

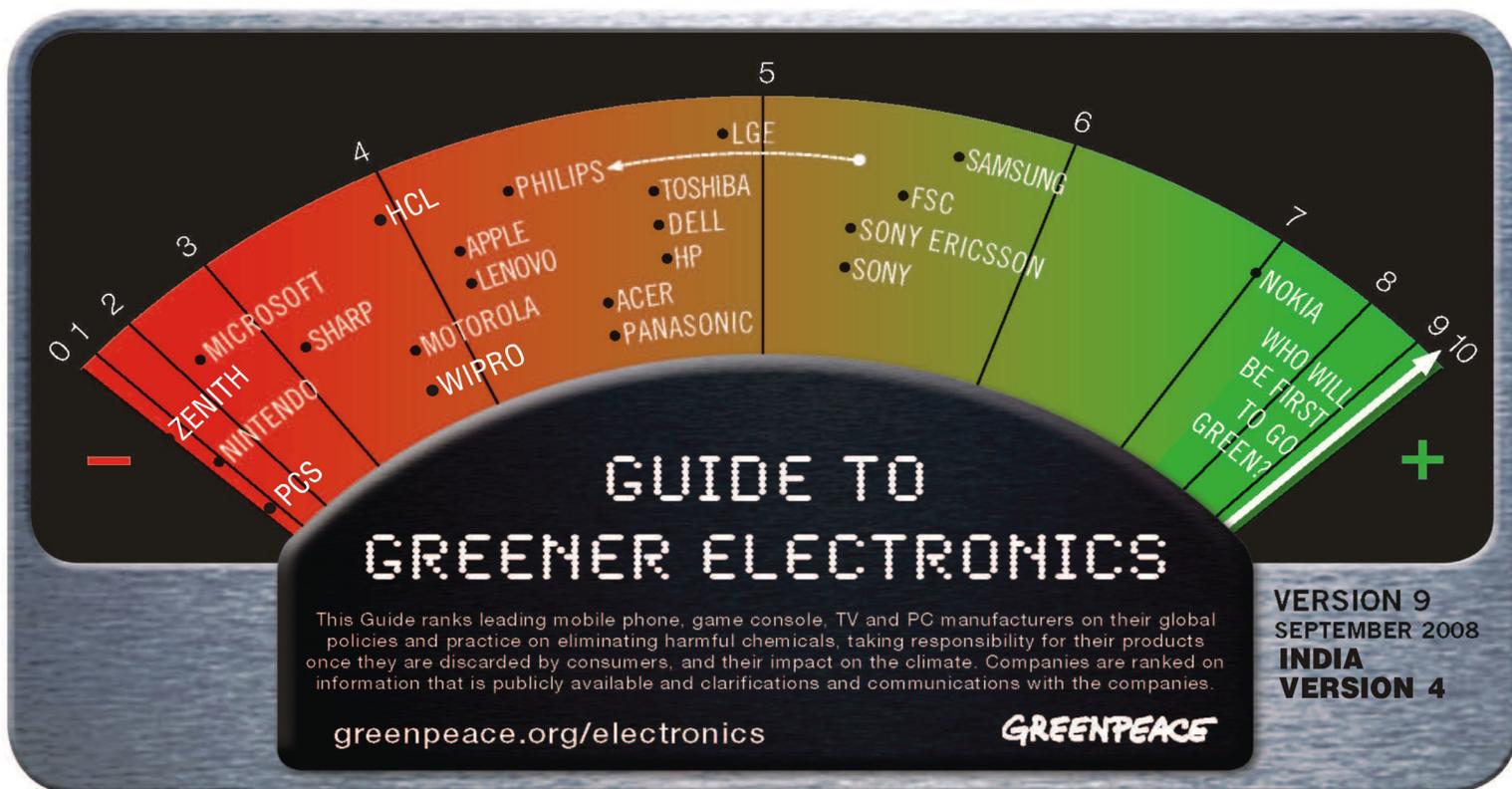
GUIDE TO GREENER ELECTRONICS

This Guide ranks leading mobile phone, game console, TV and PC manufacturers on their global policies and practice on eliminating harmful chemicals, taking responsibility for their products once they are discarded by consumers, and their impact on the climate. Companies are ranked on information that is publicly available and clarifications and communications with the companies.

greenpeace.org/electronics

GREENPEACE

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HCL Ranking = 3.92/10

HCL just maintains its number one position in the fourth Indian version of Greenpeace Guide to Greener Electronics. Its overall score has increased from last ranking mainly for its commitment to phase out phthalates, antimony and beryllium and to identify other chemicals for phase out. HCL has also provided more details on components of its products that are free of PVC and BFRs, (although there are no models on the market yet) and has increased its list of products that are Energy Star compliant, though it needs to do more to score points on these criteria. On all other criteria, HCL's score is the same as the last ranking as it did not improve its commitment and information. HCL continues to score poorly on the new climate and energy criteria and has to do a lot to improve its performance on this issue.

