

Program Performance Audit Report

PPA: TAJ 32464
(Final)

Postconflict Infrastructure Program in Tajikistan (Loan 1651-TAJ[SF])

December 2004

Operations Evaluation Department
Asian Development Bank

CURRENCY EQUIVALENTS

	At Appraisal (November 1998)	At Program Completion (December 2000)	At Operations Evaluation (July 2004)
Currency Unit	rouble (TJR)	somoni (TJS)	somoni (TJS)
TJR/TJS	1.00 = \$0.0013	1.00 = \$ 0.4545	1.00 = \$ 0.3325
\$1.00	= TJR781	= TJS 2.20	= TJS 3.01

ABBREVIATIONS

ADB	–	Asian Development Bank
ESAF	–	enhanced structural adjustment facility
ESPS	–	energy sector policy statement
FSU	–	former Soviet Union
GDP	–	gross domestic product
GWh	–	gigawatt-hour
IMF	–	International Monetary Fund
kWh	–	kilowatt-hour
MOE	–	Ministry of Energy
MOT	–	Ministry of Transport
PCR	–	program completion report
PIP	–	public investment program
QFD	–	quasi-fiscal deficit
RRP	–	report and recommendation of the President
SDR	–	special drawing rights
TA	–	technical assistance
TOR	–	terms of reference

NOTES

- (i) The fiscal year (FY) of the Government ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.
- (iii) The local currency was changed from the rouble to the somoni on 30 October 2000.

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Caroline D. Heider, principal evaluation specialist (team leader), was responsible for the preparation of this report. Harry Koller was the international consultant for the power sector, and David Roberts was the international consultant for the transport sector.

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BASIC DATA

Loan 1651-TAJ (SF): Postconflict Infrastructure Program

Project Preparation/Institution Building

TA No.	TA Name	Type	Person-Months	Amount (\$)	Approval Date
3114	Institutional Strengthening of the Transport and Energy Sectors	ADTA	65	1,500,000	10 Dec 1998

Key Program Data (\$ million)	As per ADB Loan Documents	At Completion
Total Program Cost	20.0	19.0
ADB Loan Amount/Utilization	20.0	19.0
(Special Drawing Rights million)	14.2	14.2
ADB Loan Amount/Cancellation	—	—

Key Dates	Expected	Actual
Fact-Finding		13–28 August 1998
Loan Negotiations		11–12 November 1998
Board Approval		10 December 1998
Loan Agreement		27 January 1999
Loan Effectiveness	27 April 1999	8 February 1999
First Tranche Release		11 February 1999
Second Tranche Release		22 December 2000
Loan Closing	31 December 2000	22 December 2000
Program Completion	December 2000	22 December 2000
Months (effectiveness to completion)	20	22

Tranche Releases	Amount		Number of Policy Conditions			
	(\$ million)	(SDR million)	Met	Partly Met	Not Met	Waived
First Tranche Release	9.9	7.1	7	—	—	—
Second Tranche Release	9.1	7.1	4	—	—	3
Non-Tranche Conditions			2	9	5	—
Total			13	9	5	3

Borrower Tajikistan

Executing Agency Office of the President

Mission Data

Type of Mission	No. of Missions	Person-Days
Fact-Finding	1	112
Program Administration		
Review	2	46
Program Completion	1	8
Operations Evaluation	1	21

ADTA = advisory technical assistance, ADB = Asian Development Bank, SDR = special drawing rights, TA = technical assistance.

EXECUTIVE SUMMARY

In 1998, the Republic of Tajikistan emerged from years of civil conflict that had followed independence from the former Soviet Union. Macroeconomic conditions were abysmal, the economy had contracted considerably since 1991, most infrastructure was in poor condition, no institutional or policy reforms had taken place, and poverty levels were high. The international development community had come to Tajikistan's assistance with, among other things, an enhanced structural adjustment facility (ESAF) of the International Monetary Fund (IMF). During the consultative group meeting in May 1998, the Asian Development Bank (ADB) was requested to provide assistance in support of the ESAF. The Postconflict Infrastructure Program (the Program) was developed in response to this request. Fact-finding took place in August 1998, and the loan was approved in December of the same year. The total loan amount was the equivalent of SDR14.2 million (\$20 million). In addition, technical assistance (TA) for \$1.5 million was provided. The loan became effective with the first tranche in February 1999, when all seven conditions for first tranche release had been met. The second tranche release, originally scheduled for the end of 1999, took place in December 2000 when all but three conditions, which were waived, for the second tranche release had been met. The loan was closed in December 2000 and the schedule for meeting the last policy conditions was extended until December 2004.

The Program focused on the energy and transport sectors. Its explicit objective was to promote economic recovery and growth by addressing key constraints to the functioning of the transport and energy sectors by providing support for market-based policies and institutional reforms. An implicit objective was to provide budget support in line with the ESAF. While the Program did not provide direct cash injections into the budget for the two sectors, improved resource allocations to the sectors were intended to address, among other things, the adjustment costs of reforms. Policy reforms were intended to create an enabling environment for market-based service delivery and establish a system for public participation in the reform process. The TA was designed to help the Government undertake the reforms. TA consultants prepared draft legislation and other documentation that the Government adopted. The December 2002 Program Completion Report observed that most of the policy conditions had been met, but did not assess whether the adoption of legislation and decrees had changed the policy and institutional environment to one that enabled market-based service delivery.

This Program Performance Audit Report was prepared to assess the Government's ownership and commitment to the reforms and ADB's role in loan processing and to ascertain whether policy conditions had been met and whether they led to achievement of the Program's stated objectives or purpose and, if so, what impact that had on sector performance.

The program design had several weaknesses. Partly because of the prevailing conditions—travel to Tajikistan was restricted during loan processing due to re-emerging conflicts—and also because of the country's urgent need for financial support, limited time was available for analysis. As a result, two premises for policy reforms in the energy sector were inappropriate: requirements to introduce a competitive power market and competitive pricing for energy services (that is, tariffs at cost-recovery rates). The design also suffered from multiple objectives and an overambitious agenda for institutional reforms. About half of the policy conditions had been implemented and were still in place at the time of evaluation, five conditions (excluding three that had been waived at second tranche release) had not been implemented, and nine had been partly implemented. Laws had been passed and ministries set up, but the latter were underresourced and unable to fulfill the role they were expected to undertake in a market-oriented economy. Some documentation had been prepared and approved to introduce elements of corporatization, such as setting up joint stock companies, but

measures had not been taken to improve corporate governance as required in the program design. In the energy sector, reforms to separate regulatory and operational functions were reversed in 2003, and boards of directors that had been created to oversee the sector's main companies (power, gas, coal, and oil) were replaced by one central board for all companies headed by the minister. In the transport sector, service provision in the road subsector was liberalized and resulted in improvements in urban areas, particularly in relation to public transport in Dushanbe, but the corporatization of other transport service providers is still a long way off. Tariff increases were introduced in the energy sector, but at a far slower pace and not to the level required, while in the transport sector, the ministry still prescribes minimum tariffs.

The TA was instrumental in driving the reform process and preparing required documentation. However, its resources were overstretched and unable to induce the commitment and spirit necessary for attaining actual institutional and policy reforms. The TA consultants performed well, but given the overambitious agenda, the TA was rated as partly successful.

The reforms have not resulted in an enabling environment for market-based service provision in the two sectors, as constraints still hinder new private entrants from operating in these sectors, nor have resource flows to the sectors increased. Allocations in public investment programs increased considerably, but were not implemented according to plan, which means that expected and much needed investments in infrastructure have not materialized. The absence of such investments has meant that sector productivity and service delivery have not improved. Resource allocations, measured in terms of the quasi-fiscal deficit in the energy sector, have become more efficient in the gas sector (as demanded by IMF), but less so in the electricity sector, where considerable improvements are still required. Improvements in the country's economic performance, while the goal of the Program, cannot be attributed to the performance of the energy or transport sector or to the Program. The Program was relevant in that it met the objectives of the Government and of the IMF at the time; however, some of the policy prescriptions were not appropriate to the country context. The Program was less efficacious in meeting its objectives and purpose, and whether the direction of reforms started under the Program will be sustained remains to be seen. The Program is rated as partly successful.

It is not clear that ADB has the appropriate lending modalities to respond to situations faced by the mission processing this Program. Tajikistan needed rapidly processed, quick disbursing assistance to support the ESAF. To be successful, program loans need to be preceded by careful sector analysis to develop a carefully thought out, government-owned development agenda. In the circumstances prevailing at the time, this was not possible. Revisions to ADB's Disaster and Emergency Assistance Policy in 2004 now provide an alternative intervention mode in post-conflict conditions. However, it is not clear that this would be the correct modality in these prevailing circumstances. Perhaps ADB should consider expanding the new Special Program Lending modality without such stringent hardening of the loan conditions to Asian Development Fund developing member countries. Essentially ADB would provide quick disbursing assistance that would support an ESAF without adding new conditionalities. As the IMF led macroeconomic stabilizations measures take hold, ADB could devote the necessary time and resources to more carefully prepare a subsequent program loan or sector development program.

Key issues for the future development of the sectors include a critical assessment of the extent of infrastructure that the economy can afford. Current facilities were developed during the time of the former Soviet Union and were based on a much higher gross domestic product. Capital and recurrent costs need careful reevaluation against potentials for revenue generation prior to making choices about rehabilitation, closing existing facilities, or undertaking new

investments. The sector policies developed under the Program require review to determine Government commitment to the reform agenda and to revisit policy prescriptions, particularly in the energy sector (notably, the competitive power market and competitive pricing). Capacities for sector management remain weak and will require medium-term development assistance to ensure that organizations and institutions can fulfill their roles in a market-based economy. ADB's ongoing assistance to both sectors is addressing some of these key issues.

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I. BACKGROUND

A. Rationale

1. The Postconflict Infrastructure Program (the Program) for Tajikistan was formulated in 1998 after a peace agreement had been signed to end the civil conflict that followed Tajikistan's independence from the former Soviet Union (FSU) in 1991.¹ The civil conflict resulted in macroeconomic instability (Appendix 1 provides key macroeconomic indicators), major contraction of the economy and high levels of poverty, and delays in implementing structural reforms that many other FSU countries had commenced by the time Tajikistan's conflict ended. By 1998, the Government had embarked on a number of reform programs with the assistance of bilateral agencies and international finance institutions, including an enhanced structural adjustment facility (ESAF) provided by the International Monetary Fund (IMF).² In a relatively short time, the country had received a total of \$453.9 million from six multilateral agencies, three bilateral agencies, and one nongovernment organization. The largest portion of funds (37%) had been provided as balance-of-payments support, and 19% was intended for rehabilitation and reconstruction purposes. External assistance had focused largely on sectors other than the energy and transport sectors, which had received \$14.3 million (3% of total external assistance) prior to the Asian Development Bank's (ADB's) involvement.

2. The transport sector comprised road, rail, and civil aviation networks that had been developed by the FSU and linked Tajikistan to neighboring countries, but provided a less efficient domestic network. Distances from Tajikistan to international markets are extremely long, adding high transport costs to international trade. The road transport system was the most developed and transported 82% of freight and 98% of passengers in 1997. The rail system consists of three unconnected lines and was (and still is) linked to that of the FSU, rather than constituting an internal network. However, road and rail traffic declined significantly between 1990 and 1997 because of economic contraction and civil unrest. At the time of loan processing, the air transport infrastructure was considered well developed, with 13 airports, although of the 42 operating airplanes many were considered obsolete and in breach of international standards. The energy sector comprised hydropower generation (not fully tapped) and a transmission network that was integrated with other FSU countries, but not with a unified national grid. Hydroelectric power produced in Tajikistan accounted for 82% of the total primary energy supply in 1997 and was also exported to Uzbekistan. Remaining domestic needs were met with oil and gas imports. The cost of energy imports outweighed exports, which had "a significant negative impact on the balance of payments" (Report and Recommendation of the President [RRP], Appendix 3, para. 22). Output and consumption had declined drastically between 1991 and 1997. The infrastructure of the two sectors had suffered physical deterioration or destruction because of the civil conflict, the impact of natural disasters, and the lack of maintenance. In addition, the RRP identified a number of other weaknesses from which the sectors suffered, namely: (i) poor governance, including policy and institutional constraints; (ii) legal impediments to free market operations, including pricing policies; (iii) weak capacities for sector management, including for sector analyses, policy formulation, and regulation caused by the fragmentation of organizations, unclear responsibilities, and lack of qualified personnel; (iv) poor performance of state-owned enterprises; and (v) lack of resources to fund even basic operations and maintenance costs.

¹ Asian Development Bank. 1998. Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Republic of Tajikistan for the Postconflict Infrastructure Program. Manila.

² IMF. 1998. Enhanced Structural Adjustment Facility—Policy Framework Paper, 1998–2001. Washington, DC.

3. Improvements in these sectors were seen as an essential part of the overall strategy to promote economic growth and private sector development. The Government's objectives were "to establish infrastructure systems that are efficient, provide the services the nation needs and can afford, are responsive to changes in economic conditions and meet the needs of the country as a whole, through the efficient allocation of scarce resources" (Development Policy Letter, RRP, Appendix 5). Sector-specific goals included ensuring an adequate power supply throughout the year and developing an efficient transport industry with the involvement of the private sector. ADB's strategy aimed "to facilitate the country's transition to a market economy, assist in postconflict rehabilitation and construction efforts, and provide support for natural disaster prevention" (RRP, para. 50) and at "promoting economic growth by removing policy, institutional, and financing impediments to the delivery of efficient services" (RRP, para. 51).

B. Formulation

4. The need for assistance and initial commitment to lending to Tajikistan were expressed during the consultative group meeting of development partners on Tajikistan in May 1998. Tajikistan became a member country of ADB the same year. The loan, the first that ADB provided to Tajikistan, was processed in parallel with the preparation of the country Economic Report and Interim Operational Strategy.³ The ESAF (para. 1) provided "the framework for the implementation of sector reforms and the removal of infrastructure constraints,"⁴ and thus formed the backdrop to the formulation of the Program (para. 16).

5. The loan was formulated during a fact-finding mission in August 1998. To expedite loan processing and to ensure ADB's engagement in the policy dialogue with the Government, the mission consisted of six staff and one international consultant rather than using preparatory technical assistance (TA) or a larger number of consultants. The team was in Tajikistan for a total of 112 person-days. An appraisal mission was waived to further expedite loan processing. Two staff consultants were appointed to help the Government meet the conditions for loan approval and first tranche release. The loan was approved on 10 December 1998.

