



## SAMSUNG, 7th position, 4.1/10

Samsung takes 7th position in the re-launched Guide. The 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 has been lifted. It now has notebooks, mobile phones and MP3 players that are free from these substances, but its commitment to phase out hazardous substances now only covers some product groups – TVs and household appliances are no longer included. Samsung does reasonably well on other **Products** criteria – it is one of the leaders on the new product life cycle criteria for providing information on its warranties and provision of spare parts as well as details of innovations. Samsung also scores well for the energy efficiency of its products, but it risks a **penalty point** in future Guide editions as it is a member of a trade association that has commented against stringent energy efficiency standards; it needs to distance itself from such regressive positions with a strong statement.

On **Energy** Samsung scores maximum points for providing verified data on its greenhouse gas (GHG) emissions. Samsung has set a target to “reduce the GHG emissions by 24 percent compared to ‘business as usual’ by 2015” from its operations, but does not have a target for cutting absolute emissions, which needs to be at least 30 percent by 2015. Its current use of renewable energy is low, at 0.1 percent of global electricity use; it plans to increase this in line with the Korean government’s plans for 6.9 percent renewable energy by 2020, however this is not its own target; it needs to set an ambitious target to increase its own use of renewable energy globally by 2020. On lobbying for a clean energy policy, Samsung gets a point for its support for cuts in GHG emissions by industrialised countries of at least 30 percent as a group by 2020.

Samsung scores most of its points for Sustainable **Operations** for its relatively good e-waste take-back programme and information; it needs to extend this further to cover its whole product range and to report on its recycling rate beyond Korea. It also reports on the GHG emissions of most of its 1st tier suppliers in Korea, and has plans to extend this to global suppliers in the near future. Samsung’s chemicals policy has mechanisms to identify future substances of concern; it describes its supply chain management for chemicals but does not have a restricted substances list for manufacturing. It is in the process of signing a compliance agreement with its suppliers that prohibits the use of conflict minerals and it needs to publicly map its smelters or suppliers. On paper, Samsung scores a point for reporting on its paper use and aiming to increase the use of FSC paper; it needs to develop a paper procurement policy which excludes suppliers that are involved in deforestation and illegal logging.

## SAMSUNG Overall Score

	ZERO	LOW	MEDIUM	HIGH
Disclose own operational GHG emissions				
GHG emissions reductions and targets				
Clean Electricity Plan (CEP)				
Clean Energy Policy Advocacy				
Product Energy Efficiency				
Avoidance of Hazardous Substances in Products				
Use of Recycled Plastic in Products				
Product Life-Cycle				
Measure and reduce energy consumption in the supply chain				
Chemicals Management and Advocacy				
Policy and practice on sustainable sourcing of fibres for paper				
Policy and practice on avoidance of conflict minerals				
Provides effective voluntary take-back where no EPR laws				

# SAMSUNG Detailed Scoring

## Energy

Disclose own operational GHG emissions	GHG emissions reductions and targets	Clean Electricity Plan (CEP)	Clean Energy Policy Advocacy
<b>3/3</b>	<b>3/8</b>	<b>1/8</b>	<b>1/8</b>
<p>Samsung reports its global scope 1 &amp; 2 GHG emissions of 10,655,000 tons for 2010, up from 9,375,000 tons for 2008; business travel is reported as 121 tons (compared to 61 tons in 2009). Samsung publishes a verification certificate from the Korea Energy Management Corporation and states that these emissions were verified in accordance with "Greenhouse Gas and Energy Target Management Scheme Guideline" run by the Korean government and "Samsung Electronics Guidelines for Greenhouse gas inventory" which is based on the international ISO 14064-1 standard. The certificate could be made more legible. <b>More information.</b></p> <p>Employee travel emissions are reported as 121,000 tons CO<sub>2</sub>-e in 2010 (p.45 <b>Sustainability Report</b>).</p> <p>To keep these points Samsung needs to provide more background information and analysis on the source of its GHG emissions (on its website or CR report).</p>	<p>Total GHG emissions increased as a result of increased production in 2010, but GHG emission intensity relative to sales decreased from 5.83 in 2009 to 5.11 in 2010. <b>More information.</b></p> <p>Samsung previously aimed 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. Samsung aims to "reduce the GHG emissions by 24% compared to BAU (business as usual) by 2015 to meet the Korean government's mid-term GHG reduction target and policy". However, it's not clear if this target is for absolute reductions as there is no baseline year. Samsung has another relative target to "reduce its GHG emissions intensity normalized by sales (metric tonnes of CO<sub>2</sub>, per KRW 100 million) by 50% until 2013" based on the level of 2008. <b>More information.</b></p> <p>Samsung needs to set new targets to make absolute cuts to its operational GHG emissions of at least 30% by 2015 and to dramatically increase renewable electricity use by 2020.</p>	<p>Samsung currently uses only small amounts of renewable energy; in 2010, the amount that it purchased was 0.1% of its total global electricity purchases. However, it is investing in the manufacture of renewables such as solar panels and plans to "increase its portion of renewable energy in line with Korean government's plans on renewable energy supply (the portion of renewables in total electricity generation in Korea is expected to reach 6.9% in 2020)", as the majority of its total global electricity consumption is in Korea (88% as of 2010). However, a target for increasing the use of renewable energy in Samsung's own operations is not given.</p> <p>Samsung plans to "gradually adopt renewable energy systems such as photovoltaic systems and small hydrogen energy systems at our operational sites". It also has energy management measures across its business and verified energy reduction programmes with targets, for its LCD division and its Gumi manufacturing plant. <b>More information.</b></p>	<p>Samsung supports the "development of clean energy policies by participating in several initiatives. For example, the company contributes to reducing global GHG emissions and increasing clean energy sources by participating in WBCSD (World Business Council for Sustainable Development), KBCSD (Korea Business Council for Sustainable Development), EICC (Electronic Industry for Citizenship Coalition), and the Green Growth Committee run by Korean government." <b>More information.</b></p> <p>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 also calls for global greenhouse gas emissions to peak by 2015. <b>More information.</b></p>

