Do You Know the Facts About Paper and Electronic Communication?

We often hear that going paperless is the greener choice—but not all of those claims are grounded in science. Let's sort through the most common myths and uncover the real facts about paper, digital communication, energy use, waste, and what sustainability really looks like in a circular economy.

Paper's Role in a Circular Economy

As global demand for resources continues to grow, a sustainable future will depend on products with a circular life cycle, that is, highly recycled products that are made with renewable raw materials and energy.

Paper is well-positioned for the circular economy given its unique sustainable characteristics. So why are many companies, government agencies and media organizations encouraging us to "go green" by switching from paper to electronic communications? Clearly, these appeals to help the environment by **eliminating paper-based communication are driven by the desire to cut costs**, misguided marketing strategies, or both – not on sound science.

Paper and Digital Communication: A Sustainability Comparison

Paper is made with a renewable natural resource – trees that are purpose-grown, harvested and re-grown in sustainably managed forests. It is produced using mostly renewable, carbon-neutral bioenergy in a process that uses a lot of water but actually consumes very little of it. And paper is recycled more than any other material in the U.S. and Canada municipal waste stream.

In contrast, electronic communication requires environmentally invasive drilling and mining for the finite raw materials needed to manufacture electronic devices and the massive server farms that support them. These devices and server farms are powered mostly by fossil fuel energy, and very few smartphones, tablets, laptops and computers get recycled.

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The Myth: The environmental footprint of digital technology is relatively small.

The Fact: Digital activities are often perceived as environmentally neutral, yet they carry substantial hidden costs. The energy consumed by data centers—which support our digital infrastructures—is staggering.[1]

Digital Energy Use Explained

Electronic communication has a vast and growing environmental footprint. By 2028, North America is estimated to have over 500 million internet users, up from 400 million in 2020.[2]

Internet access has already reached more than 5 billion people (about 60% of the global population). At present, the average Internet user spends approximately seven hours per day online (>40% of their waking life), with social media and video streaming being the most widely consumed digital services (over two hours per day). Despite the ubiquity of the Internet in our lives, its environmental footprint started to gain public interest only recently, partially fueled by studies highlighting the substantial energy consumption of the information and communication technology (ICT) sector.[3]

Electricity consumption from data centers, artificial intelligence (AI) and the cryptocurrency sector could double by 2026. This global demand is roughly equivalent to the electricity consumption of Japan.[4]

The Myth: Electronic communication generates very little waste.

The Fact: E-waste is a vast and growing problem.

The Growing Problem of E-Waste

The majority of Americans (98%) now own a cellphone of some kind.[4] 81% own a laptop or desktop and 64% own a tablet. Additionally, households are increasingly gaining gaming consoles, streaming devices and smart appliances.[5]

The world generated 62 billion kg of electronic waste in 2022, and only 22.3% of this was officially documented as properly collected and recycled. **Since 2010, the growth of e-waste generation is outpacing the formal collection and recycling by almost a factor of 5**.[6]

The U.S. and Canada annually generate 7.9 million metric tons (Mt) of electronic waste or 21.2 kilograms (kg) per capita. Of that 7.9 Mt, the U.S. generates 7.2 Mt and Canada generates 0.7 Mt.[7]

Increasing levels of e-waste, improper and unsafe treatment, and disposal through incineration or in landfills pose significant challenges to the environment and human health.

It is estimated that 14 billion kg of e-waste were improperly disposed of worldwide in 2022, mostly in high or middle-income countries.[7]

Most e-waste is managed outside formal collection and recycling schemes. As a result of non-compliant e-waste management, 58 thousand kg of mercury and 45 million kg of plastics containing brominated flame retardants are released into the environment every year. This has a direct and severe impact on the environment and people's health.[7]

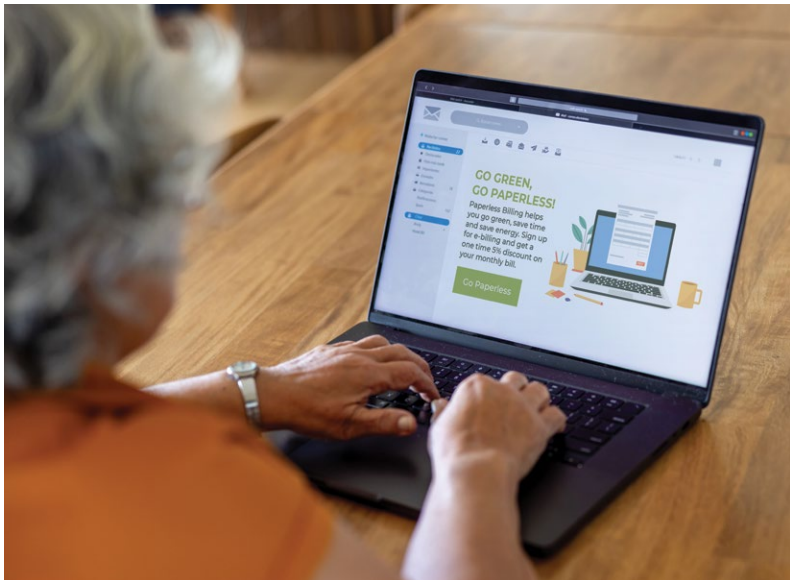
The Myth: "Go green, go paperless" marketing helps consumers make wise environmental choices.

The Fact: Broad, unsubstantiated environmental claims about electronic communication mislead consumers.

The Truth Behind "Go Paperless" Claims

A study by Two Sides North America found that half the leading U.S. banks, utilities and telecommunications companies were making unsubstantiated claims about the environmental benefits of electronic billing. In response, Two Sides initiated a campaign to educate senior executives on the sustainability of print and paper and to encourage them to abandon misleading environmental claims. As of June 2025, nearly 220 major North American corporations and other organizations (over 1,320 globally) had removed or changed unsubstantiated and misleading anti-paper environmental claims.[8]

Marketing claims like "go green, go paperless" do not meet environmental marketing standards established by the U.S. Federal Trade Commission[9], the Competition Bureau of Canada[10], the UN Environment Programme[11], the International Organization for Standardization (ISO 14021)[12], the World Federation of Advertisers[13] and others. These standards



disallow generic environmental marketing claims such as "green" and "environmentally friendly," and require that all environmental marketing claims are truthful, not misleading, and supported by reliable scientific evidence.

A Two Sides North America study found that 65% of U.S. consumers who have seen anti-paper greenwashing messages from their service providers were influenced to switch from paper to electronic communications, posing a serious financial risk to the U.S. paper, printing and mail sector and threatening the economic security of millions of Americans whose livelihoods depend on forestry, paper, print and mail.[14]

Sources

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