



**PANASONIC**  
11<sup>th</sup> position, 3.6/10

**Panasonic falls back to 11<sup>th</sup> position in this edition of the Greenpeace Guide to Greener Electronics, with 3.6 points.**

Panasonic scores low on the **Energy** criteria. The company fails to provide a comprehensive greenhouse gas (GHG) emissions reduction and clean energy strategy. For more points, Panasonic must aim to achieve a 30% emissions reduction by 2015, and increase its renewable energy use to 100% by 2020. Panasonic receives points for making progress in reducing its GHG emissions and energy efficiency, and its use, however small, of renewable energy. Panasonic reports its GHG emissions from its own operations, which are externally verified, but does not report on business travel.

Panasonic scores slightly above average on **Products**. The company provides information about its warranties and replacement parts, as well as many examples of innovation to make its products last longer. Panasonic has many products that are free from polyvinyl chloride plastic (PVC), though it did not meet its goal to eliminate PVC and brominated flame retardants (BFRs) from its notebooks and mobile phones by the end of 2011, citing technical difficulty. Panasonic increased its reporting and score on recycled plastic, though it still needs to publish a long-term goal. It scores maximum points for the energy efficiency of its products.

For **Sustainable Operations**, Panasonic's take-back programmes for obsolete products do not exist globally and do not yet cover all Panasonic's product groups, although there is good coverage for its PCs. Panasonic has a detailed chemicals management programme, although there are some inconsistencies when compared to its commitments. The company has improved its conflict minerals policy and requests its primary component and material suppliers to verify the sources of minerals. Panasonic's paper procurement policy falls short for not excluding suppliers that are involved in deforestation and illegal logging.

|                   |   | ZERO | LOW | MEDIUM | HIGH |
|-------------------|---|------|-----|--------|------|
| <b>ENERGY</b>     | Disclose and set targets for operational GHG emissions and RE supply  |      |     |        |      |
|                   | Disclose and set targets for supply chain GHG emissions and RE supply |      |     |        |      |
|                   | Clean Electricity Plan (CEP)  |      |     |        |      |
|                   | Clean Energy Policy Advocacy  |      |     |        |      |
| <b>PRODUCTS</b>   | Product energy efficiency   |      |     |        |      |
|                   | Avoidance of hazardous substances in products                         |      |     |        |      |
|                   | Use of recycled plastic in products                                   |      |     |        |      |
|                   | Product life cycle  |      |     |        |      |
| <b>OPERATIONS</b> | 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 there are no EPR laws    |      |     |        |      |

