



## PANASONIC Ranking = 5.1/10

Panasonic stays in 6<sup>th</sup> 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)
<b>PARTIALLY BAD (1+)</b>	<b>GOOD (3+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>BAD (0)</b>	<b>PARTIALLY GOOD (2+)</b>
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. <b>More information.</b>	Panasonic's web pages on chemicals management contain a lot of detailed information. <b>Summary explanation on management of chemical substances here. More information. Chemical Substances Management Rank Guidelines Ver.7</b> (for Products)	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. <b>More information.</b> 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. <b>More information.</b>	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. <b>More information.</b> Beryllium is a Managed Substance whose use (above 1000 ppm) needs to be monitored. However, no time line for total elimination. <b>More information.</b> There is no plan to phase out the use of beryllium and compounds.	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. <b>More information.</b> 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.

## E-Waste

Support for Individual Producer Responsibility	Provides voluntary take-back where no EPR laws exist	Provides info for individual customers on take-back in all countries where products are sold	Reports on amount of e-waste collected and recycled	Use of recycled plastic content in products - and timelines for increasing content
<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>PARTIALLY BAD (1+)</b>
<b>Panasonic supports Individual Producer Responsibility</b> 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).	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. <b>More information. Information on the different regions including China.</b> 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.	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. <b>More information here and here. See here for US and here for India.</b>	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. <b>More information. For PCs. For a breakdown of data on specified home appliances.</b> 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. <b>More information.</b>	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. <b>More information. Details about recycling technology.</b>

## Energy

Support for global mandatory reduction of GHG emissions	Company carbon footprint disclosure	Commitment to reduce own direct GHG emissions	Amount of renewable energy used	Energy efficiency of New Models (double points)
<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY GOOD (2+)</b>	<b>PARTIALLY BAD (1+)</b>	<b>BAD (0)</b>	<b>GOOD (3+)</b>
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. <b>More information.</b>	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. <b>More information. Japan data. Emissions from transportation</b> 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 <b>Environmental Data Book 2009, p.3. Verification.</b>	Panasonic's goal for fiscal 2019 is to reduce its CO <sub>2</sub> emissions by 120 million tons, which is 50% of its fiscal 2006 levels. <b>More information.</b> 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. <b>More information here and here.</b> 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 CO <sub>2</sub> , which was exceeded by achieving 0.84 million tons reduction. It aims to lower CO <sub>2</sub> emissions to the level of FY2001 by the end of FY 2011. <b>More information. See p.3</b>	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. <b>More information.</b>	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%. <b>More information.</b>

## 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](http://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.