

San Francisco Chronicle

How High Tech Could Deal With Global Warming

Deborah Gage

June 20, 2008

The high-tech industry over the next dozen years could be a big contributor to global warming, according to a report released today - or, it could play a major role in cutting emissions.

Depending on how they manage their businesses and what types of products they produce, communications and information technology companies could reduce global emissions of carbon dioxide by 2020 by 15 percent, close to what some scientists and economists say is needed for the world to avoid dangerous climate change, the study said.

The 90-page report was funded by the Climate Group, an international nonprofit, and the Global e-Sustainability Initiative, a group of high-tech companies and environmental groups whose members include Google, Cisco, Hewlett-Packard, Sun Microsystems, Intel and Microsoft. The institute also works with the United Nations. McKinsey provided analysis and some data.

The industry has an uphill battle because the demand for personal computers, printers, telecommunications networks, cell phones and especially data centers is expected to grow, as more people in developing countries can afford them.

By 2020, half of the world's population is expected to own a mobile phone, one third a PC, and 5 percent of households to have broadband connections.

Carbon dioxide generated by high-tech companies and their products is expected to triple, and only a third of those emissions will come from the United States and other industrialized countries.

Several member companies are already working to lower their carbon footprints. In April, for example, Dell Computer said it was powering its global headquarters in Round Rock, Texas, entirely with energy generated from wind farms and from Waste Management's gas-to-energy plant at the Austin Community Landfill. Dell said all its facilities will be carbon-neutral this year.

And Sun Microsystems will host a conference next week in Santa Clara for the Silicon Valley Leadership Group on energy-efficient data centers.

The high-tech industry is in a unique position to cut global emissions of carbon dioxide far beyond what it produces - which is currently about 2 percent - because of the products

and infrastructure it could create for other industries, said Molly Webb, a project manager for the Climate Group.

“Think about how servers and clients communicate, and then imagine that your refrigerator can talk to your utility and tell them it’s OK to shut (the refrigerator) off for a while,” she said. “Or imagine lights being able to respond to people moving in and out of a house.”

In addition to the obvious ways companies can conserve energy - using videoconferencing instead of travel, cutting down on paper and having workers telecommute - the report looked in detail at four activities that are big contributors to global warming that the high-tech industry could change, partly by creating tools that would measure and monitor energy consumption and hold companies accountable.

They are: creating efficient motor systems in China; efficient warehousing, transportation and delivery of products in Europe; efficient buildings in North America; and efficient power grids in India.

The report calculated savings in energy costs by 2020 at \$946.5 billion.

“It’s not just out of altruism that companies would do this,” Webb said.

Read the full report at www.smart2020.org. More things green: Check out our new, improved Web site at sfgate.com/green.