| <b>Energy</b>  |  | <b>7/32</b> |
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| <b>Disclose and set targets for operational GHG emissions and RE supply</b>  | <p>Panasonic gives an overview of its global emissions from the whole life cycle of its products (apart from its suppliers). <b>More information.</b> Emissions of GHGs from production activities were 3.56 million tons CO<sub>2</sub>-e in 2012, down from 4 million tons in 2011. <b>Panasonic achieved reductions</b> of 2.5 million tonnes CO<sub>2</sub>-e in 2012 and aims to achieve reductions of 2.55 million tonnes CO<sub>2</sub>-e in 2013. Absolute quantities of GHG emissions reduced from 4.59 million tons in 2006 to 3.56 million tons in 2012. Emissions from GHGs other than CO<sub>2</sub> were 12,000 tons. <b>More information.</b> Emissions of GHG from non-manufacturing sites were 180,000 tons CO<sub>2</sub>-e in 2012. <b>More information. Independent Assurance report and calculating standards.</b> Panasonic provides background information and analysis on the source of its GHG emissions. For more points it needs to report its GHG emissions from business travel. Panasonic will endeavor to ensure that CO<sub>2</sub> emissions from its entire business operations — not only from its own production activities but also from the use of its products by customers — peak out by 2018. As a result of product energy efficiency, use of renewable energy and reduced emissions from operations, CO<sub>2</sub> emissions from its entire business operations were reduced by 40.37 million tons in fiscal 2012. Panasonic aims to increase this amount to 37 million tons and 50 million tons in fiscal 2012 and 2013, respectively, and eventually to 120 million tons in fiscal 2019. However, specific figures for the reduction of GHG emissions from operations are not provided. <b>More information.</b> Panasonic’s approach needs to focus specifically on its planned reductions of GHGs – both absolute and relative. It needs to set ambitious targets and aim to reduce its own GHG emissions by at least 30% by 2015 for its operations and dramatically increase renewable electricity use by 2020.</p> | <b>2/8</b>  |
| <b>Disclose and set targets for supply chain GHG emissions and RE supply</b> | <p>Panasonic manufactures many of its products in its own factories and emissions from these are reported above. Panasonic surveyed some its suppliers, selected according to provisional calculations of the GHG emissions of products. The total GHG emissions were calculated as 2.83 million tonnes, based on replies from 84 consenting suppliers. The calculations also included emissions from the supply of raw materials and components as well as logistics. Panasonic intends to identify total CO<sub>2</sub> emissions from the entire supply chain in the future. Panasonic also has an ongoing programme (ECO-VC) to identify energy and resource savings by suppliers. In the future, this will be implemented throughout its supply chain. <b>More information.</b> Panasonic has <b>green procurement standards</b> that include a request to suppliers to promote the reduction of their GHG emissions.</p>   | <b>2/8</b>  |
| <b>Clean Electricity Plan (CEP)</b>  | <p>Formulas are given for increasing use of renewable energy, reducing emissions from operations and increasing product energy efficiency, as part of Panasonic’s ‘goal to peak out’ by 2018, but no specific targets are given. <b>More information.</b> Panasonic now provides a figure for the amount of renewable energy used globally; in fiscal 2012 it was 2,960,000 kWh. Previously it reported that the renewable energy consumed in Japan in fiscal 2011 was 2,190,000 kWh, up from 173,000 kWh in fiscal 2010. The figure isn’t given as a percentage of electricity consumption; however, this is a tiny proportion of its electricity consumption. To further promote energy conservation and reduce CO<sub>2</sub> emissions, from fiscal 2011 Panasonic has selected “Top Runner Factories” as a model, which create three year implementation plans for energy conservation and use of renewable energy. Innovations and techniques are then shared with other factories. In fiscal 2012, Panasonic utilized model factories to identify that energy savings of 20 to 30% higher than expected were possible; these processes will be extended to its global factories to achieve substantial energy savings. <b>More information.</b> Panasonic has been implementing an energy conservation project at its factories in Malaysia since fiscal 2005. <b>More information. An example of renewable energy</b> use at Kasai Green Energy Park is given. On 1 July 2011, Panasonic established its “Corporate Electricity Saving Division” in response to the change in electricity supply situation caused by the Great East Japan Earthquake. <b>More information.</b></p>   | <b>2/8</b>  |
| <b>Clean Energy Policy Advocacy</b>  | <p>Panasonic is actively engaged in various partnerships and communications with governments, through direct communication and participation in concrete projects. Some examples: <b>Dialogue with key stakeholders in Europe. Participation in Singapore International Energy Week 2010. Sustainable Smart Town Project in Fujisawa, Japan. More information.</b> Asia’s First Test-bed Project on Total Energy Solutions for Public Housing. More information <b>here</b> and <b>here</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. Panasonic needs to support the call for GHG emissions to peak by 2015; for industrialised countries to reduce emissions by <i>at least</i> 30%. <b>More information.</b> Panasonic says its supports the feed-in tariff (FIT) for renewable energy, started 1 July 2012 by the Japanese government, intended to encourage Japan to expand the use of renewable energy, and is making proposals to the Japanese government through industrial organisations to enhance/improve the programme. It should make this support more public.</p>   | <b>1/8</b>  |