HCL Overall Score				
	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD(2+)	GOOD(3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC and BFR phase out				
Timeline for phase out of additional substances				
PVC-free and/or BFR-free models				
Individual Producers Responsibility				
Voluntary takeback				
Information to individual customers				
Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled				
Use of recycled plastic				
Support for GHG emissions reduction				
Disclosure of Carbon Footprint (GHG emissions) of company				
Commitment to reduce GHG emissions by company				
Amount of renewable energy used				
Energy efficiency of new models				

HCL Detailed Scoring

Chemicals

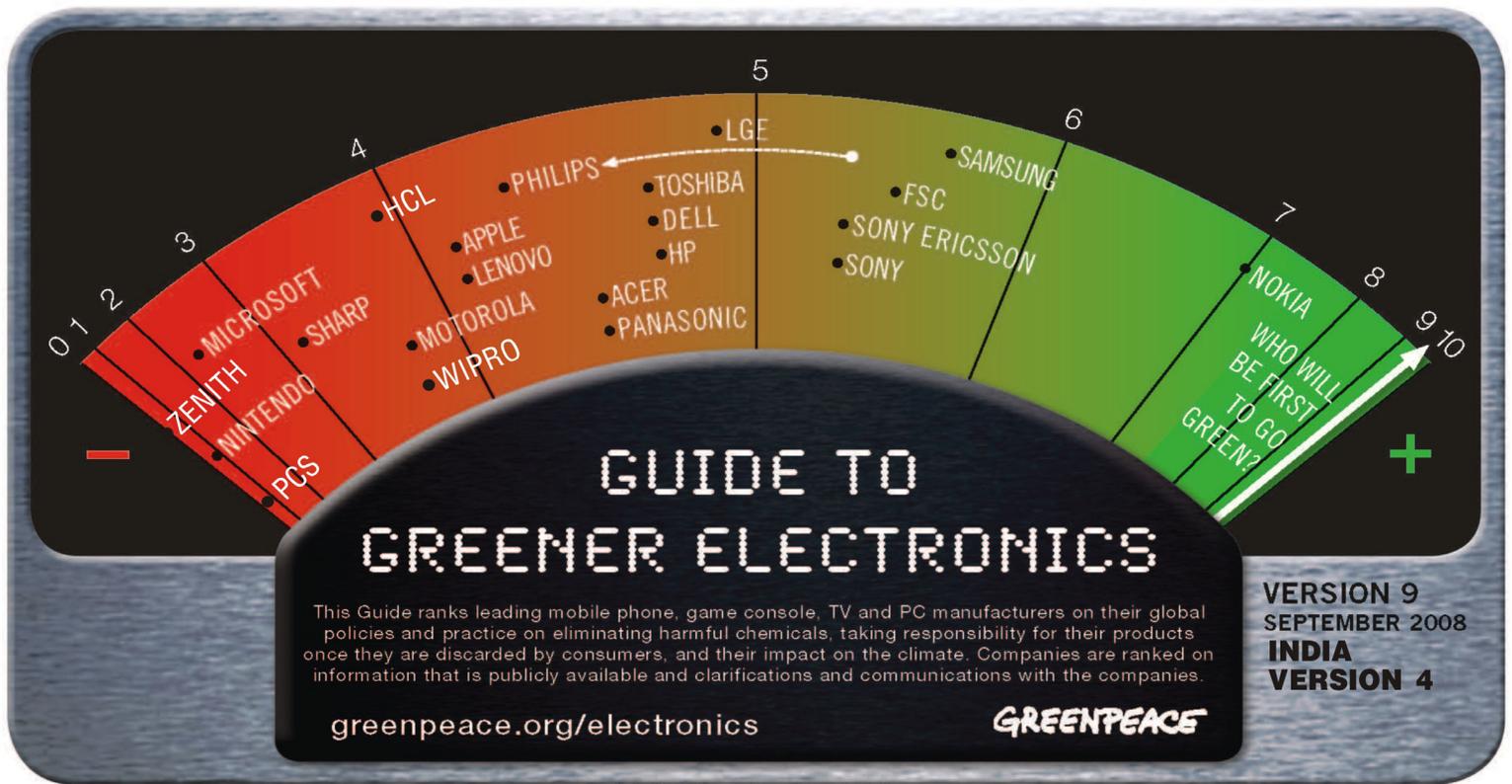
Precautionary Principle	Chemicals Management	Timeline for PVC and BFR phase out	Timeline for phase out of additional substances	PVC-free and/or BFR-free models (Companies score double on)
GOOD (3+)	PARTIALLY GOOD (2+)	GOOD (3+)	GOOD (3+)	BAD (0)
HCL scores top marks for its commitment to phase out all targeted chemicals having potential environmental and health impacts voluntarily beyond legal requirements. http://www.hclinfosystems.in/hclesafe_chemical.html	HCL provides two lists of hazardous chemicals - chemicals in class A are completely banned and chemicals in class B are severely restricted with a timeline given for phase out. http://www.hclinfosystems.in/hclesafe_chemicalsupp.html More information on letter to supplier at http://www.hclinfosystems.in/Letter_to_Suppliers.pdf	HCL is committed to complete elimination of PVC by 2009 and BFRs by 2010 at http://www.hclinfosystems.in/hclesafe_chemical.html	HCL now gives a tentative timeline of 2012 for the phase out of beryllium and antimony from its all products, which is also its timeline for phthalates. http://www.hclinfosystems.in/hclesafe_chemical.html	HCL scores top marks for its commitment to phase out all targeted chemicals having potential environmental and health impacts voluntarily beyond legal requirements. http://www.hclinfosystems.in/hclesafe_chemical.html HCL provides two lists of hazardous chemicals - chemicals in class A are completely banned and chemicals in class B are severely restricted with a timeline given for phase out. http://www.hclinfosystems.in/hclesafe_chemicalsupp.html More information on letter to supplier at http://www.hclinfosystems.in/Letter_to_Suppliers.pdf

