

ENVIRONMENT



Chuck Graff (left) and Todd Talbot in Verizon's electronic equipment test facilities in Baltimore, Maryland.

Chuck Graff and Todd Talbot didn't set out to change the world. The two engineers in our Network Operations group just wanted to make Verizon's telecommunications equipment more energy efficient and lower the company's energy costs.

The issue was heat. Our telecommunications equipment generates a lot of it, and nearly \$1 billion a year — about 50 percent of our total energy costs — goes toward cooling that equipment.

Rather than wait for an international group to come up with standards, Graff and Talbot took it upon themselves to start from scratch and

write energy-consumption standards and a measurement process for new telecommunications-related equipment — something that had never been done before in our industry anywhere in the world.

Our new standards — much like the standardized ENERGY STAR® efficiency levels set by the U.S. Environmental Protection Agency for household appliances — went into effect on January 1, 2009.

As a result, much of the new network equipment purchased by Verizon is now 20 percent more energy efficient. That significantly reduces greenhouse gas emissions and saves millions of dollars in energy costs.

“Being green is more than a corporate initiative,” Graff said. “It was too important in terms of the environment and the cost not to do it.”

Graff and Talbot helped create a ripple effect that will benefit generations to come. And, as vendors build equipment to meet our new standards, the greater environmental impact will be felt when other communications companies purchase the energy-efficient equipment as well.

It's Our Responsibility

Environmental stewardship is deeply ingrained in our heritage. It manifests itself in our corporate commitment to be a respectful, responsible and positive influence on the environment in which we operate — especially because our impact on the environment is significant.

Verizon has the second-largest private fleet of vehicles in the United States, which uses 59 million gallons of gasoline and diesel fuel annually. We occupy more than 30,000 facilities around the world, and we consume more than 9 billion kilowatt hours of electricity.

Every part of Verizon is engaged in the effort to reduce our environmental impact and become more efficient — from installing energy-management software for employees' PCs, to finding ways to reduce the time our vehicles are left idling. The savings on the vehicle idling initiative reached 1 million gallons of fuel in 2008. The reduction in carbon emissions from this program is equivalent to removing 1,600 cars from the highway.

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RECOGNIZED FOR BEING GREEN

- › Verizon's environmental policies and customer-facing initiatives earned Frost & Sullivan's 2008 Green Excellence of the Year Award.
- › In 2007, Verizon was named a member of the EPA WasteWise Hall of Fame for its record of achievement: Partner of the Year (1998, 2001, 2005, 2006), Program Champion (1997, 1999, 2000, 2002), Honorable Mention (2003).
- › EPA Energy Stars were awarded to Verizon Telecom's fuel-cell powered switching center in Garden City, New York, and Verizon Wireless stores in Toledo and Omaha — the first in the wireless industry.
- › Verizon's wildlife habitat restoration project at our operations center in Basking Ridge, New Jersey, corporate campus was awarded the Governor's Environmental Excellence Award.
- › Verizon facilities in New Jersey, Washington state and Massachusetts have been named “Best Workplaces for Commuters” by the EPA and U.S. Department of Transportation.
- › *COMPUTERWORLD* magazine named Verizon Wireless one of 2008's Top 12 Green IT vendors.



The Network Effect

As we use our technologies to help reduce energy consumption, we're also engaging our customers in a campaign that asks them to join us as we seek the common goal of improving the environment.

In 2008, Verizon began to unify all of our existing and future environmental initiatives. The result is a strategy built on connecting families, friends, businesses and ideas through our network.

We call this the "The Network Effect," in reference to the substantial impact that our millions of customers and employees, along with our operations and technology, can have on the environment today and in the years to come.

For instance, we're encouraging our customers and employees to switch to paperless billing, and to teleconference instead of travel. And we're highlighting the environmental benefits of using broadband in everyday tasks, from e-commerce to telecommuting.

Verizon's TelePresence service, for instance, creates a live, face-to-face meeting experience via life-size images, ultra HD video, and three 65-inch flat-panel displays in a specially designed room. We now have 15 TelePresence systems in company locations in the U.S., and abroad (see photo, page 27).

It's not the entire answer to a greener planet, but it's part of the solution.

Energy Efficiency via Broadband

At first glance, broadband and the environment might not seem to have much in common, but the speed and versatility that broadband brings to the Internet offers numerous ways users can reduce their carbon footprint — and make their lives easier, too.

Our industry and the larger information communications technology industry account for only about 2 percent of global CO₂ emissions, but our wireline and wireless broadband technologies

are providing solutions that can greatly reduce the 98 percent contributed by other industries and consumers.

Every user can be more energy efficient simply by taking advantage of the speed and power of Verizon's broadband — from the shopper buying items online instead of visiting a store to businesses conducting their meetings via video teleconferencing. Here are some additional examples:

> If 50 percent of the 2.5 billion DVDs and VHS tapes rented per year were delivered via Video on Demand — a service we offer via FiOS TV — the reduction in energy would be equal to the annual electricity consumption of about 200,000 households.

> Higher broadband speeds now allow workers to have a real virtual presence from home, and that translates to a savings of 62 hours in commuting time, \$1,200 in commuting costs and 1,700 pounds of CO₂ emissions not dispersed into the environment per worker.

> Broadband allows Verizon Business to market TelePresence products and services, which helps to lower costs and connect employees in distant locations. Widespread teleconferencing could eliminate 10% of all flights, saving 200 million tons of CO₂ emissions.

> Broadband and the application of information and communication technology (ICT) brings the power of the network to the transmission, distribution and the use of electricity, creating "smart grids" that will save consumers money and reduce emissions.

Preserving the environment by engaging in "green" initiatives is important to consumers, businesses and governments. Verizon is a strong contributor to these efforts, and we will continue to explore how greater use of broadband can reduce energy consumption and create a greener, cleaner world.

Since reintroducing native plant varieties, reducing both the size of lawns and the use of chemical pesticides and fertilizers on the grounds of our corporate operations center in Basking Ridge, New Jersey, we have seen the return of several rare native species of plants and animals.



VERIZON BROADBAND HELPS YOU BE GREEN, TOO

Recent studies have shown how broadband usage and Information Communications Technology (ICT) can have a huge environmental impact by reducing energy consumption and greenhouse gas emissions.

A November 2008 report by GeSI, the Global e-Sustainability Initiative, estimates that ICT can reduce emissions in the U.S. by up to 22 percent by 2020 through environmentally friendly practices such as smart logistics, smart buildings, a smart power grid and reducing travel through videoconferencing and telework.

A 2007 American Consumer Institute (ACI) study found major reductions are possible over 10 years:

- › Telecommuting reduces office space and car commutes, saving 588 million tons of emissions;
- › Widespread teleconferencing could eliminate one-tenth of all flights, saving 200 million tons;
- › E-commerce will reduce warehousing and long-distance shipping, saving 206 million tons; and
- › Online sale and distribution of digital goods such as music, books, newspapers and movies reduces emissions by another 67 million tons.

The GeSI and ACI studies show how widespread adoption of high-speed Internet service could cut up to 36 percent of U.S. oil imports each year and eliminate a billion tons of greenhouse gas emissions in 10 years.