C. Objectives and Scope

6. The objective of the Program was

to promote economic recovery and growth by addressing key constraints to the functioning of the transport and energy sectors through support for market-based policies and institutional reforms. The Program will assist the Government in (i) creating an enabling framework for the delivery of market-based transport and energy services; (ii) improving management efficiency of transport and energy sectors by restructuring key institutions; (iii) separating regulatory and operational functions of the transport and energy sectors; (iv) improving corporate governance; (v) implementing market-pricing and user pay principles to improve cost recovery; (vi) promoting competition; and (vii) establishing systems for public participation in, and to address adjacent costs of, the reform process (RRP, para. 56).

³ ADB. 1998. Economic Report and Interim Operational Strategy for Tajikistan. Manila.

⁴ ADB. 1998. TAJ: Proposed Postconflict Infrastructure Program Loan. Manila (Back-to-Office Report of the Fact-Finding Mission, para. 2).

These objectives were identical to those stated in the Government's development policy letter (para. 3). The Program had a total of 30 loan conditions, of which 7 had to be met before loan approval and first tranche release and 7 had to be met for second tranche release by the end of 1999 (para. 22). Implicit objectives of supporting the ESAF, i.e., providing budget support with a quick-disbursing loan, were not an explicit part of the program objective as stated in the RRP, but underpinned the program design (para. 4).

7. Attached to the Program was an "advisory TA for institutional strengthening of the transport and energy sectors and to assist in implementing the Program's medium-term reforms" (RRP, para. 78).⁵ The TA's scope was almost identical to that of the Program, with the only addition being the preparation of performance indicators. The TA planned to provide 45 person-months of international consultant services and 20 person-months of domestic consultant services and was budgeted for \$1.5 million.

D. Cost, Financing, and Implementation Arrangements

8. The RRP estimated that the cost of reforms in the two sectors would amount to \$50 million and that rehabilitating infrastructure would cost \$900 million. The loan amount was SDR14.2 million (\$20 million equivalent at the time of loan processing), to be disbursed in two equal tranche releases of \$10 million equivalent. The RRP described areas in which reform measures would be associated with costs, such as social mitigation measures, but without providing estimates that clarified or justified total costs. The absence of such information made it impossible to assess whether the loan amount was appropriate for meeting adjustment costs. The loan size was partly determined by the availability of ADB resources. Since Tajikistan only joined ADB in 1998, no scarce ADF resources had been earmarked for it. Approval of the loan required identifying uncommitted resources to finance the Program.

9. The RRP stated that "counterpart funds to be generated from the proceeds of the loan will be used to support the implementation of the Program, including adjustment costs and mitigation measures for social impacts, and to finance the most urgent rehabilitation needs of the transport and energy sectors" (RRP, para. 74). This statement implied earmarking funding for specific sectors and investments, which was not in line with the typical program lending modality whereby funding was linked to policy reforms rather than investments in physical infrastructure. The policy reform matrix required that public investment programs (PIPs) be prepared for the power and transport sectors and that an action plan be developed to address social costs. However, these actions did not require specific resource commitments in terms of amounts to be allocated or mechanisms to ensure that resources would be made available for the stated purposes. These expectations were unrealistic (para. 17) and eventually did not materialize (para. 32).

10. The Office of the President was the executing agency for the program loan. A steering committee was foreseen that would oversee implementation of the Program; monitor progress; and report quarterly on progress, problems, and remedial actions. In addition, a program implementation unit was to be "established to facilitate the implementation of the reforms with the assistance of the advisory TA" (RRP, para. 72).

⁵ ADB. 1998. Institutional Strengthening of the Transport and Energy Sectors. Manila.

E. Completion and Self-Evaluation

11. The program completion report (PCR) was circulated in December 2002.⁶ The PCR Mission had taken place in August of the same year, and a number of covenants were still to be accomplished after the mission was completed. The PCR reported a number of achievements. In support of creating an enabling environment, legislation, charters for key institutions, and resolutions to implement laws had been prepared. A number of organizations had been restructured, some progress had been made in separating regulatory and operational responsibilities, and oversight bodies had been set up for some of the state-owned enterprises as a first step toward improving corporate governance. Moves toward achieving greater cost recovery were also reported.

12. Key problems mentioned in the PCR were in the areas of full cost recovery for electricity supply and a reduction in the accounts receivable of the power company Barki Tajik and of the natural gas utility Tajik Gas, which had been separated from Tajikkommunservice, a provider of municipal services. The PCR acknowledged that the Program's targets were overly ambitious and that performance was adversely affected by external factors, such as the Russian financial crisis, the decline in world prices of cotton and aluminum, two of Tajikistan's major export commodities; and the hikes in domestic prices of petroleum and bread. The PCR found the Program to be relevant, effective, efficient, and sustainable (provided that continuous assistance was given to the sectors), but unrealistic conditions necessitated waiving some conditions and extending deadlines for compliance with others and resulted in shortfalls against expected outcomes. Therefore the PCR rated the Program as partly successful.

13. The PCR reported on the policy reforms that were implemented through the TA (footnote 5), but did not provide details whether the objective of increasing budget allocations to the target sectors (para. 9) had been achieved. The PCR reported on outputs that had been produced, but without assessing their content or quality and without providing information on the effects of the outputs. For instance, the procedure for licensing activity and services in power engineering was adopted, and thus the policy condition was met. The PCR stated that all legal and physical entities involved in providing power services require a license issued by the Ministry of Energy (MOE). The document did not detail a procedure for obtaining licenses or describe what license conditions had to be met, and therefore did not establish whether a material change in line with the intended reform agenda had occurred.

F. Operations Evaluation

14. The evaluation aims to assess the Program's relevance, efficacy, efficiency, and sustainability along with its institutional and other development impacts. The evaluation (i) assessed Government ownership and the role of IMF and ADB in determining the Program's design and targets; (ii) evaluated whether ADB had exercised due diligence in reviewing the IMF conditions that also underpinned the Program and how ADB exercised its oversight function related to outputs (draft legislation, decrees, action plans, etc.) that were to be acceptable to ADB; (iii) verified whether program conditions were met and evaluated whether meeting policy conditions resulted in attaining stated policy objectives, whether structural and policy changes remained in place, and what impact these changes had; (iv) assessed development outcomes as specified in the program framework, determining performance indicators as necessary

⁶ ADB. 2002. Program Completion Report on the Postconflict Infrastructure Program Loan (Loan 1651-TAJ[SF]) to the Republic of Tajikistan. Manila.

(Appendix 2);⁷ and (v) reviewed the poverty impact assessment and verified poverty reduction outcomes to the extent possible.

15. The Operations Evaluation Mission (OEM) visited Tajikistan from 22–29 July 2004 and met with stakeholders from central and line agencies, other pertinent entities, and development partners. The draft Program Performance Audit Report was circulated to the Government and within ADB, and comments were taken into account in its finalization.⁸

II. PLANNING AND IMPLEMENTATION PERFORMANCE

A. Effectiveness of Design

16. The program loan was intended to fill the first-year financing gap in the IMF ESAF (para. 4) and to help reduce the financing gap in the second and third years of ESAF implementation (ESAF document [footnote 2], para. 39). The Program supported policy prescriptions related to the energy sector set out in the ESAF policy framework, in particular, tariffs (full cost recovery for industrial and household users of energy supply by the end of 2000) and the reduction in accounts receivable. Given this commitment to ESAF targets, relevant program conditions were adopted without the RRP presenting an analysis of the likelihood of attaining them and of potential risks, especially the impact on the poor (para. 20).⁹ Moreover, the ESAF schedule required rapid loan processing, which was attained (para. 5), and a modality that allowed quick disbursements, which was the reason for choosing the program loan modality (para. 19).

1. Appropriateness for Sector Requirements

17. A positive feature of the program design was the integrated coverage of policy and institutional reforms, including corporatization and commercialization, financial management and accounting, and legal and regulatory frameworks, to address a broad range of interrelated issues as the first step in a longer-term reform process. The design was in line with the Government's development strategy as agreed with IMF at the time. The Program was consistent with sector needs to the extent that reforming policies and institutions was seen as a precondition for investing in infrastructure rehabilitation. Postponing the latter was also due to continued unrest, i.e., the high risk to rehabilitation works, and the time required for processing project loans. At the same time, infrastructure improvements were (and still are) essential for achieving sector performance targets.

⁷ The analysis of the framework discusses weaknesses in the choice and specificity of indicators used in the program framework and determines a number of indicators that the Operations Evaluation Mission used in assessing the outcome.

⁸ Copies of the draft PPAR, translated to Russian, were forwarded to the Borrower and Executing Agency on 17 September 2004 with a request that comments be provided within two weeks. The deadline was further extended, upon request of the Government, until 20 October 2004. Although the request was followed up subsequently, no comments were received.

⁹ At the time, per capita gross domestic product (GDP) per month equaled \$14.80, including the contribution of the aluminum smelter TADAZ, to GDP, without which it would have been significantly lower. The monthly electricity bill for average consumption of 150 kilowatt-hours per month at the existing tariff of \$0.015 per kilowatt-hour was \$2.25, or 15% of the average monthly GDP per capita, which was untenable and unrealistic (and explains the low collection ratios). If IMF's average monthly wage data were applied, the situation is even worse: the average electricity bill exceeded the average agriculture wage of \$2 per month and was 17% of the average monthly wage of a construction worker and 11% of an industrial worker. This analysis is conservative, and the real situation was probably much worse given that the World Bank estimated that 80% of the population was unable to adequately cover their basic needs. While not optimal (e.g., using household income and disaggregated data for rural and urban households would have been preferable) the existing data permitted assessing the feasibility of proposed reforms, but the RRP did not do so.

18. The design of the energy sector reforms had two fundamental flaws (discussed in greater detail in Appendix 3), which originated in inadequate analysis or understanding of existing data and a fallback on recommendations that were theoretically valid, but technically inappropriate to Tajikistan's circumstances. The concept of competition in the energy sector was not well supported in that fundamental conditions to achieve such competition were not met. The number of buyers and sellers is restricted by the technical features of cascading hydropower generation and the lack of an integrated national grid. Moreover even under more favorable conditions it would take several years to develop the appropriate institutional capacity, far longer than perceived under the program loan period. Similarly, an overly ambitious attempt was made to deregulate the energy sector, something that at the time had only been tried and tested in one country and that would leave already vulnerable consumers even more exposed. Targeted tariff increases were unrealistic, and it appears that existing data were not used to assess how feasible they were. Instead, IMF ESAF prescriptions were adopted, rather than reassessed (see footnote 9). In the transport sector, the program design was based on the Transport Sector Policy Statement, which covered a wide range of policy, institutional, and legislative reforms designed to create a competitive transport sector. While consistent with that policy objective, the design was overly ambitious in expecting that all the foreseen reforms would be accomplished during the program period.

2. Policies for Postconflict Assistance

19. Postconflict conditions that existed in Tajikistan were not covered under ADB policies for this type of assistance.¹⁰ The country was in a volatile situation—potentially at risk of relapsing into civil conflict—and in need of financial assistance to stabilize the economy. However, Tajikistan was not ready to receive physical rehabilitation assistance despite the intent to increase resource allocations for rehabilitation (para. 9), because many geographical areas were inaccessible due to continued unrest. The program loan modality met needs in terms of rapid loan processing and providing quick-disbursing funds (para. 16), but the short duration of loan processing combined with the lack of experience in the country and the circumstances prevailing at the time did not allow undertaking the requisite analyses. Policies on program lending required that assistance aim at enhancing sector efficiency and performance and that a comprehensive sector analysis be undertaken during the preparation of program loans.¹¹ For the energy sector, adequate data were collected and presented in Appendix 3 of the RRP, but these data were not sufficiently analyzed, as illustrated in the discussion of design flaws (para. 18 and Appendix 3). In the transport sector, the analysis of the Government's commitment to undertaking the required reforms, particularly in the area of corporatization and privatization of a number of transport service providers, was insufficient to predict and manage the subsequent reluctance to deliver against these targets. Without a transport ministry in place, establishing the commitment to consolidating line functions in one agency and to undertaking subsequent reforms was difficult. Moreover, it was assumed that merging all modes of transport under one ministry would lead to efficiency gains without assessing the effects on decisionmaking.

¹⁰ ADB's policy on rehabilitation assistance after disasters (ADB. 1997. Operations Manual, Bank Policies, Section 25: Rehabilitation Assistance after Disasters. Manila.) was applicable to postconflict situations, but focused on restoring damaged infrastructure and relatively simple repair works rather than on policy reforms. The 1989 paper (ADB. 1989. Rehabilitation Assistance After Disasters. Manila.), on which the Operations Manual was based, stated that "any program lending for the purpose of dealing with disasters ... would have to be under the revised program lending policy" (para. 15).

¹¹ ADB. 1997. Operations Manual, Bank Policies, Section 6: Program Lending. Manila.

3. Quality of Design Documentation

20. The program design was specified in the main text of the RRP, the program framework, the policy reform matrix, and the poverty impact assessment matrix. The stated objective in the main text of the RRP was repetitive in that item (i) encompassed other aspects listed after it (para. 6). In addition, the text in these documents was not entirely consistent, in that the stated objective in the RRP was not identical to the purpose statement in the framework. An analysis of the program framework (Appendix 2) shows (i) overlaps between outputs and objectives rather than logical linkages; (ii) weaknesses in the choice and definition of performance indicators (some of which could have been derived from the sector policy statements), a general absence of baseline information, and only broadly stated targets;¹² and (iii) insufficient analysis of risk factors (as acknowledged in the PCR) and of delays in reform areas central to the program design.¹³ The objectives stated in the policy reform matrix (Appendix 4) were incorporated in the program framework as outputs, with some changes to the wording and reduced detail. There was no link between the program framework, which hardly touched upon poverty impacts, and the poverty impact assessment (Appendix 6 of the RRP). This assessment was not based on actual figures, as the requisite information, e.g., number of jobs that would be lost during restructuring and/or corporatization, was not available. However, an analysis of the impact of tariffs (at 1998 levels and after suggested increases) on household incomes could have been carried out, as demonstrated in footnote 9, to determine what percentage of disposable income was required to pay for electricity consumption.

