## APPLE

$6^{\text {th }}$ position, $4.5 / 10$
Apple drops to $6^{\text {th }}$ position, with a score of 4.6. Though one of the high scorers in this edition, Apple misses out on points for lack of transparency on GHG emission reporting, clean energy advocacy, further information on its management of toxic chemicals, and details on post-consumer recycled plastic use.
Apple receives half marks in Sustainable Operations. Apple does not score high on the e-waste criteria, losing points for lacking a robust take back programme in India. However it continues to score points for its global take-back programme, reporting that 2010 global recycling exceeded its $70 \%$ goal (as a percentage of sales 7 years ago), a level that it is confident it will maintain through 2015. Together with HP, Apple is a top scorer for policies and practices regarding conflict minerals, but fails in developing a paper procurement policy banning suppliers involved in deforestation and illegal logging.
Apple scores poorly on the Energy criteria; though Apple states that greenhouse (GHG) emissions data of its operations are externally verified, it has not provided details. Apple continues to lose points for not setting a target to reduce emissions. While $13 \%$ of Apple's facility-related electricity consumption comes from renewable sources, the company could increase its score by setting an ambitious goal for boosting its renewable energy use by 2020.
Apple was one of the first companies to sell products free of polyvinyl chloride plastic (PVC) and brominated frame retardants (BFRs), but it does not mention plans to phase out antimony or beryllium. Overall, Apple continues to score well on the Products criteria. Apple has received public scrutiny for its decision to glue in batteries in its newest Macbook Pro, which creates barriers to easy recycling.


Apple reports on its GHG emissions in 2011 as 23.1 million metric tons (up from 14.8 million metric tons in 2010, although greenhouse gas emissions per dollar of revenue have decreased by $15.4 \%$ since 2008). This divides as follows: for manufacturing ( $61 \%$ ), transportation ( $5 \%$ ), product use (30\%), recycling (2\%) and facilities (2\%). Facilities accounted for 378,000 metric tons of greenhouse gas emissions. GHG emissions are calculated in accordance with guidelines and requirements as specified by ISO 14040 and ISO 14044. More information.
The Fraunhofer Institute in Germany checks the data and life cycle model used in the tool for quality and accuracy, although a copy of this verification isn't provided, which Apple needs to supply.
A breakdown of these emissions is provided in Apple's facilities report, although all figures are presented as "per employee". This includes employee travel which amounts to 161,000 metric tons of $\mathrm{CO}_{2}$ (business air travel generates a significant portion of facilities emissions, though the exact quantity is unspecified). Facilities emissions are verified by Bureau Veritas, although a copy of this verification isn't provided. More information.
For more points Apple needs to publish its external verification and present the breakdown of its figures as totals as well as per employee. Apple seeks to minimise GHG emissions by a strategy where "the environmental attributes of our products are an integral aspect of all decisions related to the design and manufacture of those products. The same is true of all the environmental decisions for our facilities." However, there are no details of targets. More information.
Apple refers to its "net zero goal for our corporate facilities" and states "in 2011, we realised dramatic reductions in energy use" in relation to this goal. Graphs show that the metric tonnes of GHG gas emissions per employee are substantially reduced, although exact data isn't provided. Total 2010 energy consumption included 493 million kWh of electricity and 3 million therms of natural gas. More information.
Apple needs to focus on both absolute and relative reductions of GHGs. It needs to set ambitious targets and aim to reduce its own GHG emissions by at least $30 \%$ by 2015 for its operations and use 100\% renewable electricity by 2020

Manufacturing - including extraction of raw materials and product assembly - accounts for $61 \%$ of Apple's total greenhouse gas emissions in 2011 (compared to $46 \%$ in 2010). In 2011 the manufacture of Apple products resulted in 14,096,000 metric tons (up from 6,852,000 metric tons in 2010) of greenhouse gas emissions. More information.
No details are provided on how this figure breaks down, no targets for future reductions. The data is verified but no copy is provided (see the criterion above).
Apple has estimated the life cycle GHG emissions, including a breakdown of their source, for individual models of products in Product Environmental Reports. See MacBook Air for example.

For more points Apple needs to be more transparent by presenting a breakdown of its data.

Apple sets out its strategy for reducing its energy consumption at its facilities; (1) Reducing energy consumption; (2) Generating its own clean, renewable energy onsite at its facilities; and (3) to meet its remaining energy needs with clean, renewable energy generated offsite.
Apple does not provide targets to increase use of renewable energy or reduce energy consumption through energy efficiency. However, it does report on the steps it has taken to improve energy efficiency and its use of renewable energy, in its facilities report. Apple's data centre in Maiden , North Carolina is exceptionally energy efficient, earning LEED Platinum certification from the US Green Building Council. It is building a large solar array and a fuel cell installation, which will both be the largest of their kind in the US, to power its future needs. More information on data centres and renewable energy.
Apple's facilities locatedin Cork (Ireland), Munich (Germany), Austin, Texas (US) and Elk Grove, California (US) are already powered with $100 \%$ renewable energy resources. Approximately 30 million kilograms of $\mathrm{CO}_{2} \mathrm{e}$ emissions were avoided through the use of renewable energy programmes in fiscal year 2011, compared to 27.5 million in fiscal 2010 and 8.3 million kgs in 2008 . More information.