E-Waste

Support for Individual Producers Responsibility	Provides Voluntary takeback where no EPR laws exist	Provides information to individual customers on takeback in all countries where products are sold	Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled	Use of recycled plastic
GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)
HCL under sustainable development supports IPR and the need for IPR/ EPR legislation in India, and offers its customers recycling options. To stay on top marks, HCL needs to define the acronyms EPR/IPR, explain what this means in practice and do active lobbying for legislation embracing IPR http://www.hclinfosystems.in/hclesafe_ipr.html#top	HCL's 'E-Waste Policy' aims at providing efficient and easy product recovery options to its consumers to facilitate responsible product retirement of all its manufactured EEE products. http://www.hclinfosystems.in/hclesafe_ewaste.html More information on online process for e-waste recycling request registration at http://pmo.hclinsys.com/ewaste/terms.asp	In an effort to educate customers on recovery and recycling programs being offered by HCL, WEEE awareness and recovery process booklet has been placed in all product packaging as part of standard product kit. More information on customer awareness at http://www.hclinfosystems.in/Awareness_Booklet.pdf More information on separate collection and recycling system at http://www.hclinfosystems.in/hclesafe_ewaste.html	HCL reports that the amount of e-waste recycled annually as a percentage of sales 4 years ago was 1.36 % for 2006 and 1.39 % for 2007. However, this is much shorter than the estimated 7 years life-span for a computer. http://www.hclinfosystems.in/hclesafe_audit.html	HCL failed to provide any specific information or data, however HCL has requested suppliers to increase the use of recycled plastics in their products and quantify the amount that they use. http://www.hclinfosystems.in/hclesafe_recycled.html

