

Energy Poverty and Development

At the second session of the IRG Discussion Forum, 50 Washington-area professionals gathered to discuss with H.E. Ishaq Shahryar the energy issues facing Afghanistan and other developing nations. As ambassador of Afghanistan to the United States and an expert on solar energy, Mr. Shahryar brings a great deal of experience and a unique perspective to development.

A Global Issue of Scale

The earth is now home to 6.1 billion residents, of which:

- ♦ *1 billion* consume half of the resources and many of the poor pay 10–150 times more for energy than the better off.
- ♦ *1.6 billion* have no access to electricity and four out of five of them live in rural areas of the developing world.
- ♦ *2.4 billion* rely on traditional biomass and 2.5 million women and children die each year from pollution caused by indoor biomass stoves in developing countries.

The task of tackling these numbers is as monumental as the numbers themselves. Energy, or the lack thereof, is among the most insidious roots of global poverty and disempowerment. The UK's Department for International Development calls energy needs "derived demand: no one wants energy for itself but rather for

the services it provides." These services—cooking, healthcare, communications, transportation, education—cannot be brought to people without a basic energy infrastructure in place—to provide the electricity for lights needed to study, to provide the heat to sterilize tools needed in hospitals, to provide the gas to stoves needed to prepare food.

There are four main constraints to addressing these gaps:

Technology. Technology is available, but tends to be limited to wealthier people. For developing countries, the advanced-technology option is more expensive upfront, since the infrastructure generally has to be built from scratch. But this leaves the poor paying significantly more for traditionally distributed forms of energy in the long run—light from a kerosene lamp costs 70 times more than electric light, light from a candle 150 times more.

Capital. The International Energy Agency projects that \$2.3 trillion will need to be spent over the next 30 years on new power capacity in developing countries—this while private investment continues to drop, from \$46 billion in 1997 to around \$30 billion in 2000. Those funds are also concentrated in fewer and fewer countries, while those areas most in need (Sub-Saharan Africa, South Asia) attract less than a quarter of investment dollars. Investing in energy is not an issue of access, it is an issue of attractiveness. The money is

there, but the current economic situation has left interest and commitment on the wane. Exacerbating this situation are the recent spate of bankruptcies and bailouts of energy companies in the U.S. and Western Europe, making investors even more wary of new ventures.

Henri-Claude Bailly (left) and H.E. Ishaq Shahryar (right) at the second session of the IRG Discussion Forum, "Energy Poverty and Development."



Institutions. In many developing countries, the energy sector is still dominated by state-run monopolies, where theft, corruption, and mismanagement are endemic. Without proper governance and transparent policy institutions in place, it will be difficult to attract outside investment.

Affordability. Energy in developing countries is currently subsidized to the tune of \$50 billion a year—more than the total annual official development assistance to those countries. But subsidies are a blunt tool that, more often than not, reach the wrong people. In subsidized systems, the poor still pay a significantly higher percentage of their income for energy than the middle class.

A National Issue of Opportunity—Afghanistan

Afghanistan is currently dependent on inefficient uses of wood, coal, and diesel for its energy. Less than 20 percent of Kabul has electricity. And although the Soviet Union developed the country's gas resources, it also drew down its oil and mineral resources.

Now much needs to be built—hospitals, schools, homes—and for Afghanistan, energy development will be a crucial step that must take place in concert with other major infrastructure development projects.

The Afghanistan Assistance Coordination Authority (AACA), a task force modeled on the Marshall Plan, has been formed to forge the new Afghanistan, capitalizing on private investment and technology. The members are working to establish the rule of law, especially in investment, banking, and property, to attract energy investors back to the country. New private investment laws are being written that implement very liberal rules. Investment will be facilitated by the AACA, the permitting process will be streamlined, and foreigners

will be allowed 100-percent property ownership. These changes have already led to new projects, including Halliburton's \$300-million contract to build the U.S. embassy in Kabul. But security is the most vital guarantee to safe investment—which is why governance and the rule of law will be critical prerequisites to development.

The AACA is also mapping the country's oil and gas resources and working to create an environment that will bring in new technologies to assist the rebuilding effort. It has funded the construction of 50 homes around Kabul using new technologies, but many more are needed. The cost of a home in Kabul has skyrocketed since the end of the Taliban rule. And with 3 million displaced refugees to resettle, progress needs to be



accelerated and costs need to be reduced—two or three homes a day should be built for around \$3,000 apiece.

What Now?

Some have already mobilized to address global energy poverty in both the public sector (Energy Future Coalition, Global Village Energy Partnership) and the private sector (Shell, BP), but no one solution will close the energy gap. The approach will need to be holistic and balanced, engaging the poorest communities and the highest levels of government, and consider the full range of energy options, from grid and biomass to fossil fuel and renew-able. All sectors will have to be mobilized—donors, end-users, governments, corporations, NGOs—and resources from the developed world will have to increase.

