# U.S. POLICY AND ENERGY SECURITY IN SOUTH ASIA

*Economic Prospects and Strategic Implications* 

Lawrence Sáez

### Abstract

South Asia's future energy consumption will be driven by continuing economic growth and demographic trends. The likely inability of India, Pakistan, and Bangladesh to meet burgeoning energy demands poses a threat to their energy security. U.S. policy in Asia constrains the ability of South Asian countries to enhance their energy security, either indigenously or through imports. This may have unintended consequences for U.S. strategic interests in South Asia in particular, and in Asia in general.

Keywords: India, Pakistan, Bangladesh, South Asia, energy security

### Introduction

The United States, both as a military and economic hegemon, will have to contend with several Asian countries that have large populations, yet remain "low income" and "lower middle income" economies.<sup>1</sup> Some

Lawrence Sáez is Visiting Fellow, Asia Research Center at the London School of Economics. As of September 1, 2007, he will hold the position of Senior Lecturer in Comparative and International Politics at the School of Oriental and African Studies. This article has been developed from research commissioned by the European Commission as well as the Foreign Affairs Select Committee, House of Commons, U.K. The views and analysis presented here are exclusively those of the author and do not necessarily reflect those of the European Commission or the House of Commons. Email: <L.saez@lse.ac.uk>.

<sup>1.</sup> The terms "low income" and "lower middle income," as used in this article, are merely analytical income categories. The terms conform to those used by the World Bank in its loan evaluation. Based on the World Bank's income classification, using the Atlas method, low income refers

Asian Survey, Vol. 47, Issue 3, pp. 657–678, ISSN 0004-4687, electronic ISSN 1533-838X. © 2007 by The Regents of the University of California. All rights reserved. Please direct all requests for permission to photocopy or reproduce article content through the University of California Press's Rights and Permissions website, at http://www.ucpressjournals.com/reprintInfo.asp. DOI: AS.2007.47.4.657.

long-term assessments of likely scenarios for U.S. global strategy already suggest that its economic and military hegemony is being challenged by India and China, two of the world's most dynamic economies. For instance, the unclassified report of the U.S. National Intelligence Council's 2020 project emphatically claimed that the likely emergence of China and India "as the new major global players—similar to the rise of Germany in the 19th century and the United States in the early 20th century—will transform the geopolitical landscape, with impacts potentially as dramatic as those of the previous two centuries."<sup>2</sup>

Faced with the emergence of China and India as potential global powers, the U.S. has attempted to realign its strategic imperatives in greater consonance with a shifting economic and military reality in which unchallenged U.S. hegemony is not guaranteed. Although the U.S.'s global strategic interests have been shaped by its effort to stamp out global terror, American policy at a regional level will continue to be guided by long-term military and economic considerations, particularly bilaterally with other states. Although most of these considerations have long been identified, new security threats are emerging and will mold the outcome of U.S. policy in Asia. One such critical security threat concerns the problem of "energy security." Energy security refers to the ability of a country to minimize vulnerability to supply interruptions and price increases in energy provision. As the U.S. National Intelligence Council's forecasting project speculates, "[G]rowing demand for energy—especially by the rising powers—through 2020 will have substantial impact on geopolitical relations."<sup>3</sup>

The ability of the U.S. to enable South Asian countries to maintain an adequate level of energy security is likely to be a crucial test of its policy in the region. At one level, countries such as Bangladesh, India, Pakistan, and Sri Lanka have experienced notable improvements in human development and sustained economic performance. On the other hand, these "low income" and "lower middle income" countries face common developmental challenges, particularly ones linked to the persistence of poverty and the consequent pressures for the redistribution of fiscal resources and public goods. As with other rapidly emerging transition economies, these countries have also continued to struggle with population growth and an unprecedented demand for energy, especially electricity for households and industry. Countries in South Asia have faced severe shortfalls in energy provision and, given their low capacity in physical infrastructure, may be unable to meet the growing energy demands of their people.

to economies with an annual gross national income (GNI) per capita of \$875 or less, whereas middle income refers to economies with a 2005 GNI between \$876 and \$3,465. See the World Bank website for further details about its country income classification, at <www.worldbank.org>.

<sup>2.</sup> U.S. National Intelligence Council, *Mapping the Global Future* (Washington, D.C.: National Intelligence Council, 2004), p. 47, at <a href="http://www.foia.cia.gov/2020/2020.pdf">http://www.foia.cia.gov/2020/2020.pdf</a>>.

<sup>3.</sup> Ibid., p. 59.

This article highlights the key demographic trends in the three largest South Asian countries (India, Pakistan, and Bangladesh) and argues that demographic trends will have a direct impact on energy demands in the region. I suggest that the surge in demand for energy will be one of the most critical problems facing the leading South Asian economies and that the range of policy options available to them is suboptimal. On the one hand, indigenous energy production is hindered by the availability of specific forms of energy, as well as by natural endowments in South Asia. On the other hand, U.S. policy in the region places an additional burden on these countries' ability to attain energy security, most notably by limiting the availability of energy imports from Iran and Myanmar. Therefore, I argue that U.S. policy in the region will have a correspondingly asymmetrical impact on the ability of different countries to meet domestic energy demands. This in turn could strain the viability of U.S. strategic alliances in South Asia.

# The Dynamics of Energy Security in South Asia

# Developmental Achievements and Future Challenges

Although they face common developmental obstacles, South Asia's so-called "low income" economies are among the most dynamic in the world.<sup>4</sup> Rates of economic growth—measured as percentage change in gross domestic product (GDP) at market prices based on constant local currency—in the region's three major countries (India, Pakistan, and Bangladesh) all exceeded 5.4% in 2005.<sup>5</sup> Growth in South Asia has been sustained with two key sources of real expenditure growth—private consumption and fixed investment. The developmental panorama, especially in terms of important indicators of human development, has also improved markedly. For example, in the U.N.'s 2006 *Human Development Report*, India has a Human Development Index (HDI) value of 0.611, equivalent to a "lower middle income" country like Morocco.<sup>6</sup> In the same report for the same year, the two other selected South Asian nations—Pakistan

<sup>4.</sup> For the sake of simplicity, this analysis will focus on the three most populous South Asian economies: India, Pakistan, and Bangladesh. The combined population of these three countries is approximately 21.9% of the world's total population and 96.7% of the combined population of South Asia (including Afghanistan). All of these South Asian economies are identified by the World Bank as being "low income" economies. Sri Lanka is the only country in South Asia that is classified by the World Bank as being a "lower middle income" economy.

<sup>5.</sup> Unless otherwise stated, economic growth data are derived from the World Bank, *World Development Indicators 2006*, at <www.worldbank.org>.

