

Environmental Insights

Paper vs Digital



IS GOING PAPERLESS REALLY BETTER FOR THE ENVIRONMENT?

Many of us have received statements from banks, telecommunication companies and other service providers that claim the reason they want customers to go paperless is to help the environment. 'Go paperless, help the environment and save trees' is a common message that confronts consumers with a

false dilemma as it implies that opting to receive paper correspondence is more harmful to the environment. These claims are misleading and unsubstantiated. Digital media has a significant environmental impact that many eco-conscious consumers may not be aware of.

DIGITAL MEDIA DOESN'T GROW ON TREES

There is more to digital than meets the eye. While paper is all around us and piles up in plain sight, the energy consumed in the manufacture of digital products, the energy needed to power them and the toxic e-waste associated with their end-of-life is largely out of sight and out of mind. In order for consumers to make informed and responsible choices it is important to be critical of claims that digital is greener than paper correspondence.

By comparing their lifecycles, consumers can decide for themselves, instead of being made to feel guilty by the torrent of greenwashing claims that are being used by many major Australian corporations.

- Producing and sending a paper statement creates on average 28.37g of CO₂. An email with a 1MB attachment takes 19g of CO₂ to send alone. However, if the email is saved, forwarded, downloaded or printed this amount becomes considerably more.
- People often compare the entire footprint of paper with only the energy it takes to send or receive digital communication. However, they forget about the data centres, networks and resources (like non-renewable metals and fossil fuels) it takes to complete the exchange.
- Storing emails and attachments on a server may be convenient, but it takes an environmental toll. The longer the email is retained, the greater its impact on the climate.

- Paper is made from wood, a fully renewable and sustainable resource. Paper recycling rates in Australia are amongst the highest in the world with over 87% of all paper and paperboard being recovered. In comparison, less than 20% of global discarded e-waste is recycled.
- The average Australian generates 21.7kg of e-waste every year, and this is expected to increase to 23kg per capita by 2030. This explains why electronic waste is growing at more than 3 times the rate of other municipal waste streams.
- Forestry is the only carbon-positive sector in Australia's economy, removing net 43.7 million tonnes of CO₂ from the atmosphere. Whereas, the use of digital devices is estimated to contribute between 2.3-3.7% of global CO₂ emissions with the communications industry predicted to account for 20% of global electricity use by 2025.
- A typical year of incoming emails for a business user, including sending, filtering and reading, creates a carbon footprint of around 135 kg.
- Over the past 20 years the Australian printing industry has reduced its carbon footprint by 97% and now has the lowest environmental footprint of any major industry sector.

Sources:

1. Two Sides Australia (2016) Life Cycle Series
2. Mike Berners-Lee (2010) How Bad Are Bananas? The carbon footprint of everything
3. Prof. Bitterlin, Ian (2015) 'Can ICT data centre infrastructure keep up with the demand for digital services?'
4. Shibata, Hirohito (2010) Paper vs. Electronic Media: Work Efficiency and Environmental Impact
5. Carli, Don (2010) The Institute for Sustainable Communication. Print vs. Digital Media: False Dilemmas and Forced Choices
6. Electronics Hub (2019)
7. Anders S.G Andrae (2017) Total Consumer Power Consumption Forecast.
8. UN Report (2019) Time to seize opportunity, tackle challenge of e-waste.
9. CEPI (2018) Sustainability Report
10. Department of Water and Environmental Regulation, 'E-waste to landfill ban in Western Australia', 2023.