Energy

Support for global mandatory reduction of GHG emissions	Disclosure of carbon footprint (GHG emissions) of company's operation	Commitment to reduce GHG emissions from a company's own operations with timelines	Amount of renewable energy used in own operations	Energy efficiency of New Models of specified products (companies score double on
BAD (0)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)	BAD (0)
<p>Strongly supports all the initiatives of the Indian Government in favour of GHG emission reductions. However, HCL's own policy is not clearly stated. http://www.hclinfosystems.in/hclesafe_initiative.html#top</p>	<p>HCL outlines its plan for reporting GHG emissions and provides a breakdown between scope 1, 2 and 3 according to the GHG Protocol. HCL currently reports 308 tCO₂ from diesel generators in manufacturing and offices (scope 1) and 7090 tCO₂ for purchased electricity (scope 2). There is no information on other sources of GHG, including emissions from its supply chain. The timescale is not given, and data is not backed by external verification. A breakdown of emissions from individual factories and offices is provided. http://www.hclinfosystems.in/hclesafe_initiative.</p>	<p>No specific commitment or timeline is given for reducing GHG emissions, so HCL fail to score any points. HCL reports on general steps they have taken, like cutting down on AC use and monitoring power usage. http://www.hclinfosystems.in/hclesafe_initiative.html#a2</p>	<p>HCL provides details of solar water heaters at one training centre. To score points HCL needs to give the percentage of renewable energy used as well as targets for increasing its use of renewable energy. http://www.hclinfosystems.in/hclesafe_initiative.html#a3</p>	<p>HCL states that 50 % of its Enterprise range of desktops are energy star compliant, and has increased the numbers of other desktops which are EnergyStar compliant. To score points HCL would need to provide information on all PCs since the ES4 standard for PCs came into effect in July 07. More Information here http://www.hclinfosystems.in/hclesafe_initiative.html#a4 and here http://www.hclinfosystems.in/hclesafe_ESCproducts.html</p>



WIPRO Ranking = 3.7/10

Wipro remains in second place in the Fourth Indian version of Greenpeace Guide to Greener Electronics but in this ranking it closes the gap behind HCL. Its score has increased since the last ranking due to its strong support for legislation on Individual Producer Responsibility, its aggressive timeline for phasing out phthalates, antimony and beryllium. and has improved its definition of the Precautionary Principle. Wipro also scores well on its timeline for phasing out PVC and BFRs & its take-back practice. But it fails to score points for PVC and BFR free models on the market and its efforts toward reusing plastics for manufacturing of new products. The information it provides on the amounts of e-waste recycled still needs to be presented as a percentage of its past sales. Wipro scores few points on climate and energy criteria and still has to do a lot more on this criterion.

WIPRO Overall Score				
	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD(2+)	GOOD(3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC and BFR phase out				
Timeline for phase out of additional substances				
PVC-free and/or BFR-free models				
Individual Producers Responsibility				
Voluntary takeback				
Information to individual customers				
Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled				
Use of recycled plastic				
Support for GHG emissions reduction				
Disclosure of Carbon Footprint (GHG emissions) of company				
Commitment to reduce GHG emissions by company				
Amount of renewable energy used				
Energy efficiency of new models				