<sup>6.</sup> Nevertheless, India's improvements in HDI value do not compare favorably with other "lower middle income" economies, such as Indonesia. For instance, Indonesia and India had similar rankings in HDI value in 1975 (0.463 and 0.411, respectively), but India's HDI value is currently lower than Indonesia's HDI value in 1990.

and Bangladesh—had a nearly identical HDI value of 0.539 and 0.527, respectively.<sup>7</sup> This was low by international standards but had improved vastly over the last decade. It is worth noting that a decade ago, Pakistan's 1995 HDI value was .453, slightly higher than India's .451. For 1995, Bangladesh's HDI value was .371, below the average HDI value of .409 for low development countries.<sup>8</sup>

Economic gains in South Asia have been offset by numerous developmental challenges including a weak overall physical infrastructure (e.g., roads, ports, and airports) and a wide divergence in the delivery of social services (e.g., health and education). While these impediments do not appear to have significantly stymied economic development to date, they do have the potential to jeopardize the sustainability of long-term economic growth and human development into the future. "Low income" and "lower middle income" countries in South Asia face two other critical challenges that may affect the sustainability of long-term economic growth and growth in energy needs. As argued in this paper, these trends can have important ramifications for future U.S. strategic interests and considerations in the region.

Several facets of population growth patterns are worth considering as we evaluate the strategic energy needs of these South Asian countries. Based on demographic forecasts compiled by the United Nations Secretariat, China will continue to be the most populous nation in the world until 2030, reaching a peak of 1.446 billion people by 2030.<sup>9</sup> However, China's population growth rate is expected to turn toward a negative trend starting in 2030, largely as a result of the official one-child policy and the growing parity between the ratio of crude birth and death rates. In contrast, with an overall decline in child mortality rates and an increase in life expectancy, India and Pakistan are projected to have the first and fifth largest populations in the world, respectively, by 2030. As Figure 1 shows, India far outdistances its South Asian neighbors in terms of projected population growth, perhaps reaching an unwieldy level. Pakistan's population growth is also noteworthy but lags India's population spurt. Nonetheless, Pakistan is projected to surpass Brazil as the world's fifth most populous country as early as 2025.

Bangladesh faces a slightly different type of demographic challenge, namely intense population density. Despite having lower levels of urbanization, "low income" South Asian economies have higher population densities than their

<sup>7.</sup> United Nations Development Program, *Human Development Report 2006*, at <a href="http://hdr.undp.org">http://hdr.undp.org</a>>.

<sup>8.</sup> Idem, Human Development Report 1996, at <a href="http://hdr.undp.org">http://hdr.undp.org</a>>.

<sup>9.</sup> United Nations Secretariat, Population Division of the Department of Economic and Social Affairs, *World Population Prospects: The 2004 Revision* and *World Urbanization Prospects: The 2003 Revision*, both at <a href="http://esa.un.org/unpp">http://esa.un.org/unpp</a>, accessed May 14, 2007. Unless otherwise specified, the demographic data reported here are the medium projection variants—that is, with a medium fertility rate and a normal migration rate.



FIGURE 1 Projected Population Growth of China, India, Pakistan, and Bangladesh, 2000–2030

SOURCE: United Nations Secretariat, Population Division of the Department of Economic and Social Affairs, *World Population Prospects.* 

populous "lower middle income" counterparts such as China and Indonesia. In 2005 population density in India was 336 people per square kilometer; in Pakistan the figure was 198 people. Bangladesh had a staggering population density of 985 people per square kilometer, higher than the aggregate population density of India, Pakistan, China, and Indonesia combined. Although already abnormally high, Bangladesh's population density is expected to grow by another 50% by the year 2050 to exceed 1,687 people per square kilometer. The impact of such high levels of demographic growth on energy consumption and economic development is worth examining.

#### Energy Mix and Energy Security Concerns

As illustrated in Table 1, indigenous energy production in the three South Asian economies discussed here is concentrated mostly in thermal sources. However, there is a wide variation in the region's energy mix, both in terms of the specific sources of thermal energy and of other secondary types of energy sources.

India—the largest economy in South Asia—has an installed energy capacity<sup>10</sup> heavily dominated by coal, which accounts for nearly 40% of its domestically

<sup>10.</sup> I.e., using permanent, not temporary, facilities.

Source of Energy	India	Pakistan	Bangladesh
Thermal	240,457 (51.5%)	29,588 (50.1%)	9,447 (53.8%)
Coal	177,887 (38.1%)	2,052 (3.4%)	
Gas	23,429 (5.1%)	3,486 (5.9%)	9,345 (53.2%)
Oil	39,141 (8.3%)	24,050 (40.7%)	102 (0.6%)
Hydroelectric	7,285 (1.5%)	2,208 (3.6%)	97 (0.5%)
Nuclear	4,433 (0.9%)	728 (1.2%)	
Renewable	214,375 (45.9%)	26,468 (44.8%)	8,006 (45.6%)
Geothermal solar	323 (0.06%)		
Total (100%)	466,873 TTOE	58,993 TTOE	17,555 TTOE

 
 TABLE 1
 India, Pakistan, and Bangladesh's Indigenous Energy Production, 2003–2004

SOURCE: International Energy Agency, *Energy Balances of Non-OECD Countries*, vol. 2 (Paris: International Energy Agency, 2006), pp. 55, 112, 154.

NOTE: Figures represent thousand tons of oil equivalent (TTOE).

produced energy. Aggregate thermal energy production is also the biggest source of indigenously produced energy for Pakistan. However, it is worth noting that renewable energy is the largest single source of domestically produced energy in that country. Renewable energy refers to energy sources that can be regenerated, including wind and solar energy, small scale hydroelectric energy, and alternative fuels. For Bangladesh, natural gas is the largest single source of indigenously produced energy; however, renewable energy also accounts for a sizable chunk of the country's domestically produced energy capacity.

The distinctive energy mix of each South Asian country under discussion translates into differences in how each government approaches developmental and security concerns. The Indian government has repeatedly identified its energy supply as a crucial security need. Following his election in 2004 as prime minister, Manmohan Singh argued that "energy security is second only in our scheme of things to food security."<sup>11</sup> At a policy level, the impending issue of energy shortages figures prominently in the Indian government's most important planning document, the Tenth Five-Year Plan (2002–07). The plan asserts that "despite the resource potential and the significant rate of growth in energy supply over the last few decades, India faces serious energy shortages."<sup>12</sup> Moreover, the current coalition government's election manifesto, the *National Common Minimum Program of the Government of India*, devotes an entire

<sup>11.</sup> Quentin Peel, "India's Terms of Engagement," Financial Times, November 11, 2004, p. 15.

