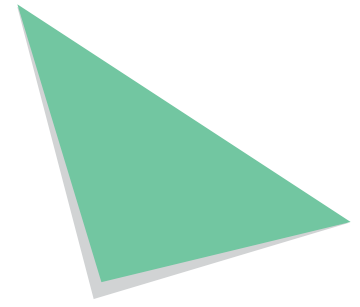# Two Sides Facts

THE MYTH:
ELECTRONIC COMMUNICATION IS MORE ENVIRONMENTALLY FRIENDLY THAN PRINT AND PAPER.

THE FACT:
NOT NECESSARILY. E-MEDIA ALSO HAS ENVIRONMENTAL IMPACTS.

"Go paperless, go green" is a common theme these days as many corporations and governments encourage their customers and employees to switch to electronic transactions or communications. But are appeals to help the environment by eliminating paper based on sound science or on marketing strategies aimed at cost cutting? Organizations that truly want to make responsible environmental choices should do so based on rigorous, peer-reviewed and verifiable life cycle assessments of each alternative

Rather than asking which is better, paper or electronic communication, we should be working to determine which combination of the two has the least impact on the environment while best meeting social and economic needs. As the population and resulting demand on resources continues to grow, a sustainable future will necessarily depend more heavily on the use of renewable and recyclable products and less on non-renewable materials and the use of fossil fuel energy.

Because the responsible manufacture and use of print and paper contributes to long-term, sustainable forest management in the United States and helps mitigate climate change, it will remain an important element in our media mix. It will also continue to provide social and economic benefits that contribute significantly to the well-being of U.S. businesses and citizens alike.

- "The direct impact of information communication technology (ICT) products and services replacing paper is far from negligible, and the trade-off between the two "technologies" depends on conditions such as use frequency, source of energy, end-of-life management of the products, etc..."[1]

- "With a reading time of 30 minutes per day the environmental impact of the web based newspaper was in general in the same range as the printed newspaper environmental impact.[2]

- A study commissioned by the Internet security software company MacAfee estimated spam wastes 33 billion kilowatt-hours annually, with the same greenhouse gas emissions as 3.1 million passenger cars using 2 billion gallons of gasoline, or enough to drive a car around the globe 1.6 million times.[3]

- In the United States in 2009 [the most recent data available], 47.4 million computers were ready for end-of-life management. Some 29.4 million were disposed of and 18 million (38%) were collected for recycling.[4] This compares to a U.S. paper recovery rate of 65.1% in 2012.[5] Paper is recycled more than any other commodity in the U.S. municipal solid waste stream, including plastics, glass and metals. The benefits of paper recycling include: extending the supply of wood fiber; reducing greenhouse gas emissions that can contribute to climate change by avoiding methane emission (which are released when paper decomposes in landfills or is incinerated); contributing to carbon sequestration; reducing the amount of energy needed to produce some paper products; and savings considerable landfill space.[6]
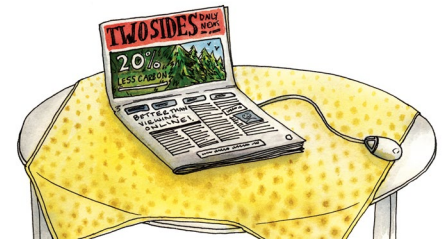
Print and Paper have a great environmental story to tell

TWO SIDES

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- A recent study estimates that developing countries will produce at least twice as much electronic waste (e-waste) as developed countries within the next six to eight years. The authors, who are based in China and the United States, forecast that in 2030 developing countries will discard some 400 million to 700 million obsolete personal computers per year compared to 200 million to 300 million in developed countries. This is significant because uncontrolled toxic emissions result from the informal recycling practices that are often used to deal with e-waste in the developing world. The resulting emissions, which can include dioxins, furans, and cyanide, can harm the recycling workers and pollute local environments.[7]

- A study by Two Sides found that half the 100% leading Fortune 500 telecommunications companies, banks and utilities were making unsubstantiated claims about the environmental benefits of electronic billing. In response, Two Sides initiated a campaign to educate senior executives and their corporate general counsels on the sustainability of paper and to encourage them to abandon misleading environmental claims. To date, over 20 companies have either changed or removed their online environmental claims and several more are working with Two Sides to develop language that does not contain misleading or factually incorrect environmental claims about the use of online transactions and communications.[8]

- "It is estimated that the production and running of the ICT sector equates to 2% of global GHG emissions, similar to the airline industry, and this is expected to double by 2020."[9] The pulp, paper and print industry accounts for only 1% of global carbon dioxide emissions.[10]

- Small network equipment like routers and modems used together in a household consume about as much energy as a new flat-screen television. On a nationwide basis, these devices consume 8.3 billion kilowatt-hours a year – more than the consumption of every home in Silicon Valley. It is estimated that small network equipment in America's homes consumed more than $1 billion worth of electricity in 2012, equivalent to the output of three large (500 MW) coal-fired power plants. This resulted in 5 million metric tons of carbon dioxide emissions, which represents the annual tailpipe emissions of 1.1 million vehicles.[11]

- On average, about two-thirds of the energy used for production by the U.S. pulp and paper industry comes from using carbon-neutral biomass on-site, including spent pulping liquors, bark, wood, wood scraps, wood by-products, and process residuals. An additional small, but significant, amount of energy is produced by other renewable sources such as hydropower.[12]

- "Paper has been an integral part of our cultural development and is essential for modern life. Paper helps to increase levels of literacy and democracy worldwide and plays an important role in protecting goods and foodstuffs during transit. Paper is made from renewable resources, and responsibly produced and used paper has many advantages over other, nonrenewable alternative materials."[13]

1 Arnfalk, P., 2012
2 Moberg, A. et al, 2007
3 McAfee, 2009
4 U.S. Environmental Protection Agency (EPA), 2013
5 American Forest & Paper Association, 2013
6 U.S. Environmental Protection Agency (EPA), 2013
7 Williams, E., et al, 2010
8 Two Sides US, 2013
9 Gartner, 2007
10 World Resources Institute (WRI), 2005
11 Natural Resources Defense Council, 2013
12 American Forest & Paper Association, 2013
13 World Wildlife Fund (WWF), 2010

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