WIPRO Detailed Scoring

Chemicals

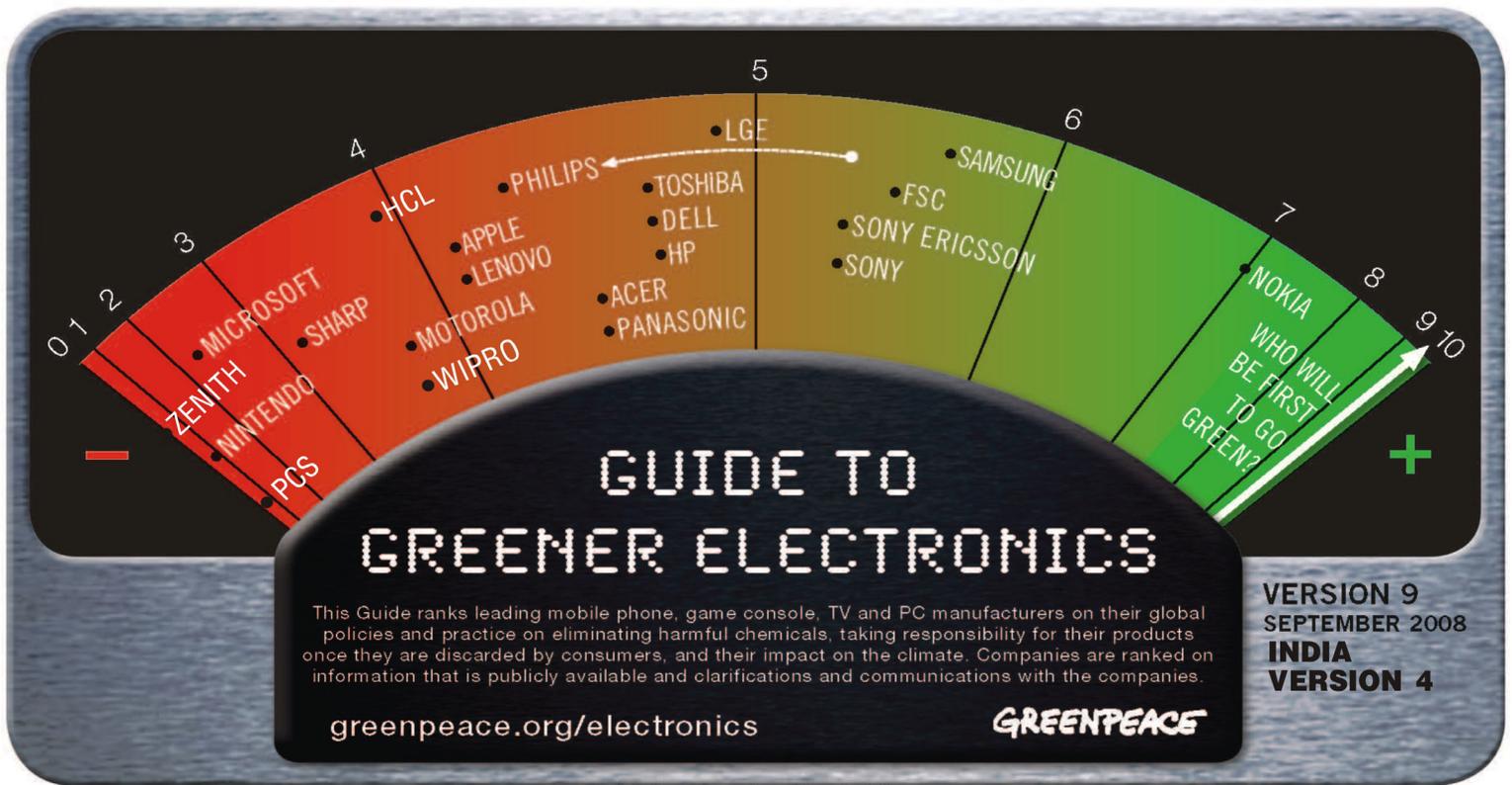
Precautionary Principle	Chemicals Management	Timeline for PVC and BFR phase out	Timeline for phase out of additional substances	PVC-free and/or BFR-free models (Companies score double on)
PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	GOOD (3+)	GOOD (3+)	BAD (0)
<p>Wipro has improved its definition of the Precautionary principle and states the need to identify chemicals that may pose a threat in the future. To get maximum points WIPRO needs to specify that the precautionary action it will take on hazardous substances goes beyond compliance with legislation.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#3</p>	<p>Wipro now provides a list of 21 chemicals which are banned, restricted or subject to phase out from its products. For maximum points WIPRO's chemical management plan needs to be more explicit and detailed to show how it reaches such conclusions and what methods it is employing to identify chemicals for future elimination.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#4</p>	<p>Committed to phase out PVC and BFRs by end of 2009.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#5</p>	<p>Wipro now has good timelines for the phase out of additional chemicals such as phthalates, beryllium compounds and antimony by Year 2010. compounds</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#6</p>	<p>Wipro provides a list of BFR-free products on the market but these are only compliant with RoHS. No additional BFRs are eliminated from products on the market.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#7</p>

