provides figures for recycling of TVs, copiers, PCs & washing machines (by wt) for 2005 (40.1%), 2006 (41.9%) and 2007 (48.9%) based on sales 10 years ago, but only for Japan and reports a composite recycling rate for 4 product types, not just TVs. More information. 2009 data here, here and here. The amounts of used electrical products collected in Maine, Minnesota, and in other States, are provided. The amounts collected in Germany, UK and Czech Republic are no longer given as a percentage of current sales but as total figures. More information.	In 2009 Sharp recycled 1,200 tons of post-consumer plastics and has a target to increase this to 1,500 tons in 2012. The data is not presented as a percentage of all plastic sourced. More information. Examples of products using recycled plastic.

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 GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)	GOOD (3+)
Sharp contributes to a mandatory global initiative that requires industrialised countries to reach their peak greenhouse gas emissions by 2015 and cut their greenhouse gas emissions at least 30% by 2020, and that calls for worldwide emissions to be reduced at least 50% from 1990 levels by 2050. For full marks, Sharp needs to state explicit support for global (not just industrialised country) emissions to peak by 2015 and explicit support for cuts by industrialised countries of at least 30% by 2020. More information.	Sharp reports on GHG emissions from its own operations in absolute terms and per production unit. More information. 2008 data that shows GHG emissions have decreased since 2007. Sharp regains a point as its verification for its CSR report includes calculation of GHG emission data. Verification details. Sharp deserves credit for providing data giving a breakdown of CO ₂ emissions for products during their life cycle. More information.	Sharp has a target to reduce relative CO ₂ emissions (per adjusted production unit) by 35% compared to fiscal 1990 by 2010, but for domestic production sites only. There is no target for an absolute reduction of emissions of all GHGs. More information. As a result of various measures taken by Sharp, CO ₂ emissions from its existing factories will peak by the end of fiscal 2007. Absolute emissions were 103Kt (6%) lower in 2008 than 2007. Future emissions will be expected to decline. More information here and here.	Sharp consumed approx. 13GWh of electricity from renewable sources in fiscal 2009, (2.5GWh more than the previous year), equivalent to about 0.5% of the electricity used by Sharp worldwide in 2009. More information. In Europe some of its companies are operating on renewable sources of energy and 85% of electricity used at its US sites is renewable. However, there is no commitment or timeline to increase the use of renewable energy. More information.	Sharp scores top marks as 100% of Sharp TVs meet the latest ES requirements (version 4.1); almost 90% of these are at least 50% more efficient in standby mode, with 60% at least 30% more efficient in ON mode. In addition, 100% of MFPs qualify under ES1.1, with 17% of them at least 30% more efficient than the changed ES requirements. A wide range of other Sharp products are also ES qualified. Sharp does not make external power supplies for mobile phones in Japan, which uses a universal charger. More information.



ACER Ranking = 4.1/10

Acer drops to 12th place from 11th, with the same score of 4.1 points.

Acer scores most points for its efforts on toxic chemicals. It is proactively supporting improvements to the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics); specifically, a methodology for further restrictions of hazardous substances, and an immediate ban on BFRs, chlorinated flame retardants (CFRs) and PVC, for which it scores maximum points. In the last four versions of the ranking, the company has not been penalised for backtracking on its commitment to eliminate PVC and BFRs in all products by the end of 2009; as assurance that this timeline will be met, Acer launched four new PVC and BFR-free models of notebook in January 2010; four more notebooks have just been launched, together with a monitor, and Acer plans to launch more monitors and a desktop shortly. Acer now needs to transition all its products to using no BFRs and PVC. Acer's new plan is to phase out PVC vinyl plastic and brominated flame retardants (BFRs) for personal and mobile computing products by 2011 rather than for all products – and therefore scores only one point. The company is rewarded for its commitment to phase out all phthalates, beryllium and compounds and antimony and compounds in all new products by 2012.

Acer scores poorly on e-waste, even though it is reporting a recycling rate of 29.8 percent based on past sales, for desktops and notebooks, but only those sold and recycled in Taiwan. Acer needs to clarify its support, and do more lobbying, for Individual Producer Responsibility, extend its voluntary take-back and recycling programme beyond India, and start sourcing recycled plastic.

Acer does a little better on the energy criteria, supporting global cuts in greenhouse gas (GHG) emissions of at least 50 percent by 2050 and 30 percent by 2020 from industrialised countries (compared to 1990 levels) and calling for global GHG emissions to peak by 2015. Acer needs to set a target for absolute cuts in GHG emissions, which is now overdue, and start sourcing renewable energy. On energy efficiency, Acer reports that, at present, 63 percent of notebook PCs and 40.6 percent of desktop PCs meet the new Energy Star v.5 standard; previously, 55 percent of Acer notebook PCs and 29 percent of desktop PCs met the standard.

ACER Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				GOOD (3+)
Chemicals Management				GOOD (3+)
Timeline for PVC & BFR phaseout		PARTIALLY BAD (1+)		
Timeline for additional substances phaseout				GOOD (3+)
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>		PARTIALLY BAD (1+)		
Individual producer responsibility		PARTIALLY BAD (1+)		
Voluntary take-back	BAD (0)			
Information to individual customers		PARTIALLY BAD (1+)		
Amounts recycled		PARTIALLY BAD (1+)		
Use of recycled plastic content	BAD (0)			
Global GHG emissions reduction support				GOOD (3+)
Carbon Footprint disclosure		PARTIALLY BAD (1+)		
Own GHG emissions reduction commitment	BAD (0)			
Amounts of renewable energy used	BAD (0)			
Energy efficiency of new models <small>(companies score double on this criterion)</small>		PARTIALLY BAD (1+)		

ACER Detailed Scoring

Chemicals

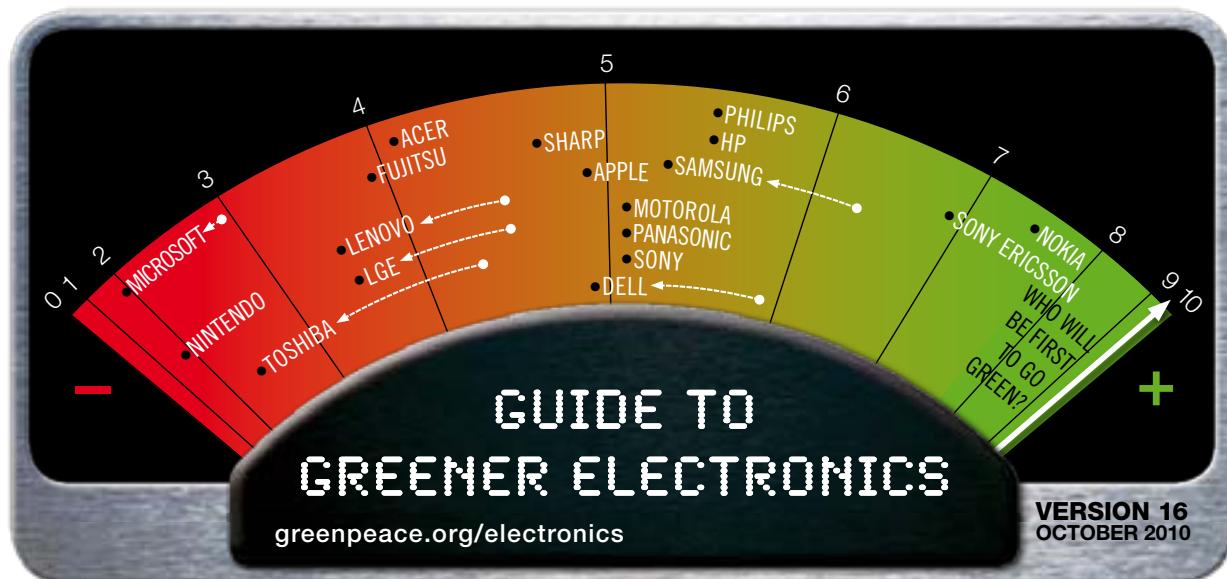
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
GOOD (3+)	GOOD (3+)	PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY BAD (1+)
<p>Acer's statement on the precautionary principle recognises the need for preventive action, even if scientific evidence is not conclusive. More information here and here.</p> <p>Acer is proactively supporting a ban on organo - chlorine and bromine substances in the revision of RoHS 2.0 and scores maximum points for providing evidence of actively promoting this position to EU decision makers. More information here and here.</p>	<p>Top marks for describing the mechanisms for identifying future substances of concern.</p> <p>Supply chain management.</p> <p>HSF (Hazardous Substance Free) Planning.</p>	<p>Acer has a new timeline and roadmap for eliminating PVC and BFRs of 2011, which now applies only to personal and mobile computing products; its previous commitment applied to all products, therefore its score is reduced.</p> <p>More information.</p> <p>Availability of key components prevented Acer from meeting its original commitment to phase out PVC and BFRs in all products by the end of 2009. Four new PVC/BFR free models of notebook were launched in January 2010 and other products have followed. More information here, here and here.</p> <p>Technology assessment results.</p>	<p>Acer has adopted a timeline of 2012 for the phase out of all phthalates, beryllium and compounds and antimony and compounds in all new products. Certain phthalates are to be phased out by 2009.</p> <p>More information.</p>	<p>It is encouraging to see that Acer has introduced more models that are free of PVC and BFRs in Q3 2010; four notebooks, apart from external cables (TravelMate 8172T, 8372T, 8472T and 8572) and an LCD monitor (C233HL); two more monitors are planned for October 2010 (C203HL) and December 2010 (C193HQL) and a desktop (apart from external cables) is planned for December 2010.</p> <p>More information. In Q1 2010 Acer launched a new Timeline series notebook, Aspire 3811TZ, 3811TQG, 3811T, 3811TG, made with materials free from PVC and BFRs. More information here and here.</p>

