

Power Transmission and Rehabilitation Project Summary of the Operation Performance Evaluation Review

THE PROJECT

Background

In the mid-1990s, the government of one of the EBRD's countries of operations embarked on comprehensive power sector reforms focusing on sector restructuring and unbundling, private sector participation, as well as efficient sector supervision and regulation. In a first step, more than 50 per cent of the power generation capacity was auctioned off to foreign and local investors. However, most of the regional distribution companies remained in state hands.

The second important change was the creation of a joint stock electricity grid operating company in 1997. The key assets transferred to the company were the country's high voltage (HV) transmission lines and substations. The company became responsible for the operation of the HV grid, the scheduling and dispatch of power generation plants, and the management of load flows. Further milestones included the establishment of the electricity and power market operator in 2000, which was responsible for spot trading of electricity, and the approval by the parliament of a new electricity law in 2004.

While wholesale electricity prices have been liberalised, retail tariffs for electricity and heat, as well as fees for network services provided by natural monopolies (transmission and distribution), are controlled by the Agency for the Regulation of Natural Monopolies (AREM) and its regional departments. Under the Law on Monopolies and its amendments, AREM is set up as an executive body forming part of the government, headed by a chairman appointed by the prime minister. The agency made good progress in devising and applying rules and procedures for tariff filing and tariff determination, but the regulatory process still lacks transparency and credibility.

Project design and implementation

In the initial stage of project preparation, the EBRD considered of providing the client company with a corporate loan of approximately US\$ 30 million. At the same time another development bank prepared the ground for a transmission sector modernisation project based on a multi-year investment programme that had been proposed by the client and that the client was unable to finance through the issue of bonds. The EBRD joined forces with another development bank to design an investment programme for a five-year period (2000-04), focusing on the refurbishment and modernisation of the company's transmission network. The programme consists of various, partly inter-connected components that are mostly replacements of obsolete or decrepit components with new, state-of-the-art equipment.

The overall costs of the investment programme were estimated at approximately US\$ 250 million. The required financing was apportioned between the EBRD (around one-fifth of the total), the other development bank (three-fifths) and the client (one-fifth). The EBRD financing was a sovereign guaranteed 15-year loan, including a three-and-a-half-year grace period, during which certain components were earmarked for installation. The EBRD locked in financial and environmental covenants in the loan agreement with the client and the other development bank involved called for a grid code and restructuring of the company.

Project implementation suffered from substantial delays. Measuring project effectiveness was delayed until June 2000 due to re-assessment of the project by the new government and a

concomitant reorganisation of the client company that also involved changes in staff assigned to the project management unit. As a consequence, the appointment of the procurement and project management consultant was deferred until February 2001 and the tendering process started one year later than scheduled. The implementation of two EBRD-financed components was delayed by up to nine months because the client did not closely follow the procedures laid down in the tender documents, prompting complaints by the two bidders. Eventually, however, the issues could be resolved and the contracts were signed in late 2003 and early 2004, respectively. The tendering process for the other components covered by the EBRD loan went ahead smoothly. Most of the EBRD-financed components have already been installed and are in operation. The last instrument transformers were installed in July 2006 and all remaining power line carrier equipment was delivered in August 2006.

More importantly, the largest component of the project – that is, sub-station automation and protective relaying (SAPR), which costs about US\$ 63 million and is being financed by the other development bank and the client, – has experienced considerable procurement problems that have ramifications for the whole investment programme. Latest estimates suggest that full implementation cannot be expected before early 2010. The reasons for this considerable delay are unclear. Since the component is not part of the package financed by the EBRD, the Operation Performance Evaluation Review (OPER) team deemed it inopportune to investigate the procurement difficulties in greater detail. However, owing to the complexity of the project, the delayed implementation of the SAPR component also affects the phasing in and functionality of complementary components, including those financed by the Bank.

ACHIEVEMENT OF OBJECTIVES

Overall, the achievement of objectives is rated *Satisfactory*. The main objectives under the project pertained to institutional, physical and financial targets.

Institutional targets. The privatisation of the distribution companies took longer than expected because of the step-by-step improvements to environment and investment climate policies that were needed to encourage greater private sector involvement. Moreover, the new Law on Electrical Energy will further enhance corporate governance through the instilment of competition at the retail level.

Physical targets. The goal of reducing the technical transmission network losses from 6 per cent in 1998 to 5 per cent or less in 2004 has not been achieved because the load growth in the transmission network grew more rapidly than expected. It is unlikely that the efficiency gains from supervisory control and data acquisition and an electronic message system, even when its optimal utilisation is feasible, would curtail network losses to the level appraised. In fact, given the vast geographic expanse of the transmission system and the load growth experienced in recent years, it will be difficult to meet the target without additional investment conducive to loss reduction. In retrospect, it can be argued that the loss reduction target was unrealistic and inappropriate. There is, however, evidence of improvements in system stability and reliability. Additional benefits from better system protection, shorter repair times, greater system stability and efficiency gains from economic dispatch are likely to occur in the future.

Financial targets. The client divested itself of non-core assets and confined its business to transmission network operation and dispatch of generation plants. The company's gearing is rather low, with capital and reserves covering 70 per cent of the balance sheet. Thanks to cost-reflective transmission tariffs the company generated sufficient revenues to meet its financial obligations. The client has also achieved all financial targets covenanted under the Bank loan: the Debt Service Coverage Ratio (DSCR) has been well above the threshold of 1.3; the current ratio has been above

or close to 2; and the average amount of accounts receivable fell to 19 days in 2005. In the last two years the company has written off large amounts of bad debt, while increasing the collection rate to 99.5 per cent. All payments are made in cash.

