25 YEARS AGO . . .

The man in the street feels that we have a vested interest. He feels that we are advocating a solution by requesting essentially more monies in one form or another for industry, the university, and/or the government agencies concerned with engineering and science and as such yielding us direct benefits. As a consequence, the advocates that he sees that have identified a problem or, as we have called it, a crisis, are those who would most derive benefits from changes in policies and procedures that would favor their organizational unit. The oil crisis, as we saw it in 1973 and 1978, looking back at this point in time from the man-in-the-street perspective, has yielded a glut of oil at the present time with much increase in price and very high profits declared by the oil companies. This perception, factual or not, certainly is an underlying response to other such crises as they are proposed to the public at large.

A last aspect of the problem is the attitude of the U.S. citizenry toward growth without risk. This country has become great, always effecting a compromise between growth associated with some risk. At this point, exemplified by the approach to nuclear energy, among others, the populace desires growth without any risk. I don't believe this has ever been possible nor will it be possible in the future. Therefore, it is our responsibility to not only identify the problem but make it real and understandable to people at all levels in all walks of life.

Lester Gerhardt,
"Progress, productivity, and people—A perspective,"
IEEE Control Systems Magazine,
vol. 1, no. 3, pp. 8–14, Sept. 1981

MORE RECENTLY . . .

The time remaining to develop new energy sources and avoid severe energy shortages is growing short. Perhaps the earliest shortage that will occur is in liquid fuels, beginning with the so-called oil peak. Once the peak occurs, oil production can no longer satisfy the world's demand and, as a result, a growing long-term shortage will begin. Although there is disagreement about exactly when this peak will occur, most predictions vary by only a few decades. Some argue that the peak is already upon us. A recent study commissioned by the U.S. Department of Energy discusses the multiple problems of converting to alternative liquid fuel sources relative to the time at which the oil peak occurs. A significant conclusion of this study is that unless intense mitigation efforts are undertaken through conservation and commercial deployment of new fuel sources at least ten years in advance, the oil peak will herald a protracted period of severe economic hardship throughout the world. While energy conservation is essential to the required mitigation, increased efficiency alone will not suffice to solve the problem.

Alfredo Pironti and Michael Walker,
"Control of tokamak plasmas part II,"
IEEE Control Systems Magazine,
vol. 26, no. 2, pp. 30–31, Apr. 2006