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	BAD (0)
<p>Acer supports IPR and "believes that this will place 'easily recyclable design considerations' as an important feedback mechanism directly reflected in product design". To score more points, Acer needs to clarify that support for IPR means full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share). Acer also needs to provide examples of where it is doing advocacy and details of operationalisation of IPR.</p> <p>More information.</p>	<p>Acer provides take-back services where required to do so by national EPR laws. The only exception seems to be India where Acer now takes back and recycles for free. It is unclear if Acer provides take-back in some US states and Canadian provinces, as the links provided are to NGOs and EPA's Plug in to e-cycling. To score points, Acer needs to extend the coverage of its take-back services. More information.</p>	<p>Recycling information provided for EU, Japanese, Taiwanese and Indian customers only. Information for US customers needs to be more relevant. In the EU, some of the links provided navigate to trade associations (e.g. France, Czech Republic) and not to recyclers.</p> <p>More information.</p> <p>Europe.</p> <p>Taiwan.</p> <p>Japan.</p> <p>India.</p>	<p>Acer reports a recycling rate of 29.47% in 2008 based on sales 6 years ago, for desktops and notebooks sold and recycled in Taiwan. However, the data is only for Taiwan and relies on many assumptions. More information.</p>	<p>Acer uses a material containing 28% post-consumer recycled plastic in monitor casings of 7 families of EPEAT Gold models. The recycled plastic percentage will be around 10%-13% of all plastics used in the monitor, however, Acer does not currently report its use of recycled plastics as a percentage of all plastics use. Acer intends to draw up a phase-in plan with a detailed schedule and targets.</p> <p>More information.</p>

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
GOOD (3+)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)	PARTIALLY BAD (1+)
<p>Acer supports the reduction targets proposed by the EU, which are to cut GHG emissions by at least 50% by 2050 globally and 30% by 2020 from industrialised countries (compared to 1990 levels). Acer gets full marks for supporting calls for global GHG emissions to peak by 2015.</p> <p>More information.</p>	<p>Acer reports on GHG emissions from its global operations that in total were 47,644 CO₂ equivalent tonnes in 2007 and 45,959 CO₂ -e tonnes in 2008. Scope 1 and 2 emissions are reported, as well as business travel in Scope 3. Acer has requested its suppliers to respond to the Supply Chain Leadership Collaboration (SCLC) questionnaire of the Carbon Disclosure Project (CDP). A preliminary figure from suppliers allocated to Acer was about 82,000 CO₂ equivalent tonnes in 2008. Acer reports that data collection and verification for 2009 was conducted in the second quarter of 2010, however, these are not available and there is no explanation for the delay. To score more points, Acer needs to provide external verification of its calculations. More information.</p>	<p>Acer expects to finalise its short-term, mid-term and long term GHG reduction targets in 2009, which is now well overdue. This was already delayed as previously Acer expected to finalize its mid-and long-term GHG reduction targets in winter 2008.</p> <p>More information.</p>	<p>A global survey was conducted in 2008 on purchasing renewable energy. Acer is also assessing the feasibility of using renewable energy such as solar power and wind power in its global operations. Acer needs to update its website with the results of this survey and set targets for its use of renewable energy.</p> <p>More information.</p>	<p>63.2% of notebook PCs and 40.6% of desktop PCs meet the new Energy Star v.5 standard. Acer has recently updated these figures. Computers need to leave the factory with the highest settings for energy efficiency.</p> <p>More information.</p>



FUJITSU Ranking = 3.9/10

Fujitsu moves up to 13th place from 15th, with an increased score of 3.9 points. Fujitsu gains two points on the energy criteria, one for adopting a target for reducing its greenhouse gas (GHG) emissions to 6 percent below FY1990 levels by the end of FY2012 and another for providing a certificate of third party verification of greenhouse gas (GHG) emissions.

Fujitsu scores highest on energy issues. It is rewarded for supporting the need for GHG emissions to peak by 2015 and for industrialised countries to cut GHG emissions by up to 30 percent. It also gains points for reporting that 100 percent of its notebook and tablet PCs released globally comply with the latest Energy Star standard. Fujitsu reports GHG emissions from its own operations for 2008, which have reduced from 2007. Although it has a new target to increase its use of renewable energy sources to 3 times FY2007 levels by the end of FY2012, there is no data on Fujitsu's use of renewable energy in FY2007 globally and therefore it fails to score any points; figures for the use of renewable energy as a percentage are only provided for Europe, where at least 15 percent of purchased electricity was renewable in 2007.

On chemicals, Fujitsu now scores maximum points for having a chemicals management system in place. It scores double points for the Fujitsu Technology Solutions (formerly Fujitsu Siemens Computers) PCs with reduced PVC vinyl plastic and brominated flame retardants (BFRs), sold in the EMEA region, including Europe. It also scores for committing to eliminate some phthalates in PCs by 2013. Fujitsu plans to totally abolish the use of PVC and the BFR HBCDD in PCs by the end of 2013, but scores no points on this criterion as it does not commit to phase out all BFRs. Although Fujitsu now provides a clear definition of the Precautionary Principle, it fails to show support for improvements to the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics); specifically, an immediate ban on BFRs, chlorinated flame retardants (CFRs) and PVC and a methodology for further restrictions of hazardous substances.

Fujitsu is relatively weakest on e-waste, but earns points for its voluntary programmes for the take-back and recycling of its discarded products. It provides information to some customers on what to do with their obsolete electronics. It also scores a point for albeit weak support for Individual Producer Responsibility and reporting recycling rates in a few EU countries. However there is plenty of room for improvement on its provision of information to customers, use of recycled plastic as well as its support for Individual Producer Responsibility.

FUJITSU Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

FUJITSU Detailed Scoring

Chemicals

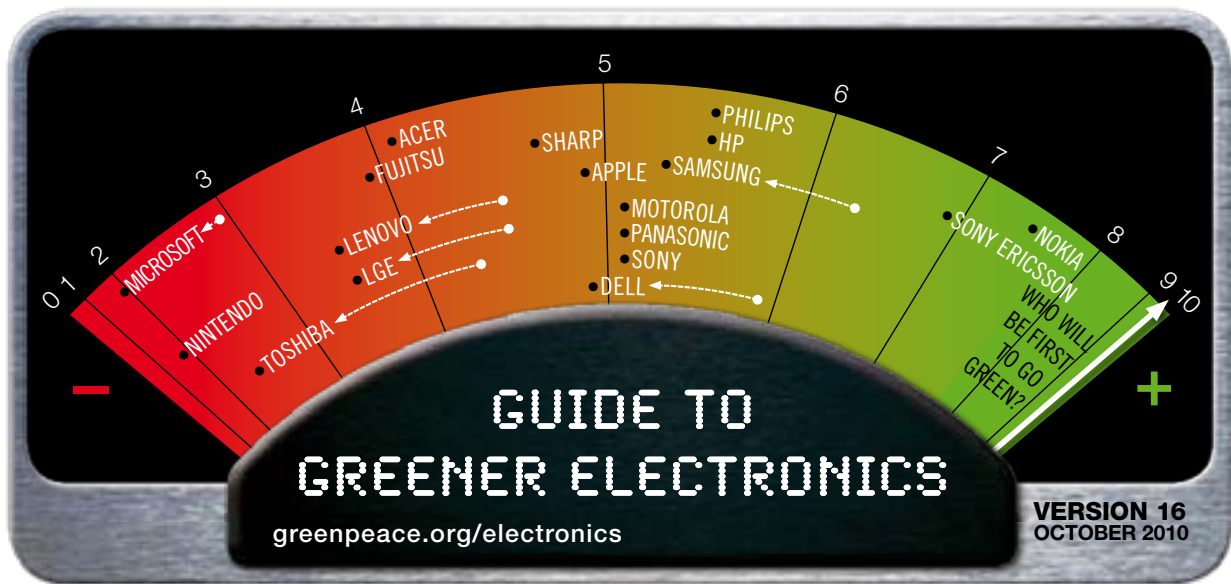
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
Fujitsu defines the Precautionary Principle as a way of identifying future substances for restriction and the need to act despite scientific uncertainty. However, Fujitsu makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. More information.	Fujitsu's Green Procurement Direction document (version 5.0) lists banned hazardous substances & their limits, specifies 'reportable' substances based on the REACH candidate substances and 'control substances'. Both of these groups of substances can be considered for inclusion on the banned substances list, based on the precautionary principle. More information here and here. Version 5.0 Green Procurement Direction. Guideline Regarding Non-Containment Management on Fujitsu Group Specified Chemical Substances.	Fujitsu plans to totally abolish the use of PVC in PCs by the end of 2013. The BFR HBCDD will also be eliminated by the end of 2013, however, the use of other BFRs in parts other than casings is not referred to. This lack of a commitment to eliminate all BFRs means that Fujitsu scores no points on this criterion. More information. Select 'Activities for PCs' at end of page.	Fujitsu plans to eliminate phthalates as part of its commitment to phase out PVC in PCs, and names three specific phthalates (DEHP, DBP and BBP) to be eliminated by the end of 2013. The use of beryllium in PCs is to be eliminated by the end of 2012. More information. Select 'Activities for PCs' at end of page.	Fujitsu Technology Solutions (formerly Fujitsu Siemens Computers) still sells PCs with reduced PVC and BFRs. Since 1993, the company has made Green PCs, such as FUTRO thin clients, ESPRIMO professional PCs and CELSIUS workstations which use halogen-free flame retardant plastics and halogen-free Printed Circuit Boards for mainboard and power supply. More information. Fujitsu Technology Solutions. Green PCs. Green IT. Green Label criteria. Halogen-free and antimony-free 2.5 inch Hard Disk Drives. See p.54 of 2009 Sustainability Report. Fujitsu's new Eco Keyboard has a PVC free USB cable.