| Greener Products                                     |  | 10/16 |
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| <b>Product energy efficiency</b>                     | <p>Panasonic exceeded its target to reduce GHG emissions through energy saving products by 32 million tons in fiscal 2012 by achieving savings of 35.05 million tons, largely due to the Japanese government's eco-point incentive programme and the Chinese government initiative to promote the replacement of used home appliances. It aims to reduce GHG emissions through energy saving products by 34.85 million tonnes in fiscal 2013 (previously this was 45 million tons). In fiscal 2011, Panasonic achieved reductions of 31.17 million tons. <b>More information.</b></p> <p>TVs: 76% (down from 100% in 2011) of 2012 TV models (41 models), including 100% of 2012 LCD-TV models (21 models) meet Energy Star requirements (ver. 5.3) for both on-mode and standby power. 36 models exceed the standby power requirement by 80% and the remaining 5 models exceed by 70%. PCs: All (100%) of 39 notebook series currently available qualify for Energy Star requirements (ver. 5.2). (ENERGY STAR qualification based upon Total Energy Consumption (TEC) calculations in kilowatt hours per year (kWh))</p> <p><b>Panasonic notebook computers</b> are approx. 25% better than Energy Star TEC requirements on average. TVs have other power saving functions. <b>More information.</b> PCs have a peak load time control system. <b>More information.</b></p>  | 5/5   |
| <b>Avoidance of hazardous substances in products</b> | <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. There are more examples of PVC-free models, including healthcare products and LED panel display units. Panasonic gives examples of fluorescent ceiling lamps that are free of BFRs – and are 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. Panasonic still plans to eliminate the use of PVC in notebooks (its original timeline was the end of 2011) globally, but notes that there are technical issues to do with the development of PVC-free AC cords. Panasonic has launched a BFR-free notebook (CF-B10) and mobile phone (P-02D), apart from accessories. Panasonic intended to eliminate BFRs from notebooks and mobile phones by the end of 2011 and now intends to do so as soon as it identifies successful alternatives. There is <b>no commitment to eliminate BFRs and PVC</b> from Panasonic's whole product portfolio. Panasonic has replaced PVC with a substitute for internal wiring of all products for the Japanese market by end of March 2009 and globally by end of March 2011. However, 54% of products – such as washing machines, are exempted due to technological problems. More information <b>here</b> and <b>here</b>. Panasonic states that its commitment to eliminating PVC will reduce or eliminate the use of phthalates, used primarily as softeners in PVC. This leaves out other applications of phthalates e.g. in adhesives. Likewise, use of antimony trioxide will be reduced as BFRs are eliminated. No timelines are given. Panasonic states that it does not use beryllium oxide and that it has not identified a substitute for beryllium copper alloy <b>More information.</b></p> | 2/5   |
| <b>Use of recycled plastic in products</b>           | <p>Panasonic used a total quantity of 35,786 tons of plastics in fiscal 2012, in washing machines and refrigerators; this included 4,392 tons of post-consumer recycled plastics. It aims to use more than 6,000 tons of recycled plastics mainly in home appliance products in fiscal 2013. <b>More information.</b> The use of recycled plastics is part of Panasonic's "<b>Recycling-oriented Manufacturing concept</b>" which sets targets to minimise the amount of total resources used and maximise the amount of recycled resources. Panasonic gives <b>some examples</b> where recycled plastics are used in products, for example vacuum insulation in refrigerators. Panasonic needs to provide a long-term target and timeline specifically for increasing use of post-consumer recycled plastic.</p>  | 1/3   |
| <b>Product life cycle</b>                            | <p>Spare parts are available for 8 years for TVs and 6 years for PCs. Warranties are 1 year. Panasonic does not disclose information about its warranties or spare parts for mobile phones, since failure and repair are dealt with by service providers. <b>More information</b> (in Japanese).</p> <p>The EVOLTA battery (primary battery) is <b>the world's longest lasting battery</b>. The <b>rechargeable battery has up to 1600 charging cycles</b>. Panasonic launched a wireless charging pad for mobile phones, smart phones and games and can be used universally as long as devices are compatible with the global standard. It removes the need for separate charges and wires. <b>More information</b> (only in Japanese). Panasonic released a range of LED lighting with a wide light distribution angle which is almost equivalent to angle of incandescent lights, with a service life of 40,000 hours. <b>More information.</b> Plasma panels in VIERA TVs last the equivalent of 100,000 hours (30 years at 8 hours a day). <b>More information.</b> The <b>Toughbook PC, CF-31</b> has the ability to withstand shock and vibration during the use and let consumers use the product for a longer period of time. As an evidence to show the "solid" performance, it passed a 120 cm free-fall test.</p> <p>For maximum points its warranties need to be longer; it also needs to show some innovative measures that increase lifespan and durability of whole product systems, rather than only individual parts.</p>  | 2/3   |