H.E. Ishaq Shahryar is the first recognized ambassador of Afghanistan to the United States since 1978 and an accomplished solar energy scientist. An advisor to former Afghan King Zahir Shah for five years, the ambassador was a key participant in the Bonn Accord negotiations that formed the Interim Administration. In 1994, he was named to the U.S. Presidential Mission on Sustainable Energy and Trade to India and has acted as an advisor to trade and environmental groups in the United States and abroad. Ambassador Shahryar was one of the three scientists who invented low-cost solar cells in 1972 and developed the process for modern day mass-production cells used in solar panels. He was instrumental in developing ultraviolet-sensitive solar cells for NASA's Jupiter Project, and in 1993, he was awarded U.S. patent rights for a 20 percent-efficient silicon solar cell. His latest patent is pending for a new solar cell that will reduce the cost of solar cells by half. He founded Solec International, one of the world's leading manufacturers of solar electric technology, and Solar Utility Company, a solar cell engineering, design, marketing, and installation company.

Energy Initiatives in Afghanistan

Earlier this year, Afghan Energy Minister Mohammad Shaker Kargar noted that the government had 58 power projects awaiting funding, including development of new coal, gas, and hydroelectricity stations. Some projects, ranging widely in size and style, have since been initiated.

USAID. Over the summer, USAID provided grants worth \$130,000 to the Ministry of Water and Power to replace damaged cables, restore electricity to parts of Kabul, rehabilitate the ministry building, and create a kindergarten at the ministry that would enable women employees to return to work.

ADB. If approved in December, the \$150-million Asian Development Bank Postconflict Multisector Program Loan could be used to address needs in the energy, transport, and finance sectors. It is structured to provide quickly disbursed resources to support policy reforms and finance budget expenditures.

MCC. The Mennonite Central Committee has committed to donate \$228,000 over three years to install nine new power plants in northeastern Afghanistan. The small-scale hydroelectricity stations will power irrigation pumps, flour mills, and lighting.

Source: ReliefWeb.

Forum Feedback

- ♦ Japan, Saudi Arabia, and the United States have committed \$180 million to a national road project that will hopefully increase trade and demobilize warlords. With 35,000 taxis in Kabul, Chrysler, for instance, could establish a factory and training center that would immediately be in high demand.
- ♦ Solar power is ideal for Afghanistan—many homes and villages will be built in areas with 8–11 months of sunshine a year. But even at 7 cents per kilowatt-hour, the cost is still prohibitive for most Afghans.
- ♦ The U.S. cannot afford to fail in its efforts to rebuild Afghanistan, yet per capita development aid is less now than it was in the 1950s and 1960s. To coordinate its efforts and ensure transparency and accountability, the United States should form a coordinating authority committed exclusively to the aid effort for Afghanistan.
- ♦ Do all barriers to development boil down to governance? Policy should be addressed before anything else, since it drives all other issues.
- ♦ Rebuilding and development in Afghanistan must move quickly, and it must move visibly. But donor country promises have not yet been delivered, and up to half of existing funding routed through nongovernmental organizations goes to overhead. Afghans are beginning to ask, “Are we better off now than we were last year?”

For More Information...

World Energy Council: www.worldenergy.org

UN Food and Agriculture Organization:
www.fao.org/sd/EN2_en.htm

UN Development Programme:
www.undp.org/energy/index.html

ReliefWeb: www.reliefweb.int

U.S. Energy Information Administration: www.eia.doe.gov

Global Village Energy Partnership: www.gvpep.org/

BP—Environmental and Social:
www.bp.com/environ_social/index.asp

Royal Dutch/Shell Group:
www.shell.com/home/Framework?siteId=royal-en

About the IRG Discussion Forum

The IRG Discussion Forum is a monthly roundtable for the Washington-area policy community. Building on the Central Asia Speaker Series held at IRG in spring 2002, the Discussion Forum focuses on public and private sector issues affecting international development—agriculture, energy, sustainability. Each session is informal, and off the record; guest speakers and attendees are participating in a personal capacity.

With the Discussion Forum, IRG hopes to foster an environment for sharing experiences, exchanging ideas, and creating new approaches to development.

Henri-Claude Bailly, chairman of the IRG Advisory Board and senior advisor to the president, moderates the IRG Discussion Forum. Mr. Bailly is the former chairman and CEO of Hagler Bailly, an international management and consulting firm to the energy and utility industries. He is a director of the Alliance to Save Energy and a member of the Advisory Council of the Energy Future Coalition.

Schedule

Thursday, October 3 The World Summit on Sustainable Development:
Issues and Outcomes

Thursday, November 7 Energy Poverty and Development

Thursday, December 5 Agriculture and Sustainable Development

For more information, email discussionforum@irgltd.com or call International Resources Group at 202-289-0100.

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INTERNATIONAL RESOURCES GROUP

1211 CONNECTICUT AVENUE, NW ♦ SUITE 700 ♦ WASHINGTON, DC 20036 ♦ UNITED STATES

TEL: 202-289-0100 ♦ FAX: 202-289-7601 ♦ WEB: WWW.IRGLTD.COM