All of Apple's products meet and exceed the US EPA's strict Energy Star guidelines for efficiency. Apple products are at least twice as efficient as the ES standard, and in the case of the Mac Mini, six times as efficient. More information.
Apple designs its products to use more efficient power supplies, use components that require less power, and use power management software. More information.
Product energy efficiency

Mac and MacBook now ship with PVC-free power cords in the US, Canada, Mexico, Colombia, El Salvador, Guatemala, Panama, Peru, Puerto Rico, the US Virgin Islands, and Venezuela. All Apple products are now free of BFRs and other "harmful toxins" such as PVC and phthalates, with the exception of power cords which are undergoing certification in regions outside of those mentioned above. Products are also mercury-free and have arsenic-free glass. More information.
Avoidance of hazardous substances in products

Environmental reports and specs for desktops, notebooks, cinema display, server, iPhone and iPod.
Apple planned to completely eliminate the use of PVC and brominated flame retardants in its products by the end of 2008 - and were the first company to achieve this goal for PCs.
Apple plans to eliminate all forms of chlorine and bromine, not just those in PVC and flame retardants. However, antimony is not mentioned and beryllium is no longer referred to. More information.

Apple states that it works with environmentally conscious materials, including recycled plastics, and that millions of speaker assemblies and internal brackets are now made from recycled PC-ABS. However, it provides no information on the quantities of post-consumer recycled plastics

Use of recycled plastic in products used. Apple products are designed using recyclable materials. More information.
Plastics make up a relatively small proportion of the materials used in Apple products, see MacBook Air for example ( 2.5 g ).

Apple provides information on its product warranties and the replacement of its batteries; iPods, iPhones, iPads and notebooks all have 1 year warranties which include the battery. It offers a battery replacement service for all MacBook, MacBook Air and MacBook Pro notebooks with built-in batteries that make it more difficult for both recyclers and consumer to choose responsible recycling options. Apple service centres can order battery replacements for models up to seven years old.

Product life cycle

Apple includes information on longer-lasting products. It gives the example of the built-in battery in the MacBook Pro line-up. Other notebook batteries can be charged only 200 to 300 times. The MacBook Pro battery can be charged up to 1,000 times. And, because this battery lasts up to five years, MacBook Pro uses just one battery in about the same time a typical notebook uses three. However, Apple does not warrant the battery beyond 1 year. More information.
Apple needs to publicly disclose all spare parts availability for its main product lines for more points. 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.

Apple refers to its "precautionary approach" to substances. More information.
Its progress in eliminating hazardous substances seems to be guided by three important elements of this principle: preventive action, voluntary elimination and proactive search for safer substitutes. More information.
Evidence of lobbying on RoHS 2.0.
Apple does not provide any evidence of advocacy for strong chemicals legislation or case studies demonstrating the process of substituting hazardous chemicals of concern. Apple refers to its Regulated Substances Specification, "which details a broad range of substances that are restricted or banned", yet still fails to disclose its Substance Specification 069-0135. More information.
Apple's Suppliers Code of Conduct states that "suppliers shall comply with the most recent version of Apple's Regulated Substances Specification, 069-015 and with any applicable laws and regulations prohibiting or restricting the use or handling of specific substances." It now provides more information on its work with suppliers to use environmentally friendly manufacturing processes.
However, it is not possible to evaluate Apple's communications with its supply chain on hazardous substances without disclosure of the Specification. Although Apple clearly implements its chemicals policy through its supply chain, it needs to be more transparent and disclose its Regulated Substances Specification.
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

Apple provides no information on its policies and practices for sustainable sourcing of fibres for paper. It is reducing the size of its packaging to save transportation costs and its product packaging uses recycled materials wherever possible. More information.
Apple 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.

Apple is a member of the Electronics Industry Citizenship Coalition (EICC), which has an extensive programme on conflict minerals.
Apple was the first company to map its suppliers and smelters in its 2011 Supplier Responsibility Report. An update on its mapping of suppliers is in this 2012 Supplier Responsibility Report (p. 11).
It is also active in the EICC conflict-free smelter programme and the EICC smelter audit process, where it helped get independent experts on the EICC audit review committee. It has an extensive new internal audit policy for suppliers on conflict minerals, including a requirement to source only from smelters that have passed the conflict-free audits. This is the only known company in the industry with such a procurement policy. However, Apple has not signed up to the Public Private Alliance and has not made statements on the need for a multi-stakeholder certification process or publicly committed to implement the OECD due diligence guidelines. It would be helpful if Apple signed on to the OECD pilot.
Apple did not issue a statement against the Chamber of Commerce lawsuit or join the multi-stakeholder submission to the SEC on conflict minerals. Apple participated in the OECD due diligence drafting and has actively reached out to NGOs on conflict minerals.

Apple now operates or participates in recycling programmes in countries where more than $95 \%$ of its products are sold. More information. Apple has recently added Israel, Qatar, Saudi Arabia, South Africa and UAE to its voluntary take-back programme for Apple-branded e-waste, to add to India, Brazil and Costa Rica. More information.
Apple also has voluntary take-back of Apple branded e-waste in China, Hong Kong, Malaysia, Singapore, New Zealand, Korea, Taiwan and Australia. More information. Free recycling for iPods and mobile phones of all brands (US only).
In the US, Apple offers a gift card for new equipment if an old computer is suitable for re-use, or free recycling for Apple branded equipment. Links to programmes in the US, Canada, Europe, Japan, Asia Pacific/Australia and Brazil/ Costa Rica are provided. Apple's original goal for 2010 was to achieve a worldwide recycling rate of $50 \%$ (as a percentage of sales 7 years ago). In 2011, Apple global recycling exceeded its $70 \%$ goal, and it is confident that it will maintain this level through 2015. For more transparency, Apple needs to provide a breakdown of the recycling quantities of its various products (eg. iPods, PCs) that make up these figures. More information.

