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CHEMICAL ENGINEERS

THREE PARK AVENUE
NEW YORK, NY 10016-5991
www.aiche.org

PUBLISHER

David H. Colby
(212) 591-7125
davec@aiche.org

EDITOR-IN-CHIEF

Kristine Chin
(212) 591-7662
krisc@aiche.org

TECHNICAL EDITOR

Cynthia Fabian Mascone
(212) 591-7343
cynfm@aiche.org

ASSOCIATE EDITOR

Rich Greene
(212) 591-8677
richg@aiche.org

ASSISTANT EDITOR

Karen Simpson
(212) 591-7337
kares@aiche.org

ART DIRECTOR

Fran Fresquez
(212) 591-8669
franf@aiche.org

PRODUCTION COORDINATOR

Andrew Triana
(212) 591-7987
andrt@aiche.org

INTERN

Danielle Deutsch

CONTRIBUTING EDITORS

Tom Noble

WASHINGTON EDITOR

Darlene Schuster
(202) 962-8690
dc@aiche.org

REGULATORY EDITOR

William A. Shirley
(888) 674-2529
envtlaw@earthlink.net

PATENT LAW EDITOR

M. Henry Heines
(415) 576-0200
mhh@townsend.com

SOFTWARE EDITOR

Roy V. Hughson
rhughson@pipeline.com

CLASSIFIED ADVERTISING

Daniel A. Johnson
(212) 591-7683
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EXECUTIVE DIRECTOR

John Sofranko
johns@aiche.org

GROUP PUBLISHER

Stephen R. Smith
steps@aiche.org



Guest



Editorial

Geopolitics and Chemical Engineering

We have a professional responsibility to do what we can as chemical engineers to counter the success of terrorism. In fact, we are capable of exercising far more effective shaping of policy, and far more effective utilization of technology in our daily lives, than public opinion seems to expect.

By practicing a high level of chemical engineering, we can improve our national and personal security. Here are a few points:

Improved design — At every step of the design and construction process, we make choices that have significant impacts on employee and community safety, operability, stability and control. If we argue for, and incorporate, the best practices, we'll help to build a more secure nation. And when we learn something significant, we should strongly argue for applying the lessons learned.

Higher national energy efficiency — This is something that would make us technologically stronger and lessen our dependence on foreign sources, especially on those whose outlooks we do not share. This country has the economic and intellectual resources to achieve higher overall process efficiency.

Some might argue that we should not do what is uneconomical, without recognizing that our criteria for what is "economically justifiable" is itself a concept created by professionals and is subject to critical examination. Decades ago, I was promoting a new Portland cement technology that was able to use oil-bearing stone as a raw material. It astonished me that in Israel, where there was such stone, considerations of foreign exchange and national security were not allowed to enter the analysis of what was, or was not, a desirable technology. So they allowed the marketplace alone to decide that they would import oil to run their cement industry. This increased their dependence on suppliers whose national interests were hardly consistent with theirs.

Greater productivity — This country has abundant capital and professional resources. We have the ability to develop methods of using capital, materials, energy and labor more productively. Every process improvement, every gain in the efficient use of materials and capital adds to our strengths and lessens our dependence on others. We are far ahead of other national economies, and are able not only to afford this effort, but to increase our lead. But it requires focus.

It's time for the public to accept high technical performance as a vital national goal. But first we have to overcome the instincts of the bean-counters — those who know the cost of everything but the value of nothing. This will come at a cost. Part of our recent prosperity has come from treating the price of national security as if it were negligible, and spending, investing and enjoying what should have been our insurance payments. To the extent that we have done so, we have been living in a fool's paradise.

Irwin B. Margiloff, P.E.
Fellow, AIChE