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	BAD (0)
Fujitsu's recycling activities supposedly are guided by the principles of extended and individual producer responsibility (EPR and IPR). However Fujitsu's statement that they only 'try to do as much collection as possible' of their own products in countries where take-back isn't obligatory is not a convincing or clear statement of support for IPR. Fujitsu needs to clarify that it supports taking individual responsibility, independent of the legal regime and that it understands that this means supporting full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately. p.59 2009 Sustainability Report. IPR statement by Fujitsu TS.	As of June 2007, Fujitsu has initiated IT product recycling services in the United States, Canada, Australia, the Philippines and Singapore. More information. See press release, for more details. Fujitsu has also launched a special initiative in South Africa. More information. It is encouraging to see that Fujitsu has expanded its voluntary take-back program to Turkey and India.	Details of the regions giving information on product recycling More information. EU information. Fujitsu has also provided the link to FTS recycling site for information on recycling in EMEA, Asia and the USA. Contact details. Although Fujitsu states that recycling services are provided in Canada, Australia and the Philippines, there are no contact details.	Fujitsu reports a recycling rate in 2007 of 22.5% in Germany and over 30% in 13 other EMEA countries, based on past sales, using a 7-year PC lifespan. Fujitsu should provide more information on how the calculations are made, given that in EU, recycling of e-waste is financed collectively by current market share, and may not represent what actually comes back into the collective recycling systems. More information. Recycling data for Japan is provided however, the recycling rate as a percentage of past sales is not given.	Fujitsu used 80 tonnes of (pre-consumer) recycled plastics in FY2008 in Japan, about 2% of the total amount of plastics used in PCs. To score one point, Fujitsu needs to set a goal with timeline to increase the use of recycled plastics. 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 GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)	PARTIALLY GOOD (2+)
The Fujitsu Group sees 2020 as a milestone in progress towards the target of halving current greenhouse gas emissions by 2050, seeing it as essential that such emissions should peak by 2015-2020, if the 2050 target is to be met. Fujitsu also identifies the need for industrialised countries to cut emissions by up to 30% by 2020. For maximum points, Fujitsu should support cuts by industrialised countries of at least 30% and worldwide emissions peaking by 2015, in order to recognise that the world needs targets at the upper reaches of the UNFCCC recommendations. More information.	CO ₂ emissions for the whole group were about 1.24 (down from 1.345 mt in 07) million tons in fiscal 2008, of which 1.066 million tons were in Japan. More information. Reducing GHGs other than CO ₂ . Fujitsu reports on CO ₂ and other GHG emissions from raw materials, manufacturing, distribution and usage for fiscal 2008. More information. Data on Fiscal 2008 is also presented in Fujitsu's 2009 Sustainability Report (p.61 - 62). Fujitsu's verification is for its whole sustainability report and includes calculation of GHG emissions. Verification.	Fujitsu scores a point for its target (in its Stage VI Fujitsu Group Environmental Protection Program) to reduce total GHG emissions associated with manufacturing globally to 6% below FY1990 levels by the end of FY2012 (CO ₂ ; 5% reduction, other GHGs; 20% reduction). It is encouraging that Fujitsu has reduction strategies for some very powerful GHGs; however, to score more points it needs to show that its planned reduction of GHG emissions amounts to greater than 10%. More information. Its goal for Japan is to limit energy consumption-related CO ₂ emissions at business sites to below fiscal 1990 levels by the end of fiscal 2010. More information.	Fujitsu has a new target to increase its use of renewable energy sources to 3 times FY2007 levels by the end of FY2012. However, there is no data on Fujitsu's use of renewable energy in FY2007 globally (excluding renewable energy supplied via the general electricity supply), which would need to be expressed as a percentage of purchased electricity in order to assess the extent of this commitment and give a score. More information. Fujitsu reports that 7.3% of electricity from the Japanese power supply is renewable; however, as this is part of the general electricity supply it doesn't earn them any points. More information.	Fujitsu reports that 100% of its notebook, tablet and desktop PCs released globally are ES 5.0 qualified. More information.



LENOVO Ranking = 4.5/10 - 1 = 3.5/10

Lenovo rises up the ranking to 14th position from 17th, with an increased score of 3.5, up from 1.9 points. It remains encumbered by a penalty point imposed for backtracking on its commitment to eliminate PVC vinyl plastic and brominated flame retardants (BFRs) in all its products by the end of 2009.

Lenovo has made significant progress on three of the energy criteria; it now supports the need for global emissions of greenhouse gases (GHGs) to peak by 2015, with a 30 percent reduction in emissions from industrialised countries by 2020 and a 50 percent reduction by 2050, relative to 1990; it has set its own targets for reducing GHG emissions, aiming to eliminate or offset its scope 1 emissions by 100 percent by April 2011 and achieve absolute reductions in scope 2 emissions, with progressive targets up to 20 percent by April 2020, relative to 2008/09; it also reports the percentage of its products that meet the latest Energy Star standards, with many of its products exceeding the standard. These new commitments are a significant boost to Lenovo's score, which was formerly just one point for disclosing greenhouse gas emissions from global operations in 2008, even though these have increased by 6 percent and are not externally verified.

Lenovo scores equally on both toxic chemicals and e-waste issues. It is rewarded for committing to the phase-out of beryllium (including alloys and compounds) and antimony and its compounds by 2012, but phthalates are still only reportable substances. The company has released a second model of a PVC and BFR-free monitor, which is available globally, (with the exception of PVC/BFR-free power cords which are not available in certain areas). However, this is not enough to score a point.

On e-waste issues, Lenovo offers take-back and recycling in 51 countries where Lenovo sells products directly, but not in countries where re-sellers sell its products. Information about this service to individual customers on what to do with their discarded PC is provided. Lenovo reports a recycling rate of 3.88 percent of the weight of products shipped in 2008 and 6.39 percent of the weight of products shipped in 2001. However, almost 80 percent 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 also scores points for its use of recycled plastic; however it has no public target to increase its use further.

LENOVO Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

LENOVO Detailed Scoring

Chemicals

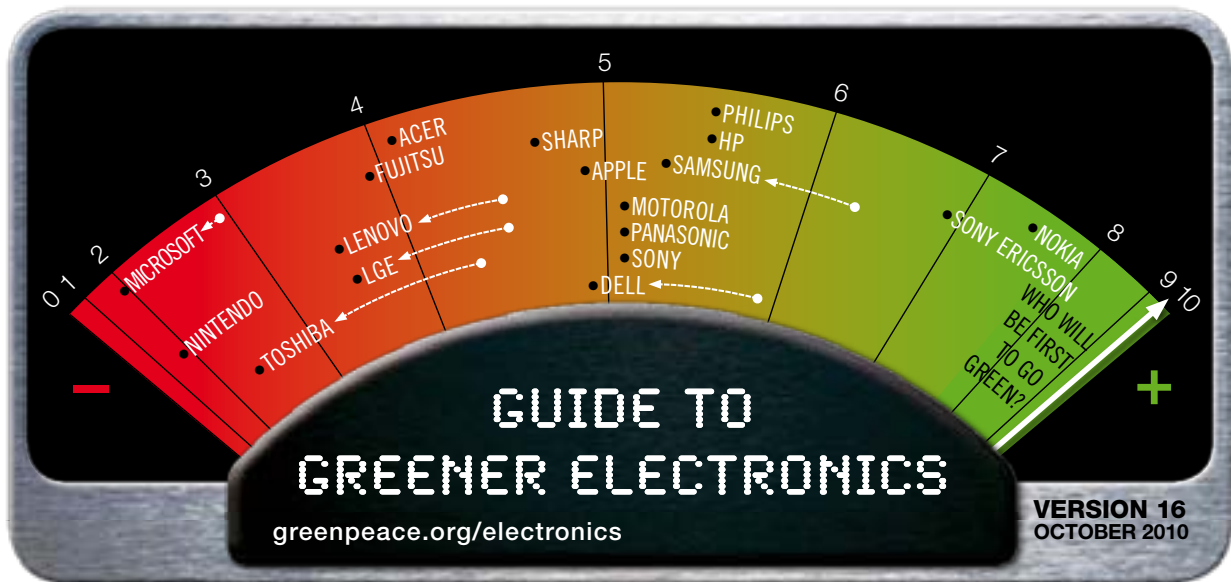
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	BAD (0)
Lenovo scores a point for its definition of the Precautionary Principle in its Sustainability Report 2009, p 43. However, Lenovo makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. More information here and pdf here.	Lenovo's Engineering Specification 41A7731 reflects its commitments on eliminating PVC, BFRs, and beryllium, antimony and their compounds. More information. Select 'Product Content Restrictions' here (see end of page) and pdf here.	Lenovo now states that it is working towards the goal of phasing out the use BFRs and PVC across all newly introduced products in 2011. More information. Lenovo's original timeline for eliminating PVC and BFRs in all products was end of 2009. It subsequently backtracked on this commitment providing a timeline of 2010. This timeline has shifted further to 2011; progress towards this goal is demonstrated by the number of halogen-free components incorporated in several product lines.	Antimony and beryllium and their compounds have a phase-out target date of 2012. Just three types of 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. More information. pdf file (p.19).	Lenovo has two completely PVC and BFR-free monitors, the ThinkVision L2440x Wide and ThinkVision L2251x Wide available globally, (except for PVC/BFR-free power cords in certain geographies). All mechanical plastic parts (such as external covers, housings, etc.) are PVC/BFR free in all products. Various models of ThinkPads contain halogen-free hard disk drives, optical disk drives, solid state drives, LCD screens, memory, CPUs and Intel communication cards. More information here and here. 'Choose Green, Choose Lenovo' brochure. To score points Lenovo needs to bring out more whole product systems such as PCs and models of monitors free of BFRs and PVC.