Planning Commission, Government of India, *Tenth Five-Year Plan*, Ch. 7.3, section 2, at <a href="http://planningcommission.nic.in/plans/planrel/fiveyr/welcome.html">http://planningcommission.nic.in/plans/planrel/fiveyr/welcome.html</a>, accessed June 15, 2007.

section to India's energy security. It states that the government's aim is to "put in place policies to enhance the country's energy security particularly in the area of oil."<sup>13</sup>

The government of Pakistan has also been keen to frame the concern about energy security in terms of its relationship to sustainable economic growth. For instance, in its 2005–06 *Economic Survey*, the Ministry of Finance (MOF) suggested that "for rapid economic growth, developing countries like Pakistan need cheap, abundant and an environment-friendly source of energy."<sup>14</sup> Like India, the Pakistan government is fully aware that the country "is ironically dependent on oil imports."15 However, compared to India, Pakistan offers an exceedingly optimistic assessment of its ability to meet the burgeoning energy demand. The *Economic Survey* suggests that "whilst production levels may still be insufficient, our country is undoubtedly thriving with potential."<sup>16</sup> It points to the likely implementation of pipeline projects from Iran and Central Asian countries as well as the development of proposed natural gas pipelines from Qatar. In the survey's estimation, "[T]hese energy development projects in the country would help battle future energy shortage . . . and pave the way for enhanced economic activities, reduction of poverty and bring Pakistan's backward areas at par with the developed areas."<sup>17</sup>

Compared to India and Pakistan's concerns about the intricate relationship between higher economic growth and increased energy consumption, Bangladesh's concerns about energy security are articulated in starker developmental terms. These are presented mostly in reference to the Dhaka government's inability to provide electricity to a country with one of the world's lowest rates of per capita energy consumption. In the government's own evaluation, "[O]nly 42% of the total population has access to electricity and per capita electricity generation is only 165 kWh which is very low compared with other countries."<sup>18</sup> Nevertheless, Bangladesh has an ambitious plan to provide electricity to all households by 2020, primarily through including substantial private sector participation in increasing total installed generation capacity. In this sense, Bangladesh aims to meet its domestic energy demand through bolstering indigenous electricity generation rather than importing crude oil and natural gas.

<sup>13.</sup> National Common Minimum Program of the Government of India (May 2004), at <a href="http://pmindia.nic.in/cmp.pdf">http://pmindia.nic.in/cmp.pdf</a>>.

<sup>14.</sup> MOF, Government of Pakistan, Economic Survey 2005-06 (Islamabad: MOF, 2006), p. 219.

<sup>15.</sup> Ibid., p. 220.

<sup>16.</sup> Ibid.

<sup>17.</sup> Ibid., p. 219.

<sup>18.</sup> MOF, Government of Bangladesh, *Bangladesh Economic Review 2006* (Dhaka: MOF, 2006), p. 11.

#### 664 ASIAN SURVEY, VOL. XLVII, NO. 4, JULY/AUGUST 2007

#### Crude Oil and Natural Gas Reserves

By itself, a country's domestic energy production is, in most instances, not sufficient to satisfy its domestic energy demand. In addition, there are at least two other factors necessary to evaluate South Asia's energy security needs. Indicators of domestic energy production address the supply of energy—that is, energy that a country is capable of producing. But we must also examine the supply side for energy from external sources, primarily in the form of crude oil and natural gas imports. For the purposes of understanding a country's energy security needs, it is also important to determine and analyze the relationship between indigenous energy production and aggregate energy consumption.

Although the mix of domestically produced energy in the South Asian countries under examination is heterogeneous, aggregate energy mix is highly dependent on coal, crude oil, and petroleum product imports. An individual country's demand for crude oil, petroleum products, and natural gas imports is shaped by both aggregated domestic energy demand and availability of indigenous production of these thermal sources of fuel. In the South Asian context, crude oil and petroleum products are the single most important sources of energy imports. India's crude oil imports as a proportion of the total energy supply is 71.4%, while Pakistan imports 70.8% and Bangladesh imports 92.5% of its crude oil.<sup>19</sup> It is worth noting that none of these South Asian countries imports natural gas; instead they rely on indigenous production to meet domestic demand.

The selected South Asian countries also have exceptionally low levels of known crude oil reserves.<sup>20</sup> Out of the three, India has the largest aggregate known reserves, approaching 5.919 billion barrels. In contrast, Pakistan and Bangladesh have minuscule proven crude oil reserves, merely 341 million and 28 million barrels, respectively. At current levels of production, India is projected to exhaust its crude oil reserves in 20.7 years.<sup>21</sup> These South Asian countries have also been largely unsuccessful in efforts to boost their overall crude oil production through exploration or improved technologies. For example,

<sup>19.</sup> International Energy Agency, *Energy Balances of Non-OECD Countries* (Paris: International Energy Agency, 2006), pp. 55, 75, 112, 115, and 154. Figures represent imports as a proportion of imports as a percentage of total energy supply from indigenous production and imports. These figures should be distinguished from those in Table 1, which only refer to sources of energy produced domestically.

<sup>20.</sup> Analysis of proven crude oil and natural gas reserves is derived from data available from the *OPEC Statistical Yearbook* (Vienna: Organization of the Petroleum Exporting Countries, 2006), pp. 45, 47. Additional data, particularly on share of world total, are available from the *BP Statistical Review of World Energy* (London: British Petroleum, June 2006), pp. 6, 22.

<sup>21.</sup> Estimate for the remaining amount of time of crude oil reserves in India is derived from the reserves-to-production (R/P) ratio. Crude oil production data for Pakistan and Bangladesh are too insignificant to be measured separately. See *BP Statistical Review of World Energy* (2006), p. 6. Calculations by the author suggest that Pakistan has an R/P ratio of 14.1, and Bangladesh has an R/P ratio of 18.9.

India has only been able to increase its oil production by a mere 1.4% since 2001. It is unlikely that the production of petroleum will increase significantly through domestic exploration in the future.

The picture for long-term availability of natural gas reserves is also troubling. India has proven natural gas reserves of 1.101 trillion standard cubic meters. In contrast, Pakistan and Bangladesh have proven natural gas reserves of 963 billion and 436 billion standard cubic meters, respectively.<sup>22</sup> However, the proven natural gas reserves from these three South Asian countries constitute merely 1.38% of the world's total proven natural gas reserves. Given the natural resource endowments of these economies, imported crude oil and petroleum products are an essential addition to domestic energy supply.

#### Measures of Energy Security

A country's demand for energy can be measured by a number of indicators. One of the most widely used is total final consumption (TFC). TFC is an aggregate measure of total energy consumed in a country (from both domestic and foreign sources) by the industrial, transport, residential, commercial, public service, and agricultural sectors. Another widely used indicator of energy demand is total primary energy supply (TPES). TPES is an indicator of the availability of energy in its initial form—whether after importation or production.

In the economic analysis of energy, various indicators may be useful guides of energy balance. Such measures may include electricity consumption as a percentage of GDP, TPES as a proportion of GDP, or production as a proportion of TPES. However, to determine the strategic implications of energy, the ratio between indigenous production (INDP) and TFC and the ratio between INDP and TPES are the most explicit indicators of energy security.