4. Implementation Schedule

21. The loan became effective on 8 February 1999, about 2 months ahead of schedule. The implementation schedule for the reform agenda was overly ambitious. The original program period required that all policy conditions were to be accomplished by the end of 2000. The second tranche release was dependent on the fulfillment of seven conditions and was scheduled for the end of 1999, but was delayed until the end of 2000.¹⁴ The Progress Report for the release of the second tranche indicated shortfalls in complying with three conditions because of “unprecedented economic hardship” (Progress Report, para. 24),¹⁵ as the Program was being implemented at the time when the peace process was under way. The three conditions that had not been met were the same as those later highlighted in the PCR (para. 12). Reportedly, 10 of the 19 nontranche conditions had not been undertaken either.¹⁶ However, the Progress Report recommended (i) waiving full compliance with the 3 outstanding conditions as a requirement for releasing the second tranche, and (ii) extending the deadline for complying

¹² For instance, improvements in efficiency were assumed to result from restructuring, but no institutional performance indicators were developed for that purpose. Equally, no performance indicators for sector performance, such as outages in power supply or duration of travel, were provided that would indicate shortfalls in performance and how they would be improved.

¹³ No analysis was provided of the national budget or of the Government’s commitment to allocating resources to reforms, infrastructure improvements, or mitigation measures. The RRP reflected on weaknesses in the reform processes, in particular privatization efforts, but these details and information about price liberalization, available in the IMF country report at the time (IMF. 1998. Republic of Tajikistan: Recent Economic Developments. Staff Country Report No. 98/16. Washington, DC.) were not analyzed to assess whether and how past performance in implementing reforms would affect the Government’s ability to meet policy conditions under this Program.

¹⁴ IMF reports did not permit discerning how ADB funding contributed to ESAF implementation and whether or how the delay in releasing the second tranche affected ESAF implementation (para. 16). In later reports, IMF reported the Program as a sector reform program without mentioning its role in funding the ESAF.

¹⁵ ADB. 2000. Postconflict Infrastructure Program. Progress Report: Release of Second Tranche. Manila. (Loan No. 1651-TAJ[SF]).

¹⁶ The Program had a total of 27 conditions, of which 7 had been met for first tranche release (para. 22). The number of noncore conditions mentioned in the Progress Report is inaccurate.

with the 3 outstanding tranche release conditions and 10 outstanding noncore activities. The recommendation was approved and the second tranche was released in December 2000, but completion of all conditions was extended until December 2004.¹⁷ No extension of the loan was required.

B. Policy Reform Measures

22. In summary, of the 27 loan conditions, 13 were complied with and 5 were not, excluding the 3 that had been waived. Nine were partly complied with or information on the current status was insufficient to assess full compliance. Appendix 4 provides a detailed review of the implementation of each condition.

1. Energy Sector

23. In the energy sector, the Government did make reasonable progress in implementing policy reform measures for each program component, although almost all target dates had to be revised. MOE was established in 2000 but, not surprisingly, it was a weak institution because of the lack of resources allocated to it and the resultant staff shortages. The separation of operational and regulatory functions improved with the Ministry for Finance setting the level of budgeted expenditures for state-owned enterprises and the State Antimonopoly Committee regulating tariff levels to achieve revenue levels foreseen in the budget. The revised Energy Law was passed in October 2000, and the Government exceeded policy conditions by passing a new law on energy conservation.

24. In 2001, the Government separated Tajik Gas from Tajikkommunservice (para. 12) and separated 24 noncore enterprises from the power company, Barki Tajik, establishing them as Government-owned joint stock companies. Revised charters were adopted for the electricity, gas, coal, and oil companies. While based on the Joint Stock Company Law, they were of limited value, because the charters were not accompanied by improvements in corporate governance or steps to move toward corporatization. Whatever little progress had been made toward improved corporate governance was reversed in 2003, when the Government decided to reabsorb the electricity, gas, coal, and oil companies into MOE and to abolish the boards of the companies. Instead, a single board chaired by the minister of energy and consisting of the minister's five deputies and the head of the trade unions runs all the companies. In some cases, separate divisions to handle such issues as strategic planning had existed in Barki Tajik and MOE, but these have now been merged as well. MOE recently submitted a power sector reform plan to the President's Office, which formalizes these arrangements. The plan was endorsed by the Government in September 2004.

25. The Government has complied partially with the requirement to introduce higher tariffs for electricity and gas, which were adjusted again as recently as mid-2003. However, the energy state-owned enterprises have been unable to comply with targets for accounts receivable. Residential consumers cope with increasing tariffs by withholding payments, either because they are unwilling to pay for services that have not improved or because they cannot afford current tariff levels. Lifeline tariffs were introduced as a social mitigation measure in 1999, but these are now being phased out with the introduction of an energy compensation fund in the national budget that more specifically targets poorer households. Accounts receivable are highest for the irrigation sector (which uses pumped irrigation systems), with the collection rate

¹⁷ The condition to be met by December 2004 was to increase electricity prices to achieve 100% cost recovery for residential consumers. All other conditions not met at second tranche release were to be accomplished by September 2003 at the latest.

being as low as 15%. The collection rate is 65% for residential consumers. The largest consumer, the aluminum smelter TADAZ, is current with its payments at the time of the OEM.

2. Transport Sector

26. In the transport sector, the Government complied with policy conditions in terms of adopting requisite legislation and setting up the Ministry of Transport (MOT). However, the latter had similar problems as MOE, lacking human and financial resources and requiring, but not receiving, assistance to define its role and responsibilities and develop operating procedures. The aviation subsector was subsumed under the overall responsibility of MOT, but initiatives were under way to formalize a separation of this subsector from MOT, which occurred earlier this year.¹⁸ The implementation of the action plan, developed under the TA (footnote 5), to guide sweeping sector reforms largely stalled due to the lack of further TA.¹⁹ The corporatization of key entities—Tajik Air and Tajik Rail—has been slow, and only limited divestiture of core businesses has taken place.²⁰ However, progress was made in corporatizing transport service industries, in a first step by establishing joint stock companies with partial or complete private sector participation. Some road construction companies were also corporatized, but limited progress has been made in this area and that of road maintenance. MOT is reviewing Kazakhstan's experience, and further ADB TA (footnote 19) is intended to help increase corporatization and privatization; however, the Inception Report of the TA consultants was critical about the capacities of potential contractors and of MOT's ability to evaluate bids, award contracts, and supervise and monitor contract implementation. The Ministry of Finance, at the insistence of IMF to consolidate the national budget, abolished the road fund. Subsequent ADB loans aim to secure maintenance funding through loan covenants. The direction of tariffs for transport services could not be determined in the absence of baseline data, i.e., information about the fare structure at the start of the Program which also was not available to the OEM, and other user pay principles, such as road tolls, are being considered only to a limited extent.

C. Program Management

1. Program

27. The Government undertook a number of requisite reforms. The TA consultants reported good working relationships, during which draft working papers were translated into Russian and discussed with staff of Government agencies. However, the number of conditions not met (para. 22), the dependence on TA consultants for undertaking reform measures, and the absence of actual implementation were indicative of somewhat limited Government commitment and capacities at the line ministry level.

28. ADB undertook two program review missions (a total of 46 person-days) and monitored the implementation of the TA. Detailed comments were provided on consultants' reports, which included draft laws, regulations, restructuring proposals, and so on, as foreseen in their terms of reference (TOR). In providing feedback on these documents, ADB verified that proposals were acceptable to ADB (as stated in the policy reform matrix). Advice by the TA consultants about overambitious targets resulted in directing consultants to work on issues that were essential to

¹⁸ ADB's involvement in the aviation subsector ceased shortly after program implementation started and as it became clear that the European Bank for Reconstruction and Development was active in the subsector.

¹⁹ ADB. 2000. Technical Assistance for Institutional and Policy Support in the Road Sector. Manila. The TA was approved in 2000, but became operational only in April 2004 because of contracting problems.

²⁰ Since completion of the program loan, ADB assistance focused on the road transport sector, with limited regional TA provided to the rail sector.

meet tranche release conditions; in reallocating resources by reducing person-months in areas such as commercialization and corporatization and extending the time of the specialist on energy institutions, the commercial/financial experts, and the team leader; and in rescheduling activities. While these changes were necessary to match the TOR and available resources, they also affected the extent to which program objectives could be met.

2. Technical Assistance

29. The TA was implemented between June 1999 and August 2000. Logistics affected the start-up of the work of the consultants' team, and a number of team members were changed during the course of the TA implementation. The Inception Report provided a thorough analysis and clarification of the TOR and the tasks that needed to be carried out and assessments of the sequencing of and time allowed for tasks and the realism of the proposed objectives and outputs.²¹ While most of the tasks in the TOR required producing outputs (rather than developing local capacities), the Inception Report recognized areas in which consensus building was essential to ensure that reforms actually took place (rather than just on paper) and other areas in which competencies needed to be developed in Tajik agencies. The final TA report—three heavy volumes—was so detailed that whether even a translated version was read and fully understood is uncertain. The translated version was nowhere in evidence during the OEM, and even the sector policy statement for transport was not well known at, or owned by, MOT. The detailed action plans were taken up in follow-up loans and TAs (para. 41). For the energy sector back-to-office report of review mission (September 2004) indicates some measures are being implemented while progress is still awaited on others. Various actions in the transport sector are indicated as being under way (Project Performance Report, November 2004).

III. ACHIEVEMENT OF PROGRAM PURPOSE

A. Performance Indicators

30. The objective stated in the main text of the RRP (para. 6) became the goal in the program framework (RRP, Appendix 1), which adopted the following purpose statement: "Improve resource allocation and removal of key constraints to the delivery of transport and energy services." The RRP did not include performance indicators or baseline data corresponding to this purpose statement. To assess performance, the OEM reviewed the resource allocations in PIPs, the efficiency of resource allocations, and the removal of key constraints (which were not further specified in the RRP) in terms of hindrances to securing funding (public or private, domestic or foreign) for the two sectors.

1. Resource Allocations

31. A comparison of total aid commitments for 1998–2000 with those for the subsequent PIP for 2001–2003 shows a clear trend toward increased budget allocations to the energy sector (from zero to \$81.0 million) and the transport sector (from \$9.7 million to \$66.9 million). These trends continued in the most recent PIP for 2004–2006, where the energy sector was expected to receive 30% of total funding and the transport sector was to receive 15%.²² However, since the 2004–2006 PIP was tabled in 2003, aid agencies expressed greater interest in funding

²¹ ADB. 1998. Institutional Strengthening of the Transport and Energy Sectors. Manila. Inception Report.

²² Government of Tajikistan. 2003. Public Investment Program and Technical Assistance Needs, 2004–2006. Dushanbe. The data in this PIP do not tally with data in the previous PIP, where a much higher allocation was made to the energy sector and may have been revised to match implementation.

projects in the social sectors in line with Tajikistan's poverty reduction strategy, which will affect allocations to the energy and transport sectors.

32. In terms of PIP implementation, the 1998–2000 PIP had a funding shortfall of 63% and only half of the originally programmed projects were financed.²³ Between 1998 and 2000, 27% of total funding went to the transport sector and 20% to the energy sector. Resources for the transport sector were spread over three years (\$10.0 million in 1998, \$5.5 million in 1999, and \$51.5 million in 2000), while for the energy sector resources increased from zero in 1998 to \$49.3 million in 2000.²⁴ The implementation of the 2001–2003 PIP showed that the bulk of expenditure was expected to take place in 2003, and if implemented according to plan, the energy sector would have received 25% of PIP funds and the transport sector would have received 24% by the end of 2003. However, actual expenditures in 2001 and 2002 together were \$2.5 million for the energy sector and \$6.0 million for the transport sector, or 5% and 12% of total expenditure for these two years, respectively, for each sector.

33. PIP allocations and implementation did not reflect the timing of tranche releases, which indicates that loan disbursements did not trigger additional resource allocations to the energy and transport sectors. The delay in the second tranche release did not have any effect.

2. Efficiency of Resource Allocations

34. The efficiency of resource allocation in the economy improved with the reduction in the quasi-fiscal deficit (QFD) of the electricity sector. The QFD measures the impact of the implicit subsidies that the economy has to bear as a proportion of gross domestic product (GDP).

35. The QFD arises from Barki Tajik's operational inefficiencies in relation to its efficiency in technical areas, billing, and collections and the difference between average tariffs and long-run marginal costs.²⁵ Table 1 compares the QFD in the power sector in 1999 and 2002. Given the rise in electricity tariffs (in local currency), and despite the growth in arrears, the QFD for electricity has shown a positive trend, i.e., was reduced from 27% of GDP in 1999 to 21% in 2002, largely due to the increase in GDP. QFD dropped even though average electricity prices fell from an average of \$0.78 per kilowatt-hour (kWh) in 1999 to \$0.50 per kWh in 2002 because of the large devaluation of the somoni. Prices were further increased 2.3 times in January 2003. However, a QFD of 21% cannot be sustained and further corrective actions are required to bring it to a desirable level of less than 1%. In the gas sector, the QFD was reduced as tariffs were increased initially in response to ADB's requirements. The pressure for tariff increases and reductions in account receivables was continued under the IMF's 3-year poverty reduction and growth facility. According to IMF, the QFD in the gas sector declined to 1.2% of GDP by the end

²³ Only \$242.3 million of the total budgeted amount of \$658.7 million was provided. While half of the projects were cancelled, 14 new projects were added that were not originally foreseen in the PIP. This illustrates how indicative PIP allocations are.

²⁴ These figures were derived from the 2001–2003 PIP, in which the expenditures for 2000 were estimates, whereas the 2004–2006 PIP reported that during 1998–2000 no funds had been spent on the energy sector.

²⁵ Considerable debate surrounded the estimate of long-run marginal costs for the power sector of \$0.021 per kilowatt-hour. This estimate, prepared by the World Bank, was considerably higher than the estimates prepared by the TA consultants and the preliminary estimate of \$0.015 per kilowatt-hour in the RRP. The Government has never accepted either the World Bank's or the TA consultants' estimates, which it regards as too high and based on an excessive estimate of the replacement costs of the power system. The TA consultants estimated the total replacement costs of the power system as \$4.8 billion, while the Government prepared a counterestimate of \$2.0 billion (base year 1999). What is important is the QFD trend and not the absolute value of the long-run marginal cost estimate.

of June 2003, which compares well with 3.2% at the end of 2002.²⁶ A further reduction below 1% of GDP is expected with improvements in the efficiency of billing and collections.

Table 1: Quasi-Fiscal Deficit in the Power Sector, 1999 and 2002

Item	Unit	1999		2002	
		Actual	Economic ^a	Actual	Economic ^a
Net Generation plus Imports	Gigawatt-hours	15,067	15,067	16,016	16,016
Technical and Billing Efficiency	Percent	81	90	81	90
Collection Efficiency	Percent	50	98	71	98
Electricity Price per kWh	US cents	0.78	2.10	0.50	2.10
Electricity Revenue Realized	\$ million	34.8	278.2	46.2	296.7
QFD	\$ million	243.4		250.5	
GDP	\$ million	900		1,193	
QFD as a Percentage of GDP	Percent	27		21	

GDP = gross domestic product, QFD = quasi-fiscal deficit, kWh = kilowatt-hour.