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
Lenovo supports IPR legislation that allows manufacturers to recover their own brand products. However, for more points, Lenovo needs to clarify this means supporting full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share), provide examples of where it is doing advocacy and details of operationalisation of IPR. See Sustainability Report p. 45.	Take-back is offered in 52 countries (of which 22 have voluntary take-back) where Lenovo sells products directly, but not in countries where re-sellers sell its products. Lenovo also provides Asset Recovery Services for business customers. More information here and here. Product take-back has been extended in India and in China . Lenovo now has a free take-back programme in the US. More information.	Lenovo provides take-back information to both business and individual customers in countries where the company sells its products directly. Lenovo provides information to individual customers in all the countries where take-back is provided. More information. Lenovo provides more details here and here about take-back in the US.	Lenovo recycled 3.88% of the weight of products shipped in 2008 and 6.39% of the weight of products shipped in 2001. 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. See Sustainability Report p. 45-47.	Over 16% (gross) of the total plastics used in all Lenovo products during the first half of 2010 contained recycled content, with net post-consumer content usage of approximately 6.5%. All Think Vision monitors contain post-consumer recycled content, which makes up over 30% net by weight in 2009. More information. Lenovo has achieved its target of 4% post consumer recycled plastics for monitors, desktops, servers and workstations in 2008/9. Although Lenovo has internal targets to increase its use of recycled plastic, these have not been published on its web-site. See p. 41-42, 2009 Sustainability Report.

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 GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	BAD (0)	PARTIALLY GOOD (2+)
Lenovo supports the need for global emissions of GHG to peak by 2015, a 30% reduction in emissions from industrialised countries by 2020 with a 50% reduction by 2050, relative to 1990. For maximum points, Lenovo needs to specify that reductions by industrialised countries should be at LEAST 30% by 2020. More information.	Lenovo reports GHG emissions of 82,163 metric tons from global operations in 2008; this includes scope 1 and 2 emissions, and scope 3 emissions from employee travel. This is an increase of 6% from 73,566 metric tonnes in 2007. No reference to external verification. See Sustainability Report p 48-49. Lenovo participated in a road test for a new global standard on life-cycle emissions of GHGs to account for emissions associated with individual products across their life-cycles. More information. Intertek verified Lenovo's assessment of the life-cycle impacts associated with its new Thinkcentre M90z desktop. More information.	Lenovo has new climate change objectives and targets; it aims to eliminate or offset scope 1 GHG emissions by 100% by 31/3/2011; it also has targets to achieve absolute reductions in scope 2 emissions, with progressive targets up to 20% by 31/3/2020, relative to 2008/09. More information. Absolute carbon emissions reduced by nearly 20% from 2008/9 to 2009/10. It has committed to match 2009/10 emissions during 2020/21. For maximum points Lenovo needs to provide more information on its targets in relation to its reduction of GHG emissions so far. More information.	Lenovo's purchase of RECs will be used to fund the construction of new renewable energy sources; 100% of its scope 1 emissions and up to 7% of scope 2 emissions will be offset by these purchases. However, Lenovo needs to present its target for increasing its use of renewable energy as a percentage of electricity use. More information. The purchase of local renewable energy sources is also associated with Lenovo's targets for absolute reduction of GHGs. More information. The majority of its electricity usage is in China, where 17% of electricity comes from renewable sources; as this is part of the national grid it does not contribute to Lenovo's score. See Sustainability Report p 49.	Lenovo reports that over 93% of all notebook platforms, 43% of desktop platforms, 92% of workstation platforms and 93% of monitors meet the latest Energy Star standards. Many of these products also exceed the standards; 75% of monitors exceed the standard by at least 10%, with 33% exceeding the ENERGY STAR energy criteria by at least 25%. More information.



LG ELECTRONICS Ranking = 4.5/10 - 1 = 3.5/10

LG Electronics continues to fall down the ranking, from 12th place to joint 14th, with its score dropping from 3.7 points to 3.5. It is still weighed down by the penalty point imposed for backtracking on its commitment to have all its products free of PVC vinyl plastic and brominated flame retardants (BFRs) by the end of 2010. Now only mobile phones will be free of these toxic substances from 2010; TVs, monitors and PCs have to wait until 2012 and household appliance models until 2014; there is a lack of evidence on how this programme will be implemented. It also loses a point (doubled) for failing to progress on bringing PVC/BFR free products onto the market. LGE still only has one first mobile phone that is free from PVC and BFRs and six models of 'halogen-free' Optical Disk Drives; details about other reduced halogen products are no longer there.

LGE has yet to show support for bans on PVC, BFRs and chlorinated flame retardants (BFRs/CFRs) during the revision of the EU's RoHS Directive (Restriction of Hazardous Substances in electronics). It scores a point for committing to eliminate the use of phthalates and antimony in new mobile phones, TVs, monitors and PCs by 2012, and all new household appliances by 2014. The use of beryllium oxide in mobile phones has already been phased out and other kinds of beryllium compounds will be banned by 2012.

On e-waste issues, LGE scores relatively well for its support for Individual Producer Responsibility (IPR), because it has recently engaged with a European coalition of NGOs and industry in support of this principle, especially during the revision of the EU WEEE Directive, and for reporting its use of (post-industrial) recycled plastic across all LGE products as 11 percent, with plans to increase this to 25 percent by 2025. The company has compiled figures for (increased) e-waste recycling in Europe, Asia and North America and reports its recycling rates for 2008 as a percentage of past sales. However, LGE fails to disclose the source of EU recycling data or how these were calculated, if these were not merely extrapolated from market shares. LGE's voluntary global take-back for products other than mobile phones has been extended to India; it needs to continue to expand its programme for all its products in non-OECD countries

On the energy criteria, LGE scores points for supporting the need for global greenhouse gas (GHG) emissions to peak by 2015 as well as mandatory cuts of GHG emissions of at least 30 percent in industrialised countries by 2020. It discloses externally verified domestic GHG emissions, has committed to reducing GHG emissions by 5 percent (75,000 tons) below the 2008 level by 2012 and by 10 percent by 2020, and gains a point for providing data for its baseline year of 2008. It scores no points on the energy efficiency of its products, for making false claims about the energy performance of its white goods in both the US and Australia; it reports its compliance with the Energy Star standard for its TVs but no longer for chargers and PCs.

LG ELECTRONICS Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

LG ELECTRONICS Detailed Scoring

Chemicals

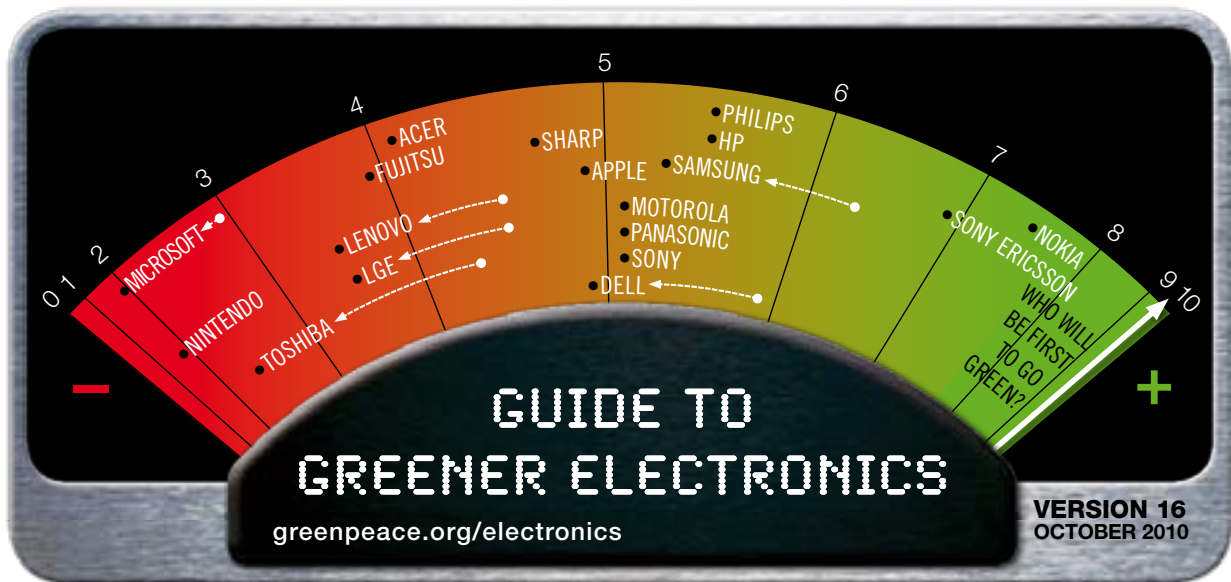
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	GOOD (3+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	BAD (0)
LGE provides 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. More information. However, LGE makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions.	LGE's product specs in the updated (v. 5.1) Manual for Preparation of Environmental Regulations earn them top marks. More information here and pdf here. LGE's substance list includes future substances to be reduced, including beryllium and antimony.	LGE has backtracked on its commitment to eliminate PVC and BFRs in all its products by 2010. Now only mobile phones will be free of these toxic substances from 2010; PVC and BFRs will also be banned from TVs, monitors and PCs by 2012. PVC and BFRs will be totally banned from use in household appliance models by 2014. However, there is a lack of evidence to show how LGE will progress towards these objectives. More information.	The use of phthalates and antimony will be prohibited in new mobile phones, TVs, monitors and PCs by 2012, and all new household appliances by 2014. The use of beryllium oxide in mobile phones has already been phased out and other kinds of beryllium compounds will be prohibited in new products by 2012. For maximum points LGE needs to phase out phthalates, antimony and compounds and ALL beryllium compounds and alloys in ALL products by 2012. More information.	LGE has one mobile phone (GD510) that is free from PVC and BFRs. 6 models of Optical Disk Drives are halogen free. In mobile phones BFRs have been removed from all parts used in the housing, packaging and main PCB. More information. Details of the GD510 solar powered mobile phone. However, LGE loses a point as it has made no progress in bringing PVC and BFR products on the market, despite its commitment to phase these out from mobile phones from 2010. Details about LCDs and notebook computers that are partly halogen-free are also no longer published on its website. Environmental self-declaration of many LGE products, although none that were checked were free from PVC or BFRs apart from the GD510. More information.

