



KATIE SINGER spoke about the Internet's footprint at the United Nations' 2018 Forum on Science, Technology & Innovation and, in 2019, on a panel with the climatologist Dr. James Hansen. Her books include *An Electronic Silent Spring* (available in Korean), *Honoring Our Cycles*, *The Garden of Fertility* and *The Wholeness of a Broken Heart*. A consultant with the EMR Policy Institute, she blogs about the Internet's energy use, greenhouse gas emissions and toxic waste; she speaks internationally.

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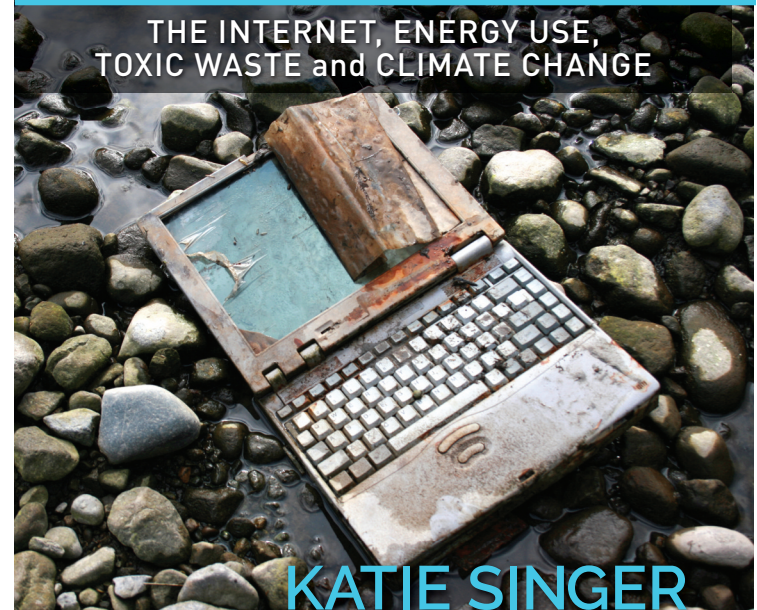
If you're
not aware
that you are
part of the
problem,
you can't
be part of
the solution.



PROFESSOR BILL TORBERT
BOSTON COLLEGE
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OUR WEB of INCONVENIENT TRUTHS

THE INTERNET, ENERGY USE,
TOXIC WASTE and CLIMATE CHANGE



KATIE SINGER

This is a shocking and much needed wake-up call about our ever-expanding Internet's unsustainability. Because we all contribute to the problems, we all hold responsibility for the solutions.

—JOSÉ RAMÓN LOPEZ-PORTILLO, PhD
The United Nations' Technology Facilitation Mechanism

THE INTERNET is the largest thing that humanity has built. Every text message, video stream, Facebook post, Google search, GPS search, online purchase (every online activity) engages an international network of cell sites and data storage centers that consume huge amounts of greenhouse gas emitting electricity. Manufacturing every tablet, "smart" phone, "smart" "energy-saving" Internet-of-Things-connected refrigerator and "zero emissions" vehicle starts with extraction of natural resources including coal, copper, quartz, coltan, cobalt, lithium, petroleum coke and fracked natural gas. Every device, appliance and infrastructure part depends on refineries, CO₂-emitting power plants, nuclear plants, chemical plants, steel mills, metal smelters, wood chips (for smelters) and factories of all kinds. Each energy-guzzling, toxic-waste and greenhouse-gas emitting operation depends on all of the others. They interconnect by a network of power lines, natural gas pipe lines, cargo ships, trains, trucks, shipping lanes, railways, highways, telecom access networks and data storage centers to form one gigantic global super-factory.

Becoming aware of these inconvenient truths is a personal experience. Decreasing our footprint requires collective action.

WHAT ARE THE INTERNET'S MAIN ENERGY GUZZLERS?

1. **Access Networks:** World-wide infrastructure including antennas, transmitters and routers.
2. **Data Centers:** Packed with computers that store websites, GPS, records, etc. and cooling systems, data centers' CO₂ emissions grow 13% per year.
3. **Embodied Energy:** Used to mine raw materials, manufacture and ship each item to its end-user.

HOW DO WE REDUCE THE INTERNET'S FOOTPRINT?

- ▣ Wait at least four years to upgrade (replace) devices. Petition manufacturers to make repairable, upgradable, modular electronics.
- ▣ Repeal legislation that removes local authority over telecom facilities and promotes 5G wireless "small" cell sites on utility poles. Since wireless tech uses 10 times as much energy as copper or fiber, get wired. Consider mobility a luxury.
- ▣ On websites, minimize videos, pop-ups and slide shows, which use lots of energy and emit lots of CO₂. Link or embed videos; do not re-post them.
- ▣ Delay children's use of electronics until they have mastered reading, writing and math on paper.
- ▣ Sponsor fix-it clinics and Internet cafes.
- ▣ Define what media is essential and use much less of everything else.

SPREAD THE WORD

Downloading a video uses more data and takes more energy than downloading a photo. Transmitting a picture takes more energy than text. Skyping uses more energy than plain talk. With the Internet-of-Things (machine-to-machine communication), the Internet grows exponentially and e-waste increases. Don't buy into it or 5G.

Katie Singer clearly explains that despite the Internet's benefits, it fosters energy dependence and takes us faster to climate change. May this remarkable book make Internet users more responsible. May it inspire revised policies and governance around the world.

AJAY K. JHA, New Delhi attorney for sustainability and human rights, Director, pairvi.org and cecoedecon.org, Former director, Beyond Copenhagen

Our Web of Inconvenient Truths is a magnificent, comprehensive, long overdue examination of the negative, irreversible consequences to society from our mad race for electronics. Pressured by billionaire enterprises, our entire globe has plunged into high-speed Internet without vetting its long-term consequences on nature or humanity. Katie Singer offers a keen, ground-breaking analysis of what we have actually done to ourselves and the living world. Before it's too late, we must heed her recommendations.

JERRY MANDER, Founder, International Forum on Globalization
Author, *Four Arguments for the Elimination of Television*