

SOURCE : <http://inhabitat.com/greenpeace-reveals-the-internets-biggest-secret-dirty-coal/>

Greenpeace Reveals the Internet's Biggest Secret – Dirty Coal!

by [Brit Liggett](#), 03/30/10

filed under: [green technology](#), [Renewable Energy](#)



The next time you're marveling about the amount of information you can access at the [click of your mouse](#), think about this: if it were considered a country, our collective computing carbon footprint would place 5th in world for energy use. What shows up on your computer screen is most likely coming from a large data center — or “data farm” — thousands of miles away from you. Today Greenpeace [released a study](#) detailing the amount of [energy consumed](#) by data centers and revealing that most data centers are [run by coal fired power plants](#) — one of the most destructive kinds of energy there is.



With the ever-increasing amount of information on the web — from movies and music [to books](#) and video games — data centers are constantly growing. In 2008 The Climate Group and the Global e-Sustainability Initiative issued the [SMART 2020](#) report, which noted that [personal computer](#) ownership will quadruple by 2020.

There's good news and bad news about this. The more people buy computers, the more capital data companies acquire. With the capital behind large data companies, green innovation can be championed in the name of better profits. Yahoo, for instance, is building a data center specifically near a [hydropower plant](#) in New York State in order to lower their energy costs and carbon emissions. Google just created an energy company — [Google Energy](#) — so they could buy energy in bulk from whatever source they like. They also buy carbon offsets for their entire company's emissions.

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The bad news is [companies like Facebook](#), in search of a cheap energy source are [turning to coal](#) to run their increasingly large data centers. Instead of driving innovation forward toward [renewable energy](#) they're turning their backs for the easy buck. It's not only the servers that use up energy but also huge temperature control systems that keep the complexes climate controlled for the highest performance.

"Increased power demand is forcing all new data centers to focus almost entirely on [energy efficiency](#) and lowering dependence on traditional power means," Kyle Brown, Technical Documentation Manager at [Teladata](#) — a San Francisco Bay Area data center company that specializes in energy efficiency — told Inhabitat. "This means everything from clean renewable sources of energy, to new energy cells. As data centers move forward, they will inevitably become green and more sustainable," he added. The Greenpeace study seconds this point: if data centers want to remain profitable, "they must use their power and influence to not only drive investments near [renewable energy sources](#), but also become involved in setting the policies that will drive rapid deployment of renewable electricity generation economy-wide."

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SOURCE : <http://blogs.whattheythink.com/going-green/2009/10/paper-vs-the-coal-fired-internet/>

WhatTheyThink Blogs

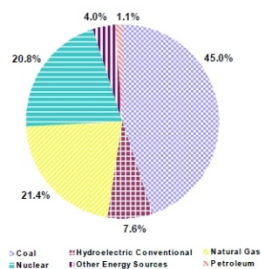
Going Green

A Resource for Today's Green Business

[Going Green Home](#) → [2009](#) → [October](#) → Paper vs “The Coal-Fired Internet”

Paper vs “The Coal-Fired Internet”

By [Gail Nickel-Kailing](#) on October 6th, 2009



“*A Printing Office*” (a *WhatTheyThink* blog managed by Patrick Henry) recently published comments by **Kevin Keane**. In [The Coal-Fired Internet](#), Kevin noted:

At a Xerox luncheon during Print 09, Dr. Joe said: “We have a coal-fired Internet.” Meaning, we should not forget that all those who tout paperless billing via a the Internet or downloading e-books to their Amazon Kindle reader via the Internet are still using one of millions of computer nodes on a worldwide network which is run off of electricity and which by definition leaves a carbon imprint of a considerably sulfurous sort.

Let’s take a closer look at energy sources and a detailed breakdown of computer usage and power requirements as we continue to balance “*Pixels vs Paper*.”

The [Energy Information Administration](#), a source of government statistics regarding energy sources and usage, published June 2009 statistics (the most recent) on September 11.

“Year-to-date, coal-fired plants contributed 45.0% of the nation’s electric power. Nuclear plants contributed 20.8%, while 21.4% was generated at natural gas-fired plants. Of the 1.1% generated by petroleum-fired plants, petroleum liquids represented 0.8%, with the remainder from petroleum coke. Conventional hydroelectric power provided 7.6% of the total, while other renewables (biomass, geothermal, solar, and wind) and other miscellaneous energy sources generated the remaining 3.8% of electric power.”

The [West Virginia Coal Association](#) published a report called *Coal Facts 2008* that gives us a calculation of the amount of coal needed to power various computer and internet activities.

