

Editors' Foreword

The evolution of human societies is dependent upon the conversion of ever more concentrated and more versatile forms of energy.... Neither the growth of technical capabilities and a deeper understanding of the surrounding world nor the effort to secure a better quality of life would have been successful without innovations in energy use.¹

Access to energy sources and the technology to exploit them are the basic prerequisites of modern society. Yet this is all too often taken for granted. Certainly economic development depends on political stability, the rule of law, competitive markets and wise macroeconomic policy, but without the fuel to power this transformation even the most vigorous economy grinds to a halt. In its more than 50 years of publishing, the *Journal of International Affairs* has never devoted a single issue to the topic of energy, though we've come close, with explorations of "Technology and International Policy" (Spring 1998) and "The Global Environment" (Winter 1991). Despite this fact, each of the articles in the present volume might have fit seamlessly into any one of our previous issues in the last ten years—testament to the myriad ways in which energy issues inform all aspects of international affairs.

The oil shocks of the 1970s put energy high atop the list of policy priorities, with U.S. President Jimmy Carter declaring energy conservation efforts "the moral equivalent of war." The bold price increases engineered by the Organization of Petroleum Exporting Countries (OPEC) and the Arab oil embargo against the United States sparked fears of an imminent energy shortage, while the rampant nationalization of energy industries throughout the developing world demonstrated once and for all that power from energy remained subject to the power of politics. Today—with oil again relatively inexpensive and abundant in the industrialized countries, OPEC in seeming disarray and most overt forms of resource nationalism nearing dissolution—the word "crisis" is no

¹ Vaclav Smil, *Energy in World History* (Boulder, CO: Westview Press, 1994) p. 1.

Journal of International Affairs

longer commonly associated with energy.

Appearances, however, can be deceptive. In the several months since the editorial board of the *Journal* decided on this theme, energy issues have recaptured the headlines on numerous occasions: “merger mania” in the oil industry as Exxon and Mobil, as well as British Petroleum and Amoco, joined forces; DaimlerChrysler’s unveiling of the first driveable, zero-emission automobile run on the hydrogen fuel cell; OPEC’s first agreement in more than a decade committing its members to production cutbacks; and the continuing debate on how the industrialized countries will achieve the reductions in greenhouse gas emissions promised at the Kyoto Conference on Climate Change in 1997.

The *Journal* prides itself on its unique single-topic format. It is our aim in choosing the theme for each issue that we hit upon a consequential and timely subject in international affairs. We believe that, though it has often been neglected, energy is such a topic, and that its importance will in time—and with the earnest efforts of the esteemed academics and practitioners we publish—be made manifest. Today energy is too often recognized only by its absence or its excess. In other words, energy is like national security: when one has it, it is easy to ignore, but the moment one loses it, its importance is quickly revealed. As we approach the 21st century and attempt to divine the major currents in international affairs for the foreseeable future and beyond, we at the *Journal* are convinced that energy problems will once again be recognized as a major concern.

Accordingly, the Fall 1999 issue of the *Journal of International Affairs*, “Fueling the 21st Century: The New Political Economy of Energy,” explores many of the important energy challenges facing the world today. By examining this topic in such diverse contexts as economics, politics, human rights and the environment, our authors demonstrate that a new political economy of energy is emerging. This new political economy is characterized by several features: the growing importance of alternative and renewable energy sources; the ascendancy of market forces as expressed in widespread privatization, deregulation and openness toward foreign investment; an environmental consciousness that reflects the threat posed by cumulative energy use to the ecosystem; startling advances in technology that offer new possibilities for improving the efficiency with which we consume energy; and the general sense that both the political and economic forces affecting the energy world have become more dispersed while the relationship between the two has become more complex. Reflecting these aspects of the new era, the articles in this volume examine

energy's wide-ranging points of tension, from Venezuela to Nigeria, from the politics of biomass fuels to the cultures of electricity consumption.

Edward L. Morse contributes our introductory essay, questioning whether a new political economy exists for oil today. He provides a short conventional history of hydrocarbons in the 20th century, and then demonstrates what this standard version leaves out—namely, the role of short-sighted U.S. policy in encouraging the establishment of OPEC and its radical use of the oil weapon. Mr. Morse concludes that, despite the ascendancy of market forces and the demise of resource nationalism, the new political economy retains several important characteristics of the old era.