## Greener Products

Product Energy Efficiency	Avoidance of Hazardous Substances in Products	Use of Recycled Plastic in Products	Product Life-Cycle
<b>4/5</b>	<b>2/5</b>	<b>1/3</b>	<b>2/3</b>
<p>100% of Samsung notebook PC models on the market globally have met the latest Energy Star requirements, and 52% of Samsung notebook PC models on the market globally have exceeded the Energy Star TEC requirements for estimated annual energy consumption by 50 % or more. Samsung also reports that its TVs, monitors and printers meet the Energy Star requirements by between 86 and 98%. It reports that 100% of its EPS meet the latest Energy Star standards, however, these are now old and have not been updated, so Samsung needs to refer to other international standards. Samsung is a member of the Korea e-Standby Program and the China Energy Conservation Program, but needs to show more evidence of positive advocacy for higher energy efficiency. It also needs to provide information on energy management to its customers. <b>More information here and here.</b></p> <p>However, Samsung is a member of CEA, an industry association that recently made comments against the battery chargers systems regulation in the California Appliance Efficiency Regulations. It needs to reiterate its support wherever possible for more stringent energy efficiency standards for all electronic products. It needs to distance itself from such regressive positions or risk incurring a penalty point in future editions of the Guide.</p>	<p>Samsung has achieved its target to phase out PVC and BFRs in notebooks (except power cord and adapter), ahead of its revised commitment of January 2012, and its target to phase out PVC in internal wires of TVs by January 2011. 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. Since 1st November 2007, all new models of LCD panels are PVC-free.</p> <p>Other products that are partly PVC/BFR free are: 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 monitors are BFR free.</p> <p>Samsung previously backtracked on its commitment to eliminate BFRs in new models of all products by January 2010, and although it has set new timelines for eliminating PVC and BFRs for some product groups, the commitment no longer covers all its products or all parts (for example there is no commitment to extend the PVC/BFR phase out in notebooks to power cords and adapters).</p> <p>Samsung no longer plans to phase out the use of BFRs and all PVC in its TVs and household appliances and the timelines beyond 2010 are not acceptable.</p> <p>All new models of all products will be free from beryllium from January 2013. There is an exemption for 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.</p> <p>For more points, Samsung needs to eliminate these substances from its whole product portfolio, as well as antimony and compounds. <b>More information here, here and here. Product information.</b></p>	<p>Samsung is increasing the quantities of post-consumer plastic that it uses: in 2010, its use across all products was approximately 0.55%, and has increased to 2.37% by June, 2011; this compares to 0.4% during the year 2009.</p> <p>Samsung gives some examples of several mobile phones, a refrigerator and a washing machine, as products with post-consumer plastics content.</p> <p>Samsung's target is to increase its use of post-consumer plastics to 2.62% by 2013 – which it has almost achieved. Previously it had a target of 25% recycled plastic content (from post-industrial as well as post-consumer sources) out of total plastics used by 2025 and intended to maximise the use of post-consumer recycled plastics over post-industrial plastics. An intermediate target is welcome, however, a longer term objective is also needed. <b>More information here and here.</b></p>	<p>Samsung believes that "extending the lifespan of products is important for sustainability and has a policy on providing reasonable product warranty and service parts availability considering product categories, sales region and legal requirement." It offers a 1-2 year warranty on mobile phones and TVs and a 1-3 year warranty for monitors. Service parts are available for up to 8 years for mobile phones and monitors, and for up to 10 years for TVs.</p> <p>Samsung gives several examples of extending product life cycles, including a 'battery life extension mode' for PCs and its digital cameras have adopted the "Universal Charging Solution (UCS) which can be used for other mobile equipment such as smart phone, camcorder etc. This UCS standard initiated by Global System for Mobile communications Association (GSMA) can reduce standby energy consumption and eliminates the need for discarding chargers and keeping multiple chargers for different products". <b>More information.</b></p> <p>For maximum points it also needs to show some innovative measures that increase lifespan and durability of whole product systems, rather than only individual parts.</p>