^a Economic values are based on a calculation of revenues at long-run marginal cost tariffs.

Sources: ADB. 1998. Institutional Strengthening of the Transport and Energy Sectors. Manila. Final Report. IMF. 2004. Second Review Under the 3-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for a Waiver of a Performance Criterion. Country Report No. 04/17. Washington, DC; World Bank. 2004. Tajikistan Energy Utility Reform Review (draft). Washington, DC.

3. Key Constraints

36. According to the RRP, the key element for removing the major constraints to service delivery was to address the financing constraints hindering the rehabilitation of basic infrastructure. Apparently the Program assumed that removing the constraints presented by an inadequate policy framework, poor separation of regulation and commercial functions, and inadequate revenues would facilitate channeling finance into infrastructure investments, which would eventually lead to improved sector efficiency.

37. Revised legislation, in particular the foreign investment and sector laws, was expected to remove or reduce constraints to the entrance of private sector operators, and thus mobilize funding. However, the range of formal constraints to market entry or exit remains difficult, with more than 17 licences required, and the banking system is inadequate to meet the financing requirements of private operators. Despite the passage of revised laws, the environment for private sector participation in the energy sector remains difficult, and only one enterprise, the Pamir Energy Company, has been set up, and that with external participation. Whether this is a special case or a genuine attempt by the Government to establish similar private concession agreements in other regions remains to be seen. In the transport sector, private sector involvement increased, in particular in the urban transport service industry, and freight transport has been completely deregulated. However, price regulations are still in place for passenger fares, although actual prices vary based on competition and standard fares are reportedly not strictly enforced.

B. Effects of Policy Reforms

1. Productivity of the Energy Sector

38. Given the initial focus on the policy framework rather than on rehabilitation, the decline in the efficiency and delivery of energy sector services during 1999–2002 is not surprising. During

²⁶ IMF. 2004. Second Review Under the 3-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for a Waiver of a Performance Criterion. Country Report No. 04/17. Washington, DC.

this time, Tajikistan also experienced a severe drought, which had detrimental effects on the hydropower system. Total domestic electricity consumption declined from 13,310 gigawatt-hours (GWh) in 1999 to 12,579 GWh in 2002. Losses as a percentage of supply increased from 15% in 1999 to 19% in 2002. System reliability also declined, with recorded outages related to the transmission system of 178 GWh in 1998, 138 GWh in 1999, and 309 GWh in 2000. Overall, the productivity of Barki Tajik declined between 1999 and 2002 as output was reduced and average staff numbers grew from 9,092 in 1999 to 9,688 in 2003. In the gas sector, total gas consumption fell between 2000 and 2002 from 484.4 to 449.1 million cubic meters despite a reduction in the system's technical losses from 50% to 37%. These initial reductions in the productivity of the electricity and gas sectors could have been expected at loan processing given the run-down state of infrastructure and the need for rehabilitation.

2. Service Delivery

39. Access to energy services has not improved because of the decline in the system's reliability. When the RRP was prepared, few data were available on access to energy services, although almost 99% of the population was connected to a power supply system. However, these connections do not translate into a secure, year-round supply of electricity. In urban areas, a changing consumer pattern from residential to industrial led to changes in load curves that were not accompanied by new investments, which resulted in technical losses in the system because of mismatches between the physical distribution network and the actual location of the load. In rural areas and among the poor, electricity consumption is relatively low—nearly 40% of households in the lowest income quintile had less than 6 hours of electricity per day during the month of May—and the quality of service is poor.²⁷ In the winter, rural households receive virtually no electricity. All rural households rely heavily on wood (45%), manure (17%), and cotton waste (10%) for heating and cooking, making deforestation a major environmental issue. In the transport sector, vehicle ownership patterns have changed dramatically, with 95% of cars and almost 65% of buses being privately owned. Anecdotal evidence indicates that transport services in urban areas have improved. Baseline data (in terms of frequency of service provision and travel times) at the start of the Program were not documented, but apparently customers had to wait up to 2 hours for bus service. Today, licensed buses operate frequently on a number of routes in Dushanbe. However, reliable passenger and freight data that would allow assessing whether and to what extent performance has improved are not available.

3. Sector Investments

40. Data on PIP implementation (para. 32) indicate that planned investments are taking place at a slower than expected pace, and the current state of physical infrastructure has not improved. A large proportion of roads are in poor or very poor condition, and investments are needed to increase the reliability of the electricity supply system. ADB and other development partners approved a number of loans for infrastructure investment in these sectors. In the road transport sector, MOT associated the shortfall in maintenance funds with the absence of the road fund (para. 26), although nominal allocations have been increasing in recent years. Higher tariffs for electricity increased revenue (in local currency), and Table 2 presents the levels of expenditure on maintenance and capital investment. As the table shows, expenditures on repairs and maintenance increased from TJS1.8 million in 1999 to TJS7.5 million in 2003, while capital expenditures amounted to TJS32.6 million in 2003, compared with TJS6.9 million in 1999. Even when adjusting these nominal figures for inflation, the trend is still positive, albeit far

²⁷ World Bank. 1999. Tajikistan Living Standards Survey. Washington, DC.

less pronounced. Other performance indicators, such as Barki Tajik's operating ratio, rate of return on net fixed assets in service, and debt-service coverage ratio showed considerable improvements during the program period and beyond.

Table 2: Operating and Maintenance Cost Structure of Barki Tajik, 1999–2003
(TJS million, current prices)

Budget Category	1999	2000	2001	2002	2003
Staff Costs	4.3	7.2	11.8	19.0	17.9
Materials	3.0	4.8	7.3	9.3	15.1
Fuel	12.8	14.3	11.4	7.6	10.6
Local Energy	0.3	1.1	0.6	0.9	0.5
Energy Imports	6.3	45.2	37.8	21.1	9.6
Services	0.7	1.2	1.3	1.4	2.2
Repairs and Maintenance	1.8	1.6	4.2	5.6	7.5
Other Expenses	2.2	0.5	2.4	5.9	7.5
Depreciation	3.3	3.9	4.2	6.0	18.9
Total	34.7	79.8	81.0	76.8	89.8
Purchases of Property, Plant, and Equipment	6.9	14	20	16.8	32.6
Average Staff Numbers (number of staff)	9,092	9,399	9,251	9,251	9,688

Source: ADB. 2000. *Technical Assistance for Introducing International Accounting Standards at Barki Tajik*. Manila; financial accounts and audited accounts for Barki Tajik for 2003.

C. Sustainability

41. Reforms intended under and achieved by the Program and the associated TA were only a first step in a reform process that would require more time and resources. In the energy sector, additional assistance was provided to cover the implementation of the Energy Law and the restructuring of Barki Tajik; engineering aspects (preparation of future power development projects and of a hydropower development strategy), commercial areas (international accounting standards and financial management information system at Barki Tajik and improvement of Barki Tajik's billing and collection systems); and the development of an energy conservation program. Assistance to the transport sector was approved in 2000, but implementation was delayed until April 2004. Progress in other areas was limited and partly reversed (para. 24). Given this situation, whether the direction of reforms started under the Program was sustained remains to be seen.

D. Counterpart Funds

42. Loan proceeds were provided to the central budget, in support of the ESAF (para. 16, footnote 14). While the design of the program loan assumed that Government funding would be provided to the energy and transport sectors for the most urgent rehabilitation work and for mitigation measures (para. 9), allocations in the PIP for these two sectors were made only in later years (para. 31) and were not actually implemented (para. 32). The extent of adjustment costs could not be estimated, but seemed relatively small given limited progress toward corporatization and privatization, which would be associated with job losses. Verbal reports from line ministries indicated that institutional changes resulted in job creation rather than losses, but no official data could be obtained to corroborate this assertion. There was no evidence of transfers to Barki Tajik or Tajik Gas to provide funding for social mitigation measures associated with the tariff increases.

E. Technical Assistance

43. The TA was key to attaining the overall program results, as the TA consultants were instrumental in preparing all the required documentation and in driving the reform process to the extent they could do so, given the duration of their assignment and the scope of the TA.

44. In the energy sector, while the quality of the TA consultants' work was very good, problems existed in the area of market-based energy pricing. The TA consultants followed the TOR and drafted the Energy Law based on the Energy Sector Policy Statement (attached to the RRP as one of the first tranche release conditions), instead of following through on the observation in the Inception Report that market-based pricing was unrealistic and inappropriate in the Tajik context. Barki Tajik disagreed with the proposed market-based pricing system, which the TA consultants attributed to Barki Tajik's difficulties in adopting radically new pricing principles rather than acknowledging the fundamental flaw in the proposed pricing system (para. 18 and Appendix 1). By contrast, the TA consultants questioned the validity of market-based pricing in another section of their final report:

These conditions exist in road transport, but not, for instance, in electricity. Where there are natural monopolies such as electricity and in the absence of competition, the public administration of the sector should oversee adequate safeguards to protect the consumers and the economically weak and disadvantaged.²⁸

Given these inconsistencies, Barki Tajik's reservations about the Energy Law were understandable, but the law is under discussion and is being clarified with subsequent assistance.

45. In the transport sector, the TA was generally of good quality, but its scope was too broad and was narrowed down during implementation. For instance, by the end of 1999, the consultants were asked to stop work on market pricing and promoting competition in the transport sector on the grounds that these tasks were effectively complete, even though certain prices are still regulated. In early 2000, ADB lowered the priority of work on corporatization in general, and for Tajik Rail in particular, because the latter would not commit to corporatization. These changes contributed to shortfalls in attaining policy objectives. The time frame for implementing the TA was insufficient to communicate with stakeholders and generate sufficient understanding and ownership of complex concepts among them. Translations of terminology alone (e.g., marginal costs, costs versus tariffs, division of costs into fixed/variable, terminal/movement, conditions for competitive market equilibriums) would have been difficult, if not impossible, as the theoretical foundation for these terms was missing. Recommendations in the TA report, and in particular the action plan, implicitly assumed the presence of resources and skills that do not exist.

46. While the TA consultants performed well, it was difficult for them to meet overambitious targets and produce sustained results. The TA is therefore rated as partly successful.

²⁸ ADB. 1998. Institutional Strengthening of the Transport and Energy Sectors. Manila (Final Report, 2000, Vol. 1, Chapter 2).

IV. ACHIEVEMENT OF OTHER DEVELOPMENT IMPACTS

A. Economic Recovery

47. The Program's goal was to contribute to economic recovery (para. 6 and program framework), but it did not have explicit poverty reduction goals. Overall real GDP growth rates improved dramatically from 1.7% in 1997 to an average annual real growth rate of 7.3% since 1998. Inflation also dropped dramatically from an annual increase of 43% in 1998 to 12% in 2002 (IMF, p. 4 [footnote 26]). However, these improvements cannot be attributed directly to the energy and transport sectors, the performance of which has not improved, or to the Program (footnote 14).

B. Institutional Development

48. The Program, through the attached TA, set out to develop the institutional and legal framework for the two sectors. While ministries were formed and legislation and charters were drafted, the TA design allocated few resources to other capacity building measures, such as developing an understanding of market-based principles among staff across all levels, which would have been essential to affect the fundamental sea change required under the Program. No resources were provided for setting up institutional processes, and while the structures of the ministries were set up, little or no effort had gone into solving problems of resource provision for these organizations, i.e., ensuring appropriate staffing levels of personnel with appropriate qualifications and securing financial resources for daily operations. These shortfalls hampered the operations of MOE and eventually resulted in the reversal of earlier separations of functions (para. 24) and contributed to the separation of the aviation subsector from MOT (para. 26).

C. Social Impacts

49. At appraisal, negative social impacts were anticipated to arise from increases in electricity tariffs, which were to be mitigated through the provision of lifeline tariffs. A lifeline block of 150 kWh per month was introduced and increased to 250 kWh per month in 2003, when tariffs increased further.²⁹ Residential consumers, for their part, evaded higher tariffs by reducing bill payments, partly because of poor service provision (paras. 25 and 39). Improvements in access and the reliability of supply will take longer to materialize, depending on the completion of rehabilitation projects. A new energy compensation scheme for poor consumers of electricity and gas has been introduced with funding from IMF and channelled through the central budget (TJS12 million in 2003 and TJS20 million in 2004). This scheme has been implemented in parallel with the lifeline electricity tariffs that are still in place. Appendix 5 provides an updated poverty impact assessment matrix.

D. Environmental Impacts

50. Environmental impacts, positive or negative, were not anticipated at appraisal. In the energy sector, positive impacts could be attained if households in rural areas were eventually supplied with power through the grid, thereby reducing their reliance on firewood (para. 39). In the transport sector, the privatization of vehicle ownership resulted in imports of newer vehicles with lower emission levels; however, no data exist to assess the impact of these changes.

²⁹ The current level of lifeline consumption is excessive, as it allows each residential consumer to use 3,000 kWh per year at lifeline tariffs, when average annual consumption is 4,500 kWh, and thus again broadens rather than focuses the provision of electricity subsidies.

V. OVERALL ASSESSMENT

A. Relevance

51. The objective of the Program matched the objectives of the Government expressed in the development policy letter (para. 6), was in line with the medium-term economic strategy as reported in the ESAF (footnote 2), and was relevant to ADB's interim operational strategy (footnote 3). While in line with these policy statements, line agencies had not been consulted on the required reforms, and today concerned line ministries are generally unaware of sector policy statements that were adopted to meet first tranche release conditions. Underlying assumptions of the program design, namely, that policy reforms were a necessary prerequisite to mobilizing investments in infrastructure was correct. However, such an approach would delay needed investments, thereby postponing improvements in sector efficiency and reducing the potential impact of these sectors on economic recovery. Policy conditions in relation to energy tariffs were ignorant of real conditions (footnote 9), and thus irrelevant. On balance, the Program is rated as partly relevant.

B. Efficacy

52. The Program's overall goal, namely, economic recovery, has occurred in macroeconomic terms, but these improvements are not attributable to the Program (para. 47). Equally, the purpose of the Program, i.e., increasing resource allocations and removing key constraints (para. 30), was only partly achieved, as was the introduction of market-based policies and institutional reforms in the areas set out in the RRP (para. 6). The Program is rated as less efficacious.

C. Efficiency

53. The reform process effectively rested on the TA (\$1.5 million) rather than being associated with the Program (\$20 million). TA resources were spread to cover an overambitious agenda with too many reforms and too little time to implement them. Thus TA resources may not have been used as efficiently as if a more focused scope had existed from the outset. The efficiency of use of loan proceeds cannot be determined. The Program was not rated in this category.