OVERALL ASSESSMENT

Based on the findings and the assessment of the OPER team, the overall performance of the project was rated *Successful*, despite some project components not having been completed due to procurement delays. Apart from this shortcoming, the operation managed to implement a complex and large-scale investment programme designed to refurbish and modernise the bulk of the country's HV transmission system. More specifically, judging by the achieved targets, the operation was *Satisfactory*; the rating of the client's financial performance was *Good*, as was the rating for transition impact; the additionality (the Bank's ability to complement, rather than replace, private sources of finance) of the Bank's loan package was *Verified in all respects*; the environmental performance was rated *Good*; and Bank handling was rated *Good*.

TRANSITION IMPACT AND ADDITIONALITY

Transition impact. In assessing the transition impacts, the OPER team focuses on incremental effects that can be ascribed, either directly or indirectly, to the operation at issue, without giving the project credits for impacts of parallel operations and activities or impacts that would have also taken place in the absence of the project (that is, at the counterfactual scenario). Overall, the short-term transition impact of the project is *Good*. The longer-term impact potential is *Good*, with a *Low* risk attached.

Additionality. The additionality of the Bank loan is *Verified in all respects*. The client did not have the credit strength to borrow from international markets on its own balance sheet, even though it was one of the first companies that obtained an international credit rating equal to the country's sovereign rating (BB-). The project was launched one year after the Russian financial crisis, which together with huge country and energy sector risks, severely limited the scope for commercial borrowing on affordable terms. Also, the sheer size of the investment programme rendered commercial financing elusive.

Compliance with the Bank's country strategy and sector policy. The project was consistent with the Bank's Energy Policy, which focuses on improvements in energy supply and efficiency, and complied with the relevant country strategy, which emphasised the Bank's role in supporting private sector investment in the energy supply industry and in the country as a whole.

Environmental impact. The project, which required an environmental analysis, was screened as B/0 by the Environmental Department (EvD). Since the project deals with the upgrading and replacement of existing facilities with modern equipment, it involves no significant environmental risks or hazards. An environmental management plan covenanted under the Bank's loan addressed all concerns raised during project preparation. The client also agreed to carry out the project in compliance with the country's environmental regulations and standards, as well as with European standards.

FINANCIAL PERFORMANCE

Client financial performance. The client's financial performance has been *Good* to date. The company is strongly capitalised, with shareholder equity covering about 72 per cent of the balance

sheet. All assets not related to the core transmission business have been divested. Thanks to regular transmission tariff adjustments approved by AREM, revenues increased in line with costs so that the company's gross margin kept close to 30 per cent in recent years. Also, the gradual decline in the accounts receivable from customers, the writing-off of bad debts and the high cash collection rate have stabilised the company's cash flow on a level that is adequate to meet its financial obligations. By the same token, the DSCR and other financial ratios stayed well above the thresholds covenanted by the Bank. In total, the client has demonstrated its ability to run the transmission business in a profitable way, and the available evidence indicates that the company is on a sound financial footing.

Project profitability for the Bank. Investment performance is rated *Satisfactory*. The project earned enough for the EBRD to cover its full costs and make a contribution to the EBRD's profits; its discounted profit contribution (DPC) works out at 1.43 (no estimate at appraisal).

BANK PERFORMANCE

Project selection and design conformed to the Bank's country and sector strategy, ensured additionality and complied with sound banking principles. The appraisal quality was adequate. The strong focus on network modernisation through replacements with state-of-the-art equipment was justified on technical grounds, but it appears that the project's perceived benefits, notably those stemming from efficiency gains, were overblown. Most of the risks identified at approval have been properly mitigated by the sovereign guarantee and by covenants. The Bank managed to maintain good relationships with all stakeholders, notably with the client and the partner development bank. The sector team took pains to cooperate with the partner bank in all essential areas, ranging from deal structuring to joint project monitoring. Overall, the rating of Bank handling is *Good*.

KEY ISSUES AND LESSONS LEARNED

The completion risks involved in the financing of large-scale investments in the refurbishment and modernisation of a complex infrastructure are difficult to control and mitigate. The co-financing of distinct components that appear to be easily manageable from a procurement and implementation perspective does not reduce the probability of project delays when the project is composed of a variety of inter-related investments. Ring-fencing the co-financed components of a complex investment programme fails to contain completion risks. Reducing the scale of a project may reduce the damage in case of unexpected delays. For the project at issue, however, a piecemeal implementation of the modernisation programme was not advisable because the main perceived benefits of the project depended on the rehabilitation of the entire transmission system.

The EBRD should not overstretch the leverage of sovereign guarantees to prescribe broad sector and policy reforms. The Bank's focus should be on commercial lending to private sector projects with intrinsic transition impacts. The decision to resort to sovereign guarantees should be based on a sound assessment of project benefits and credit risks, but not be driven by the security needs of co-financiers or by the desire to covenant far-reaching policy changes. When recourse is made to sovereign guarantees on the basis of sound banking principles, there is no need to vindicate the lending operation or the co-financing arrangement through sovereign commitments to bold policy changes.

Careful benefit estimates are imperative when the economic and financial viability of large-scale investment operations rests on critical impacts that are difficult to predict and verify. If the case made for a sizeable investment with a large share of sophisticated and particularly expensive components is not convincing on economic and financial grounds, doubts might be cast on the rationale and objectives of the project. Therefore, the Bank should ensure due diligence in

the assessment of the effects that are crucial for the justification of large-scale investment programmes, notably in the case when vast sums are spent on elaborate equipment.