## Sustainable Operations

Measure and reduce energy consumption in the supply chain	Chemicals Management and Advocacy	Policy and practice on sustainable sourcing of fibres for paper	Policy and practice on avoidance of conflict minerals	Provides effective voluntary take-back where no EPR laws
2/5	2/5	1/3	1/5	5/8
<p>Samsung has measured GHG emissions from its 1st tier suppliers (Scope 1 &amp; 2) on a yearly basis since 2009. In 2010, GHG emissions of 812,000 tons CO<sub>2</sub>-e, for the year of 2009, were measured from 662 suppliers located in Korea, which represents 98% of total suppliers in Korea and 40% of total purchase worldwide. This data was given limited assurance with other Samsung Sustainability Report data by Samil Pricewaterhouse Coopers based on ISAE 3000 and AA1000AS. Samsung plans to complete the measurement of GHG emissions by its suppliers globally by the end of 2011, ahead of its previous schedule of 2013.</p> <p><b>More information.</b> However, elsewhere Samsung states that a global inventory of GHG emissions will be completed by 2013. <b>More information.</b> The figure of 218,000 is also reported in its <b>Sustainability Report 2011</b>, as scope 3 emissions (see P.45).</p>	<p>Samsung supports and understands the Precautionary Principle. 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. <b>More information.</b> Samsung also identifies future chemicals to be targeted for elimination. <b>More information.</b> <b>SEC Standard</b> (revision 13 00A-2049) Samsung describes some of its measures for supply chain management but there is no restricted substances list for manufacturing. <b>More information.</b></p>	<p>Samsung is working to increase the proportion of recycled fibre and FSC paper it uses. It reports that "in 2010, the company used 40% recycled paper content in packaging across all products. Also, 70% of manuals in home appliances (refrigerators, washing machine, air conditioners, etc) were manufactured with FSC certified papers." It has also introduced a range of measures to reduce paper usage, such as innovative green packaging and electronic manuals. Samsung scores one point for its use of FSC paper and its reporting. For more points Samsung needs to develop a paper procurement policy which excludes suppliers that are involved in deforestation and illegal logging and sets specific targets to reduce paper use and increase use of recycled and FSC fibres. <b>More information.</b></p>	<p>Samsung states that it is "working closely with our procurement and supply chain partners, as well as our customers, to investigate our supply chain and mineral sourcing practices". So far it has not made in-depth investigations of its supply chain. Samsung is in the process of signing a compliance agreement with its suppliers that prohibits the use of conflict minerals. <b>More information.</b> Samsung has joined the EICC but is not an active member of the Extractives Working Group and has not published or publicly mapped smelters or suppliers, as several companies have already done. It is active in the EICC smelter audit process and is in the process of signing a compliance agreement with its suppliers that prohibits the use of conflict minerals, but the verification for this is unclear. In addition it has not signed up to the Public Private Alliance, made statements on the need for a multi-stakeholder certification process, or publicly committed to implement the OECD due diligence guidelines. Samsung did not issue a statement against the Chamber of Commerce lawsuit and did not join the multi-stakeholder submission to the SEC on conflict minerals. Samsung did not participate in the OECD due diligence drafting.</p>	<p>Samsung offers diverse take-back programmes in 60 countries - see <b>Sustainability Report</b> p.48 Samsung initiated a take-back programme for all its consumer electronics products in August 2010, across 21 cities in India. Samsung also 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. A voluntary programme is also planned for China in 2012. For more points Samsung needs to continue to extend its voluntary take-back for all products to non-OECD countries. <b>More information.</b> <b>Global mobile phone recycling.</b> Samsung provides accessible information to consumers on what to do with their discarded products, especially for mobile phones and for the <b>Recycling Direct programme</b> in the US and now Canada. <b>Mobile phone take-back.</b> Samsung estimates its 2010 recycling rates for Korea as a percentage of past sales: TVs - 42 % (based on an average life-span of 10 years, 2000) Computers - 16 % (based on an average life-span of 7 years, 2003) Mobile phones - 27 % (based on an average life-span of 2 years, 2008). <b>Recycling rates</b> need to be provided globally. <b>Recycling amounts</b> for 2010 by region. Total quantities of recycled product waste are reported in its <b>Sustainability Report 2011</b> (p.49).</p>

# Ranking Criteria Explained

Version 17, released in November 2011, of the Greenpeace Guide to Greener Electronics ranks companies in the electronics industry under three headings, Energy & Climate, Greener Products and Sustainable Operations.

