Afghanistan: Household Energy Demand

CONCEPT NOTE FOR RESEARCH AND CAPACITY-BUILDING UNDER
ESMAP THEMATIC PROGRAM "ENERGY-POVERTY"
FY06-FY08

Rationale for Proposal

Afghanistan ranks among the least developed countries in the world in terms of its per capita consumption of energy. The overwhelming majority of the population (some 70%) is estimated to live in rural areas of the country without access to electricity and other forms of modern energy. Access to electricity is also extremely low in the urban and peri-urban areas of the country, and even where access exists, power supply is highly constrained and unreliable. Throughout the country, Afghans rely heavily on non-commercial and generally less clean forms of energy to meet their basic energy needs, with the well-known costs to the environment and human health. In addition, anecdotal evidence from throughout the country suggests the widespread use by businesses and better-off households of high-cost generation sets run on imported diesel fuel, and this means of coping with the inadequacy of the formal power system clearly has high financial and environmental costs, and increases the economy's vulnerability to high international prices of fossil fuels.

The very low level of access to electricity (estimated at 6% of the population for grid-supplied power) has profound implications for the country's economic and social development, as it deprives the majority of Afghans of opportunities to earn income and to enjoy the education and health benefits that are made possible by electricity. The absence of opportunity in rural Afghanistan has been fueling a process of urban migration which has the potential of overwhelming the cities with new problems such as the emergence of large-scale informal settlements that are not adequately served by such basic infrastructure as electricity and piped water (which in turn is dependent on the availability of a reliable supply of power).

Reliable data on basic aspects of the structure of energy demand and energy resources are lacking in Afghanistan. This represents a fundamental knowledge gap that directly impacts on the quality of decisions on policy and related investments in the sector that are made by the Government of Afghanistan with support from the World Bank and other donors active in Afghanistan. For these reasons, it is proposed to use ESMAP support to establish baselines of the structure of household energy demand, first in urban/peri-urban areas and later in rural areas through a series of household-level surveys. Depending on the availability of resources (both financial and on-the-ground research capacity), the scope of the enquiry may be expanded to include commercial consumers who are particularly significant as users of diesel-fueled generation sets.

Structure of Proposed Research and Capacity-Building Program

The research and capacity-building program proposed here will be implemented over the period FY06-FY08, corresponding to the time period of the current ESMAP Business Plan. In the first phase of program, to be carried out in FY06 (commencing when funds are made available through June 2006), it is proposed to carry out a survey of the structure of household energy demand and standard related issues (e.g. basic demographics and some level of capture of data on income/expenditures) that will be representative of the population of Kabul. As part of the preparation for the quantitative research (which forms the mainstay of the research under this proposal), exploratory qualitative research (focus groups and/or in-depth interviews) will be conducted to gain a more in-depth understanding of what households need energy for, their coping strategies in the face of severe energy supply and income constraints, and the costs to households and the environment associated with these coping strategies.

Sampling: A special effort will be put into developing a spatially-based sample that adequately reflects the population of the city, which in recent years has seen a dramatic increase in population and the emergence of widespread informal settlements (rendering impractical the use of such official data and lists of households as may exist that in more stable situations often serve as the basis for compiling samples). In addition, there will be some focused sampling of certain groups of particular interest in the broad developmental agenda, e.g. female-headed households.

As of this writing (mid-September 2005), it is expected that in FY06 it will also be possible to lay the groundwork for analogous studies to be carried out in other major urban centers of Afghanistan in FY07; however, this will depend on when financing is made available and on the progress of the work in Kabul, which is difficult to predict given the instability that prevails in the country. It is envisioned that in the course of FY07 and FY08, the studies in the other major urban centers of Afghanistan as well as initial studies of energy demand in rural Afghanistan will be completed.

This proposal includes a significant component of capacity-development. Since the fall of the Taliban and the beginning of the intense international engagement in the reconstruction of Afghanistan, survey research in the country has been limited in its scope and carried out by a small number of expatriate commercial organizations based in Kabul. While these organizations have played and continue to play an important role in collecting and analyzing data on Afghanistan today, the capacity-building aspect of their activities is hard to gauge and is likely somewhat *ad hoc* in nature.

In the context of this proposal, it is proposed to work in partnership with sociologists of Kabul University and interested students who will serve as interviewers after undergoing training. This will make a contribution to improving the country's overall capacity to carry out socio-economic research using standardized survey methodology. Dr. Ashraf Ghani, Rector, Kabul University, has given his enthusiastic support for the proposed participation of Kabul University in this research program.

The Ministry of Energy and Water and DABM, the national electric utility, will be important stakeholders whose inputs into the design of the research program will be critical and with whom the research materials will be shared. Other interested stakeholders (e.g., counterparts working on the National Vulnerability Assessment, the Ministry of Rural Rehabilitation and Development) will also be apprised of the progress of the research and invited to contribute to it, as appropriate.

Expected Outcomes of Research and Capacity-Building Program

The key expected outcomes of the proposed research and capacity-building program are:

- A considerably improved understanding of how households (and possibly other consumers) use energy, and the direct and indirect cost implications of the patterns of energy use by households;
- Consequently, improved quality of policy-making by GOA and advice from WB and other donors on energy-specific issues as well as related areas, e.g. improved targeting of social assistance that may be delivered through forms of energy;
- Enhanced capacity of Afghan sociologists to carry out research using standard sociological methods of quantitative and qualitative research, and training of students and other interested individuals in standardized interviewing techniques;
- Enhancement of distribution-level project in Kabul and other major cities that will be under preparation/implementation in this period with WB financing.