



1. Project Data:		Date Posted : 09/23/2003	
PROJ ID: P008803		Appraisal	Actual
Project Name: Russia Energy Efficiency	Project Costs (US\$M)	131.4	30.1
Country: Russian Federation	Loan/Credit (US\$M)	106.5	22.5
Sector(s): Board: EMT - District heating and energy efficiency services (48%), Power (27%), Oil and gas (25%)	Cofinancing (US\$M)	3.2	3.2
L/C Number: L3876			
	Board Approval (FY)		95
Partners involved : GEF	Closing Date	06/30/2001	01/31/2003
Prepared by :	Reviewed by :	Group Manager :	Group:
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2. Project Objectives and Components			
a. Objectives			
(i) To increase the efficiency of energy use by supporting investments in more efficient equipment and increasing the use of customer metering; (ii) to reduce gas distribution network costs and maintain distribution system capacity, integrity and safety through network rehabilitation; and (ii) to support the government's gas sector reform program through technical assistance.			
b. Components			
1. Gas distribution system rehabilitation and upgrading, including installation of corrosion protection systems, installation of residential and commercial gas meters, and replacement of improving leak detections programs and replacement of older leaky pipes for Volgograd (\$36.5 million). This component was subsequently dropped in a restructuring that took place before loan signing.			
2. Energy efficiency investments: replaceable model investment programs to improve energy efficiency of district heating and combined heat and power utilities (\$58 million)			
3. Technical assistance and studies to support gas sector reform (\$12 million).			
4. The GEF assistance will be used to develop investment components for the project, all of which will lead to reduced Greenhouse Gas (GHG) emissions (\$3.2 million).			
c. Comments on Project Cost, Financing and Dates			
Project costs were based on city specific investment requirements based in turn on detailed technical and economic analysis. Cities were required to repay the loans they received. They had to pay local costs, including import duties. All of the sub-components were preappraised, so the timing was appropriate.			
3. Achievement of Relevant Objectives:			
Effectiveness, which was to take place 6 months after approval, was delayed by over a year (11/02/95 to 12/26/96) due, primarily to complications related to the establishment of regulations related to on-lending of Bank loan proceeds to regional sub-borrowers. Frequent changes in the Ministry of Finance further complicated this process. In the process of qualifying the sub-borrowers under the newly designed onlending agreements (before loan effectiveness), the \$36.5 million Volgograd gas distribution project component was dropped.			

The energy efficiency component originally included ten cities. Two of these were dropped and replaced by other cities in 1997. After the financial crisis and subsequent massive devaluation in mid-1998, the financial condition of six of the remaining ten cities deteriorated to the point where they had to drop out of the project. As a result, only four of twelve regional subprojects were implemented, and even for these, the project scope was significantly smaller than originally expected.

Only four of the ten gas sector studies were implemented. Gasprom failed to support the remaining studies, and they were eventually dropped.

GEF funds were used to identify and appraise additional energy saving investments (\$0.8 million). The other components, which were to identify ways to mitigate the release of methane in the production and transportation, distribution and utilization of natural gas were not implemented.

4. Significant Outcomes/Impacts:

- In total, only \$16.6 million was invested in energy efficiency sub-projects of four cities. All of these subprojects were completed successfully, with highly satisfactory results. Financial rates of return ranged from 19% to 83%, with economic returns ranging from 31% to over 200%. Annual economic benefits from these investments are estimated to exceed \$10.7 million, which includes \$7.7 million in financial savings, 56 thousand tons fuel savings, and a reduction of 105 thousand tons in CO2 emissions. Even more importantly, the sub-projects improved the living conditions of more than 160,000 people. In Archangelsk and Semenov winter apartment temperatures increased from a 12-16 degree C range to a stable 20 degrees C. Financial savings on heat supply has allowed municipal governments to finance other priority projects to assist the poor.
- The success of the implemented investment components proved a model for further energy savings projects. The Bank financed a \$85 million dollar follow-up Municipal Heating Project in FY01.
- The project has had a strong demonstration impact and has triggered energy efficiency programs in the non-project areas. Many heating authorities acquired their own cost monitoring, metering, and control equipment to improve the operation of their heating services. In Nizhny Novgorod 9 projects with a total investment of 35 million were launched using domestic funds.

5. Significant Shortcomings (including non-compliance with safeguard policies):

- Efforts to work with Gasprom proved futile. They would not support the Volgograd gas distribution rehabilitation program or the methane gas release reduction study. They stymied the efforts to implement gas sector policy studies that they thought might lead to recommendations against their basic interests.
- While the TA component contributed to legislative and regulatory capacity-building, the institutional development impact has been relatively modest compared with what was expected under the project. Study recommendations are being used in an ad-hoc fashion. Most sector reform issues identified during appraisal have not been addressed.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Unsatisfactory	Moderately Unsatisfactory	The investment funds that were used produced highly satisfactory results. Expectations to reform the gas sector with this type of a mixed project were unrealistic.
Institutional Dev .:	Modest	Modest	

Sustainability :	Likely	Likely	
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Unsatisfactory	Unsatisfactory	
Quality of ICR :		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

- The Bank should continue to strongly support the rehabilitation of district heating infrastructure. It should be considered an essential service needed for reducing real poverty, and it is generally an economically and financially attractive investment, with additional GHG reduction benefits.
- Investment loans are not effective vehicles for sector reform when the institutions that need to be reformed are not direct beneficiaries of the investment program. In this case the municipal heating authorities, which purchased gas, were the beneficiaries, while Gasprom, the supplier of gas, was the object of the reform. There was no incentive for Gasprom to support the investment program or the reform program.

8. Assessment Recommended? Yes No

9. Comments on Quality of ICR:

The ICR was exceptionally detailed and complete. Its judgements were well substantiated. It would have been useful to have explained why the large Volgograd component was dropped before loan signing, as this might have provided some insight into the problems with lending to regional bodies.