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Let's Get It Right This Time

When I began my editorial career, we received breaking news over a clattering telex machine. On May 2, 1982, one of my colleagues stood mesmerized watching a dispatch come over the wire, then he tore off the report and exclaimed, "Holy \$%#@! Exxon pulled out of the Colony Project!" The Colony Shale Oil Project in Colorado was an oil shale mine and a pilot plant that would have commercialized the TOSCO II retorting technology for producing synthetic oil from shale.

That day marked the beginning of the end of a dream for many who graduated in the late 1970s and early 80s, aspiring to become leaders in the burgeoning synfuels field. We learned to drive in the midst of the 1973 oil embargo — when the price of oil quadrupled to nearly \$12/bbl and the price of gasoline rose from a national average of 38.5¢ to 55.1¢. When the 1979 oil crisis hit, our cars sat idling in long lines at the pump; in some states, we could buy gas only every other day. We launched our careers confident that our chemical engineering training would enable us to solve the country's energy problems.

Then the price of oil dropped from about \$50/bbl to \$33/bbl, and synthetic fuels no longer made economic sense. Colony and other synfuels projects ground to a halt. By the mid-80s, the price of oil had fallen to below \$10/bbl and the world was again awash in cheap oil — the result of slowed economic activity following the energy crises of the 1970s and conservation spurred by high fuel prices. Sound familiar?

As a student, history was one of my least favorite subjects. How could memorizing dates of wars and names of kings possibly be of any use to me later in life? Well, I think I finally get it — as philosopher George Santayana put it: "those who cannot learn from history are doomed to repeat it."

The product of a process still in the pilot stage doesn't compete against oil at its current price, but rather at some future price, the details and timing of which we can't predict. So how do we evaluate the economic viability of a new technology? How can we make wise investments that maximize this quarter's returns and satisfy our shareholders' desire to make money?

Hmmm ... maybe there are lessons to be learned from history. Considering the world's current financial state, might it be better to set some longer-term investment goals than insisting on a quick profit?

This issue's special energy supplement (pp. 17–32) looks at several longer-term challenges that chemical engineers are uniquely qualified to address, including massive electricity storage for renewable energy, fusion power, and carbon capture from coal-fired power plants.

Maybe we should consider a domestic energy policy modeled after the ITER project, a 30-plus-year multinational undertaking aimed at demonstrating fusion power (pp. 26–32). Imagine if America's best companies and universities, key government agencies, and some visionary entrepreneurs and investors had begun a similar project to develop a portfolio of sustainable alternative and renewable energy sources 30 years ago. We would not still be seeking energy security and independence today.

Maybe the current generation of graduating chemical engineers will learn from history and not repeat our mistakes.

Cynthia F. Mascone, Editor-in-Chief