



WHY WE SHOULD CARE ABOUT 'GREEN' PHONES!

By Azita Arvani, The Arvani Group

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In honor of Earth Day, April 22nd, I would like to share with you some thoughts about the environmental impact of our industry and with mobile phones in particular. I came across a recent survey of 2,088 UK adults that showed 88% of them couldn't care less about the eco-friendliness of their mobile phones.

The study also revealed that many of the respondents didn't know that mobile phones incorporate hazardous material and need to be disposed of properly. This surprised me and, as a result, motivated me to write this column that will hopefully help everyone be more aware of environmental issues related to mobile phones.

As with any other electronic device, there are many dimensions of "green-ness" for a mobile phone. For some time now, I have been trying to find simple ways of reducing various aspects of "green-ness" to a few key ones that can be specified, measured, and discussed. To further that mission, I've come across four ways in which a phone can be green:

1. Eco-friendly Materials
2. Energy Efficiency
3. Take-Back and Recycling
4. Environmental Management of Phone Life Cycle

Let's explore each one in a little more detail:

Eco-friendly Materials:

Many electronic devices contain hazardous levels of lead, nickel-cadmium, and other toxic materials. And, mobile phones are no exception. To deal with this issue, the European Union (EU) adopted a Reduction of Hazardous Substances (RoHS) directive in 2003 which went into effect in 2006. This directive restricts the use of six hazardous materials in electrical and electronic equipment, including mobile phones. The six hazardous materials are: Lead, mercury, cadmium, hexavalent chromium, PolyBrominated Biphenyls (PBB), and PolyBrominated Diphenyl Ether (PBDE). So, if you are selling mobile phones in the EU, you must comply with the RoHS directive.

It is generally more economical for global manufacturers to have a single bill of materials (BOM) for a product rather than having one version for the EU and different versions for other regions. So, companies like Apple have decided to offer RoHS-compliant products, like iPhone 3G, across all their markets.

Motorola has recently introduced a certified Carbonfree cell phone called MOTO W233 Renew which is made up of recycled water bottles. According to Motorola, the phone housing is 100% recyclable. Renew phone is available in the US through Motorola's and T-Mobile's online stores.

Energy Efficiency:

Mobile phones should better manage their power consumption using more efficient components and software. Samsung just introduced a solar-powered mobile phone, the Solar Crest, in Pakistan. This may be a good selling point in countries, such as Pakistan where the sun is more reliable than the country's electricity supply.

External power supplies also play an important role in conserving energy. Most of us may not be aware that cell phone chargers that are plugged into the wall, but not used to charge phones are still consuming power. According to Nokia, the energy that could be saved globally by all Nokia phone users unplugging their chargers when their phones are fully charged is equivalent to the amount needed to power 100,000 average-sized European homes.

Mobile phone chargers are becoming more energy efficient. US Environmental Protection Agency has created the ENERGY STAR standard as a voluntary way to measure power efficiency of consumer electronic products. ENERGY STAR External Power Supply (EPS) specification applies to cell phone chargers. Version 2.0 (effective

Nov 1, 2008) specifies maximum power in no-load mode to be ≤ 0.3 watts. Good news is that the iPhone 3G power adapter and some Nokia chargers exceed this specification. But not all chargers are created equally.

Moreover, a group of mobile manufacturers, led by Nokia, have created an energy rating system for chargers to easily compare energy efficiency of various chargers. The rating system shows how much energy a charger uses in no-load mode. It goes from zero stars (>0.5 watts) to 5 stars (≤ 0.03 watts).

At Mobile World Congress this February, the top five handset vendors announced they will support a universal charging solution. By 2010, a majority of the phones they ship will support this solution which will have a micro USB interface. This means that you'll be able to purchase a single charger and use it with any phone that complies with the standard. This is an initiative that is way over-due.

Take-Back and Recycling:

Mobile carriers and phone manufacturers have done the most in providing options for consumers who are interested in recycling their old cell phones. Apple, Nokia, AT&T, Verizon, Sprint Nextel, T-Mobile, Virgin Mobile, and others have free take-back and recycling programs. However, in order to encourage customers to turn in their old phones, it would be advisable if mobile carriers offered a financial incentive such as a trade-in program when purchasing a new phone. There are a few online places that offer a trade-in for phones, but it would be more effective if carriers also provided that option at the point of sale.

Environmental Management of Phone Life Cycle:

The processes of manufacturing a mobile phone, including all of its components, transporting them and recycling them all touch the environment in ways that have negative impacts. As we become more aware of these impacts, mobile phone manufacturers are paying more attention to reducing carbon footprints of the entire life cycle of mobile phones. Discerning the pollution level of these processes involves a more complicated and subjective methodology. But that has not stopped phone vendors from making progress. Apple has created a life cycle analysis for each of its products, including iPhone 3G environmental report, which estimates greenhouse gas emissions for its iPhone to be 55 kg of CO₂.

As consumers get better informed regarding the environmental impacts of their mobile phones, they will be more inclined to consider green factors in their purchasing decision. In anticipation of this likelihood, we need to make it easier for consumers to understand and compare mobile phones based on their environmental impacts.

Written by:



Azita Arvani
The Arvani Group
E: azita@arvanigroup.com
P: 310-260-8558

Azita is a contributor to Inside Mobile and will write a column from time to time during 2009.

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