| Sustainable Operations  |   | 8/21 |
|---|---|------|
| <b>Chemicals management and advocacy</b>                                  | <p>Panasonic refers to the precautionary approach to hazardous substances as defined by the Rio Declaration and aims to voluntarily reduce or discontinue their use in case of any environmental risks. However, Panasonic does not provide any evidence of advocacy for strong chemicals legislation or case studies demonstrating the process of substituting hazardous chemicals of concern. <b>More information.</b></p> <p>Panasonic's web pages on chemicals management contain a lot of detailed information. <b>Summary explanation on management of chemical substances. More information.</b> Chemical Substances Management Rank Guidelines Ver. 8 (for Products). Only specified BFRs are listed, despite the commitment to phase out BFRs in mobile phones and computers by the end of 2011. <b>More information.</b></p> <p>Also see Chemical Substance Management Rank Guideline for Factories Ver.4. Substances restricted for use in products (eg. PVC) are not listed. Also, beryllium alloys are listed for 'reduction' and beryllium is 'prohibited', whereas it is not listed in the Guidelines for Products. <b>More information.</b></p>   | 2/5  |
| <b>Policy and practice on sustainable sourcing of fibres for paper</b>    | <p>In 2008 Panasonic agreed a policy with WWF to use FSC certified paper, with the aim of using 100 tons by 2010; 138 tons was used. Panasonic's <b>green purchasing policy</b> resulted in 100% of paper purchases for its offices in Japan being green purchases. Panasonic created the Panasonic Group Green Procurement Guidelines for Wood to conserve biodiversity and sustainable resource usage after thorough consultations with WWF Japan. The Guidelines divide various wood and wooden materials that may be procured into three categories. Panasonic reports on the percentage of wood and wooden materials used and its progress. It aims to reduce its procurement of Category 3 wood &amp; wooden materials – those that are not confirmed to be legally logged - to nearly zero by fiscal 2013. <b>More information.</b> Panasonic 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.</p>   | 1/3  |
| <b>Policy and practice on avoidance of conflict minerals</b>              | <p>Panasonic has updated its position and activities on conflict minerals since September 2011. It <b>states</b> that it has; identified products and business areas and selected suppliers subject to conflict-related minerals due diligence; inspected and analysed existing suppliers for risks related to conflict-related minerals; and established a policy, management system, and process to start a full-scale due diligence programme beginning the next fiscal year. Panasonic provides details of its participation in a pilot project to implement the OECD guidance on conflict minerals. In February 2011 it requested its primary component and material suppliers to verify the sources of minerals used in their supplies. <b>More information.</b></p>  | 3/5  |
| <b>Provides effective voluntary take-back where there are no EPR laws</b> | <p>Panasonic signed an agreement to establish a joint company for recycling business in Hangzhou, China, in May 2011, for recycling home appliances in China. <b>More information.</b> Voluntary take-back programmes are not worldwide and do not yet cover all Panasonic's product groups, mainly mobiles, PCs, TVs 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 audio and video with over 1500 collection sites nationwide, and a goal to achieve 1600 sites by the end of fiscal 2013. Information on the different regions, including Europe, China, India and Australia is provided. In Australia Panasonic plans to implement a National Television and Computer Product Stewardship were due to come into effect in July 2012 which aims to increase recycling rates of televisions and computers to more than 80% by 2020-21. In India it has set up a scheme with 76 collection points in 10 cities and provides a toll-free number for customers to recycle Panasonic's end-of-life products. Panasonic needs to continue to expand its take-back to more non- OECD countries and product groups. <b>More information here and here</b></p> <p>Information to customers is available in European countries with EPR laws and for electronics, batteries and toner cartridges in US. However, the information on how to recycle is not always easily accessible to customers. No information is available to consumers about the recycling programmes in China and Japan. Panasonic provides data on home appliances and PCs recycled in Japan in fiscal 2010 and recycling quantities for the US (PCs, batteries and other) and Korea.</p> <p>For PCs. For Europe information on recycling rates for 2007 - 2010) based on current sales is provided for 18 countries. Panasonic has undertaken sample tests for the return share of TVs in seven European countries. Updated 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 – the US and Korea as a minimum - and establish a target to increase the quantities recycled.</p> | 2/8  |