Energy Fables

BY CHARLES WOLF, JR.

When fantasy confronts reality.

Like the *Harry Potter* series, tales about energy security abound in myths. The difference is that in Harry's case the myths are taken for granted; in energy security, they are not.

While the energy mythology has been circulating for decades, it has been revitalized in recent months by a series of disparate and distracting events. These include: inflated oil prices (although the current $63 per barrel price is about the same in real terms as that reached in 1982); China's and India's booming demand for oil making them respectively the second and fourth largest importers (the United States imports twice as much as China, and Japan is the third largest importer); the recently withdrawn offer by the China National Offshore Oil Company (CNOOC) to buy UNOCAL (a withdrawal due in part to indications conveyed in recent energy legislation that the transaction would be a "threat" to U.S. energy security); and continued turmoil in the Middle East including the disappointingly slow revival of Iraq's oil exports.

One of the abiding myths about energy is that, because the earth's oil reserves are finite, these reserves will be exhausted at some point in the future. Moreover, by matching currently rising rates of consumption—especially the accelerating rates in China and India—with estimates of proven reserves, an approximate date can be estimated by which reserves will be exhausted. According to a for-

Charles Wolf, Jr., is senior economic adviser and corporate fellow in international economics at the RAND Corporation, and a senior research fellow at the Hoover Institution.

THE INTERNATIONAL ECONOMY

THE MAGAZINE OF INTERNATIONAL ECONOMIC POLICY

888 16th Street, N.W.
Suite 740
Washington, D.C. 20006
Phone: 202-861-0791
Fax: 202-861-0790
www.international-economy.com

mer U.S. Secretary of Energy, the predicted date would be early in the twenty-first century.

This would be a compelling story if it were true, but in fact it is a canard. If and when the growth of oil consumption seriously depletes reserves, the cost of extracting oil (whether from shale, tar sands, or through tertiary recovery from buried crude deposits) will have assuredly risen to such a high level that non-fossil energy sources—nuclear, geothermal, hydro, wind, or biomass—will be used in preference to oil and other fossil fuels remaining in the ground. The last few billion barrels of oil will remain in the ground because extracting them would cost more than they'd be worth.

A second fable in the energy mythology is that U.S. energy "independence" is both vital and attainable. The reality is that America's "dependence" on foreign sources of supply is ineluctable, a fact of life that can be mitigated, hedged, and cushioned, but not avoided. Even if the United States were to secure all its energy sources from oil and natural gas within North America—including oil from Canada's huge supplies of oil sands—it would remain "dependent" on the global oil market. Because oil is a homogeneous, fungible commodity, the economic law of a single price (after allowing for differences in transportation and insurance costs) must prevail absent barriers to trade. The degree of dependence does not translate into vulnerability.

Even if the United States were to secure all its energy sources within North America, it would remain "dependent" on the global oil market. Because oil is a homogeneous, fungible commodity, the economic law of a single price must prevail absent barriers to trade.

Were the United States to embark on a policy of eliminating or even reducing imports of oil in an elusive quest for independence, it would be imposing on the American economy an extra burden whose weight would depend on the external market. If as a consequence of pursuing energy "independence," imported oil were available at a price below the domestic price, the magnitude of this burden would be the difference between the higher domestic price and the lower international price multiplied by the volume of total U.S. oil consumption. If the domestic oil price were below the world price, the American economy would be burdened by a similarly calculated opportunity cost of forgoing oil exports in its effort to avoid dependence on imported oil.

While dependence on the international market is unavoidable, this does not deny that continued research and development on competitive, less costly energy technologies and more efficient, non-gasoline powered and competitively priced automotive vehicles can be valuable. But formal independence of and insulation from the global oil market is a myth.

A third fable in the energy mythology focuses on "players" in the global energy arena who allegedly seek to "lock up" energy supplies by a variety of

Continued on page 54

The reality is that, as a large and growing energy consumer, China's efforts and interests in increasing oil and gas supplies help rather than hinder America's energy security!

Continued from page 39

The Oil Reserve Myth

One of the abiding myths about energy is that, because the earth's oil reserves are finite, these reserves will be exhausted at some point in the future. Moreover, by matching currently rising rates of consumption—especially the accelerating rates in China and India—with estimates of proven reserves, an approximate date can be estimated by which reserves will be exhausted. According to a former U.S. Secretary of Energy, the predicted date would be early in the twenty-first century.

This would be a compelling story if it were true, but in fact it is a canard. If and when the growth of oil consumption seriously depletes reserves, the cost of extracting oil (whether from shale, tar sands, or through tertiary recovery from buried crude deposits) will have assuredly risen to such a high level that non-fossil energy sources—nuclear, geothermal, hydro, wind, or biomass—will be used in preference to oil and other fossil fuels remaining in the ground. The last few billion barrels of oil will remain in the ground because extracting them would cost more than they'd be worth.

—C. Wolf

stratagems—for example, property acquisitions, pipeline construction, long-term purchase contracts, and so on—that will protect them from possible future energy "shocks." China is currently cast in this role, a bête noire whose prominence in the international energy market is seen in some circles as a potential "threat" to America's energy security.

There is an element of reality behind this mythical perception of China as a threat in the global oil market. As a major and rising importer, China's growing demand for oil boosts international oil and gas prices. But most of the imputed threat has been erroneously ascribed to China's activism in bidding for and acquiring oil and gas properties in Central Asia and Latin America, investing in pipeline construction, and negotiating long-term purchase contracts at stipulated prices.

The irony is that this part of the fable would actually have the opposite effect from what is ascribed to it: easing rather than raising future oil and gas prices facing the United States in international markets. The reality is that, as a large and growing energy consumer, China's efforts and interests in increasing oil and gas supplies help rather than hinder America's energy security! What the myth portrays as a "threat" is in reality a mutual interest that the United States and China share.

Formal independence of and insulation from the global oil market is a myth.

When the fantasy is confronted by reality, policy issues may appear in a different light. For example, if tax incentives are offered to encourage exploration and development of potential fossil fuel supplies, whether these potential supplies are located within the U.S. boundaries or outside should be a distinctly secondary consideration compared with their prospective net yield. U.S. energy security depends on the costs of energy supplies, not on their location. Higher-cost supplies available within U.S. geographic limits contribute less to U.S. energy security than lower cost supplies generated outside U.S. geographic limits.

China's "lock-in," long-term contracts for future delivery of oil at stipulated prices may or may not be soundly based depending on whether one expects future prices to be higher or lower than the stipulated prices. But quite apart from U.S. energy security, such efforts by China may conflict with other security interests of the United States. For example, oil contracts concluded by China that may assure Iran of extra earnings may be sharply adverse to U.S. interests in nuclear non-proliferation. ◆