D. Sustainability

54. The direction of policy reforms has in part been reversed and will be sustained only if Government ownership and commitment are built and further TA is provided to assist with institutional reforms and capacity development. Such TA is being provided, and this continuous effort may make the sustainability of the Program and TA results likely.

E. Institutional Development and Other Impacts

55. Given the limited amount of resources dedicated to attaining fundamental institutional development impacts, the TA performed relatively well and generated moderate impacts, although the role of the Program was limited. Social impacts could not be measured, but tariff increases, if implemented as planned, would have had a strong adverse impact on the population at large and on poor consumers in particular, though a degree of mitigation would have been evident through the lifetime tariff and a recently introduced energy compensation

fund. The Program had no impact on the environment. The Program's impact on institutional and other developments is rated as moderate.

F. Overall Program Rating

56. The Program is rated as partly successful for the following reasons: (i) outputs were produced; (ii) while partly relevant, the Program did not enjoy full ownership and commitment on the part of the Government; (iii) objectives were attained, albeit not fully; (iv) institutional development impacts were limited, but were commensurate with time and resource allocations for this purpose; and (v) sustainability remains dependent on future support.

G. Assessment of ADB and Borrower Performance

57. Circumstances in Tajikistan were difficult during loan processing, but expedience and the need for compliance with IMF ESAF conditions appear to have affected analyses and sound judgment (on both sides) of the feasibility of policy conditions and program objectives. During program implementation, the borrower performed to its abilities and cooperated with the TA consultants as the main agents for preparing requisite reform documents. ADB fulfilled its monitoring and supervision responsibilities and adjusted the scope of the TA and loan conditions once it became apparent that they were overly ambitious. However, ADB could have exercised more care in processing the loan to ensure that some aspects had a more realistic and relevant design, including the timeframe for implementation. Overall the performance of both parties is rated as partly satisfactory.

VI. ISSUES, LESSONS, AND FOLLOW-UP ACTIONS

A. Key Issues for the Future

58. Infrastructure was constructed when GDP was much higher than it is today and was highly subsidized by the FSU. The cost of maintaining these investments in the energy and transport sector is higher than the economy can afford at present. Decisions will need to be taken on future investment choices—expansion, rehabilitation, and closure—in the light of the affordability of long-term maintenance (long- and medium-term capital and recurrent budget allocations) versus the need to provide services and options for alternative service provision. Such strategic analysis is needed for both sectors. This is being undertaken for the energy sector in the hydropower development strategy.³⁰ No such analysis seems to have been carried out for the transport sector, which faces additional challenges because of the mountainous terrain, where landslides occur frequently and increase demands on rehabilitation works.

59. The policy framework and reform strategies in both sectors need to be revisited: in the energy sector to assess the validity of the prescribed competition and market-pricing models (particularly determining the long-run marginal costs, as discussed in footnote 25, to determine appropriate cost-recovery levels on which tariffs can be based), and in the transport sector to verify the Government's commitment to reforms and mechanisms to secure funding for maintaining existing assets. Appendix 3 provides a more detailed discussion of key issues for the energy sector. Aspects are being reconsidered under ongoing ADB operations (para. 41).

³⁰ ADB. 2002. Hydropower Development Strategy. Manila. The strategy will identify the optimal energy development program to meet domestic energy requirements and realize export opportunities given the energy resources available, existing power investments, and fiscal and other constraints.

60. Capacities for sector management remain weak, as the Program and TA only set in motion some initial changes, some of which have been reversed. Defining the role of each ministry and agency and developing capacities to fulfil these roles, including indicators for monitoring and managing sector development, will be essential. Otherwise, sector performance is unlikely to improve, and ministries and agencies will not be in a strong position to negotiate regional agreements with neighbouring countries. For both sectors, regional agreements are essential, as economic benefits will depend on the amount of regional energy trade and the extent to which Tajikistan can become part of a regional transport network.

B. Lessons Identified

61. The program loan illustrated weaknesses in ADB's policies to respond to the needs of a country in circumstances such as those of Tajikistan at the time (para. 19). The need to expedite loan processing to facilitate resource flows in line with the IMF ESAF conflicted with the level of critical analysis necessary and with possible design options, and resulted in an overly ambitious and faulty Program. Some of the policy prescriptions, notably, those that were the most difficult to attain (competitive energy markets and market-based pricing) were not based on a thorough analysis of circumstances in Tajikistan and an assessment of whether those prescriptions were relevant and appropriate.

62. Objectives for policy and institutional reforms were overly ambitious and provisions in the TA focused more on producing outputs, which meant that TA consultants were drafting legislation and action plans, but had less time for consensus building, training, and system development. While conditions at loan processing were not conducive to conducting a thorough analysis of existing capacities, experience in other transition economies in Central Asia indicated that policy and institutional changes required a lot more resources in terms of personnel, time, and finance and effort to build consensus and ownership among stakeholders than originally anticipated. Based on that experience, a useful approach would have been to work on developing a medium-term framework for capacity development, which would have been essential to recognize the magnitude of necessary reforms and required assistance, provide the basis for an integrated assistance program, and set medium-term goals and milestones to monitor progress.

63. The policy on disaster and emergency assistance has recently been revised,³¹ establishing a focus for emergency assistance loans on immediate needs for restoring damaged infrastructure. Generally such assistance would not include conditionalities linked to macroeconomic policies nor insist on stringent cost recovery. While policy dialogue may be conducted, conditionality, if any, would be confined principally to governance processes.

64. An intervention couched under this policy might have circumvented various of the problems encountered under the program loan. Nevertheless it would still have had to face the daunting task at that time of the physical undertaking of rehabilitation works as well as possibly delinking it from the IMF ESAF program. It is not clear that ADB yet has the appropriate lending modalities to respond to situations faced by the mission processing this Program. Tajikistan needed rapidly processed, quick disbursing assistance to support the ESAF. To be successful, program loans need to be preceded by careful sector analysis to develop a carefully thought out, government-owned development agenda. In the circumstances prevailing at the time, this was not possible. It is not clear that this revised policy would be the correct modality in these

³¹ADB. 2004. *Disaster and Emergency Assistance Policy*. Manila. Disaster is defined as being caused by natural events, technological or industrial accidents, or conflict. A "post-conflict country" is defined as one emerging from violent, protracted conflict (ADB. 2004. Operations Manual. Section D7/BP. Disaster and Emergency Assistance. 2004).

prevailing circumstances. Perhaps ADB should consider expanding the new Special Program Lending modality without such stringent hardening of the loan conditions to Asian Development Fund developing member countries. Essentially ADB would provide quick disbursing assistance that would support an ESAF without adding new conditionalities. As the IMF led macroeconomic stabilizations measures take hold, ADB could devote the necessary time and resources to more carefully prepare a subsequent program loan or sector development program.

C. Follow-Up Actions

65. No follow-up actions are recommended given that ADB assistance is continuing and is addressing a number of the issues raised in this report.

KEY MACROECONOMIC INDICATORS, SELECTED YEARS

Indicator	1995	1997	2000	2003
Income and Growth				
GDP (TJS million, current)	64.8	632.0	1,807	4,758
GDP Per Capita (\$, current)	176.9 ^a	175.1	155.4	235.9
GDP Growth (% , constant prices)	(12.5)	1.7	8.3	10.2
Sector Distribution (% , current prices)				
Agriculture	15.3	27.1	27.0	28.1
Industry	35.3	19.7	23.9	23.0
Construction	3.2	2.1	3.4	3.1
Trade	13.0	10.2	18.3	20.3
Other	33.2	40.9	27.5	25.4
Employment				
Population (million)	5.8	6.0	6.2	6.4 ^b
Total Employment (million)	1.9	1.8	1.7	1.8 ^c
Official Unemployment Rate (%)	2.0	2.8	2.7	2.5
Savings and Investment				
Gross Domestic Investment (% of GDP)	—	15.4 ^d	17.3 ^e	16.6 ^c
Gross National Savings (% of GDP)	—	23.3 ^d	19.4 ^e	—
Money and Inflation				
Consumer Prices (annual % change, EOP)	2,131.9	163.6	60.6	13.7
Consumer Prices (annual % change, average)	—	88.0	32.9	16.4
Broad Money (M2, annual % change, EOP)	—	110.7	64.5	44.4
Ruble Broad Money (annual % change, EOP)	—	117.2	48.4	32.9
Government Finance				
Revenue (% of GDP)	15.2	13.7	13.6	17.2
Expenditure and Net Lending (% of GDP)	26.5	17.0	14.2	16.3
Overall Surplus (+)/Deficit (-) including Transfers (% of GDP)	(11.2)	(3.3)	(0.6)	0.9
Balance-of-Payments				
Merchandise Trade Balance (% of GDP)	(9.7)	(5.8)	(46.0)	(13.2)
Current Account Balance (% of GDP)	(14.6)	(5.2)	(6.5)	(1.3)
Merchandise Export Growth (annual % change)	39.2	(3.1)	18.5	14.2
Merchandise Import Growth (annual % change)	22.2	2.5	20.3	22.0
Foreign Direct Investment (\$ million)	—	18	24	24
External Payments				
Gross Official Reserves (\$ million, EOP)	4	30	87	135
Months of Imports (goods and nonfactor services)	0.1	0.6	2.1	1.9
External Debt				
\$ Million	817	1,106	1,226	1,007
Percentage of GDP	133.6	100.2	128.9	64.7
Debt Service				
\$ Million	129.7	57.0	—	111.2
Percentage of GDP	21.2	5.2	—	—
Percentage of Export Goods and Services	30.4	12.4	17.5	18.2
OER (TJR/TJS per US dollar, annual average)	135	564	1.8	3.1

— = not available.

EOP = end of period, GDP = gross domestic product, OER = official exchange rate.

Notes: Figures for 2003 include preliminary data. Exchange rates for 1995 and 1997 are in Tajik rubles (TJR) per US dollar and exchange rates for 2000 and 2003 are in Tajik somoni (TJS) per US dollar.

a. 1996.

b. 2002.

c. 2001.

d. 1998.

e. 1999.

Sources: ADB internal database; International Monetary Fund data.

PROGRAM FRAMEWORK

Table A2.1 does not contain the columns on monitoring mechanisms, assumptions, and risks typical for frameworks at the design stage. Instead, the design critique column has been added to comment on each aspect of the framework. Key problems with the framework as a whole were the choice of broad indicators that were not particularly meaningful and the lack of baseline information and specific, quantified targets. The final column summarizes current status.

Table A2.1: Program Framework

Design Summary	Performance Indicators and Targets	Design Critique	Evaluation Findings
<p>Goal Support economic recovery and growth by improving the efficiency of the transport and energy sectors.</p>	<p>Delivery of transport and energy services improved.</p> <p>Appendix 3 of the RRP indicated the following baseline information. From 1990 to 1997</p> <ul style="list-style-type: none"> - road freight fell by 97% and passenger transport by 85%; - electricity output fell from 17.6 to 14 terawatt-hours; and - electricity consumption decreased from 19.1 to 10.9 terawatt-hours, which was largely due to declining consumption in the commercial sector. 	<p>The stated indicator is almost identical to the one at the purpose level. It does not capture the intended growth and recovery impacts. Instead, indicators should have been chosen that would have reflected statistics on movement of people and goods, growth in energy-dependent industries, and economic growth in general.</p> <p>The risk assessment in the program framework did not consider external markets for aluminum and cotton, even though they play a significant factor in economic recovery and growth.</p>	<p>Overall growth rates of real gross domestic product improved dramatically from 1.7% in 1997 to an annual average real growth rate of 7.3% since 1998. Inflation also dropped dramatically from an annual increase of 43% in 1998 to 12% in 2002. However, these outcomes cannot be attributed directly to the energy and transport sectors or to the program loan.</p> <p>With an emphasis on policy reform prior to investing in physical rehabilitation, the efficiency and delivery of energy services declined during 1999 to 2002. Data to measure the efficiency of the transport sector, such as the cost of haulage or transport times, were not available, but in the absence of physical improvements, these parameters would not have improved. The lack of efficiency gains is not—and should not have been—surprising, because efficiency increases can be attained only with requisite investments in infrastructure improvements, which are only now forthcoming.</p>

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Purpose

Improve resource allocation and removal of key constraints to the delivery of transport and energy services.

First phase of the legislative and institutional reforms in the transport and energy sectors completed.

A more appropriate indicator for measuring improved resource allocations would be an analysis of the PIP, and actual expenditure, and ideally, an assessment of the allocative efficiency of such financial commitments. The “removal of key constraints” would have required a clearer statement of constraints before relevant indicators could be developed.

Resource allocations in the PIP increased for the energy and transport sectors; however, these allocations are highly dependent on the priorities and commitments of external development partners. Moreover, allocations in the PIP do not automatically translate into expenditure, as funding shortfalls (e.g., 63% for the 1998–2001 PIP) and changes in project composition have been experienced.

Access to transport and energy services improved. For the energy sector, the RRP indicated that electricity prices for household consumption were highly subsidized, and thus created incentives for private consumers to switch from gas—for which prices were increased and nonpayment resulted in disconnection—to electricity. In rural areas, most households used liquefied petroleum gas. However, no figures were provided in terms of access (number and/or percentage of households) or service reliability.

More specific indicators should have been chosen, such as

- the number of people and percentage of the total population with or without access to transport services and energy supply;
- the types of transport services available (road, rail, and air);
- the reliability (number of interruptions) and frequency of transport services and energy supply; and
- the cost of transport and energy services as related to affordability.

Key constraints for entry into the market by private sector operators remain, in that private businesses require 17 licenses for entry and the financial market to provide requisite financial services is not in place.

The high percentage of household connections, inherited from the Soviet system did not translate into a reliable energy supply. The Tajikistan living standards survey of 1999 showed that poor households had a limited number of hours of electricity supply (6 hours per day in May, virtually none in the winter) and that such households relied heavily on other sources of fuel (wood, cotton waste, and manure).

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For the transport sector, Appendix 3 of the RRP provided information about the network's coverage for the entire country and the poor condition of the roads and of the vehicle fleet, which was largely under the control of the Ministry of Transport. No data or performance indicators were evident in terms of access or service delivery.

Greater cost recovery in key enterprises achieved. The RRP indicated the following baseline information and targets:

- reduce accounts receivable of Barki Tajik to no more than 6 months of billing by the end of 1999 and no more than 3 months by the end of 2000, and of Tajikkomunservice to no more than 3 months by the end of 1999; and

- achieve full cost recovery for industrial, agricultural, and household consumers in steps by December 2000.

