

AFGHANISTAN NATIONAL ELECTRICAL UTILITY COMMERCIALIZATION SUPPORT CASE STUDY

1. The Emerging Situation in DABS¹

Major Progress in Physical Infrastructure; Little Progress in Institutional Capacity and Cost Recovery

Significant progress has been made in rebuilding the physical infrastructure in Afghanistan's electricity system. Electricity production increased by approximately 22% during the period from January 2005 to July 2007. Another 471 MW of new generation capacity and imports is scheduled to become available beginning in December 2008 through March 2010.²

In addition, approximately \$350 million is being invested in the North East Power System, including 850 km of new or rehabilitated transmission lines. The NEPS transmission lines should become operational in November 2008. This will allow energy to be imported from Central Asia to Kabul. Additional investment has been made in generation, transmission and distribution in over 3,000 villages, towns and cities. Substantial investments in the rehabilitation of distribution systems are planned for Kabul and Mazar-e-Sharif, and have been completed for Aybak and Qalat.



Clearly, the physical infrastructure for the electricity system is being rebuilt. Parallel to the physical infrastructure, there is a need to build both the institutional and the financial capacity to operate, maintain, and expand the system. There is evidence that maintenance is a major challenge for the electricity system in Afghanistan. In addition, it is clear that the system is under serious and growing financial stress. Cash collections are lagging far behind the costs of operating and maintaining the

electrical system. Three key steps that can be taken to manage the increasing financial losses include:

¹ Da Afghanistan Breshna Moassasa, DABM, is Afghanistan's state-owned electricity utility. The newly corporatized state-owned utility will initially be called Da Afghanistan Breshna Shirkat, DABS, until a new corporate name is selected. We use DABS because we assume that a new USAID project will begin after completion of the DABS corporatization.

² This includes a planned dispatch of approximately 112 MW from Uzbekistan to the Kabul load center beginning in late 2008.

1. Purchase 150 MW of capacity from Central Asia on a firm, predictable basis as soon as possible;
2. Reduce Aggregate Technical & Commercial losses from the current 55% level to 20% to 30%. This can only be achieved if DABM becomes an effective, well managed utility corporation. This requires major reforms.
3. Add new customer connections slowly, because for the next several years, each additional unit sold to residential customers results in an increased financial loss to DABM.

The USG has also concentrated on building the capacity of the existing DABM organization and its staff. Results of the capacity building activities have been frustrating, and it is not clear that progress is being made. For example:

- Efforts to introduce new commercial systems and approaches to metering, billing and collection have been tried 4 times by different projects and donors. None of these initiatives have been accepted and implemented after completion of the training and pilot activities.
- Efforts to introduce new load management procedures and techniques seem to have failed. After procuring load management software and training staff, DABM management refused to allow staff to enter the room where computers are housed.
- A new procurement system for spare parts and materials that would ensure transparent competitive bidding was designed, but implementation was blocked.

Problems Getting “Capacity Building” to Stick

One USAID report on a metering billing and collection pilot stated: *“Discussion with the supervisory engineer on implementation of pilot activities was not productive. He was given a copy of the proposed scheme for meter reader overtime payments and conditions for payments. The supervisor said payments needed to be substantially higher, USAID should repair the building in which the staff work, we should pay cash to accounting personnel for extra work, etc. He was asked to sign a letter directing meter readers in the pilot project to cooperate with us. The letter still has not been signed. Other staff refuse to provide us with any more data such as meter routes and junctions for the commercial accounts stating that our controllers can go to the field and get it themselves. We have had no luck getting Kabul Electricity Department readers into the field except when meter reading is done.”*

The Strategic Importance of Corporatizing and Commercializing DABM

Along with physical rehabilitation, a critical objective in the energy sector today is to create a well managed national electricity utility. For Afghanistan, this involves the corporatization and strengthening of the Ministry of Energy and Water’s (MEW) electricity department, DABM.