These indicators point to two types of strategic vulnerabilities. The ratio between a country's indigenously produced energy (i.e., INDP) and the amount consumed (i.e., TFC) highlights the reliance on foreign sources of energy to meet domestic consumption needs. In other words, countries that have to import a lot of energy to meet domestic consumption requirements have a higher degree of strategic vulnerability than countries that can generate all domestic energy consumption needs domestically. This type of strategic vulnerability may be termed *primary energy security*, largely because the costs of securing external energy sources or importing energy can have important economic and military impacts. Similarly, the ratio between a country's domestically generated energy (i.e., INDP) and the total amount demanded (i.e., TPES) highlights unrealized economic gains stemming from energy-related productivity

<sup>22.</sup> Analysis of proven natural gas reserves is derived from data available from the *OPEC Statistical Yearbook*, p. 47. Additional data, particularly on share of world total, are available from the *BP Statistical Review of World Energy* (2006), p. 22.



FIGURE 2 Primary and Aggregate Energy Security Indicators (INDP/TFC and INDP/TPES)

SOURCE: Ibid. to Table 1. Calculations by the author.

gains. In other words, economic growth can be adversely affected as a country fails to meet its citizens' total energy demand. This type of strategic vulnerability may be termed *aggregate energy security*.

If we contrast the three South Asian countries selected for this analysis, it is clear that they each have very distinct ratios of primary and aggregate energy security vulnerabilities. Figure 2 shows the values of indigenous production as a proportion of TFC (i.e., "primary energy security") and the values for indigenous production as a proportion to TPES (i.e., "aggregate energy security"). The closer the figures are to zero, the higher the level of energy security vulnerability, indicating that domestically produced energy is not sufficient to meet domestic demand. Figures that exceed 1 suggest the reverse. As Figure 2 shows, the "primary" and "aggregate energy security" indicators for Pakistan are the lowest among the selected South Asian countries, thus suggesting a critically low level of energy security. From these simple indicators, it can be concluded that at present Bangladesh and India also have notable vulnerabilities in energy security, particularly in terms of "aggregate energy security." For instance, Figure 2 shows that Pakistan, Bangladesh, and India have aggregate energy security ratios below 1. This is particularly problematic for these countries where indigenous production of energy does not exceed 0.81 as a proportion of TPES. Although South Asian policy makers often discuss the importance of energy security for their countries, these figures should provide a

more precise measure of current energy vulnerability. However, what is truly problematic for these South Asian economies is that countries that are projected to experience sharp increases in aggregate population growth will have corresponding increases in both TPES and TFC. This represents an alarming prospect for the future energy security of South Asia unless indigenous domestic production increases correspondingly.

#### Constraints to Domestic Energy Production

Demographic factors, combined with indigenous natural resource capabilities, also translate into different levels of energy security in South Asia. In a purely economic sense, shortcomings in energy security can be met with an increase in domestic energy production, increases in energy imports, or a sharp decline in total energy consumption. The third option—a decline in energy consumption—runs counter to the experience of "upper middle income" and "high income" countries. In the case of "low income" South Asian economic growth. For this reason, the only two viable alternatives are increasing domestic energy production or boosting energy imports. As will be shown in this section, however, domestic energy production is severely constrained in South Asia.

The expectation of sharp increases in domestic energy production must be tempered against the reality of the available natural resource endowment in the region. For instance, coal is the dominant source of domestically produced energy in India. As Table 1 shows, coal is far less important in Pakistan and virtually nonexistent in Bangladesh. India has large proven reserves (92.445 billion tons), which is much larger than Pakistan's proven coal reserves (about 3.05 billion tons).<sup>23</sup> However, these two countries differ in terms of the availability of specific types of coal and in their yield production capabilities. Nearly 97.4% of India's coal reserves are in the form of anthracite and bituminous coal-with a high carbon and comparatively low calorific content. These types of coal are considered less efficient in terms of energy production and have the added disadvantage of being more polluting. In contrast, Pakistan's coal reserves are almost exclusively in the form of energy-efficient and environmentally friendly sub-bituminous coal and lignite. The anthracite and bituminous coal with which India is endowed is thought to have an adverse effect on global warming. Furthermore, the productivity of coal mines in India is low by international standards, largely as a result of inefficient levels of mechanization and antiquated mine design. For instance, although India has about 10.2% of the world's total proven reserves of coal, it accounts for only about 6.9% of global commercial production. Sharp increases in coal-generated energy do not seem likely in the near future.

<sup>23.</sup> BP Statistical Review of World Energy (2006), p. 32.

Given its abundance of rivers, hydroelectric energy ought to be a natural source of energy in these South Asian economies. Yet, as seen in Table 1, only an insignificant portion of domestically produced energy comes from this source. The reason is largely because the generation of electricity from hydroelectric sources is costly and politically sensitive. Among Asian countries, only China has taken a decisive step to increase domestic energy production via hydroelectric power—a policy exemplified by the construction of the Three Gorges Dam. Even in this instance, the construction of large hydroelectric power generators has met with an unusual level of political opposition. Nevertheless, once the Three Gorges Dam is fully operational, it is forecast to generate over 18.2 gigawatts (GW) of electricity, equivalent to Pakistan's entire installed electricity generating capacity in 2002. It is very unlikely that any South Asian country will be able to increase hydroelectric energy output so dramatically.

The domestic production of energy utilizing renewable sources is an important component of South Asia's indigenous energy production. Renewable energy accounts for over 45% of indigenous energy production in India, Pakistan, and Bangladesh. Among South Asian nations, India has taken a leading global role in renewable energy. At present, India is one of the world leaders in wind power generation, ranking fifth, behind Germany, Spain, the U.S., and Denmark, in total installed wind power capacity.<sup>24</sup> Moreover, India is a leader in manufacturing certain types of equipment for use in photovoltaic energy conversion and the world's fifth largest manufacturer of silicon solar modules. Although solar power is a promising source of energy for South Asia, domestic production using renewable sources is unlikely to grow fast enough to help close the gap between energy production and demand.

The production of energy from coal, hydroelectric power, or renewable sources is highly constrained in South Asia. At present there is only one source of energy that is underutilized, namely nuclear. Among the South Asian countries under discussion, only India and Pakistan are capable of producing energy from nuclear sources; moreover, they have not signed the Non-Proliferation Treaty (NPT). As a result of international restrictions on the acquisition of dual-use technology, the amount of indigenously produced nuclear energy by these two countries is very small, amounting to about 1% of total indigenous electricity generation in each country.