While the text in the program framework was too abbreviated, the main text of the RRP provided sufficient clarity about the key enterprises and targets.

The transport network continues to be in poor condition, with only 20% of the road network estimated to be in fair condition, with the rest being in poor or worse condition. The vehicle fleet has seen a renewal with permission for private vehicle ownership granted and liberalization of the transport service sector, which resulted in an increasing number of new in-city buses and minibuses. Transport statistics for rail and air have not improved to pre-program levels, while road freight statistics improved to 1997 levels, but are still significantly below 1991 levels.

The increase in electricity and gas tariffs led to a corresponding increase in accounts receivable, but Barki Tajik's revenue collection increased from TJS43.0 million in 1999 to TJS88.5 million in 2002. Accounts receivable totaled TJS135.4 million at the end of 2002, or 13.2 months of sales, well above the target of 3 months. The overall collection rate improved slightly from 70% to 71% by 2002.

Revenue collections for Tajik Gas increased from \$10.1 million in 2000 to \$11.3 million in 2002. Accounts receivable were 28 months at the end of 2002, compared with the target of 3 months. The overall collection rate improved from 56% in 2000 to 77% in 2002.

Revised targets for electricity tariffs were not achieved.

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Greater private sector involvement in service delivery achieved.	The indicator is insufficient in that it does not specify the extent of planned private sector participation, e.g., in road maintenance, construction, transport services, and power distribution. The lack of specificity leaves it open to interpretation whether private sector involvement was limited to service delivery or whether it was to cover road construction and maintenance as well.	<p>In the energy sector, the only private sector participation was the Pamir Energy Company, funded by the Aga Khan Fund for Economic Development and other external funding agencies. This is an important example of the types of public and private partnerships that are possible under the Energy Law.</p> <p>In the transport sector, the number of privatized entities increased from 1998 onward. In 2004, 163 private transport organizations operated. However, less progress was made in private sector involvement in road construction and road maintenance. The Ministry of Transport, reviewing the experience of Kazakhstan, was reluctant to commit to the corporatization or privatization of entities in these areas.</p>
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PIP = public investment program, RRP = report and recommendation of the President.

Table 2.2. provides the design critique concerning outputs stated in the program framework. Findings regarding what outputs were actually produced are summarized in Appendix 4, because the stated outputs are identical to the objectives in the policy reform matrix.

Table A2.2: Design Critique of Outputs

Design Summary	Performance Indicators and Targets	Design Critique
Outputs Framework for the delivery of market-based transport and energy services	<ul style="list-style-type: none"> - Transport Sector Policy Statement and Energy Sector Policy Statement issued. - Government decree covering transport and energy sectors implemented and further sector reforms planned in line with the medium-term reform action plans to be implemented with ADB-financed technical assistance - Transport Law amended and Energy Law and related charters prepared. 	The stated indicators are actually outputs and simply state that a paper be produced rather than determining some actions that the policy statements, decrees, or laws need to fulfill in order to provide an appropriate framework. (such as sector restructuring measures).
Improved management efficiency of transport and energy sector by restructuring	<ul style="list-style-type: none"> - Transport and energy sectors unified under single ministries of transport and energy. - Public investment programs for the transport and energy sectors implemented. 	The stated indicators do not provide any data on management efficiency, but rather imply that structural changes will, by definition, achieve greater efficiency. Instead indicators for measuring efficiency, such as input-output ratios or process indicators for management and decisionmaking, should have been provided. (such as staffing levels, reduction in quasi-fiscal deficits).

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Design Summary	Performance Indicators and Targets	Design Critique
Implementation of market pricing systems and user pay principles to increase self-financing	<ul style="list-style-type: none"> - Review conducted of prices in the transport sector to liberalize taxes and tariffs - Electricity tariff increased. - Gas tariff increased. - Road fund improved. 	A schedule for increasing tariffs was provided in the main text of the RRP, as indicated above.
Separation of regulatory and operational functions of transport and energy sectors	Noncore enterprises and assets divested through the auctioning system of the State Property Committee.	The main text of the RRP specified that 120 medium and large-scale enterprises were to be privatized by 1999 and that a number of action plans had been adopted.
Improved corporate governance	<ul style="list-style-type: none"> - Time-bound action plans, acceptable to ADB, to corporatize Government-owned enterprises in the transport and energy sectors. - Roles and responsibilities of shareholders and boards of directors of corporatized entities defined. - Corporate plans and annual reports to be made public and independently audited commercial accounts to be prepared 	These indicators are outputs that can be produced by consultants without having an impact on the corporate governance or corporate culture of the entities concerned. Meaningful indicators should have been determined based on current shortcomings. For instance, they could have included transparency of decisionmaking, actual functioning of boards of directors as oversight bodies, and financial accounting and auditing practices.
Greater competition and private sector participation	Foreign Investment Law amended to specify the rights of foreign investors.	The output (greater competition) is actually an objective and the Foreign Investment Law is the output. Indicators should have been specified for assessing the quality of the law (property rights, legal provisions for defending these rights, repatriation of profits, etc.).
Establishment of systems for public participation in and to address the adjustment costs of the reform process	Consultative working groups established to facilitate participation by those affected.	Indicators of public participation in the decisionmaking processes would include Government-led consultation processes at the local level, system of communication between subnational and national levels, principles and processes for resolving disputes, prioritization mechanisms, etc. As earmarking of funds was not required it is not evident how funding would have been provided and allocated to meet adjustment costs, i.e., how funds would reach those (the poor, presumably) that were worst affected by reforms. The policy reform matrix included the preparation of action plans for this purpose.

ADB = Asian Development Bank, RRP = report and recommendation of the President.

Sources: ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Republic of Tajikistan for the Postconflict Infrastructure Program*. Manila; ADB. 2002. *Report on the Regional Power Transmission Modernization Project for Uzbekistan and Tajikistan*. Manila; ADB. 2002. *Technical Assistance for Introducing International Accounting Standards at Barki Tajik, Financial Projections Report*. Manila; ADB. 2003. *Tajikistan: Country Strategy and Program (2004-2008)*. Manila; ADB. 2004. *Institutional and Policy Support to the Transport Sector, Inception Report of the TA Consultants*. Manila. International Monetary Fund. 2004. *Second Review Under the 3-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for Waiver of a Performance Criterion*. Country Report No. 04/17. Washington, DC; World Bank. 2004. *Tajikistan Energy Utility Reform Review (draft)*. Washington, DC.

DESIGN EFFECTIVENESS AND KEY FUTURE ISSUES: ENERGY SECTOR

A. Design Effectiveness

1. According to the Report and Recommendation of the President (RRP),¹ the key element for restoring delivery of energy services is to address the financing constraints impeding the rehabilitation of basic infrastructure. The energy sector had an inadequate and shrinking revenue base, which along with the years of civil conflict had eroded basic infrastructure and social services. In this respect, the design of the program loan for the energy sector was relevant to Tajikistan's conditions and needs and was consistent with the Government's strategy of facilitating Tajikistan's transition to a market economy. Improvements in the delivery of energy services were not going to occur unless the sector could afford to pay for the required rehabilitation of infrastructure, and any private capital that could be attracted would reduce the financing burden on the public investment program. The proposed reforms did provide a necessary stepping-stone before other reforms could take place, because external funding agencies might not have been prepared to rehabilitate infrastructure unless the Government was committed to improving its ability to pay.

2. The overall sequence of reforms in the energy sector in the RRP was correct, in that establishing a policy and legal framework conducive to attracting international investment (donor or other) was important to rehabilitate the energy sector. Priority was therefore given to establishing the policy and legal framework (the new Energy Law and supporting regulations); establishing a more efficient institutional structure that merged the various Government functions for energy into one ministry; defining a better separation of the policy, regulatory, and commercial functions of the energy sector institutions; and improving corporate governance. These priority actions were to create an environment in which commercial entities could have the confidence to invest and recover their capital and operational costs with some certainty and foreign capital could be attracted in joint ventures. The social impact of the electricity and gas tariff increases was to be addressed through a range of mitigation measures developed by the technical assistance (TA) consultants.

3. The only problem with the sequence was that the social mitigation measures were not given sufficient priority in the sequencing of program targets. For example, it could have been insisted that the social mitigation measures for tariff increases were in place before the tariff increases were started. Note that to their credit, the Board members of the Asian Development Bank (ADB) did raise this critical issue: "To address the concerns of the Board, the Vice President of the Bank required that mitigation measures be in place to address the adverse social impacts of raising the power tariff before the electricity tariff is increased."² However, tariffs were adjusted in April 1999, before mechanisms were in place to ensure that mitigation measure would reach target groups. In addition, there were some serious design flaws that should not have occurred if a proper analysis of available data had been carried out. The major design flaws are discussed in the next section.

¹ Asian Development Bank. 1998. Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Republic of Tajikistan for the Postconflict Infrastructure Program. Manila.

² ADB. 1999. Postconflict Infrastructure Program—Back-to-Office Report of the Review Mission. Manila. (Loan 1651-TAJ[SF]), Attachment, Memorandum of Understanding, p. 5, para. 14).

1. Framework for Delivery of Market-Based Energy Services

4. The cornerstone of the policy framework for the delivery of market-based energy services was the Energy Sector Policy Statement (ESPS), prepared by ADB with the assistance of a staff consultant and issued by Government decree on 27 October 1998. The new Energy Law was to be drafted and passed to implement the policy principles of the ESPS. The ESPS was not based on a good understanding of how competition in the electricity and gas sectors might work. Its policy prescription of allowing competition to determine energy prices was poorly defined and ignored relevant facts of the physical characteristics of the energy sector as described in Appendix 3 of the RRP. The design suffered from two main flaws.

5. **Flaw One.** ADB did not demonstrate that the basic conditions for competition could be established in the energy sector (electricity and gas) before deciding on a policy of market-based energy prices. The ESPS (paras. 3 and 17) anticipated that a market-based energy system would allow customers to choose from a multitude of suppliers on the basis of price and quality of services and that competition would create market incentives to deliver better and cheaper services. While this concept was consistent with microeconomic theory, the RRP failed to demonstrate whether the basic conditions for a competitive market could be established in Tajikistan and how it would work. Requisite conditions included (i) sufficient number of both sellers and buyers, (ii) adequate tradable volumes or liquidity, (iii) diversified ownership of each type of plant, and (iv) ease of market entry and exit by participants. In the electricity sector, these conditions could not be met for the following physical and financial reasons (detailed in Appendix 3 of the RRP), even if the policy and institutional framework were to change:

- (i) The generation sector of 4,400 megawatts of installed capacity (of which 3,000 megawatts were operational in 1997) is dominated by one large hydropower plant cascade (Nurek) that accounts for more than 50% of total output. The other hydropower generators are in a cascade river system, where generators cannot operate entirely independently of each other because they feed off the same water resource. The only separate generation facilities consist of five small hydropower plants in the Pamir region and 321 megawatts of conventional thermal plant. Therefore the number of sellers of energy is insufficient for a competitive market.
- (ii) The number of sellers of energy in competition is further reduced because the north and south grids of the power system are not interconnected, and the Pamir region is also separate. Therefore sellers in one grid cannot compete with sellers in another grid.
- (iii) The number of energy buyers is limited because one buyer, the Tajik Aluminum Smelter (TADAZ) accounts for a large proportion of consumption, e.g., 36% of electricity consumption in 1997.
- (iv) The entry of a new generator investor is a rare event that involves great financial, political, and operational risks because electricity is a highly capital-intensive sector, particularly for generation. Thus new entrants into the market would not be forthcoming at short notice, and even if interest was expressed (depending on regional markets, as discussed in para. 6), construction times would imply that new suppliers would not enter the market immediately.

6. The ESPS also failed to define the scope of the energy market. The TA consultants recognized this and highlighted it in their Inception Report when they queried whether the energy market was to be for Tajikistan only or for a regional market. The need for a regional

rather than a Tajik energy market was recognized in the enhanced structural adjustment facility (ESAF) supported by the International Monetary Fund (IMF), as summarized in the RRP (Appendix 2, para. 18): “In hydropower production, Tajikistan would benefit from the development of a regional market with countries that have an electricity deficit while at the same time supplying irrigation resources for Kazakhstan and Uzbekistan.” The only mention of regional energy trading is when the ESPS states that the strategy will include measures for “improving regional energy trade and cooperation arrangements with neighboring countries.”

7. The RRP and ESPS also did not define how electricity competition was to work under these conditions. The only country to develop market processes with a predominantly cascade hydropower system is Brazil, but its market was under development and had just commenced in 1998, and Brazil’s internal market is considerably larger than Tajikistan’s. Thus no example of a competitive energy market with the same physical and technical conditions was available to draw on.

8. In the gas sector, only some 188,000 households use natural gas and no gas pipelines run between the northern and southern regions. To create a competitive number of gas sellers to compete for such a small customer base would eliminate economies of scale, which are important to the economic efficiency and financial viability of the gas sector.

9. The TA consultants raised concerns about the feasibility of market-based pricing in their Inception Report:

Throughout, the Terms of Reference, “market based pricing” and “user pays principle” are indicated as desired (or required) end products. Both of these concepts open up fairly complex issues that must be considered throughout this project. Before market based pricing can be implemented, the relevant market and its characteristics must be determined. To properly apply user pay principles the actual parties benefiting from the good or service need to be identified.³

The Final Report also queried the validity of competition in the energy sector:

These conditions exist in road transport, but not, for instance, in electricity. Where there are natural monopolies such as electricity and in the absence of competition, the public administration of the sector should oversee adequate safeguards to protect the consumers and the economically weak and disadvantaged.⁴

However, this concern was not followed through.

10. **Flaw Two.** The ESPS foresaw that the Government’s role would be limited to “monitoring tariffs and charges levied by monopoly enterprises.” In 1998, no country other than New Zealand had deregulated electricity and gas tariffs for monopoly enterprises,⁵ giving the

³ ADB. 1998. Technical Assistance to the Republic of Tajikistan for Institutional Strengthening of the Transport and Energy Sectors. Manila. (Inception Report, 1998, p. 15, Section 3.6).

⁴ ADB. 1998. Technical Assistance to the Republic of Tajikistan for Institutional Strengthening of the Transport and Energy Sectors. Manila. (Final Report, 2000, Vol. I, Chapter 2).

⁵ New Zealand has retreated from this position and reimposed the regulation of distribution network charges, and it has always regulated transmission charges.