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+)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)
LGE supports individual producer responsibility, and has recently signed the IPR statement, although it recognises that for IPR to be operationalised, technically and economically feasible identification solutions are needed. For more points, LGE should clarify it understands IPR as full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately, document its operationalising of IPR and show evidence of lobby for IPR. More information.	LGE provides take-back of its discarded mobile phones in some 50 countries with 392 drop off points globally. About half of these countries represent voluntary take-back. However, large gaps still exist in Africa, Middle East and Latin America. More information. LGE has a nationwide recycling program in the US for LG, Zenith and GoldStar brands of TVs, computer monitors and other consumer electronics products. For more points, LGE needs to provide voluntary takeback of more product types and in more non-OECD countries. LGE is now offering take-back of its products in India , in addition to mobile phone take-back.	Information to customers on what to do with discarded mobile phones, including a new text service in the US. More information. Information on take back of consumer electronics other than mobile phones in the US here.	LGE reports its recycling rates for 2008 (as a percentage of past sales) as: 159% for TVs, 59% for computers and 7.1% for mobile phones. LGE has also compiled its 2009 figures for e-waste recycling in Europe, Asia and North America; it recycled 152,160 tons of e-waste in 2009, compared to 108,135 tons in 2008. More information. To get full marks, LGE needs 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.	LGE reports its use of (post-industrial) recycled plastic across all LGE products as 11%, with plans to increase this to 25% by 2025. It needs to set intermediate goals, to check progress towards 2025. 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)
GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	BAD (0)	BAD (0)
LGE supports that global GHG emissions are to peak by 2015 and the need for global mandatory cuts of GHG emissions proposed by the UN and others (specifically to "reduce CO ₂ emissions by at least 50 percent below 1990 levels by 2050), as well as mandatory cuts of at least 30% in industrialised countries by 2020. More information.	LGE reports global GHG emission data for 2007 – 2009. Verification by DNV of 12 Korean operations in 2008 is provided, and two operations in China for 2010. However, the certificates are not legible. More information. 2008 domestic emissions data by scope (716,658 tons GHGs) are provided in LGE's Sustainability Report 2008 (p 42-43). Global emissions data by scope are provided for 2007 – 2009 (1,279 k-ton CO ₂ -e in 2009, compared to 1529 k-ton CO ₂ -e in 2008), in LGE's Sustainability Report 2009 (p 35-36) . LGE's verification certificate for its GHG inventory 2005 – 2007 is still accessible. To continue to score 2 points LGE's latest verification certificates should be accessible and legible.	LGE aims to reduce GHG emissions from manufacturing by 5% (75,000 tons) below the 2008 level (of 1,529,000 tons CO ₂ -e) by 2012 and by 10% (150,000 tons) by 2020. LGE gains a point as global data for its baseline year are now provided. More information. More details of LGE's plan are in its 2008 sustainability report (p.42–45). LGE's GHG emissions decreased 8.1% from the previous year; LGE should provide information on how these reductions have been achieved. In 2009 emissions of GHGs were reduced by 250,000 tons compared to 2008 from manufacturing and by about 5,450,000 tons from customers product use compared to the business as usual emissions in 2007. See LGE's Sustainability Report 2009 (p 35-36).	LGE is launching a solar cell business with an annual capacity of 240MW. See LGE's Sustainability Report 2009 (p.37) . LGE also aims to use renewable energy in its products as part of its green product strategy. More information. LGE no longer provides information on its use of renewable energy, although previously it reported that 1.6% of total electricity purchased in Korea in 2008 is renewable energy; however, this is based on renewable energy supplied through the national grid. There are no specific targets for increasing use of renewable energy.	LGE reports that about 78% of its TVs comply with Energy Star 4.1, but has not reported on compliance of its other products. More information. However, LGE fails to score as it has been caught making false claims about the energy efficiency of its white goods, resulting in Energy Star labels being removed from the products. Also, in Australia , fridges were found to contain an illegal device that activates an energy saving mode when it detects room conditions similar to those in a test laboratory. To score points, LGE needs to make a strong statement in support of more stringent ES verification standards.



TOSHIBA Ranking = 4.3/10 – 2 = 2.3

Toshiba drops further down the ranking from 14th place to 16th, due to TWO penalty points; the first imposed for backtracking on its commitment to bring to market new models of all its consumer electronics products free of PVC vinyl plastic and brominated flame retardants (BFRs) by 1 April 2010, its own timeline for meeting this commitment; the second for misleading its customers and Greenpeace by not admitting that it would not meet its public commitment until the timeline for that commitment had passed. It has failed to provide a new timeline, which means there is no longer a commitment to eliminate these harmful substances.

Toshiba scores equally on the chemicals and energy criteria; it scores points for its Portege 600 series of PCs, which it describes as having “a PVC-free design”, excluding the AC adapter for markets outside Japan, but plastic moulded parts under 10g still contain BFRs. Mobile phones launched after January 2010 are free from PVC and BFRs, however, Toshiba’s mobile phone business has now been merged with Fujitsu so information isn’t currently available. Toshiba launched a TV (model 55X1) in December 2009 that has no BFRs in the cabinet and no PVC/BFRs in the main control circuit board. Toshiba has also committed to introduce alternatives to phthalates, beryllium and antimony by 2012 in all its products.

The company scores poorly on e-waste due to its lack of support for Individual Producer Responsibility and its low use of recycled plastic. It has made some progress on rolling out global take-back for its PCs but needs to extend this to all of its products, particularly TVs in non-OECD countries. However, Toshiba reports a recycling rate of 13.4 percent globally for a group of five types of products that includes TVs, PCs and 3 types of home appliances. It also provides separate global recycling rates for TVs (36.1 percent in 2009) and PCs (20.2 percent based on sales 10 and 7 years ago, respectively).

On energy, Toshiba scores most of its points on the energy efficiency of its products. Toshiba reports that all PCs developed in 2009 (up to the end of July) comply with the new Energy Star 5, except non-OS models; in addition 23 LCD TV models are compliant with the latest Energy Star 4.1 standard; however, this needs to be expressed as a percentage of all models. It is rewarded for supporting global cuts in greenhouse gas (GHG) emissions with greater cuts for industrialised countries and for disclosing GHG emissions from its own operations and supply chain, but the verification that Toshiba provides is for CSR reporting and not specifically for the calculation of its GHG emissions. The company commits to cut GHG emissions and it has clarified that it aims to stop further increases by (financial year) 2012. Toshiba reports that the percentage of renewable energy used by the Toshiba Group in total (additional to that supplied by the grid) is approximately 0.6 percent, up from 0.1 percent last year, although it fails to score points for this low percentage.