- It takes one pound of coal to produce 1.25 kilowatt hours of electricity, enough to light **one** 100 watt lightbulb for 10 hours.
- A typical computer spread with internet access requires about 1,000 watts of power.
- A lump of coal is burned every time a book is ordered on-line.
- It takes about a pound of coal to create, package, store and move 2 megabytes of data.
- The average internet user (12 hours per week) uses over 300 pounds of coal annually for this purpose.
- The total demand for electricity from personal computers on the internet amounts to 8% of the U.S. electrical supply.
- When one billion people are accessing the internet, as is projected, the required electricity will be equal to total current capacity of U.S. electric power production.
- One ton of coal equals 3.8 barrels of oil, 189 gallons of gasoline, **one cord of firewood**, 21,000 cubic feet of natural gas, and 6,500 kilowatts of electricity. (A **cord** of wood measures 4 feet high by 4 feet wide by eight feet long (4' x 4' x 8') and has a volume of 128 cubic feet.)

More than 2/3 of the US power requirements are supplied by fossil fuels – coal, natural gas, and petroleum. Wood is renewable.

Taking all communication online is not “going green,” all communication channels have a carbon footprint. We need to consider availability, renewability, and the cost of collecting the fuel to generate electricity as well as the actual production of paper and printed material.

SOURCE : <http://www.greenwisebusiness.co.uk/news/facebook-dont-use-coal-to-power-your-datacentres-2137.aspx>

Facebook: don't use coal to power your datacentres

Jodie Van Horn, Greenpeace International
23rd February 2011

On the eve of Facebook's seventh birthday, Greenpeace issued a challenge to CEO Mark Zuckerberg: commit to stop using coal to power the world's most popular social network by Earth Day, 22 April 2011.

After multiple years of explosive growth, **Facebook** now accounts for nine per cent of all internet traffic in the US, nearly as much as all of Google's online products (Gmail, YouTube, Search) combined. It is a leading brand in a sector that is among the fastest growing in terms of electricity use. But after two announcements in one year that Facebook is building massive **data storage** facilities in locations that rely heavily on **coal power**, it is clear that the company needs an immediate plan to fuel any additional growth with [renewable](#) energy.

IT's Cloudy Growth

While information technology ([IT](#)) has the potential to significantly reduce emissions across other sectors of the economy through energy saving innovations, we also know that IT's own energy footprint is projected to triple in the next 10 years.

The growth of cloud computing, which satisfies our demand for content to be delivered in real time by storing virtual mountains of video, pictures, and other data online, has spurred a construction boom of data storage centres. Facebook, in an attempt to sustain the explosive growth of its user base (and store our photographs and status updates), is building two massive half-billion dollar data centres in the US, each the size of three Walmart stores.

In March of last year, Greenpeace published the 'Make IT Green' study, which estimates that the amount of electricity produced and consumed to power the data centres and telecommunication networks that back up the internet, is already quite significant. Even if we exclude the electricity associated with devices used to surf, tweet, and search from, the internet would rank fifth in electricity consumption when compared to countries. Our report estimates that by 2020 demand will reach about 1,963 billion kilowatt hours of electricity, an amount greater than the electricity currently used by France, Germany, Canada, and Brazil combined.

The problem is that the electricity grid in the US and most countries is still largely fueled by coal and other sources of dirty energy. The emissions associated with these fuels threatens to cancel out the positive contributions of IT [innovations](#) and energy solutions.

Greenpeace is calling on Facebook and other IT companies to show leadership through [investment](#) and, most importantly, to apply significant its political influence to push for policies that will make clean, renewable energy more affordable and sooner available.

Facebook's Paradox

Facebook has sought to deflect criticism of its dependence on coal-powered electricity by

highlighting the [energy efficiency](#) features of its data centre designs. While efficiency is important, a highly efficient data centre powered by coal still helps to destroy the planet, it just does so more slowly than one lacking in state-of-the-art efficiencies.

Given its growth projection, failure to solve the dirty energy issue keeps Facebook and other 21st century innovators locked into 19th century energy choices. Just as tech companies have revolutionised our lives in so many other ways, they need to help transform our production and use of electricity so that modern technologies can be supported by clean, renewable, and modern energy choices.

Greenpeace regularly uses Facebook to raise awareness and engage our supporters to take action. Just like everyone who has benefited from the connectivity of Facebook's social platform, we hope to see the company and its enormous global community thrive, but we cannot continue to support a healthy and connected global community with coal power.

Now, along with more than half-a-million people who have joined this global campaign, we are asking Facebook to be a clean energy champion. Facebook can show leadership by embracing what Greenpeace is calling the Big IDEA:

- Increase its use of clean energy to make Facebook coal-free
- Develop a plan to make Facebook coal-free by 2021
- Educate its members about how Facebook powers its services and disclose its carbon footprint
- Advocate for clean energy at a local, national and international level.

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