Government a monitoring rather than a regulatory function. There were at best only a half dozen functioning power markets where generation prices were fully deregulated and retail prices were partially deregulated, and none of them were in Asia. Argentina and Chile were the only developing countries with power markets in 1998. While it may be argued that a regulator independent of government should regulate the tariffs and charges levied by monopoly enterprises, this is not mentioned anywhere in the ESPS. The reality is that in the electricity and gas sectors, the charges for transmission and distribution networks must be regulated because they are monopoly components of the cost of supply. While various jurisdictions use different methods of regulation, the proposition that the tariffs levied by monopoly enterprises should only be monitored was not supported by the economic theory of natural monopolies or by international experience. This principle should have never been included in the ESPS or in the Energy Law.

2. Improving Efficiency by Restructuring Key Institutions

11. This policy condition of the program loan required the Government to unify the various agencies in the energy sector under a new Ministry of Energy (MOE) with separate departments for electricity, gas, oil, and coal. Presumably the expectation was that this would improve the sector's efficiency, but the RRP did not provide indicators for measuring efficiency increases. Efficiency gains can be achieved by improving the productive, allocative, and dynamic efficiency of the commercial enterprises of existing companies and new entrants. The ESPS required MOE not to interfere in commercial decisions taken by the power company Barki Tajik or Tajik Gas. With this limited mandate, MOE's role in improving the sector's efficiency was restricted to planning and monitoring programs that facilitated resource mobilization. In a situation where infrastructure investment was eventually expected to respond to market-based prices, MOE's role would become increasingly irrelevant, because the market would resolve issues pertaining to fuel types, fuel prices, and service standards. Other efficiency gains that could have been expected from the creation of MOE could have been achieved by reducing staffing levels or improving process efficiency, neither of which appear to have been accomplished.

3. Improving Corporate Governance

12. This component of the Program included preparing time-bound action plans to corporatize Barki Tajik and Tajikkommunservice and defining the roles and responsibilities of shareholders and directors of the corporatized entities. A minor criticism of this component is that the new charters for these companies were not included in the framework for evaluating program outputs. While the company charters were to be assessed for their consistency with the new Energy Law, there was no requirement that they be assessed in relation to their effectiveness in improving corporate governance overall.

4. Improving Cost Recovery

13. The design of this program component suffered from several problems, and this was the weakest component of the program for the energy sector. The issue of market-based prices for energy has already been discussed, thus this subsection discusses issues pertaining to the design of user pays principles.

14. The first design flaw was that program targets for cost recovery were unrealistic. With the benefit of hindsight, various ADB documents have argued that the program targets to improve cost recovery were too ambitious or unrealistic. These targets were based on the IMF ESAF (even though most Tajik officials think they were ADB targets). While the ADB Fact-

Finding Mission had internal discussions about the realism and appropriateness of these targets, no documentation was found that would confirm that ADB had exercised sufficient due diligence in reviewing the IMF targets. The Operations Evaluation Mission (OEM) understands that the IMF ESAF was binding. The IMF itself eased some of the ESAF conditions in subsequent review. Given information available at the time, more consistent judgement could have been exercised, as illustrated by an analysis of data existing at the time, and more timely adjustment of some conditions taken.⁶

15. Per capita gross domestic product (GDP) per month equaled \$14.80, which included TADAZ's contribution to GDP, without which monthly per capita GDP would have been significantly lower. The monthly electricity bill for 150 kilowatt-hours per month at the existing tariff of \$0.015 per kilowatt-hour was \$2.25, or 15% of the average monthly GDP per capita, which was already untenable and unrealistic (and explains the low collection ratios). If the IMF's average monthly wage data were applied, the situation is even worse: the average electricity bill exceeded the average agriculture wage of \$2 per month and equivalent to 17% of the average monthly wage of a construction worker and 11% of that of an industrial worker. This analysis is conservative, and the real situation was probably much worse given that World Bank estimates indicated that 80% of the population was unable to adequately cover their basic needs.

16. The second design flaw was that the RRP did not consider whether full cost recovery for the existing power system was appropriate given the large reduction in GDP since 1991.⁷ The energy infrastructure had been built when GDP was considerably higher, and its cost was (and is) more than the current economy can support. This means that some infrastructure will have to be abandoned and not replaced when it reaches the end of its economic life unless energy export opportunities could cover the costs. However, as Appendix 3 of the RRP highlights, Tajikistan has an energy trading deficit.

17. The third design flaw was setting the accounts receivable targets on an aggregate rather than on a customer segment basis. The RRP demonstrates that the data to set the targets by segment were available and that the performance of TADAZ—with its cumulative arrears of \$53 million by the end of 1996—was a major issue. The performance conditions for accounts receivable should have been set by customer segment to avoid a situation where one segment has to perform better than the target to make up for poor performance by another customer segment. At the very least, TADAZ should have been separated out.

18. The fourth design flaw was that the accounts receivables target did not adequately measure the effectiveness of the collections process, because the level of receivables could be reduced by barter payments or write-offs of accounts. The Program should have included a collections ratio, which is the value of cash collections as a ratio of billed sales, as this would have provided a better measure of improving cash flows and the self-financing of the energy sector.

19. The fifth design flaw was that ADB expected all electricity consumers to pay the increased tariffs without any improvements in the reliability of electricity. As this report shows, the reliability of supply deteriorated during the program loan period.

⁶ The facts do not support claims in back-to-office reports that such calculations were impossible at the time.

⁷ The TA consultants also raised the issue of "what is meant by the term 'full cost recovery' in the context of the Loan Agreement and supporting Action Plan...As a result, the Consultant believes that the target of 'cost recovery' was intended to be measured as a percentage of the computed cost of electricity supply divided by the tariff charged. This is the interpretation that the Consultant will apply" (Final Report [footnote 4], Vol. III, Chapter 8, p. 8-1).

5. Social Impacts and Public Participation

20. The RRP stated that an important mechanism to mitigate the adverse social impacts of the proposed reforms was to prepare an action plan (by 31 December 1999) for lifeline electricity tariff subsidies for the poor in an accountable and transparent manner. A minor criticism of this proposed mechanism is that the RRP failed to consider that lifeline tariff subsidies are only effective for those consumers that have meters. However, the RRP did go on to state that the appropriateness of mitigation measures would be reviewed through a consultative process when the proposed World Bank poverty survey made national data available.

B. Key Issues for the Future

21. Four critical policy issues in the energy sector need to be addressed.

22. First, the level of electricity and gas infrastructure the population can really afford (e.g., what is people's willingness and ability to pay?), needs to be assessed. A flaw in the program design was that the RRP did not consider whether the full recovery of costs for the existing power system was appropriate given the large reduction in GDP since 1991. As noted earlier, the energy infrastructure was built when GDP was considerably higher, and the cost of that infrastructure is more than the current economy can support. This means that some infrastructure will have to be abandoned and not replaced when it reaches the end of its economic life unless energy export opportunities could cover the costs. The TA for preparing a hydropower development strategy (para. 41 and footnote 30 of the main text of this report) and the work already completed on the power development strategy will likely help the Government and ADB make this critical assessment.

23. Second, the policy framework and reform strategy urgently need to be revisited. The validity of the ESPS and associated Energy Law, in particular the prescribed role of competition in the energy sector, needs to be reassessed. This review should examine the trade-offs between economies of scale in the energy sector and the feasibility of competition in generation and gas supply given the physical characteristics of the Tajik power and gas systems. If generation prices need to be regulated and transmission and distribution costs are a natural monopoly, then the only costs subject to competitive pressures are customer metering and billing and management overheads. Given the economies of scale in the cash-critical processes of customer metering and billing, it is important to assess whether the remaining cost savings in the energy sector will be greater than the cost of and complexities introduced by a wholesale energy market and loss of economies of scale in customer billing. This concern should not be implied as a rejection of market-based energy trading on a regional basis, which is critical to the future of Tajikistan's energy sector. Nevertheless, a design needs to be developed for how the benefits of regional trading will flow through to consumers in Tajikistan and what consumer protection mechanisms should be put in place. One feasible competitive model within Tajikistan would be a single buyer model with competitive tendering for new generation capacity. The single buyer would then act as the energy trader on behalf of all consumers within a regional market. A suggestion in the MOE reform plan is that TADAZ be permitted to purchase electricity outside Tajikistan, but as TADAZ already has a huge competitive disadvantage given its reliance on imported materials, it is hard to see how the company would benefit from switching from cheap hydropower sourced locally and paying additional transmission charges to import power from elsewhere in Central Asia. With regard to industry structure, serious consideration should be given to whether Barki Tajik and Tajik Gas should remain as separate companies given that in several other countries electricity and gas operate very efficiently in one company.

24. Third, a more realistic tariff policy and sustainable social protection program for electricity and gas consumers need to be developed. With no agreement on the long-run marginal costs of the power system, which will depend on how much the country can afford (para. 22), agreeing on the cost-recovery targets by customer segment with the Government is difficult. The important thing is to gradually increase the level of cost recovery consistent with economic growth and incomes and to develop a transparent subsidy program. The 2003 Human Development Report has raised a concern about the impact of high tariffs on the financial viability of the 48% of farmers who are dependent on irrigation pumps.⁸ Unless complementary programs to increase agricultural productivity and incomes are in place, the financial viability of cotton farming at full cost-recovery tariffs for irrigation pumping is marginal. The lifeline tariff was a poor protection mechanism—though the only quick one available in 1999—because it could not be targeted and is not available to the 17% of the population without meters. The World Bank argues that if continued, the lifeline tariffs are unsustainable and will consume 18.7% of the budget or 2.7% of GDP (which compares unfavourably to a limit of 3% of GDP in the public investment program). An energy compensation fund is being introduced in the national budget to more specifically target poorer households.

25. Fourth, a system for performance monitoring of the reliability of the supply and the quality of customer service for both electricity and gas is urgently needed. Huge amounts are being invested in infrastructure rehabilitation and no reporting mechanism is in place to track the delivery of benefits. According to MOE, the only performance reporting for the energy sector is the letters of complaint written to the President's Office, but statistics on the number of complaints by type are not compiled. The concession agreement with the Pamir Energy Company is the only example the OEM found of key performance indicators for supply, voltage, and frequency variations. Minimum service standards for customers are set out with maximum duration of outages to repair faults.⁹

⁸ UNDP. 2003. Human Development Report for Tajikistan. Dushanbe.

⁹ World Bank. 2002. Project Appraisal Document for the Pamir Private Power Project. Washington, DC (p. 3).

POLICY REFORM MATRIX

Policy Objective	Action Program	Status at Program Completion	Evaluation Findings
Program objective: The program will promote economic recovery and growth by addressing key constraints to the functioning of the transport and energy sectors through support for market-based policies and institutional reforms.			
Create an enabling framework for the delivery of market-based transport and energy services	<ol style="list-style-type: none"> 1. Issue Transport Sector Policy Statement (TSPS) and Energy Sector Policy Statement (ESPS), acceptable to ADB, by Government decree. 2. Have Parliament approve amendments to the Transport Law, as required and the new Energy Law, acceptable to ADB. 3. Adopt charters, consistent with the Transport Law and the Energy Law for key institutions in the transport and energy sectors. 4. Issue decrees, regulations, and rules, acceptable to ADB as may be necessary to implement the Transport Law and the Energy Law. 5. Align other legislation and regulations with the Transport Law and the Energy Law and with associated subsector charters. 	<ol style="list-style-type: none"> 1. TSPS and ESPS issued on 27 October 1998. 2. The Energy Law enacted on 4 October 2000. The Transport Law amendments enacted on 2 October 2000. 3. Complied with. The following charters were adopted: <ul style="list-style-type: none"> ▪ Barki Tajik: Resolution 492, 3 November 2001; ▪ Tajik Gas: Resolution 91, 4 March 2002; ▪ Tajiknefetgas: Resolution 236, 7 June 2001; ▪ Tajikangisht: approved by MOE on 24 March 2001; ▪ Tajik Rail: Resolution 244, 5 June 2002; and ▪ Tajik Air: submitted on 12 July 2002. 4. Significant compliance. <ul style="list-style-type: none"> ▪ Resolution 93, Procedure for Issuing Certificate of Quality for Road Equipment, 4 March 2002; ▪ Resolution 261: Law on Automobile Roads and Road Activity, 23 April 2002; ▪ Resolution 591: Procedure for Licensing the Activity and Services in Power Engineering, 30 December 2001; and ▪ Resolution 240: Tariff Schedule for Tajik Gas, 5 June 2002. 5. Significant compliance. Resolution 512, 17 November 2001, approved development of an accounting methodology for three divisions (envisioned for separation) of Tajik Air. The methodology was approved on 15 March 2002. 	<ol style="list-style-type: none"> 1. TA consultants modified the ESPS to make it more consistent with the Energy Law. The proposed changes were good, but the Government did not adopt the revised ESPS. The TSPS was issued, but is not well known among decisionmakers in the MOT, which is indicative of a lack of ownership and is due to changes among senior staff. 2. Laws were passed, but a translation of the adopted versions was not available to compare with earlier drafts. 3. The charters for Barki Tajik, Tajikangisht, and Tajiknefetgas were not in conflict with either version of the Energy Law. The charters for Tajik Rail and Tajik Air were prepared. 4. The resolutions were adopted, but, for instance, Resolution 591 on licensing does not define requirements for license applications and actual license content. Actual implementation of this procedure is limited, given that only one private operator exists and no other operators entered the market. 5. The scope of this policy action would require reviewing of relevant other laws that would or should be affected and would require revision.

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Policy Objective	Action Program	Status at Program Completion	Evaluation Findings
<p>Improve management efficiency of transport and energy sectors by restructuring key institutions</p>	<ol style="list-style-type: none"> 1. Finalize a time-bound action plan, acceptable to ADB, to restructure the transport and energy sectors 2. Consistent with the TSPS <ul style="list-style-type: none"> ▪ unify, with TA, the transport subsectors (roads, railways, and civil aviation) under an MOT; and ▪ establish departments or divisions for roads, railways, and civil aviation within MOT. 3. Prepare PIPs based on detailed financial and economic analysis for the transport and energy sectors. 4. Consistent with the ESPS <ul style="list-style-type: none"> ▪ unify, with TA support, the transport subsectors (electricity, gas, oil, and coal) under an MOE; and ▪ establish departments or divisions for electricity, gas, oil, and coal within MOE. 	<ol style="list-style-type: none"> 1. Submitted 28 October 1998. 2. Unified on 31 December 1999 and separate divisions have been established. 3. PIPs were completed and approved in September 2000. 4. MOE was established in October 2000 and separate divisions were set up. 	<ol style="list-style-type: none"> 1. For the energy sector, the TA action plan was updated in subsequent ADB loans. Those plans present a detailed list of the actions required to achieve particular loan targets along with the agency responsible. In the transport sector, the action plan was a detailed step-by-step plan for implementing the reform program. 2. MOT was established with the requisite departments; however, the aviation department is being spun off into a separate entity because of disputes about technical competences. The establishment of the ministry was not accompanied by requisite arrangements for human and financial resources or operational business processes. 3. Detailed financial and economic analyses were not prepared to determine PIP allocations, which increased based on commitments by external agencies. Allocations in the PIP were not identical to actual expenditures. 4. Even though MOE was established, it did not function well in 2001 and 2002 because of a lack of funding. License fees were not paid, which reduced the funding available to the new ministry. The TA consultants' staffing plan for MOE included 36 to 48 technical specialists.