Despite the restrictions the NPT places on the transfer of fuel and technology, the U.S. can play a potentially important role to help boost domestic nuclear energy production in South Asia, especially for India. The U.S. has taken a

<sup>24.</sup> Data on cumulative installed wind turbine capacity are available from the British Petroleum website, at <http://www.bp.com/liveassets/bp\_internet/globalbp/globalbp\_uk\_english/reports\_ and\_publications/statistical\_energy\_review\_2007/STAGING/local\_assets/downloads/pdf/table\_ of\_cumulative\_inst\_wind\_turbine\_capacity\_2007.pdf>, accessed June 22, 2007.

leading role in facilitating the development of nuclear energy for civilian purposes in India. Although remaining outside the NPT has typically hampered efforts to receive technological and fuel assistance from abroad, under the terms of the 2006 U.S.-India nuclear deal Washington has agreed to provide fuel to the safeguarded nuclear reactors at Tarapur. In turn, India has agreed to separate its civilian and military nuclear programs over the next eight years in exchange for receiving continued expertise and nuclear fuel from the U.S. India also agreed to allow its civilian nuclear facilities to be subject to permanent international inspections.<sup>25</sup> The United States, however, still needs to persuade the members of the Nuclear Suppliers Group (NSG) to make an exemption for India relating to the existing NSG guidelines governing the export of items especially designed or prepared for nuclear use as well as on the export of nuclear-related dual-use items and technologies. In contrast, there is no overt collaboration between the U.S. and Pakistan on the development of nuclear technology for civilian purposes. Given the experience with the A. Q. Khan nuclear secrets network, it is extremely unlikely that the U.S. will offer Pakistan this type of collaboration in the near future.

### Crude Oil and Petroleum Products Import Constraints

As discussed earlier, there is little room for optimism that domestic energy production is likely to increase sufficiently to meet South Asia's growing energy demands. One possible exception may be India's development of civilian nuclear energy production. But even the most optimistic estimates from nuclear sources suggest a gap of at least 10 years before India's energy mix is noticeably transformed.<sup>26</sup> In the meantime, India—not to mention other countries in South Asia with even less potential for nuclear energy production—must assess its current energy security needs and determine the viability of increasing crude oil and petroleum product imports.

A principal concern for India and Pakistan alike is the stability and cost of obtaining oil. India's existing fuel mix—combined with the uneconomical exploitation of its domestic oil and gas resources—has prompted the government to devote a growing share of revenue to import crude oil and natural gas, primarily from the Middle East. In 2005–06, for example, India imported 99.4 million metric tons of crude oil for \$38.7 billion. During the same time period,

<sup>25.</sup> An excellent analysis of the motivations and implications of this agreement is provided by Dinshaw Mistry, "Diplomacy, Domestic Politics, and the U.S.-India Nuclear Agreement," *Asian Survey* 46:5 (September/October 2006), pp. 675–98.

<sup>26.</sup> India's Department of Atomic Energy (DAE) forecasts that, with accelerated construction, India could install nuclear facilities that would generate over 20 GW of electricity by 2020 and provide nearly a quarter of total electrical output by 2050. See Department of Atomic Energy, *A Strategy for Growth of Electrical Energy in India* (Mumbai: Department of Atomic Energy, 2007).

Pakistan imported 8.6 million metric tons of crude oil at a cost of \$3.8 billion.<sup>27</sup> As past trends in the pricing of crude oil and natural gas have shown, price volatility can severely strain a developing country's fiscal and trade stability. Therefore, India and Pakistan are vulnerable to both supply risks associated with the maintenance of reliable oil supplies as well as market risks, including sudden increases in oil prices caused by various types of disruptions.

For "low income" countries, sharp increases in oil prices could have a debilitating effect on fiscal stability and the structure of imports. India imported 1.94 million barrels of petroleum a day in 2004. A year later, it imported 2.39 million barrels a day—a 23.4% increase. In addition, the fiscal impact from a sudden increase in crude oil prices can be appreciable. In 2004–05, India spent \$29.2 billion on crude oil and petroleum products imports—nearly 4.4% of its GDP. A year later it spent \$44.6 billion, over 5.7% of GDP. The government of Pakistan has also reported sharp increases in the costs of importing crude oil and petroleum products. In its latest economic survey, Pakistan reported that aggregate petroleum products represented the single largest item in its import bill, encompassing nearly one-third of all import costs. Although it reported a small decline in the actual volume of crude oil and petroleum products imported during the 2005–06 fiscal year, Pakistan's MOF noted that costs for these items increased by 76.6% and 62.9%, respectively.<sup>28</sup>

Against the backdrop of increasing crude prices is the expectation that crude oil and natural gas imports can be obtained more economically, primarily by tapping into resources available in countries near South Asia. However, the option to increase energy imports by this means is hampered by U.S. strategic concerns in the area. In this context, U.S. policy in Asia will have a direct impact on the policy options of South Asian countries, thus affecting their energy security. Those South Asian countries with a higher degree of energy security vulnerability, most notably Pakistan, are particularly prone to be most adversely affected by U.S.-imposed restrictions on crude oil and natural gas imports.

# U.S. Policy and Strategic Implications for South Asia's Energy Imports

This article began by examining the specific demographic challenges faced by the three most populous "low income" South Asian economies. I showed how these demographic challenges directly constrained these countries' ability to

<sup>27.</sup> Unless otherwise stated, data for India and Pakistan's crude oil imports have been acquired from the Government of India's Ministry of Petroleum and Natural Gas, and the Government of Pakistan's Ministry of Petroleum and Natural Resources, respectively. Data for India's crude oil imports are available at the Ministry of Petroleum and Natural Gas website, at <a href="http://petroleum">http://petroleum</a> and Natural Resources, at <a href="http://petroleum">htt

<sup>28.</sup> Government of Pakistan, Economic Survey 2005-06, p. 132.

meet their population's energy needs. As noted, different countries have varying levels of energy security capacity. In this final section, I will examine how U.S. strategic policy in Asia is likely to further exacerbate the energy security scenarios of individual South Asian countries, but with a likely inverse effect on the U.S.'s overall strategic needs in the region.

A popular perception in some policymaking circles in Washington, D.C., is that there will be an inherently deepening strategic partnership between India and the U.S., perhaps with the effect of offsetting China's growing economic and military influence.<sup>29</sup> Although the exact parameters of this strategic possibility have not been worked out, the basic assumption is guided by the notion that India and the U.S. are the world's two largest democracies. Thus, they are assumed to share a similar political outlook. The White House in 2006 defined the nature of the relationship by asserting that "[b]uilding on their common values and interests, the United States and India affirmed their joint commitment to promote freedom and democracy and assist countries in transition."<sup>30</sup>

This idealistic assessment of the prospects for developing a U.S.-India strategic partnership is not shared elsewhere. Some scholars, like Devin Hagerty, have argued that "[b]arring the emergence of a radically altered South Asian security environment, New Delhi and Washington are likely to intensify their evolving entente, but not to transform it into a full-blown alliance."<sup>31</sup> There is a growing consensus that India would be hesitant to play the latter role and may not be easily guided toward serving as a counterbalance to China. Despite historical antecedents that demolished a budding Sino-Indian partnership in the 1950s, current Indian policy makers are keenly aware of the potential gains from collaborative engagement with both the U.S. and China.