In our second overview essay, **Terry Lynn Karl** explores what she has famously termed “the paradox of plenty”—the irony that developing countries rich in natural resources often find themselves stuck in a quagmire of corruption and gridlock. Dr. Karl argues that abundant energy resources have had the perverse consequence of encouraging the development of “rentier states” that need not engage in the *quid pro quo* negotiations between ruler and ruled necessary for successful state-building.

In the section “Energy Dilemmas Around the World,” **Dai Qing and Lawrence R. Sullivan** examine the Three Gorges Dam in southeastern China, the largest construction project in human history, which when completed will join the Great Wall as the only two man-made structures that can be seen from outer space. Ms. Dai and Dr. Sullivan investigate whether the dam is the proper means through which to provide hydropower for China's rapidly growing economy, or whether the forced displacement of 1.9 million residents of the flooded areas will prove a political and humanitarian disaster. The authors' bleak assessment reveals that the urge to satisfy energy demand can sometimes lead to widespread dissatisfaction, especially in closed political systems where channels for expressing opposition remain cut off.

Marshall I. Goldman argues that Russia's abundant energy resources may be more of a curse than a blessing. His analysis of shady corporate practices in the natural gas and petroleum industries since the demise of the Soviet Union provides a good demonstration of how foreign investors have become alienated by the domestic economy, and how the Russian people have been largely denied the promise of their country's ample natural wealth.

Fereidun Fesharaki advocates a new concept of energy security for Asia, one recognizing that market forces can secure the access to and transport of oil much more effectively than the misguided

state interventionism of the past. He foresees the continuing importance of petroleum in the region's energy mix, and the growing importance of the Middle East as a source of that oil.

R. K. Pachauri boldly challenges the conventional wisdom that coal use in developing countries needs to be significantly reduced. Using India as a case study, Dr. Pachauri explains why the economic well-being of his country's population will require significant increases in energy consumption—increases that can only be achieved by making the most of India's coal resources, albeit in a more environmentally friendly manner.

Luis E. Giusti, the former chief executive officer of Petroleos de Venezuela (PDVSA), offers a unique perspective on the transformation of PDVSA from a state-run oil enterprise to a partially privatized, competitive global company. Examining both the current political situation in Venezuela and the country's rapidly changing oil industry, Mr. Giusti's personal account of PDVSA's turbulent years sheds light on the challenges that many oil-rich developing countries currently face in this market-driven era.

David E. Nye compares the widely differing cultures of energy consumption in the United States and Europe. Exploring energy as a social phenomenon rather than a merely technical issue, Dr. Nye examines the historical and cultural roots of Americans' excessive energy consumption, and explores why Europeans tend to express less faith in the ability of technological innovation to prevent future energy shortages.

Examining extensive public opinion data from Western Europe, **Debra Johnson** reveals that the ascendancy of green and leftist parties in several governments throughout the region has not been accompanied by a concomitant rise in anti-nuclear sentiment. The accelerated phase-out of nuclear power advocated by European environmentalists, Dr. Johnson argues, is not feasible—and the public at large seems to understand this.

Of course, ensuring energy supply is not the only goal or value of modern society. Which source of energy is most compatible with our many ambitions—not only to power the economy, but also to preserve the environment, to protect citizens from the noxious by-products of energy exploitation and production, to minimize the costs of industrial inputs, or to prevent excess dependence on other regions whose political interests may conflict with our own? The 20th century has been, as Daniel Yergin has remarked, "the age of oil," but as we approach a new millennium some are proclaiming the end of the hydrocarbon era. Debate continues to flourish about how long it will be until the world's

stock of oil is depleted, if ever. But already policymakers, as well as major players in the energy industry, are working toward a post-petroleum future—one in which nuclear power, renewable energy such as wind and solar, and even biomass fuel from wood, dung and crop residues—may play an increasingly significant role. Global warming, though not yet accepted by all climatologists, may hasten this transformation, especially since the countries of the world have agreed to decrease their use of fossil fuels. The section on “Envisioning the Future of Energy and the Environment” was inspired by these developments.

Defying traditional constructs of a political economy of energy based on hydrocarbons, **Christopher Flavin and Seth Dunn** unveil an emerging energy economy based on a decentralized, demand-based system of renewable energy sources. Parsing the socioeconomic forces that have fueled past energy transitions, Mr. Flavin and Mr. Dunn advance a scenario in which a new geopolitical energy balance emerges, giving environmental and efficiency concerns much greater weight. **Amory Lovins and Chris Lotspeich** continue in this vein, proposing a new paradigm for the energy industry based on properly valuing the “natural capital” of the ecosystem. They offer a vision of—and practical suggestions for—an energy economy using not fossil fuels but the most abundant element in the universe, hydrogen.