The criteria used in version 17 of the Guide to evaluate the companies reflect Greenpeace's demands to electronics companies to:

- Reduce emissions of greenhouse gases (GHGs) with energy efficiency and renewable energy
- Clean up their products by eliminating hazardous substances;
- Take-back and recycle their products responsibly once they become obsolete,<sup>1</sup> and;
- Stop the use of unsustainable materials in their products and packaging

Previous versions of the Guide ranked companies on the following criteria: Chemicals, E-waste, and Energy. The ranking in version 17 sees a major change as it reorganizes the individual criteria under new headings (Energy & Climate, Greener Products and Sustainable Operations).

In areas where Greenpeace has seen some progress, multiple criteria have been folded together into one overall criterion, putting the focus on the implementation of previous commitments. In places where the industry needs to make further progress, such as energy policy and practice, we have re-written and strengthened the current criteria. Finally, new criteria on the sourcing of paper products and conflict minerals have been added under Sustainable Operations and on product life cycle under Greener Products.

In addition to these structural changes, the scoring system has also been changed. Depending on the complexity of the criteria the maximum points awarded per criteria will vary between 3, 5 and 8 points. There will no longer be double points for any criteria in the new scoring system. The maximum score is 69, which is converted into a score out of 10.

Given the urgency of tackling climate change, Greenpeace has re-focused and updated its energy criteria to encourage electronics companies to improve their corporate policies and practices with respect to Energy and Climate.

## Criteria on Energy and Climate

The criteria that companies will be evaluated on are:

1. Disclosure of Greenhouse Gas (GHG) emissions
2. Commitment to reduce the company's own short term and long term GHG emissions
3. A Clean Energy Plan which includes increasing use of Renewable Energy (RE) and energy efficiency measures to implement cuts in GHGs
4. Advocacy for a Clean Energy Policy at national and sub-national level

## Criteria on Greener Products

These criteria focus on the environmental performance of consumer electronics, across a number of different issues:

1. Energy efficiency of new models of specified products
2. Products on the market free from hazardous substances
3. Use of post-consumer recycled plastics in products
4. Product life cycle

## Criteria on Sustainable Operations

These criteria examine how companies implement environmental considerations during manufacture in their supply chain through to the end-of-life phase of a product:

1. Reduction of supply chain GHG emissions by major suppliers
2. Policy, practice and advocacy on chemicals management
3. Policy and practice on sustainable sourcing of fibres for paper
4. Policy and practice on avoidance of conflict minerals
5. Producer responsibility for voluntary take-back of e-waste

## Company scores

Companies have the opportunity to improve their score, as the Guide will be periodically updated. 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 e-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 electronic 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 criteria was made more challenging.

The 17th edition has been re-organised, to reflect campaign priorities and to provide a more comprehensive assessment of the areas where electronics companies impact the environment, under the three headings Energy & Climate, Greener Products and Sustainable Operations. Many elements of the previous criteria remain but they have been re-arranged and updated, with a greater focus on implementation rather than commitment.

It now ranks 15 top manufacturers of personal computers, TVs and mobile phones; Fujitsu, games console producers Nintendo and Microsoft are no longer included and the mobile phone manufacturer Motorola has been replaced with RIM.

**For the latest version, see [www.greenpeace.org/rankingguide](http://www.greenpeace.org/rankingguide)**

Sony is issued with a penalty point on its total score as it has made comments in opposition to energy efficiency standards in California, (specifically on the CA Title20 Battery chargers systems and the SB 454: Enforcement of energy efficiency appliance standards).

Sony and LGE are listed as clients of Asia Pulp and Paper (APP), which is responsible for illegal logging and deforestation in Indonesia. Sony and LGE should immediately and publicly commit to stop sourcing any paper or packaging needs from APP or risk being penalised in future versions of the Guide.

Companies that are members of the trade associations ITI and CEA are warned that they risk incurring a penalty point in future editions of the Guide; this affects all companies apart from Sony Ericsson, LGE and Acer. These industry associations have recently made comments against stricter energy efficiency standards in the scope of the California Appliance Efficiency Regulations (a. the inclusion of computers and servers; b. comments against battery chargers systems regulation, respectively). Companies need to distance themselves from such regressive positions and reiterate their support wherever possible for more stringent energy efficiency standards for all electronic products.

Penalty points previously imposed on Toshiba, Samsung, LGE, Dell and Lenovo for backtracking on their commitments to phase out vinyl plastic (PVC) and brominated flame retardants (BFRs) have been lifted as a result of progress made in bringing PVC/BFR-free products onto the market.

<sup>1</sup> The two issues are connected: the use of harmful chemicals in electronic products prevents their safe recycling once the products are discarded.