E-Waste

Support for Individual Producers Responsibility	Provides Voluntary takeback where no EPR laws exist	Provides information to individual customers on takeback in all countries where products are sold	Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled	Use of recycled plastic
GOOD (3+)	PARTIALLY GOOD (2+)	PARTIALLY GOOD (2+)	PARTIALLY BAD (1+)	BAD (0)
<p>Wipro scores full marks for its support for IPR and its public support for comprehensive legislation based on the IPR principle in India.</p> <p>To stay on top marks, Wipro needs to define the acronyms EPR/IPR, explain what this means in practice (voluntary t/b programme in India for all products and all customers - B2B and B2C) and do active lobbying for legislation embracing IPR.</p> <p>http://www.wipro.in/</p>	<p>Wipro added one more collection centre at Vijaywada from Aug-08 and now has 17 collection centers, highest among all PC manufacturers in India. An on-line registration form is also available for collection of end-of-the-life products.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#9</p>	<p>Detailed information is provided to customers on how to "dispose" of discarded products through Wipro's take-back service. FAQs have been added which give more information to customers.</p> <p>However, Wipro's use of the word 'disposes' at some times and 'recycle' at others might be confusing to customers. Wipro also gives information about its efforts in creating awareness among customers and other stakeholders.</p>	<p>Wipro now provides the "% of Warranty disposed" month-wise from Apr-06 to Jun-08. The average % of "disposed" amount is 3.96 % highest among all Indian brands. However, its not clear what this percentage refers to; for more points Wipro needs to provide the percentage of end-of-life products recycled in relation to past sales of its products, by product type.</p> <p>It also needs to clarify whether it is "disposed of" or recycled.</p>	<p>Wipro states that it sends 95 % of plastics to China for re-use and 5 % to Hong Kong for recycling. However, Wipro fails to provide any information on whether it uses any kind of recycled plastics in its products and if so, by what percentage of the total plastic used.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#13</p>

Energy

Support for global mandatory reduction of GHG emissions	Disclosure of carbon footprint (GHG emissions) of company's operation	Commitment to reduce GHG emissions from a company's own operations with timelines	Amount of renewable energy used in own operations	Energy efficiency of New Models of specified products (companies score double on
BAD (0)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)	BAD (0)
<p>Wipro supports the Kyoto Protocol and the Indian government's stand on common but differentiated responsibility between developed and developing countries in curbing GHG emissions. To score points Wipro needs to support global mandatory cuts of at least 50% by 2050 with greater cuts of at least 30% by 2020 by industrialized countries.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#15</p>	<p>Wipro discloses its GHG emissions for both IT and Non-IT business. However, no information on its product supply chain is given, and the data has no external verification.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#15</p>	<p>Wipro has announced its commitment to become carbon neutral by 2014. However, it fails to score because it does not provide targets for reducing absolute emissions of GHG from a specified baseline year. Wipro also needs to outline what steps it will take to make it carbon neutral.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#16</p>	<p>Wipro saved 71 % energy in year 07-08 on account of lowering the power source (SMPS) on its Products from 300 watts to 250 Watts. However it fails to provide any information about its use of renewable energy.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#16</p>	<p>Wipro has one selected range of products- E2160 standard product which can support an Energy star-4 capable system, and the PROTOS range of computers is Energy Star compliant. But Wipro fails to score any points because it does not give the percentage of models which are Energy Star compliant.</p> <p>http://www.wipro.in/Products/greenpc/html/0002core.htm#19</p>



PCS TECHNOLOGY Ranking = 0.2/10

PCS Technology moves into third position in the fourth Indian version of the Greenpeace Guide to Greener Electronics. This is not due to new information or and commitments by PCS Technology but to Zenith losing points for not providing information. PCS is rewarded for its reference to the EU legislation on RoHS (Restriction of Hazardous Substances) under the Chemicals Management criteria. PCS Technology also mentions its efforts to put models on the market which are energy efficient but fails to provide information on Energy Star compliance. Apart from that, it fails to score on any other criteria.

PCS Overall Score				
	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD(2+)	GOOD(3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC and BFR phase out				
Timeline for phase out of additional substances				
PVC-free and/or BFR-free models				
Individual Producers Responsibility				
Voluntary takeback				
Information to individual customers				
Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled				
Use of recycled plastic				
Support for GHG emissions reduction				
Disclosure of Carbon Footprint (GHG emissions) of company				
Commitment to reduce GHG emissions by company				
Amount of renewable energy used				
Energy efficiency of new models				