Jerry Taylor and Peter VanDoren adamantly refute the argument that renewables will gain increasing importance in the coming century. With renewable energy comprising only 1.5 percent of the world energy market, they declare that “...victory over fossil fuels is nowhere in sight.” Mr. Taylor and Mr. VanDoren rebut the charge that energy markets are inefficient, skeptically asking whether governments are any more capable than private actors of allocating energy resources wisely.

Douglas Barnes and Willem Floor make the case in favor of biomass-based energy in developing countries, arguing its merits over “big oil” and “big power” in the transition to a low-carbon energy economy. They assert that increasing the efficiency and cleanliness of biomass use—not abandoning it in favor of more “modern” energy sources—is especially necessary to enhance energy access and improve the quality of life for poor and rural people in low- and middle-income countries such as China and India.

One of the most contentious issues in the political economy of energy is the role of large multinational energy companies in promoting, or hindering, the democratic development of the countries in which they do business. Throughout the Third World,

popular resentment of Western oil companies was a major impetus behind the widespread nationalizations of the 1970s. Today human rights advocates are quick to criticize the multinationals for their alleged complicity with autocratic regimes, while their defenders argue equally vigorously that such companies hold the key to the development of some of the world's most desperately poor nations. Leading off the section, "Human Rights and Oil Companies: A Debate," **John F. Imle, Jr.**, the vice chairman of Unocal Corporation, a major oil multinational headquartered in California, argues in favor of "constructive engagement." By this he means using continued business investment as a lever to promote economic development and, ultimately, democratization. Given the extremely long-term commitment necessary for petroleum activities to become profitable, it is especially important for energy multinationals to forge ties with a country as a whole—and not to involve themselves with the vicissitudes of its everyday politics.

Bronwen Manby asks, on the other hand, why companies claim that they cannot intervene in local politics when it comes to human rights allegations, while they lobby those very governments to lower their tax burdens or make more congenial political decisions regarding foreign investment. She focuses her analysis on the role of multinationals in Nigeria, while Mr. Imle examines his own company's projects in Myanmar (Burma).

Our "Spotlight: Energy in the Caspian Basin" section looks at a region that, given its potential for vast reserves of petroleum, has greatly gained in strategic importance since the collapse of the Soviet empire. **Martha Brill Olcott** attempts to dampen enthusiasm toward the region's energy prospects by arguing that despite the promise of windfall profits from oil, energy abundance in the Caspian states may prove—as in so many resource-rich countries—as much a curse as a blessing. In the Andrew Wellington Cordier Essay, **Carolyn Miles** argues that the United States must put aside its political differences with Iran and allow oil from the Caspian region to be transported via a pipeline through the Muslim theocracy it has long derided as a "rogue state."

Finally, **Lisa Anderson** reviews two recent academic studies of oil and state-building in the Middle East and North Africa. She explores the riddle of why the quadrupling of oil prices after 1973, while flooding producer governments with huge revenues, did not lead to a change in any political regime in the Arab world. She finds the answer in the peculiar political economy of oil, which has encouraged the creation of distributive states that "need not concern themselves systematically with their own populations at

all.”

Collectively, the essays in this volume examine the many intersections between energy and the world of international affairs. They seek to demonstrate, above all, that energy is not merely a technical subject to be understood by specialists, but also a rich area of interest for policymakers and concerned citizens alike. For all of the new characteristics that mark today's political economy of energy—and although the zero-sum use of energy as a blunt political weapon is now yesterday's headlines—the energy game still creates winners and losers, albeit in different ways than in the past. Beneath the relatively calm surface of energy politics today lie currents that may prove to be every bit as exciting and contentious as those of the days when oil went unchallenged and prices were set by government and corporate fiat.

The *Journal of International Affairs* relies on the dedication and enthusiasm of many people. We would like to extend our gratitude for the support of Lisa Anderson, dean of Columbia's School of International and Public Affairs, Joan Turner, associate dean, and Penny Zaleta, business manager. We are also indebted to Harpreet Mahajan, executive director of information technology, and her staff for their technical assistance. Finally, we thank our dedicated team of editorial assistants for their invaluable contributions. ♣

Journal of International Affairs