

Unsustainable practices

I would like to respond to harvey Alter's letter, "Eschewing Crisis," regarding the growing "cacophony" about a perceived "energy crisis" ([C&EN, March 17, page 4](#)). I agree with Alter's comment that the term "crisis" leads scientists and policymakers to react to the problem with emotion rather than reason. As an environmental chemist, I myself often succumb to the desire to speak on environmental issues in a tone which underlies my feelings rather than the scientific facts. It is true that the U.S. has seen many "energy crises" come and go. A few decades ago, many scientists believed we would now be nearing the last of our extractable reserves of fossil fuels. Clearly, this is not the case. With each passing year, the number of known oil, coal, and natural gas deposits grows--as does our capacity to extract them. In fact, it may not be until sometime next century that a pure lack of recoverable deposits will seriously affect the world economy.

However, the present energy situation is absolutely unsustainable. For example, it has been reported that in 1999 alone, the Mississippi River discharged about 500,000 metric tons of black carbon into the Gulf of Mexico [*Environ. Sci. Technol.*, **36**, 2296 (2002)]. Of this, about 27%, or 135,000 metric tons, was caused by the burning of fossil fuels. Aside from the direct effects of polluting the environment, our current policies are causing great disturbances in global environmental cycles (Intergovernmental Panel of Climate Change Third Assessment Report: Climate Change 2001, <http://www.ipcc.ch>). Global sea levels are rising due to melting of polar ice sheets and thermal expansion [*Nature*, **409**, 1026 (2001)]. A nation's energy policies affect the economy, environment, and quality of life not only for that nation's people but also for the entire world population. The reality is that the U.S. is such a large consumer of the world's energy resources that our policies have profound effects for the global environment. As the burning of fossil fuels continues to raise mean global temperatures, warm the seas, and raise sea levels, the citizens of the U.S. must take partial ownership of those effects.

Clearly, this issue will continue to be hotly debated. At present, we have two main driving forces for developing "alternative" energy sources: the environmental impact of burning fossil fuels and the inherent precariousness of relying on fuels which are finite and largely based in foreign nations. Thus, whether or not one believes that we are destroying our environment with fossil fuels, there is no excuse for inaction or dismissal of the "crisis" at hand.

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