PCS Detailed Scoring

Chemicals

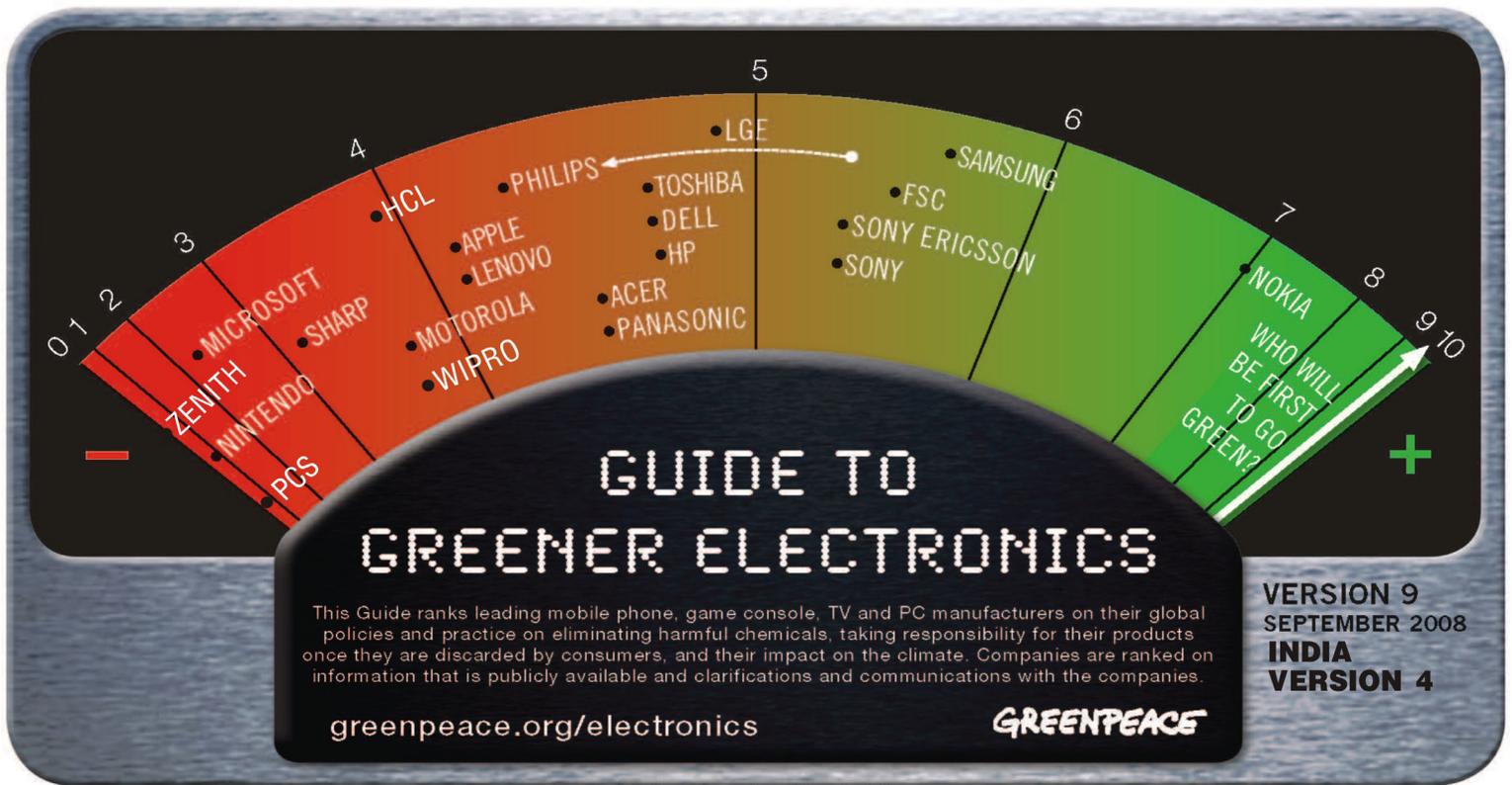
Precautionary Principle	Chemicals Management	Timeline for PVC and BFR phase out	Timeline for phase out of additional substances	PVC-free and/or BFR-free models (Companies score double on)
BAD (0)	PARTIALLY BAD (1+)	BAD (0)	BAD (0)	BAD (0)
PCS Technology states that it “commits to manufacture products that are environment friendly in all respects and are free from hazardous chemicals.” However, the Precautionary Principle is not mentioned http://www.pcstech.com/greensafe.asp?vgs=gsafe1	PCS Technology refers to compliance with RoHS (EU Directive on the Restriction of Hazardous Substances), and therefore scores 1 point. http://www.pcstech.com/greensafe.asp?vgs=gsafe4	No information	No information	No information