TOSHIBA Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

TOSHIBA Detailed Scoring

Chemicals

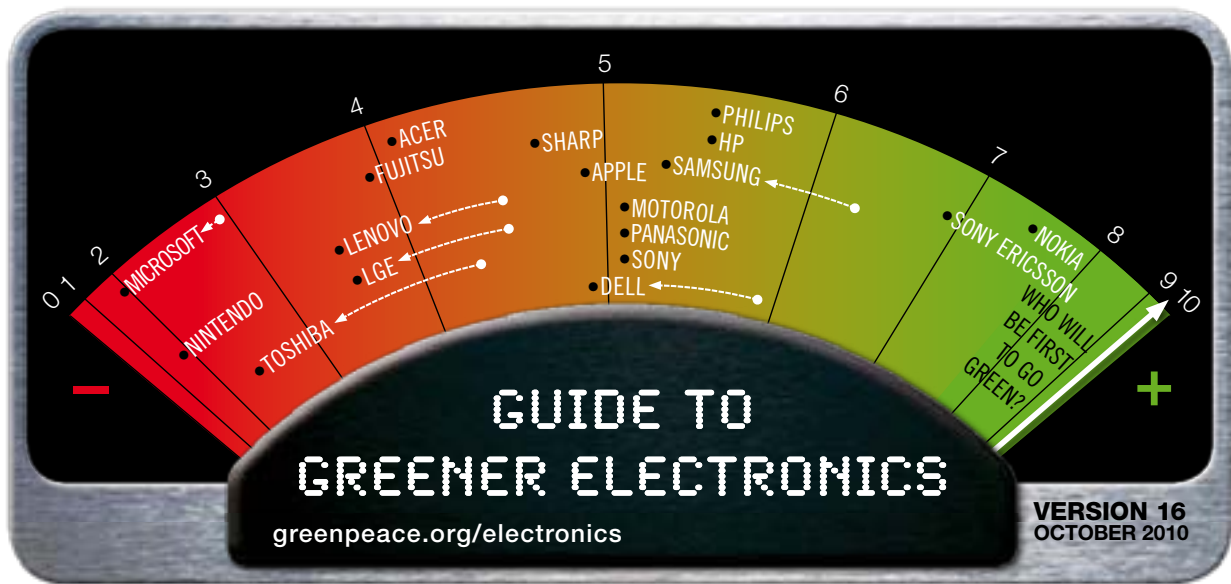
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	BAD (0)	GOOD (3+)	PARTIALLY BAD (1+)
Support for the precautionary principle on Toshiba's global corporate site refers to taking action on toxic chemicals regardless of lack of full scientific certainty. However, Toshiba makes no mention of the need for RoHS 2.0 to adopt a ban on organo-chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. More information. For PC Division see commitment 4.	Toshiba has Green Procurement Guidelines for suppliers and ranks suppliers. See pdf file. Toshiba's PC and Network Company updated guidelines. Guidelines for Green Procurement v.7. However, Toshiba loses a point as the details about restriction and phase out of hazardous substances in its various product lines do not reflect the commitments on its web-page.	Toshiba has committed to phasing out PVC and BFRs from all its products - not only from their notebook PCs and mobiles - with a timeline of FY 2009. More information. Toshiba outlines its plan for introducing BFR and PVC alternatives in TVs. However, although Toshiba has indicated that it is working hard to bring a PVC/BFR free product on the market, there are currently no totally PVC/BFR free products available. Given that by 1 April 2010 new models of all products should have been free of PVC and BFRs it must be concluded that Toshiba has backtracked on its commitment. Toshiba does not provide a new timeline for meeting this commitment, so it must be assumed that there is no longer a commitment to eliminate these substances. Therefore Toshiba scores no points on this criterion. More information.	Toshiba has committed to replace phthalates, beryllium and compounds and antimony and compounds by 2012 in all its consumer electronic products, if alternatives are available. Despite failing to meet its commitment on PVC and BFR phase out, Toshiba continues to score maximum points on this criterion. More information. For commitment to phase out these substances in notebook PCs.	Toshiba has no models of PC completely free of BFRs. The Portege 600 series of notebook PCs and the worldwide models Portege R700 and Libretto W100 are PVC free (excluding external cables) and BFR free for casing and all plastic parts weighing 10g or more. PVC-free AC cables are used for the Japanese models of Portege R600 and A600. More information here and here. Mobile phones launched after January 2010 are free from PVC and BFRs. PVC/BFR free models are: au mobile phones: T004, IS02 docomo mobile phone: T-01B – although information on these products is not currently available due to a merger of Toshiba's mobile phone business with Fujitsu. Other products which use PVC/BFR alternatives, include PVC free USB cables and halogen free printed circuit boards. Case studies of other products here. Toshiba has confirmed to Greenpeace that in November 2009, it launched a TV (model 55X1), which has no BFRs in the cabinet and no PVC/BFRs in the main control circuit board. See halogen-free hard disk drives here and here.

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
BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)
Toshiba believes that IPR provides incentives for Design for Recycling. To score points Toshiba needs to explicitly support IPR with no 'flexibility' caveat. For full marks, it needs to clarify that this means supporting full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately (e.g. no longer collective financing such as market share but instead more real and individualised financing such as return share), in addition to lobbying for IPR and exploring how IPR can be operationalised. More information.	Voluntary take-back of PCs, covering 80% of total (PC) sales, is provided in Canada, South Korea, Australia, New Zealand, China, Singapore, Thailand and much of SE Asia. Take-back services have also been launched in India, Pakistan, Myanmar, Cambodia and many other South East Asian countries. These recycling programs don't include other Toshiba products like TVs, which are so problematic at end-of-life. For more points Toshiba needs to expand its TV take-back programme to non-OECD countries. More information here, here and here. Toshiba is part of recycling joint venture MIRM, which offers take-back of consumer electronics, including TVs. More information.	Comprehensive and improved information to customers on the take-back of used PCs. Toshiba now provides information on voluntary take-back of notebook PCs to customers in Thailand, Indonesia, Malaysia, Vietnam, Philippines and India. More information. Select: Services & Support. Information on take-back of consumer electronics including TVs in the US here.	Toshiba 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 2009, the recycling rate is 13.4%. Toshiba provides separate global recycling rates for TVs (36.1% in 2009) and PCs (20.2%) based on sales 10 and 7 years ago, respectively. Toshiba needs to clarify how it calculates EU recycling rates. More information.	Toshiba used about 1,100 tons of recycled plastic in FY2008, for the base plates of washing machines, multifunctional peripherals, TVs, air conditioners, notebook PCs and other products. Toshiba plans to increase the ratio of recycled plastics to up to 25% of total plastics use as part of its next voluntary plan, which will be after FY 2012. More information. Examples of recycled plastics used in MFP. Example of recycled plastic parts used in PC case.

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 GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	BAD (0)	PARTIALLY GOOD (2+)
Toshiba states that it is contributing to the G8 2008 Summit agreement to reduce global GHGs by at least half by 2050; that Japan should decrease emissions by 60-80% by 2050 and that global emissions should peak 2018-2028 and be halved by 2025. More information. By 2025 global CO ₂ emissions should be halved, with a reduction of 80% by advanced nations. More information. For full marks, Toshiba needs to support global emissions peaking by 2015.	Toshiba reports on emissions from R&D, through procurement, manufacturing, use & recycling which would score 2 points. see p. 44 of CSR report 2009. See also Environment Report 2009, p.13 – 14. But Toshiba scores only one point as verification is for the whole Environment Report, not just the GHG emissions, which should be verified to the GHG Protocol ISO standard. Details of third party verification by Bureau Veritas.	Toshiba scores a point on this criterion as it aims to stop increasing emissions by FY2012. It plans to control the absolute reduction at a level of 1.96 million tons by FY2012, to have emissions peak at 70% less than the FY1990 level, and decrease them by a further 10% by 2025. More information. Toshiba has a target of reducing CO ₂ emissions by 47% by 2012, but this is a relative 'rate to net production output'. Reduction of non-CO ₂ GHG emissions is 38% by 2012 for total emissions. The baseline year is 2000. See p. 46 CSR report 2009.	Toshiba gives some examples of renewable energy at Toshiba facilities and estimates that the percentage of renewable energy used by Toshiba Groups in total (additional to that supplied by the grid) is approximately 0.6% up from 0.1% last year. To score points, Toshiba needs to invest in renewable energy and set a target and timeline for increased use of RE globally. More information.	Toshiba reports that 23 LCD TV models are compliant with the latest Energy Star 4.1 standard. However, this is not expressed as a percentage of all models. More information. Toshiba reports that all PCs developed in 2009 (up to the end of July 2009) comply with the new Energy Star 5, except no-OS models. Toshiba needs to update its information on Energy Star compliance for its PCs. More information.



MICROSOFT Ranking = 2.9/10 – 1 = 1.9

Microsoft drops to 17th place from 16th, with a reduced score of 1.9 points, as a result of a penalty point imposed for backtracking on its commitment to phase out BFRs and PVC by the end of 2010. Its timeline for phasing out BFRs and phthalates in all products is 2012 but its commitment to phasing out PVC is not clear. As yet it has no products that are completely free from PVC and BFRs; it needs to put products on the market that are free from BFRs in printed circuit boards before it can score points for this criterion. It no longer scores maximum points on chemicals management as its commitments on the phase out of hazardous substances are not clearly communicated to its suppliers in its Restricted Substances for Hardware specification. It also fails to show support for improvements to the revised EU RoHS Directive (Restriction of Hazardous Substances in electronics); specifically, a methodology for further restrictions of hazardous substances, and an immediate ban on BFRs, chlorinated flame retardants (CFRs) and PVC.

On e-waste, it scores points for providing information to its customers on take-back of obsolete products and for reporting on the recycling of its e-waste. Microsoft is also rewarded for engaging in an EU coalition supporting Individual Producer Responsibility. On other e-waste criteria, Microsoft fails to score any points.

On energy, the company gets points for supporting mandatory cuts in global greenhouse gas (GHG) emissions, for reporting its total carbon dioxide equivalent emissions from its own operations, which are verified externally, and for sourcing 24.4 percent of all the electricity used in 2007 from renewable sources, although it needs to commit to increase its use of renewable energy with a timeline. It is no longer scored on the energy efficiency of its products as there is still no Energy Star standard for games consoles.