Analysts of the U.S.-India strategic relationship have also pointed to the structural challenges of such a partnership. For instance, Amit Gupta has argued that the U.S.'s reluctance to recognize India as a fully legitimate nuclear power serves as a major constraint to the congruence of Indian and American worldviews. In Gupta's view, this lack of recognition has spillover effects on India's ability to transfer technology and to gain access to dual-use and space technologies.<sup>32</sup> Stephen Blank concurs with this assessment by arguing that

<sup>29.</sup> Nicholas Burns, "The U.S. and India: The New Strategic Partnership." Remarks delivered to the Asia Society, New York, October 18, 2005. Full transcript of the remarks is available at <<u>http://www.state.gov/p/us/rm/2005/55269.htm</u>>.

<sup>30.</sup> White House, Office of the Press Secretary, "Fact Sheet: United States and India: Strategic Partnership" (March 2, 2006). Full text is available at <a href="http://www.whitehouse.gov/news/releases/2006/03/20060302-13.html">http://www.whitehouse.gov/news/releases/2006/03/20060302-13.html</a>>.

<sup>31.</sup> Devin Hagerty, "Are We Present at the Creation? Alliance Theory and the Indo-U.S. Strategic Convergence," in *U.S.-Indian Strategic Cooperation into the 21st Century*, eds. Sumit Ganguly, Brian Shoup, and Andrew Scobell (New York: Routledge, 2006), p. 29.

<sup>32.</sup> Amit Gupta, *The U.S.-India Relationship: Strategic Partnership or Complementary Interests?* (Carlisle, Penn.: Strategic Studies Institute, U.S. Army War College, 2005), pp. 15–16.

the U.S.'s stress on non-proliferation creates a major obstruction to the consolidation of a U.S.-India strategic partnership.<sup>33</sup> As he writes, "While India and America are the two largest democracies in the world, that is not enough to satisfy or sustain a genuine strategic partnership."<sup>34</sup>

Both Gupta and Blank offer a wide range of prescriptions on the elements that could sustain U.S.-India strategic collaboration. Gupta asserts that the U.S. shares three complementary interests with India: terrorism, energy, and China. From this view, Gupta suggests that one critical area where Indian interests could overlap with U.S. military interests is the need for energy resources and the economic potential of markets in Central Asia.<sup>35</sup> Blank offers a broader set of prescriptions based on "the recognition of shared tangible interests, particularly shared regional interests in key areas of Asia: South Asia, Central Asia, Southeast Asia, and to some degree, even the Gulf."<sup>36</sup>

Although political affinity between India and the U.S. may form the basis from which to build a durable strategic partnership, the Pakistan-U.S. and Bangladesh-U.S. relationships cannot be framed in the same political and ideological terms. After all, both Pakistan and Bangladesh have had a turbulent history of democratic governance. Since September 11, 2001, Pakistan and Bangladesh have been closely aligned with the U.S. in its efforts to confront Islamist terrorism, but beyond that the exact parameters of U.S. strategic interests with these countries cannot be easily linked to any given issue area. For instance, from an economic viewpoint, the level of bilateral trade and investment between the U.S. and Pakistan or Bangladesh is small, so this trade is not of great strategic interest to the U.S.

Ongoing U.S. policy in South Asia suggests a significant degree of asymmetry, at least from the perspective of the various, often competing, host nations and potential strategic partners. For example, the U.S. granted Pakistan "major non-NATO ally" status in 2005, largely because of the latter's importance as a frontline state in the global "war on terror." Yet, the U.S. has failed to extend the same status to India even though New Delhi has been one of the most vocal allies of the U.S. on this front. The 2005 designation of Pakistan, which followed a visit to India by the U.S. secretary of state, created some alarm in New Delhi because it enables Islamabad to purchase sophisticated military hardware from the U.S. and could permit Pakistan expedited export processing of space technology.

<sup>33.</sup> Stephen Blank, *Natural Allies? Regional Security in Asia and Prospects for Indo-American Strategic Cooperation* (Carlisle, Penn.: Strategic Studies Institute, U.S. Army War College, 2005), p. 4.

<sup>34.</sup> Ibid., p. 9.

<sup>35.</sup> Gupta, The U.S.-India Relationship, p. 38.

<sup>36.</sup> Blank, Natural Allies, p. 9.

In its turn, the U.S. negotiated a sensitive treaty with India that will make it easier for the latter to generate nuclear energy for civilian use. This agreement envisions collaboration in the construction of new fast breeder reactors and power plants capable of generating up to 20,000 megawatts (MW) of nuclear energy by 2020. Even though Pakistan is also a declared nuclear state, the U.S. has been reluctant to negotiate a similar agreement with it. Predictably, the India agreement created consternation in Islamabad. The Pakistani Foreign Office spokeswoman, Tasnim Aslam, stated that "the objective of strategic stability in South Asia and the global non-proliferation regime would have been better served if the United States had considered a package approach for Pakistan and India, the two non-NPT Nuclear Weapons States, with a view to preventing a nuclear arms race in the region and promoting restraints while ensuring that the legitimate needs of both countries for civilian nuclear power generation are met."<sup>37</sup>

Some of these strategic asymmetries can be explained, as Blank stresses, by existing bureaucratic hurdles. In one notable instance, the U.S. has placed India within the ambit of the smaller U.S. Pacific Strategic Command, whereas the rest of South and Central Asia is placed in the U.S. Central Command.<sup>38</sup> The State Department, on the other hand, has included Central Asian states within the purview of its South Asia Bureau. There are several areas where U.S. strategic asymmetry is likely to promote a sense of ambiguity in the region, particularly in those Asian countries that have greater energy security vulnerabilities. These factors demonstrate the lack of coordination among U.S. military, political, and economic concerns in the region, but most alarmingly between the strategic means and strategic objectives. The U.S. may have a long-term strategic objective to contain the military growth of China. But Washington's current focus, which prioritizes waging a war on global terror and defines regional alliances by their eagerness to fight terrorism, may not be the most efficient route to containment.

# U.S. Policy on Iran and Myanmar: Impact on South Asia

For countries in South Asia with energy security vulnerability, one of the most obvious policy alternatives is to import crude oil and natural gas. One big obstacle is the constraints posed by U.S. policy on Iran and Myanmar. The policy options currently available to South Asian countries stand in direct contrast to

<sup>37. &</sup>quot;Pakistan Renews Concerns over U.S.-India Nuclear Deal," *People's Daily Online* (Beijing), June 29, 2006, <a href="http://english.peopledaily.com.cn/200606/29/eng20060629\_278302.html">http://english.peopledaily.com.cn/200606/29/eng20060629\_278302.html</a>. Also see Qudssia Akhlaque, "Pakistan Not Fully Informed about Nuclear Deal," *Dawn* (Internet edition), April 11, 2006, at <a href="http://www.dawn.com/2006/04/11/top5.htm">http://www.dawn.com/2006/04/11/top5.htm</a>.

