Global warming and the tech industry's environmental role were hot topics this week as scientists convened at a meeting of the American Geophysical Union to discuss the latest information about the state of Earth, planets and space.

Former U.S. Vice President Al Gore, in a speech at the San Francisco conference Thursday, urged scientists to come forward and help communicate to the public about the dangers of climate change. He warned that climate change presents an unusual, and dire, set of circumstances, and getting the public to understand the problem and then act upon it is not easy.

Humanity will essentially have to make large changes in how it consumes natural resources, and instilling massive societal changes is difficult. And society has become more short-term in its thinking, he asserted.

Gore took quite the flaming from CNET News.com's readers, many of whom questioned his motives and said he's hard to take seriously. "You never see him driving around in hybrid," one reader wrote on the Talkback board. "Instead, I'm always reading about him motoring around in limos or Suburbans, and traveling by private jet instead of going commercial...I say start practicing what you preach before you ask me to have some Kool-Aid."

Gore's speech, also mulled over by News.com's Charles Cooper, came on the heels of a report released at the conference predicting that the permanent Arctic ice sheet could nearly melt away by 2040. (The earlier estimate was 2060.)

But not all the news was somber. Controls imposed on coal-burning power plants have reduced nitrogen-oxide pollution in the Ohio River Valley over the last six years, according to a new study from the National Oceanic and Atmospheric Administration.

And the scientific work abounds. For example, a pair of roving satellites is being used to track the world's water supply by measuring its gravitational field. Among the findings of the NASA-sponsored Gravity Recovery and Climate Experiment, the Congo River has been losing about 21.6 millimeters in depth every year for the past three years.

Up in space, Opportunity, the healthier of NASA's two Mars rovers, will explore the rim of a large crater for more information on the Martian water and may even plunge inside.

Opportunity has made it to the lip of Victoria Crater, a fairly large crater on Mars, said Steve Squyres, the principal investigator from the Mars Exploration Rover program and a professor at Cornell University. Victoria's geology potentially will yield important clues about the chemistry and extent of the groundwater that Squyres and others believe existed on Mars in the distant past.

Talk of the environment was also taking place outside the conference walls. One story pointed out that pollution penance isn't just for heavy industry anymore.

This year, several Web-delivered services emerged that are designed to reduce an individual's environmental impact on the planet. Called carbon offsets, these Web-based tools allow users to measure their personal carbon footprints and make charitable donations to help reduce pollution.

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carbon offsets, these programs are meant to appeal to people concerned about climate change that stems from greenhouse gas emissions.

Meanwhile, Andy Karsner, a senior Energy Department official tells of the dialogue he’s started with tech leaders to figure out how his agency can help tackle energy efficiency in computing.

In the Zune zone
For Microsoft, trying to catch up to the iPod is an expensive proposition. To tout its Zune music player, Microsoft launched a marketing campaign on par with that for the original Xbox. But now that the music player has spent a month on the market, the company is considering increasing its advertising to attract more attention to it.

Microsoft debuted the Zune to mixed reviews last month. The device had a strong initial sales week, but has dipped in sales rankings since that point, according to market tracker NPD and online retailer Amazon.com’s sales chart.

News.com’s Ina Fried, for one, had trouble tracking down owners of the Zune, a music player that’s supposed to be all about sharing and socializing. Unlike the solitary iPods, the digital music player lets you make new friends and discover new music. But it took Fried a week to find a Zune pal.

CONTINUED: Thwarting the "frankenbuild"...