The Government of Afghanistan decided in 2006 to form a new Afghan national electricity company, which will be referred to initially after incorporation as Da Afghanistan Breshna Shirkat, or DABS. Cabinet Decree #14 (dated 18/5/85) requires DABS to be corporatized as a commercial company. The corporatization process is

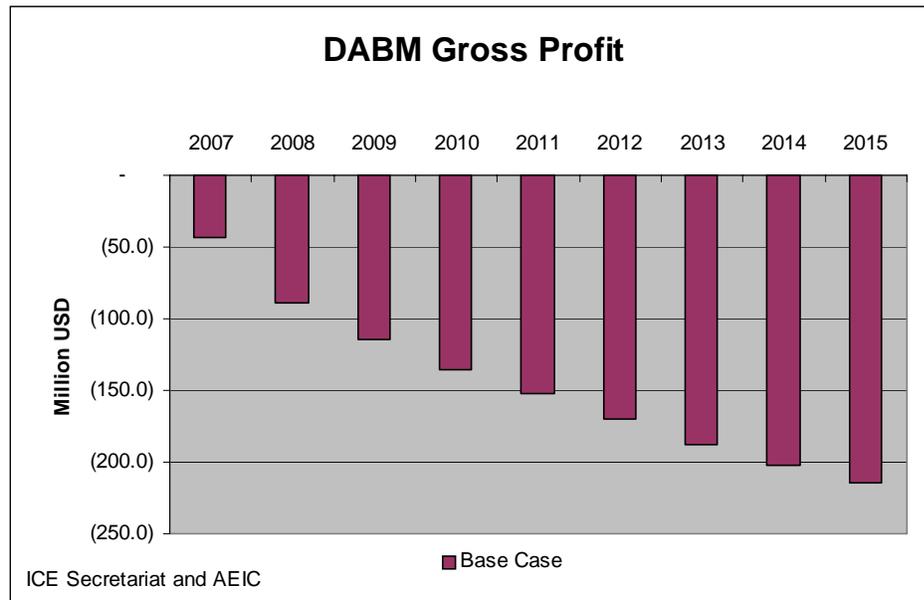
supported by the World Bank, and will convert DABM into a company owned by the Afghan Government.

Progress in developing a strong, professionalized national electricity utility is very slow. To date, the corporatization of DABM has finished only preliminary steps, and little has been achieved over the past 10 months. It appears that someone is blocking the completion of the corporatization process.

Financial Stresses on the New Company

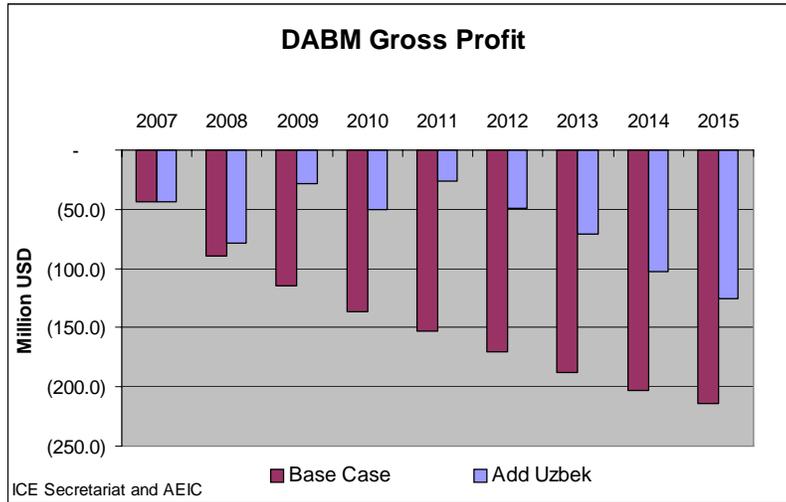
It is estimated that DABM Kabul Division will operate at a cash loss (cash receipts minus cash expenses) of \$48 million in 2007 and \$84 million in 2008. Estimates generated from a model prepared by the Afghanistan Energy Assistance Program project annual cash losses of about \$100 million by 2009. Although low cost electricity imports from Central Asia reduce cash losses, losses are projected to remain large relative to the cash revenues of DABS. If NEPS imports do not arrive in the planned quantities, then losses will be far higher due to the higher cost of thermal generation in Kabul. The following table estimates cash losses to Kabul load center if no changes to the current situation are made:

DABM Losses Soar Under Base Case



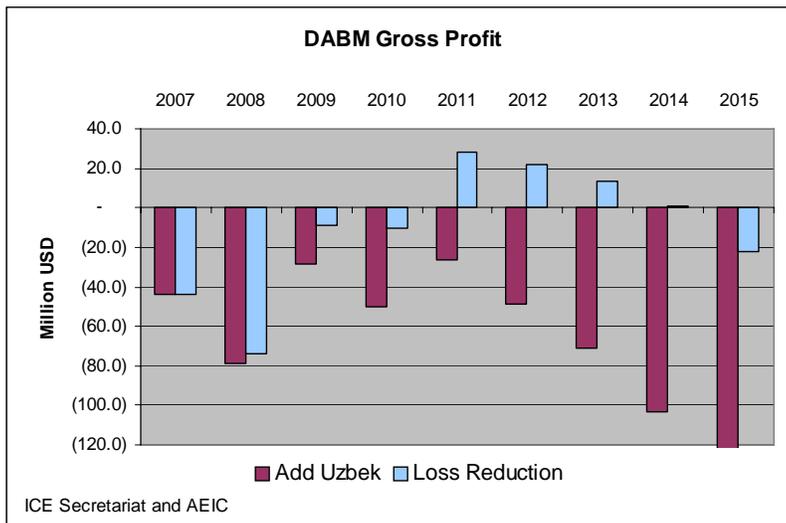
The next table provides an estimate of what happens to losses if the utility is able to buy 150 MW of capacity from Central Asia beginning in 2009. Losses are significantly reduced, but the system still runs at a large loss. It is not clear how the power purchase bills would be paid with these levels of losses:

Uzbek Power Reduces DABM Losses



The table below provides an estimate of what happens with losses if the 150 MW of Central Asian power is purchased, and then (in blue) what happens if a comprehensive loss reduction program is implemented.

Loss Reduction Program Allows DABM to Turn Profit

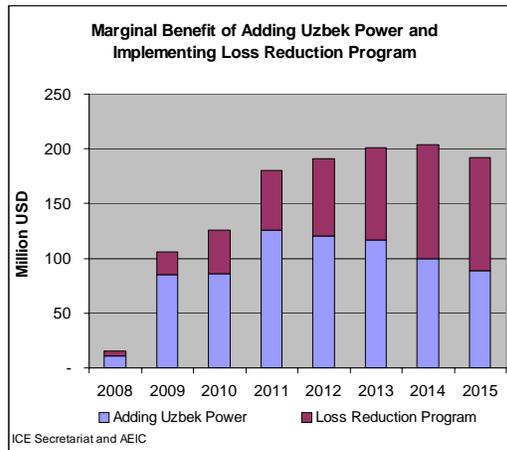


As noted above, a major loss reduction program that would be implemented along with fundamental corporate reforms would cause the system to actually break even after a few years. It is clear that DABM does not have the capacity currently to implement such a major loss reduction program, because a range of loss reduction pilots and initiatives have already failed.

Clearly, the economic value of importing Central Asian power and implementing the loss reduction program is huge, as indicated in the following chart:

Uzbek Power and Loss Reduction Program Offer Significant Benefit Over Business as Usual

- Adding Uzbek power reduces DABM losses by \$734 million from 2008-2015.
- Implementing loss reduction program adds incremental benefit of \$482 million.
- Cumulative benefit >\$1.2 billion.



Assignment:

Your team has been in Kabul for the past 16 days conducting an assessment of the forward-looking situation in the Afghan power sector.

The Mission Director is seeking advice on next steps for the energy program, and particularly, how to deal with the mounting financial losses and lack of funds for O&M.

He has discussed the situation with the Minister of Energy & Water and senior management of DABM. They told him that they prefer an expanded capacity building program, including more training of staff, more investment in distribution systems, and more equipment. However, with these levels of losses, and with strong resistance to past capacity building efforts, the Mission Director has suggested that he wants a new approach.

Tomorrow morning, you will brief senior Mission management, along with the US Ambassador's energy staff and the World Bank Kabul Energy Specialist. You have been asked to summarize your recommendations in no more than 5 key points because of time limitations. You should also provide a brief explanation of what steps the Mission should take next to address this crisis situation.