E-Waste

Support for Individual Producers Responsibility	Provides Voluntary takeback where no EPR laws exist	Provides information to individual customers on takeback in all countries where products are sold	Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled	Use of recycled plastic
BAD (0)	BAD (0)	BAD (0)	BAD (0)	BAD (0)
No information	No information	No information	No information	No information

Energy

Support for global mandatory reduction of GHG emissions	Disclosure of carbon footprint (GHG emissions) of company’s operation	Commitment to reduce GHG emissions from a company’s own operations with timelines	Amount of renewable energy used in own operations	Energy efficiency of New Models of specified products (companies score double on)
BAD (0)	BAD (0)	BAD (0)	BAD (0)	BAD (0)
No information	No information	No information	No information	PCS Technology is developing energy efficient models in its product line but does not refer to compliance with Energy Star. http://www.pcstech.com



ZENITH Ranking = 0/10

Zeniths has slipped to bottom among the Indian companies in Fourth Greenpeace Guide to Greener Electronics mainly because the information it posted last time is no longer available via its main website. Although the previous links are still working they are no longer attached to main website. In this ranking Zenith scores zero points on all criteria.

Zenith Overall Score				
	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD(2+)	GOOD(3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC and BFR phase out				
Timeline for phase out of additional substances				
PVC-free and/or BFR-free models				
Individual Producers Responsibility				
Voluntary takeback				
Information to individual customers				
Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled				
Use of recycled plastic				
Support for GHG emissions reduction				
Disclosure of Carbon Footprint (GHG emissions) of company				
Commitment to reduce GHG emissions by company				
Amount of renewable energy used				
Energy efficiency of new models				

Zenith Detailed Scoring

Chemicals

Precautionary Principle	Chemicals Management	Timeline for PVC and BFR phase out	Timeline for phase out of additional substances	PVC-free and/or BFR-free models (Companies score double on
BAD (0)	BAD (0)	BAD (0)	BAD (0)	BAD (0)
No information	No information	The earlier link which provided information on a timeline for the phase out of BFRs and PVC is now not available on the website. http://www.zenith-india.com However, the previous link is still working but not attached with Main home page. "Zenith Computers promises its customers that it will stop using PVC and BFR in its PC models by year 2010."	No information	No information

E-Waste

Support for Individual Producers Responsibility	Provides Voluntary takeback where no EPR laws exist	Provides information to individual customers on takeback in all countries where products are sold	Report on amount of waste electrical and electronic equipment (WEEE) collected and recycled	Use of recycled plastic
BAD (0)	BAD (0)	BAD (0)	BAD (0)	BAD (0)
No information	This information is also withdrawn which was earlier available. Zenith offers a free recycling and disposal service for end-of-life Zenith products to all its customers and business clients. It is not clear whether takeback is offered for all of Zenith's customers or only those in India. In addition, the information about whether a fee is charged is ambiguous. http://www.zenith-india.com/recycling.html	This information is also withdrawn which was earlier available. Zenith provides an e-mail address its customers to contact them for disposal of discarded products but fails to provide more detailed information. Also, the information is not easily accessible from Zenith's main pages. http://www.zenith-india.com/recycling.html	No information	No information

Energy

Support for global mandatory reduction of GHG emissions	Disclosure of carbon footprint (GHG emissions) of company's operation	Commitment to reduce GHG emissions from a company's own operations with timelines	Amount of renewable energy used in own operations	Energy efficiency of New Models of specified products (companies score double on
BAD (0)	BAD (0)	BAD (0)	BAD (0)	BAD (0)
No information	No information	No information	No information	No information

Criteria on Toxic Chemicals

Greenpeace wants to see electronics companies clean up their act.

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

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

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

The criteria on Precautionary Principle and Chemicals Management remain the same. The criterion: BFR-free and PVC-free models on the market, also remains the same and continues to score double points.

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

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

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

Criteria on e-waste

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

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

Criteria on energy

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

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

Click here to see more detailed information on the ranking

Ranking criteria explained

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

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

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

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

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

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

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

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

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

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

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

In the eighth edition, we sharpened some of the existing ranking criteria on toxic chemicals and e-waste and added a criterion on each issue. We also added five new energy criteria.

For the latest version greenpeace.org/greenelectronics

Philips continues to get a penalty point; however, this is no longer for double standards (as the Electronic Manufacturers' Coalition for Responsible Recycling has been dissolved), but for bad lobby in the EU on Revision of WEEE Directive.