<sup>38.</sup> Blank, Natural Allies, p. 7.

policy actions undertaken by China—a country that faces similar energy security concerns but different strategic objectives than those of the U.S.

For energy-vulnerable South Asian countries, the closest source of substantial crude oil and natural gas is Iran. Iran has proven crude oil reserves of 27.58 trillion barrels and natural gas reserves of 136.27 trillion standard cubic meters, the world's second largest reserves. However, U.S. policy has added substantial transaction costs to any trade activity involving that country. Washington imposed major unilateral economic sanctions against Iran after the 1979 American embassy takeover by radical students and has continued to punish Teheran based on the assessment that Iran supports international terrorism.<sup>39</sup> The most recent presidential provision relating to Iran is Executive Order 13059, signed in August 1997, which prohibits virtually all trade with and investment in Iran by Americans-wherever they are physically located. Likewise, the Iran and Libya Sanctions Act of 1996 broadened the scope of U.S. action by imposing sanctions on non-U.S. companies that engage in specified transactions with Iran. Other countries are not directly prevented from engaging in trade with Iran. But the potential repercussions from escalating U.S. sanctions have made the delivery of Iranian crude oil and natural gas to South Asia difficult without including transactions involving American carriers or financial services companies affected by the U.S.-led sanctions.

China, on the other hand, has taken the forefront in developing strong economic relations with Iran. According to an analysis of China's oil security concerns, Chinese oil companies—most notably China National Offshore Oil Company—have attempted to establish onshore partnerships with the stateowned National Iranian Oil Company.<sup>40</sup> At present, China imports a fraction of its total oil imports from Iran. However, other analysts of China's energy security have also noted that China is Iran's largest crude oil and natural gas customer. Therefore, Iran would be quite concerned about any sharp decline in oil purchases from China. The exact extent of Chinese involvement in Iran's physical infrastructure development—particularly in oil exploration and the development of gas and petrochemical industries—is not publicly available. Nevertheless, a Congressional Research Service report on China-U.S. relations claims that a Chinese company has been allowed to develop Iran's Yadavarn

<sup>39.</sup> For instance, invoking provisions under the International Emergency Economic Powers Act (50 U.S.C. 1701–06), Executive Orders 12205 and 12211, signed April 7 and 17, 1980, respectively, includes a ban on all commerce and travel between the United States and Iran. Executive Order 12613, signed October 29, 1987, prevents goods of Iranian origin to be imported into the United States. Specific restrictions, such as the 1987 Iranian Transactions Regulations (31 CFR Part 560) and subsequent amendments, place limits on transactions relating to the development of Iran's petroleum facilities.

<sup>40.</sup> Erica Downs, *China's Quest for Energy Security* (Santa Monica, Calif.: RAND Corporation, 2000), p. 18.

oilfield in exchange for the purchase of Iranian liquefied natural gas.<sup>41</sup> According to other estimates, over 100 Chinese companies are currently operating in Iran to develop the country's physical infrastructure. Liu estimates that, as part of this drive to strengthen bilateral links, Chinese oil companies "have signed long-term contracts valued at \$200 billion" with Iran.<sup>42</sup>

India has also attempted to develop economic links with Iran, albeit far less successfully than China. Since the early 1990s, one of the ongoing prospects for India has been its involvement in a proposed 2,600-mile natural gas pipeline from Iran. The exact specifications of this project have varied. Some proposals have included an onshore pipeline through Pakistan, while others have assessed the viability of an offshore pipeline. Some authors have argued that in addition to providing much-needed sources of energy an Iran-India natural gas pipeline could also be a significant confidence-building measure for potentially improving Indo-Pakistani relations.<sup>43</sup> By showing that India and Pakistan can collaborate on an issue of mutual importance, it is anticipated that bilateral collaboration is possible in controversial issue areas such as ongoing border disputes. Nonetheless, the U.S. has resolutely opposed either an onshore or offshore pipeline. According to a U.S. military assessment of economic security in Asia, Ambassador to India David Mulford "warned New Delhi that the Iran and Libya Sanctions Act of 1996 might require the U.S. to apply economic sanctions against Indian companies doing business with Iran."<sup>44</sup> The threat of sanctions was reiterated a month later during the March 2005 visit to New Delhi of Secretary of State Condoleezza Rice, who said publicly that the U.S. had "communicated to the Indian government our concerns about gas line cooperation between Iran and India."45

One of the unintended effects of U.S. policy against Iran is that China has become a key beneficiary of the U.S.-led trade embargo. Oil-dependent economies in South Asia, on the other hand, are more vulnerable to a decline in reliable energy imports. This pattern is not exceptional nor unique to the Iranian example. U.S. policy against another potentially reliable source of natural gas, Myanmar, also poses asymmetrical outcomes to South Asian countries. Myanmar has proven natural gas reserves of 500 billion standard cubic meters. But

<sup>41.</sup> Kerry Dumbaugh, China-U.S. Relations: Current Issues and Implications for U.S. Policy (Washington, D.C.: Congressional Research Service, 2006), p. 14.

<sup>42.</sup> Xuecheng Liu, *China's Energy Security and Its Grand Strategy* (Muscatine, Iowa: Stanley Foundation, 2006), p. 10.

<sup>43.</sup> S. G. Pandian, "Energy Trade as a Confidence-Building Measure between India and Pakistan: A Study of the Indo-Iran Trans-Pakistan Pipeline Project," *Contemporary South Asia* 14:3 (September 2005), pp. 307–20.

<sup>44.</sup> U.S. Pacific Command, *Asia-Pacific Economic Update 2005*, vol. 2 (Camp Smith, Hawaii: U.S. Pacific Command, 2005), p. 24.

<sup>45.</sup> Remarks by U.S. Secretary of State Condoleezza Rice and Indian Foreign Minister Natwar Singh, March 17, 2005, at <a href="http://newdelhi.usembassy.gov/iprmar1605a.html">http://newdelhi.usembassy.gov/iprmar1605a.html</a>>.

for a decade, the U.S. has imposed economic sanctions against Myanmar in response to the tightened grip of the military junta. After considerable pressure from Congress, then-President Bill Clinton in 1997 issued Executive Order 13047 banning most new U.S. investment in Myanmar's economic development. President George Bush escalated the sanctions, signing the Burmese Freedom and Democracy Act of 2003.