MICROSOFT Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

MICROSOFT Detailed Scoring

Chemicals

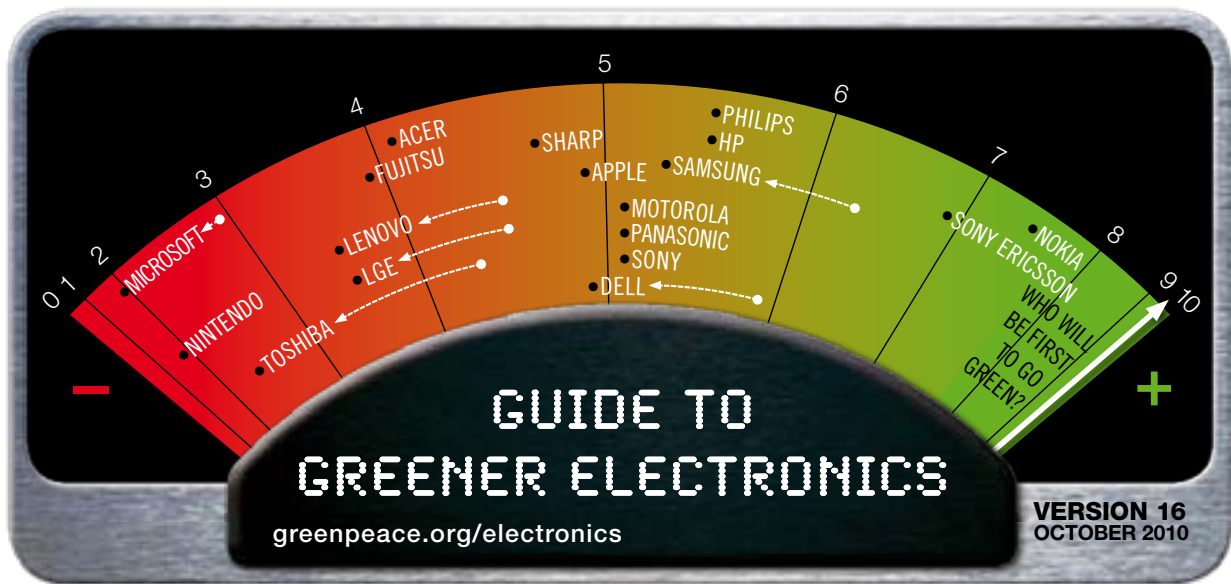
Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	BAD (0)
<p>Microsoft has a definition of the Precautionary Principle, as defined in the UN Rio declaration.</p> <p>More information. Select Precautionary Principle Word file. (may require software) However, Microsoft makes no mention of the need for RoHS 2.0 to adopt a ban on organo- chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years), as well as an end-of-life focused methodology for adding future substance restrictions. Microsoft also needs to clarify its stance in relation to the position of the trade federation TechAmerica on further restrictions and in particular PVC, CFRs and BFRs within 3-5 years.</p>	<p>Microsoft lists its Chemical Specifications and a procedure for identifying future substances for elimination. However, in its Timeframe for Phase out Substances, PVC is not listed, despite its commitment to eliminate PVC. More information. Select Restricted Substances for Hardware. -Word file, may need software. Suspect substances for potential future elimination include those on the Canada Environmental Protection Act Domestic Substance List and California Proposition 65 List. However, the latter List includes 100s of substances, most of which are not used by the electronics industry.</p>	<p>Microsoft is committed to eliminating PVC and brominated flame retardants from all of its hardware products by or before 2010. More information. Select 'Sustainability Fact Sheet' (may require software). However, Microsoft loses points as it has informed Greenpeace that its timeline for phasing out BFRs and phthalates is now 2012. The timeline for phasing out PVC is unclear. More information. Select Precautionary Principle Word file (may require software).</p>	<p>Microsoft provides a timeline of the end of 2010 for eliminating phthalates. However, Microsoft has informed Greenpeace that its timeline for phasing out BFRs and phthalates is now 2012. Select Precautionary Principle Word file. (may require software). Microsoft currently restricts certain phthalates and antimony in line with the EU Toys Directive, for use in selected products such as game controllers. Beryllium compounds, antimony and phthalates are all listed as reportable substances. See p.10, 11 & 12 of Restricted Substances Specification.</p>	<p>Microsoft offers electronic products that are both phthalate and/or BFR free with the exception of the printed circuit board, and gives an example of the Xbox 360 Wireless Microphone product provided with the game 'Lips', which is BFR, PVC and phthalate free, with the exception of BFR in the printed circuit board. To score points printed circuit boards at a minimum need to be free from BFRs. Accessed from here. Select 'Sustainability Fact Sheet' (may require software).</p>

E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
PARTIALLY BAD (1+)	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)	BAD (0)
<p>Microsoft states that it "supports the mandatory collection and recycling of consumer electronics funded by individual producers..." and has recently signed the IPR statement. However to maintain its points on IPR Microsoft will need to clarify its understanding of IPR on its own web-pages. It needs to clarify this means supporting full internalisation and transparent feedback of its products real end-of-life costs, (ie through differentiated financing that accounts for each brand separately) and should start active lobby for IPR, inter alia to ensure the revised EU WEEE legislation sets clearer requirements (enforcement criteria) for the implementation of IPR. More information. Select 'Sustainability Fact Sheet'. (may require software).</p>	<p>In the US and Canada Microsoft is participating in the Reconnect partnership where customers can drop off any brand of used equipment at participating Goodwill donation centres. Microsoft also provides an address for US customers to mail back obsolete products (pre-paid shipping label is provided), or they can be taken to two Microsoft store locations. However, to score points Microsoft's voluntary take-back needs to be more comprehensive; it also needs to extend to other countries, especially non-OECD. More information. Microsoft refurbishes computers and other devices to keep them in use and out of the waste stream as long as possible – so that they can be recycled properly at the end of life. More information. Microsoft's Authorised Refurbisher (MAR) Programme. More information here and here.</p>	<p>Microsoft provides links to official take-back programmes and other recycling organisations in the US, Canada, European Union, Asia, Australia, New Zealand and South Africa. It provides a link to its Reconnect partnership for the US and Canada, a link to Microsoft store locations in the US and an email address to request a pre-paid shipping label. Microsoft Authorised Refurbisher Programme global partners. More information.</p>	<p>Microsoft reports that in 2009 it funded the recycling of more than 9,300 tonnes of electronic materials worldwide, representing approximately 27% of its worldwide sales seven years ago. More information. For more points, Microsoft needs 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.</p>	<p>Microsoft is using recycled plastics in product packaging films but no details are given about its use in hardware products. More information. Microsoft will begin reporting on its use of recycled plastic in packaging by the end of 2010. More information.</p>

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	BAD (0)	PARTIALLY GOOD (2+)	N/A
<p>Microsoft has a Climate Change Policy Statement which supports government actions to transition to a low-carbon economy. More information. Microsoft's Climate Change Policy Statement. Microsoft supports the need for a 50 to 85 percent global reduction of greenhouse gas emissions by 2050. For more points Microsoft needs to support mandatory cuts by industrialised countries of at least 30% by 2020 and call for global GHG emissions to peak by 2015. More information.</p>	<p>Microsoft reports its total CO₂ equivalent emissions in 2008 at 46066 metric tonnes (scope 1), 799859 metric tonnes (scope 2), 291,888 metric tonnes from employee business travel (scope 3). More information. Details of verification. Full details are provided to Carbon Disclosure Project, see questions 10.2, 11.2, 13.1, 13.4 in 2009 questionnaire. (note log in is required to view).</p>	<p>Microsoft has set a goal to reduce its carbon emissions per unit of revenue at least 30% below 2008 levels by 2012. However, there is no commitment for absolute cuts of GHG emissions. More information. See Microsoft on the Topic: Climate Change (may require software)</p>	<p>Microsoft reports that in 2007, renewable energy supplied 24.4% of its total electricity load associated with its facilities and data centres; it is currently investigating opportunities to boost this percentage. More information. Examples of its use of renewable energy are also given. 'Sustainability Fact Sheet' (may require software).</p>	<p>There is still no Energy Star standard for games consoles, although a new standard is being developed. As soon as a new standard is in effect, Microsoft will be scored on this criterion. The newest version of the Xbox uses 50% less energy than the first Xbox 360 launched 5 years ago in 2005.</p>



NINTENDO Ranking = 1.8/10

Nintendo remains in last place with the same score of 1.8 out of 10.

Nintendo scores most points on chemicals; it has put games consoles on the market that have PVC-free internal wiring. It has banned phthalates and is monitoring use of antimony and beryllium. Although it is endeavouring to eliminate the use of PVC, it has not set a timeline for its phase-out. It scores points for adopting the precautionary principle in its approach to managing chemical substances and for publishing its Standards for chemicals management.

It continues to score zero on all e-waste criteria and although it has improved its information to customers about access to its take-back programme in the US and Canada, this is not enough to score points.

It scores points on energy criteria, for the energy efficiency of its low power AC adaptor for the Nintendo DSi, which meets the requirements for external power supplies in the Energy Star programme. It also retains a point on energy for disclosing carbon dioxide (CO₂) emissions from its own operations. However, it fails to score for its commitment to reduce greenhouse gas emissions, due to a second year of increases, despite a commitment to cut CO₂ emissions and other greenhouse gases by 2 percent over each previous year. Emissions in 2007 increased by 1.5 percent compared to 2006, following a rise of 6 percent in 2006. Nintendo has updated its website since this assessment was made.

Nintendo has updated its web-site since this assessment was made.

