



Executive Summary

Strategic Studies Institute and U.S. Army War College Press



NEW REALITIES: ENERGY SECURITY IN THE 2010s AND IMPLICATIONS FOR THE U.S. MILITARY

John R. Deni
Editor

The rapidly changing global energy supply situation, coupled with a host of social, political, and economic challenges facing consumer states, has significant implications for the United States generally and for the U.S. military specifically. In order to address these major “new realities” geographically and technologically and to explore the related military implications, the U.S. Army War College gathered experts from the policymaking community, academia, think tanks, the private sector, and the military services at the Reserve Officers Association in Washington, DC, on November 19-20, 2013. This edited volume is based on the presentations delivered at that conference, which was funded through the generous support of the U.S. Army War College Foundation.

The volume opens by surveying the most significant changes on the production side of the energy equation, with Dr. Theresa Sabonis-Helf addressing Russia’s many challenges. Lack of sufficient western knowledge and capital, long-standing inefficiencies in production, the nontransparency of both the petroleum and gas sectors, limits on foreign investment, and outright corruption all have contributed to a worsening of energy relations between Russia and its most important market, Europe. Dr. John Calabrese argues that the effects of the Arab Spring on the region’s energy sector vary greatly by country. These varying implications of the Arab Spring will mean that some Middle East and North Africa (MENA) states will continue to fill the gaps created by drops in production by other states such as Libya, Syria, and Iraq. Hence, the Arab Spring’s effects on MENA

producers have not substantially jeopardized U.S. energy security just yet.

Sub-Saharan Africa’s role as an energy producing region is undergoing a significant shift, largely due to declining production among major African hydrocarbon producers. At the same time, argues Dr. Ian Taylor, Sub-Saharan Africa is likely to see less attention from the United States overall. Latin American producers have significant potential, writes Dr. David Mares, in terms of both unconventional oil, shale gas, and renewables; but an array of technical, market, and societal challenges within the four largest energy producers—Venezuela, Brazil, Argentina, and Mexico—will likely prevent the region from achieving all that it might. Meanwhile, the North American unconventional fossil fuels revolution is the most transformative socio-political-economic event of the last several decades, according to Mr. Robert Manning. Dramatically altered energy predictions for the United States in terms of production, as well as consumption, presages a period of American economic resurgence and will fundamentally alter U.S. relations with the Middle East.

There is hope in North America, Europe, and elsewhere that renewable energy capabilities might ameliorate energy security challenges posed by reliance on conventional fossil fuels from Latin America, the Persian Gulf, or elsewhere. However, Dr. Karan Smith Stegen argues that there are significant risks associated with renewable technology, especially in terms of the rare earth metals that constitute some of the necessary components of these technologies.

Another non-hydrocarbon energy source—nuclear power—faced incredibly bright prospects just a decade ago. But Ms. Jane Nakano argues that, since then, several factors together have served to dampen prospects for nuclear power in the United States.

Following this look at energy production, the volume turns next to changes on the consumption side. In looking at the case of China, Dr. Michal Meidan finds that, despite efforts to spur development and production of domestic energy sources, China is likely to remain dependent on foreign oil and gas for the foreseeable future. Spurred on by its national oil companies and the Chinese navy, Beijing will seek to maximize Chinese leverage over energy flowing through and from the South China Sea. Just next door, India faces a series of challenges, especially in terms of corruption and extensive domestic fuel subsidies, as it pursues energy security. Mr. Tom Cutler argues that the United States has strong interests in an energy-secure India, which has seen its demand for energy increase dramatically over the last several years.

The cases of China and India exemplify the growing demand throughout the developing world. Ms. Deborah Gordon argues that the most dramatic increases in global energy demand in the coming decades will be in non-Organization for Economic Cooperation and Development (OECD) countries. In particular, China, India, Brazil, Indonesia, the Middle East, and Africa are the countries and regions that are expected to see the highest rates of energy demand growth. On a related point, Dr. Michael Klare argues that conflict over energy is likely to recur so long as major consuming states, like the United States, India, and China, continue to rely on supplies derived from distant and unruly areas. But, as the United States relies less and less on foreign sources of energy, it remains unclear whether the country will remain interested in underwriting the security of global energy supply lines.

Having examined changing patterns of consumption and the shifting locus of production, the volume ends with an assessment of some specific military issues and implications. The Honorable Katherine Hammack addresses the necessity of organizational culture change within the military, as well as the need to adopt new technologies and capabilities, in her chapter on the progress the U.S. Army has made to date. The Army is focusing on turning its installations into platforms of stability, resiliency, and endurance, and on leveraging innovations that reduce fuel demand and resupply

requirements in the field. Dr. Paul Roege examines how the U.S. Department of Defense (DoD) has tried to develop concepts that enable U.S. military forces to utilize energy in flexible ways in order to optimize mission effectiveness.

As the Army and the rest of DoD rely increasingly on computers and technology to manage and use energy, Dr. Chris Bronk argues that the risk to operational energy security posed by cyber attack also increases. The ever increasing use of computers in the energy industry means that energy security is more susceptible today to cyber attack than ever before. In terms of protecting those networks and related critical energy infrastructure, the North Atlantic Treaty Organization may ultimately prove a useful means of addressing these and other energy security challenges. However, Dr. John R. Deni argues that the alliance has achieved little in terms of practical accomplishments. Limited success has been achieved only in terms of some key operational energy security initiatives.

Finally, Dr. Ronald Filadelfo examines the feasibility of strengthening military installation energy security through the use of small modular nuclear reactors (SMRs). Filadelfo argues that DoD could serve as a test bed for the fielding of SMRs, which could be a cost effective source of electricity in limited locations around the country.

More information about the programs of the Strategic Studies Institute (SSI) and U.S. Army War College (USAWC) Press may be found on the Institute's homepage at www.StrategicStudiesInstitute.army.mil.

Organizations interested in reprinting this or other SSI and USAWC Press executive summaries should contact the Editor for Production via email at SSI_Publishing@conus.army.mil. All organizations granted this right must include the following statement: "Reprinted with permission of the Strategic Studies Institute and U.S. Army War College Press, U.S. Army War College."



This Publication



SSI Website



USAWC Website