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Policy Objective	Action Program	Status at Program Completion	Evaluation Findings
Separate regulatory and operational functions of transport and energy sectors	<ol style="list-style-type: none"> 1. Prepare time-bound action plan, acceptable to ADB, for the privatization of enterprises to be selected from the "Ministry of Transport and Roads' List" (27 enterprises) currently requiring Government approval. 2. Issue Government decree to privatize key businesses and divest noncore activities. 3. Prepare time-bound action plan, acceptable to ADB, to divest small hydropower generating plants and associated distribution network facilities on a pilot basis. 	<ol style="list-style-type: none"> 1. Action plan submitted on 10 October 1998. 2. Decrees issued on 27 October 1998. 3. Action plan submitted on 22 August 2000. 	<ol style="list-style-type: none"> 1. The action plan could not be located and reviewed. 2. In the transport sector, little or no progress has been made in privatizing noncore businesses, such as housing, hotels, and restaurants operated by the railways. Housing (apartments) was privatized under a broader Government initiative, but MOT was unable to divest itself of maintenance responsibilities for these properties because of their current state and because no other entity was taking over maintenance responsibilities. In the energy sector, according to MOE, 24 enterprises have been separated from Barki Tajik and established as joint stock companies—10 are power supply and switch-gear companies and 14 are construction and maintenance companies. The Government owns all shares. 3. The action plan to divest small hydropower generating plants has not been reviewed because there is no copy in ADB files. The only hydropower plants that have been divested in a concession agreement are part of the Pamir Energy Company.

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Policy Objective	Action Program	Status at Program Completion	Evaluation Findings
Improve corporate governance	<ol style="list-style-type: none"> 1. Prepare time-bound action plans, acceptable to ADB, to corporatize Barki Tajik, Tajikkomunservice, Tajiknefteprodukt, and Tajik Rail. 2. Prepare time-bound action plans, acceptable to ADB, to separate, corporatize, and then commercialize Tajik Air and Tajik airports 3. Define the roles and responsibilities of shareholders and the boards of directors of the corporatized Barki Tajik, Tajikkomunservice, Tajiknefteprodukt, and Tajik Rail. 4. Prepare corporate plans for Barki Tajik and Tajik Rail. 5. Prepare annual reports, which will be made public, and independently audited statements that comply with international commercial accounting standards for Barki Tajik and Tajik Rail. 	<ol style="list-style-type: none"> 1. Submitted in August and November 2000. 2. Partly complied with, because a subsequent loan from the European Bank for Reconstruction and Development involved restructuring. The Government committed to ensuring that reform plans to comply with the conditions of the program loan. 3. Partly complied with. Entities are operating but are fine-tuning corporate responsibilities. 4. Not complied with. Formal corporate plans for these two entities had not been approved, although work was in progress. 5. Partly complied with. Barki Tajik was adopting international accounting standards (effective August 2002) and independent audits were to start in 2002. Tajik Rail submitted its 2001 annual report to the Government, but had not started using international accounting standards. 	<ol style="list-style-type: none"> 1. In 2001, Tajik Gas was created as a statutory unitary enterprise and was separated from Tajikkomunservice. A presidential decree was issued for the privatization of Tajik Rail and a railroad development plan was adopted for 2001–2005 to make rail assets and operations more attractive to potential investors. 2. ADB's involvement in the aviation subsector ceased soon after program implementation started, because the European Bank for Reconstruction and Development provided assistance in this area including restructuring and reform places. 3. Work in this area is lacking, which in part is due to the refocused work priorities of the TA consultants and to limited progress in corporatizing the said entities. In the energy sector, in 2003, MOE abolished all boards for these three entities and merged the organizations into MOE. In the transport sector, the establishment of MOT under the Program resulted in abolishing boards of directors for railways and aviation. 4. There are no corporate plans for the mentioned entities. 5. Barki Tajik prepares accounts according to international accounting standards that are audited by a London-based accounting firm. The most recent report is for 2003. Tajik Rail will prepare independently audited accounts for 2004 as a condition of an International Monetary Fund loan.

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Policy Objective	Action Program	Status at Program Completion	Evaluation Findings
Implement market-based pricing and user pay principles to improve cost recovery	<ol style="list-style-type: none"> 1. Review the road financing and cost recovery mechanisms to ensure full cost recovery and the application of user pay principles. 2. Establish a pricing commission to monitor targets for cost recovery and tariffs for electricity. 3. Increase electricity prices to achieve cost-recovery levels for <ul style="list-style-type: none"> ▪ industry and agriculture: 75% by the end of 1999 and 100% by the end of 2000, and ▪ households: 50% by the end of 1999 and 100% by the end of 2000. 4. Implement full cost recovery for gas customers. 5. Reduce accounts receivable to no more than <ul style="list-style-type: none"> ▪ 3 months billing for Tajikkommunservice and 6 months for Barki Tajik by the end of 1999, and ▪ 3 months billing for Barki Tajik by the end of 2000. 6. Prepare an action plan for installing gas meters, first in Dushanbe and then in other parts of the country. 	<ol style="list-style-type: none"> 1. Submitted December 1999. 2. Commission established on 17 September 1998. 3. Tariff increases fully complied with. 4. Full cost recovery implemented as of 31 December 1998. 5. Not complied with, although major improvements were achieved. 6. Action plan submitted on 1 October 1998. 	<ol style="list-style-type: none"> 1. A policy for users to pay for road transport is not being considered at present. The Ministry of Finance allocates funds from the central budget for road construction and maintenance, which reportedly fall short of required funding. 2. The Ministry of Economy and External Economic Relations (in 1998) and the State Antimonopoly Committee (since 2001) monitor cost recovery targets and electricity tariffs. 3. Tariff increases were not attained, and even rescheduled targets have not been reached. The weighted average tariff was \$0.005 per kWh in 2002, which was lower than the weighted average tariff of \$0.0063 in 2000. Eighteen categories of privileged consumers still exist, amounting to around 214,000 households that annually receive TJS41 million in subsidies. For poor households, the lifeline block was increased to 250 kWh per month to soften the impact of increased tariffs. 4. Full cost recovery for gas tariffs was achieved on 1 July 2003, and all 12 categories of privileged customers have been eliminated. 5. Not achieved. 6. The action plan for gas meters is progressing. As of 1 January 2003, only 10.3% of residential consumers had gas meters. Tajik Gas had installed 15,000 meters by March 2004 and is negotiating a World Bank loan that includes a provision for 150,000 meters.

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Policy Objective	Action Program	Status at Program Completion	Evaluation Findings
Promote competition	Approval by Parliament of an amendment to the Foreign Investment Law to determine the rights of foreign investors.	Foreign Investment Law approved in November 1999.	The law approved in 1999 is adequate except in the area of dispute resolution, where no provision is made for foreign arbitration. All disputes must be settled in a Tajik court, which is unlikely to satisfy foreign investors given the weak state of the Tajik legal system.
Establish systems for public participation in, and to address the adjustment costs of the reform process.	<ol style="list-style-type: none"> 1. Develop consultative working groups to facilitate participation at the national and regional levels for the program of transition to a market-based economy. 2. Prepare action plans to address the social costs of the Program, including the impacts of restructuring and increases in user charges for electricity, roads, railways, and civil aviation services. 3. Prepare an action plan for lifeline electricity subsidies for the poor in an accountable and transparent manner. 	<ol style="list-style-type: none"> 1. Working group set up on 28 October 1998. 2. Complied with. 3. Action plan prepared in April 2000. 	<ol style="list-style-type: none"> 1. The Operations Evaluation Mission was unable to obtain information about the operations of this working group. 2. Restructuring the benefits system that existed (i.e., reducing the number of privileged categories and improving the targeting of subsidies) was a complex task, which went beyond the preparation of an action plan. Additional assistance is being provided in this area by the World Bank. 3. Lifeline tariffs were implemented in 1999 without increasing tariffs for this block during 2000–2002.

% = percent; ADB = Asian Development Bank; ESPS = energy sector policy statement; kWh = kilowatt hour; MOE = ministry of energy; MOT = ministry of transport; TA = technical assistance; TJS = Tajik somoni; TSPS = transport sector policy statement; PIP = public investment program.

Sources: ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Republic of Tajikistan for the Postconflict Infrastructure Program*. Manila; ADB. 2003. *Country Strategy and Program 2004–2008 Tajikistan*. Manila; Government of Tajikistan. *Public Investment Program and Technical Assistance Needs*. Dushanbe; International Monetary Fund. 2004. *Second Review Under the 3-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for a Waiver of a Performance Criterion*. Country Report No. 04/17. Washington, DC; Ministry of Energy. 2000. *Energy Sector Action Plan Progress Report*. Dushanbe; World Bank. 2004. *Tajikistan Energy Utility Reform Review* (draft). Washington, DC.

POVERTY IMPACT ASSESSMENT MATRIX

Separate matrixes were prepared in the report and recommendation of the President for each policy objective, covering channels (labor, prices, transfers, access to energy services, access to transport services, access to social services, quality of life, and social capital), types of effects (direct, indirect, on the nonpoor, macroeconomic), and mitigation measures. The following table summarizes the short- and long-term net effects.

Policy Objective	Short-Term Net Effects	Long-Term Net Effects	Evaluation Findings
Program Objective: The program will promote economic recovery and growth by addressing key constraints to the functioning of the transport and energy sectors through support for market-based policies and institutional reforms.			
Create an enabling framework for the delivery of market-based transport and energy services.	Little direct effect on the poor from the preparation and adoption of policy statements, laws, charters, decrees, regulations, and rules by themselves, but these documents set the framework for greater transparency in management for the sector. Positive eventual effects expected from review of the Labor Law, mandatory safety standards, and framework for participation in the reform process.		Since the frameworks have not been established successfully to this date, an impact on poverty could not be identified.
Improve management efficiency of the transport and energy sectors by restructuring key institutions.	The Social Protection Plan addresses some loss of jobs and services through restructuring. A time-bound action plan will clarify job losses (21,000 people employed in the transport sector).	Greater transport and energy efficiencies from restructured departments facilitate efficient service delivery.	Job losses were not reported, as ministries were created by moving staff from existing entities to new positions. In some cases additional positions were created.
Separate regulatory and operational functions of the transport and energy sectors.	Loss of jobs and social services through divesture of noncore activities.	Greater efficiency in the transport sector provides better transport services and potentially better access to markets and services.	Divesture has been minimal and has not resulted in job losses.
Improve corporate governance.	Some further loss of jobs and social services through corporatization are offset by the Social Protection Plan. Job losses are not yet known.	Greater transport and energy efficiencies from corporatized enterprises facilitate the efficient service delivery.	Corporatizations have not taken place.
Implement market-pricing and user pay principles to improve cost recovery.	For those who can afford to pay for power, there will be improved reliability of supplies and less load shedding, especially in winter. Reliability may improve, with flow-on improvement in equipment performance for essential services (e.g., hospitals) and agriculture and industrial production.	Overall unemployment may increase as higher production costs force inefficient agricultural and industrial enterprises to shed labor or to close, affecting both the nonpoor and poor. Production cost increases will force up most prices, including food, which will have a negative impact on poor households that depend on food purchases.	Service improvements have not materialized, as these would require infrastructure investments. Thus consumers were affected by higher tariffs without commensurate service improvements.

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Policy Objective	Short-Term Net Effects	Long-Term Net Effects	Evaluation Findings
Promote competition.	Prices may fall somewhat because of increased competition, which may reduce the costs of some goods and services for the poor. There may be further risk of job losses, which could affect the poor and nonpoor.		Whether competition can work in the energy sector in Tajikistan unless regional arrangements are made is questionable. In the transport sector, prices for passenger transport (roads) are regulated, but apparently providers adjust tariffs to affordable levels.
Establish systems for public participation, and to address the adjustment costs of the reform process.	Mitigation measures address the adverse impacts of transition in the two sectors for the poor and nonpoor. Consultative processes enhance the likelihood of increased knowledge and understanding about the need for change and concomitant new opportunities.	The Labor Law provides a basis for fair and equitable employment and labor terms and conditions, or can be amended to achieve this.	Whether the consultative process functioned and how it affected meeting adjustment costs has not been documented.

Sources: ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Republic of Tajikistan for the Postconflict Infrastructure Program*. Manila; and Findings of the Operations Evaluation Mission.

**MANAGEMENT RESPONSE ON THE PROGRAM PERFORMANCE AUDIT REPORT
ON THE POSTCONFLICT INFRASTRUCTURE PROGRAM IN TAJIKISTAN
(Loan 1651-TAJ[SF])**

On 25 February 2005, the Director General, Operations Evaluation Department, received the following response from the Managing Director General on behalf of Management:

1. Management takes note of the key issues and lessons identified in the Program Performance Audit Report (PPAR) and will take them into account in the design of similar interventions in the future.
2. ADB policy on disaster and emergency assistance, as approved in May 2004, provides the framework for the prompt restoration of services. Under this policy, emergency assistance loans will not attempt to address medium- to long-term economic rehabilitation investments or sectoral or institutional problems unrelated to the emergency and, by implication, will not include conditionalities linked to macroeconomic policies.
3. On the energy sector, progress has been made in analyzing affordability of service and tariff issues. Other key energy sector issues included in Appendix 3 of the PPAR are acknowledged and are being addressed. It is now well recognized by ADB and other multilateral financing institutions that the power sector in Tajikistan has not yet developed sufficiently to enable market-based services. The recommendation on the gradual increase in electricity and gas tariffs to cost-recovery level along with a transparent subsidy program for the poor is now being used in the policy dialogue with the Government. Steps will also be taken to gather relevant energy sector data to monitor the standards of service, particularly reliability of supply.
4. On the transport sector, strategic analysis of future investment choices and the issue of Government's commitment to reforms and mechanisms to secure funding for maintaining existing assets are regular features of policy dialogue with the Government. ADB's focus has been on rehabilitating roads forming part of key national and internal transport corridors and strengthening regional cooperation through Central Asia Regional Economic Cooperation (CAREC) program.