NINTENDO Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle and support for revision of RoHS Directive.				
Chemicals Management				
Timeline for PVC & BFR phaseout				
Timeline for additional substances phaseout				
PVC-free and/or BFR-free models <small>(companies score double on this criterion)</small>				
Individual producer responsibility				
Voluntary take-back				
Information to individual customers				
Amounts recycled				
Use of recycled plastic content				
Global GHG emissions reduction support				
Carbon Footprint disclosure				
Own GHG emissions reduction commitment				
Amounts of renewable energy used				
Energy efficiency of new models <small>(companies score double on this criterion)</small>				

NINTENDO Detailed Scoring

Chemicals

Precautionary Principle and support for revision of RoHS Directive.	Chemicals Management	Timeline for PVC & BFR phaseout	Timeline for additional substances phaseout	PVC-free and/or BFR-free models (double points)
PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY BAD (1+)
Nintendo scores a point for following the Precautionary Principle, even if adverse effects have not been scientifically proven. However, Nintendo makes no mention of the need for RoHS 2.0 to adopt a ban on organo- chlorine and bromine compounds (at least PVC, CFRs, and BFRs within 3-5 years) as well as an end-of-life focused methodology for adding future substance restrictions. More information here and here.	Nintendo publishes its 'Environmental Control Standards' including lists of substances that are banned, subject to early withdrawal, and under application control. More information. Nintendo scores two points for publishing its Standards for Environment-Related Substance. However, it still needs to outline its criteria for identifying future substances for restriction. More information.	PVC is listed as a substance 'subject to early withdrawal' and Nintendo states that it is 'currently working towards eliminating' it. More information. Nintendo aims to minimise and ultimately eliminate the use of PVC and BFRs in its manufacturing processes. However, no timeline is given for their phase-out. More information.	Six types of Phthalates are listed as 'banned substances' by Nintendo on their Environment-Related Substances List. Antimony and Beryllium and their compounds and Bis (2-methoxyethyl) phthalate are listed as substances under application control. More information.	Nintendo states that PVC was completely eliminated from the internal wiring of games consoles. More information here and here.

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
BAD (0)	BAD (0)	BAD (0)	BAD (0)	BAD (0)
Nintendo considers the promotion of recycling of used products and packaging to be one of its most important responsibilities and complies with the laws of each region. However, there is no reference to Individual Producer Responsibility. More information. To score points, Nintendo needs to explicitly support and demonstrate an understanding of IPR, for example clarifying that it understands IPR as full internalisation and transparent feedback of its products real end-of-life costs, ie through differentiated financing that accounts for each brand separately.	Nintendo of America (NOA) now provides free take-back to customers in the US and Canada and links to the Environment Canada recycling information website in addition to USEPA's eCycling hardware and battery recycling programmes. It also provides a phone number with business hours given in Pacific time for hardware and battery recycling. More information here and here.	Nintendo.com (America) provides a phone number for customers in the US and Canada and a Take Back Program form for US customers and gives links to Environment Canada recycling information and the US EPA disposal and recycling pages. More information. Information on product take-back systems in Europe is available on the packaging and in the manuals of products. More information.	Nintendo of America claims a near 100% recycling rate for product returns and repairs in the US, and reports that the total amount of used products returned by customers in FY2008 was 552 tons. However, there is no information on its recycling performance in other parts of the world. More information. Updated figures for FY2010 are provided on the NOA website: 814 tons of materials received from consumers and retailers were recycled or re-used. More information.	No information.

Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
BAD (0)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)	PARTIALLY BAD (1+)
Nintendo states that the reduction of CO ₂ emissions is one of the most important issues for the world today. However, to score on this criterion Nintendo needs to support mandatory cuts of at least 30% by 2020 and call for global GHG emissions to peak by 2015. More information.	Nintendo reports on emissions of CO ₂ , both absolute and per sales unit, for all business offices in 2008, except Nintendo of Korea, but these are not externally verified. More information.	Nintendo aims to reduce CO ₂ emissions and other greenhouse gases by 2% over each previous year. However, Nintendo scores zero as emissions in 2008 increased by 1.2% compared to 2007, following a rise of 1.5% in 2007 and 6% in 2006. Nintendo intends to step-up its efforts on reducing CO ₂ emissions. More information.	No information	Nintendo has developed a low power AC adaptor for the Nintendo DSi that meets the requirements on the external power supply in the Energy Star Program for energy-efficient products. Even though the game consoles are not subject to the Energy Star Program at this stage, the Nintendo DSi adaptor (100v-120v) meets the requirements equivalent to the current strictest level V requirements (standby power: 0.3W; average efficiency: 66.8% ; rated output power: 4.14 W). Both the Wii console and the DSi also meet the requirements of the EuP Directive that came into effect in 2010. More information here and here.

Criteria on Toxic Chemicals

Greenpeace wants to see electronics companies clean up their act.

Substituting harmful chemicals in the production of electronics will prevent worker exposure to these substances and contamination of communities that neighbour production facilities. Eliminating harmful substances will also prevent leaching/off-gassing of chemicals like brominated flame retardants (BFR) during use, and enable electronic scrap to be safely recycled. The presence of toxic substances in electronics perpetuates the toxic cycle – during reprocessing of electronic waste and by using contaminated secondary materials to make new products.

The issue of toxicity is overarching. Until the use of toxic substances is eliminated, it is impossible to secure 'safe' recycling. For this reason, the points awarded to corporate practice on chemicals are weighted more heavily than criteria on recycling.

Although there are five criteria on both chemicals and waste, the top score on chemicals is 18 points, as double points are awarded for vinyl plastic-free (PVC) and BFR-free models on the market, whereas the top score on e-waste is 15 points.

The first criterion has been sharpened to require companies not only to have a chemicals policy underpinned by the Precautionary Principle, but also to support a revision of the RoHS Directive that bans further harmful substances, specifically BFRs, chlorinated flame retardants (CFRs) and PVC. The criterion on Chemicals Management remains the same. The criterion: BFR-free and PVC-free models on the market, also remains the same and continues to score double points.

The two former criteria: Commitment to eliminating PVC with timeline and Commitment to eliminating all BFRs with timeline, have been merged into one criterion, with the lower level of commitment to PVC or BFR elimination determining the score on this criterion.

A new criterion has been added, namely Phase out of additional substances with timeline(s). The additional substances, many of which have already been identified by the brands as suspect substances for potential future elimination are:

- (1) all phthalates,
- (2) beryllium, including alloys and compounds and
- (3) antimony/antimony compounds

Criteria on e-waste

Greenpeace expects companies to take financial responsibility for dealing with the electronic waste (e-waste) generated by their products, to take back discarded products in all countries with sales of their products and to re-use or recycle them responsibly. Individual Producer Responsibility (IPR) provides a feedback loop to the product designers of the end-of-life costs of treating discarded electronic products and thus an incentive to design out those costs.

An additional e-waste criterion has been added and most of the existing criteria have been sharpened, with additional demands. The new e-waste criterion requires the brands to report on the use of recycled plastic content across all products and provide timelines for increasing content.

Criteria on energy

The five new energy criteria address key expectations that Greenpeace has of responsible companies that are serious about tackling climate change. They are:

- (1) Support for global mandatory reduction of greenhouse gas (GHG) emissions;
- (2) Disclosure of the company's own GHG emissions plus emissions from two stages of the supply chain;
- (3) Commitment to reduce the company's own GHG emissions with timelines;
- (4) Amount of renewable energy used
- (5) Energy efficiency of new models (companies score double on this criterion)

Click here to see more detailed information on the ranking

Ranking criteria explained

As of the 8th edition of the Guide to Greener Electronics, Greenpeace scores electronics brands on a tightened set of chemicals and e-waste criteria, (which include new criteria) and on new energy criteria.

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

- (1) clean up their products by eliminating hazardous substances; and
- (2) take-back and recycle their products responsibly once they become obsolete.

The two issues are connected: the use of harmful chemicals in electronic products prevents their safe recycling once the products are discarded.

Given the increasing evidence of climate change and the urgency of addressing this issue, Greenpeace has added new energy criteria to encourage electronics companies to:

- (3) improve their corporate policies and practices with respect to Climate and Energy

Ranking regrading: Companies have the opportunity to move towards a greener ranking as the guide will continue to be updated every quarter. However penalty points will be deducted from overall scores if Greenpeace finds a company lying, practicing double standards or other corporate misconduct.

Disclaimer: Greenpeace's 'Guide to Greener Electronics' aims to clean up the electronics sector and get manufacturers to take responsibility for the full life cycle of their products, including the electronic waste that their products generate and the energy used by their products and operations.

The guide does not rank companies on labour standards, social responsibility or any other issues, but recognises that these are important in the production and use of electronics products.

Changes in ranking guide: We first released our 'Guide to Greener Electronics' in August 2006, which ranked the 14 top manufacturers of personal computers and mobile phones according to their policies on toxic chemicals and recycling.

In the sixth issue of the Guide, we added the leading manufacturers of TVs – namely, Philips and Sharp – and the game console producers Nintendo and Microsoft. The other market leaders for TVs and game consoles are already included in the Guide.

In the eighth edition, we sharpened some of the existing ranking criteria on toxic chemicals and e-waste and added a criterion on each issue. We also added five new energy criteria. In the fourteenth edition the criteria for the Precautionary Principle was made more challenging.

For the latest version [greenpeace.org/greenelectronics](https://www.greenpeace.org/greenelectronics)

Toshiba, Samsung, LGE, Dell and Lenovo continue to be penalised in this latest version of the Guide for backtracking on their commitments to phase out vinyl plastic (PVC) and brominated flame retardants (BFRs). Toshiba is served with a further penalty point for misleading its customers and Greenpeace by not admitting that it would not meet its commitment. In addition, Microsoft is served with a penalty point for the first time for backtracking on its commitment to phase out PVC and BFRs by the end of 2010.