Similar to the situation with Iran, the U.S. isolation of Myanmar has had the unintended effect of helping China develop stronger links with Yangon. Since the beginning of the military junta's rule in Myanmar and into the early 1990s, most bilateral links took the form of standard commercial relations. Eventually, this expanded to include the provision of major Chinese conventional military hardware in exchange for raw materials. In an early analysis, Peter Rodman argued that the sanctions have proven to be "a great strategic boon to China."<sup>46</sup> To date Chinese military hardware sales to Myanmar have included fighter aircraft, military transport vehicles, surface-to-surface and surface-to-air missiles, lighter tanks, and missile boats. Nearly 90% of Myanmar's total military hardware has been purchased from China.

As a result, China is Myanmar's leading strategic ally. A report by the International Institute for Strategic Studies estimates that total Chinese military assistance to Myanmar in the 1990s ranged from \$1 billion to \$2 billion.<sup>47</sup> However, the reported construction of Chinese naval bases in Myanmar is of even greater concern for U.S. policy interests in the region.<sup>48</sup> The impact of this level of assistance has been noteworthy in other areas as well. A report by Amnesty International has argued that the different facets of Chinese collaboration have contributed to the human rights abuses in Myanmar.<sup>49</sup>

The imposition of U.S.-led sanctions has weakened the resolve of some South Asian countries to engage with Myanmar. Nevertheless, U.S. sanctions

<sup>46.</sup> Peter Rodman, "The Burma Dilemma," *Washington Post*, May 29, 1997, p. A23. Since July 2001, Rodman has served as the assistant secretary of defense for international security affairs.

<sup>47. &</sup>quot;China's Military Designs in Myanmar," *IISS Strategic Comments* 6:6 (London: International Institute for Strategic Studies, 2000). For further details about the extent of military collaboration between China and Myanmar, also see Martin Smith, *Burma: Insurgency and the Politics of Ethnicity* (London: Zed Books, 1999), esp. p. 427.

<sup>48.</sup> The observation that China is building naval bases in Myanmar is not verifiable from nonclassified materials. This specific claim stems from an internal report prepared by the consulting firm Booz Allen Hamilton on behalf of the U.S. Department of Defense. The title of the report is *Energy Futures in Asia*. Further details about this claim can be obtained from Kerry Dumbaugh, *China-U.S. Relations*, p. 12, and from Bill Gertz, "China Builds up Strategic Sea Lanes," *Washington Times*, January 18, 2005. The report makes the additional claim that China has already established an electronic eavesdropping facility at the deep-sea port currently under construction in Gwadar, Pakistan.

<sup>49.</sup> *People's Republic of China: Sustaining Conflict and Human Rights Abuses*, Amnesty International, report ASA 17/030/2006 (London: Amnesty International, 2006).

are far less stringent and comprehensive than those imposed on Iran. Given more room to maneuver, the Indian government has slowly attempted to strengthen economic and military links with Myanmar, mostly under the guise of conducting anti-insurgency operations on their border. However, in 2003 the New Delhi government confirmed the sale of 75 millimeter Indian-produced howitzers to Myanmar, items of no apparent use in anti-insurgency operations. Since then, India's interest has taken a more decisive military focus. The most evident example of the potential collaboration followed the visit of India's air force chief, S. P. Tyagi, to the new Myanmarese capital, Nay Pyi Taw, in November 2006. During the visit, a proposed multimillion-dollar military hardware package was discussed. Some human rights groups like Human Rights Watch criticized the proposed arms deal, fearing that it would further fuel human rights abuses.<sup>50</sup> Likewise the U.S. diplomatic stance has also strengthened. One analysis noted that "India is pursuing closer relations with the repressive regime in neighboring Burma, with an interest in energy cooperation and to counterbalance China's influence there." However, it argued that "the Bush Administration has urged New Delhi to be more active in pressing for democracy in Rangoon."51

### Conclusion

In this article I have suggested that the strength of the U.S.'s strategic relationship with South Asia will be defined by issues of mutual interest, not unilaterally. This article has also argued that demographic trends and the security of energy needs will be critical for long-term sustainability of economic development in South Asia. Although alterations to the projected demographic trends will have to be resolved domestically, the issue of energy security is mutually advantageous to the U.S. and South Asia. In particular, the security and sustainability of energy supply are likely to be the key drivers of South Asian countries' cooperation with the U.S.

This article has argued that South Asian countries face an imminent energy crunch. Prescriptions to alleviate this gap generally involve altering these countries' energy mix, either by boosting oil imports or by moving toward increased reliance on nuclear technology. In this context, the U.S. could potentially play a decisive and positive role in assisting South Asian countries to achieve increased energy security. I argue that instead of doing so, many current U.S. policies have restricted these countries' ability to import crude oil and natural gas and to further develop civilian nuclear power. This, in turn, has adversely

<sup>50.</sup> Human Rights Watch, "India: Military Aid to Burma Fuels Abuses," at <a href="http://hrw.org/english/docs/2006/12/07/india14778.htm">http://hrw.org/english/docs/2006/12/07/india14778.htm</a>.

<sup>51.</sup> Alan Kronstadt, India-U.S. Relations (Washington, D.C.: Congressional Research Service, 2006), p. 9.

affected the energy security of the two strongest U.S. allies in South Asia, India and Pakistan.

This article has ultimately offered a critical analysis of U.S. strategy in Asia, arguing that it lacks symmetry and effectiveness in several dimensions. The pursuit of U.S. global strategic concerns has come head to head with the realization of Washington's regional strategic objectives in South Asia. Although the U.S. has attempted to build its strategic partnership with India—largely with the expectation of counterbalancing the emergence of China—it has simultaneously undermined its own goal by enabling China to develop closer links with energy-rich countries such as Iran and Myanmar while indirectly preventing South Asia allies from effectively doing so.

Furthermore, the U.S. has developed a notable strategic relationship with Pakistan—a frontline state in the global "war on terror"—but failed to sign a civil nuclear agreement as was done with India. It remains to be seen whether U.S. policy in South Asia after the Bush administration continues to stress the global "war on terror" to the same degree as it does today. If the stress is only episodic, then the current U.S. unwillingness to engage Pakistan—a country that enjoys non-NATO ally status—in developing civilian nuclear technology is likely to weaken this long-term strategic partnership, probably to the benefit of India.

Ironically, the primary visible beneficiary of these apparent contradictions in U.S. strategic thinking vis-à-vis South Asia appears to be China. Unlike South Asia, China is not constrained by restrictions on imports of crude oil or natural gas from Iran, Myanmar, or any other regime that the U.S. may deem unpalatable. Such existing restrictions only harm potential U.S. allies, whether Bangladesh, Pakistan, or India. It may be time for the U.S. to consider a policy of multilateralism in Asia, not out of weakness or inherent virtuousness but because it appears to be the most effective policy tool at achieving American long-term strategic objectives in the region.