



<b>1. Project Data :</b>
<b>OEDID:</b> C2903
<b>Project ID:</b> P044395
<b>Project Name:</b> Emergency Electric Power Reconstruction
<b>Country:</b> Bosnia-Herzegovina
<b>Sector:</b> Electric Power & Other Energy Adjustment
<b>L/C Number:</b> Credit 2903-BOS
<b>Partners involved :</b> 13 co-financiers
<b>Prepared by :</b> Alvaro J. Covarrubias, OEDST
<b>Reviewed by :</b> Alain A. Barbu
<b>Group Manager :</b> Gregory K. Ingram
<b>Date Posted :</b> 08/13/1999

**2. Project Objectives, Financing, Costs and Components :**  
 The Emergency Electric Reconstruction Project, supported by an IDA credit for SDR 24.9 million (US\$35.6 million equivalent) was approved in early FY97 and closed on December 31, 1998 as originally scheduled. A total of US\$0.22 million equivalent was not disbursed. Cofinancing of US\$134.1 million equivalent from more than 13 donors helped project financing. The appraised cost of the project was US\$ 196.4 million and the estimated actual cost was US\$182.4 million, excluding the cost of rehabilitating the Mostar hydropower plant (US\$23.5 million). The project objectives were to restore electricity service, which was disrupted seriously during the 1991-95 war, to acceptable levels in major cities and for vital industries, increase coal production for thermal power plants, reconfigure the electric power network of Bosnia and Herzegovina, enhance the power sector's institutional capacity and improve its finances, and support sector restructuring. These objectives were to be met by rehabilitating four hydropower stations (Jablanica, Grabovica, Mostar and Jajce) and three thermal power plants (Tuzla, Kakanj and Ugljevik), reconstructing 350 km of 220 kV and 110 kV transmission lines, and thirty one 220/110/35 kV and 110/35/10 kV substations, reconstructing essential parts of the distribution networks of 13 districts, repairing the communications and power system control; purchasing utility vehicles and spare parts for maintenance of the generation plants and transmission and distribution facilities; and emergency rehabilitation of selected coal mines (Dubrave, Sikulje, Banovici, Mramor, Vrtliste, Breza, and Ugljevik); supporting project management and procurement monitoring and auditing. Moreover, the project included technical assistance in engineering services, and in carrying out studies on sector restructuring, tariffs, and least cost investment plan. The IDA credit was allocated to rehabilitate the Grabovica hydro power station and the Tuzla thermal power plant, purchase of equipment and services for the reconstruction of part of the 220 kV and 110 kV transmission substations, hire consultants for engineering services and studies, and purchase of supplies for project management. US\$90.1 million equivalent in co-financing from four major donors (EC, EBRD, Japan, USA) was allocated to purchase most of the equipment, material and services for reconstructing 220 kV and 110 kV transmission facilities and distribution networks. The rest of co-financing (US\$44.0 million equivalent) and local contribution (US\$14.1 million equivalent) was allocated to purchase the balance of equipment and services needed for rehabilitating the generation, transmission and distribution facilities, and the coal mines.

**3. Achievement of Relevant Objectives :**  
 Objectives were substantially achieved in spite of the problems inherent in coordinating a large number of co-financiers. Electricity service was restored to acceptable levels in about two and a half years by : (a) rehabilitation of the Grabonica hydropower plant (2x57 MW), the Tuzla thermal power plant (unit No.3 of 100MW), the Kakanj thermal power plant (unit 5 of 110 MW), the Jajce hydropower plant, and the Ugljevik thermal power plant (300 MW unit); (b) completion of the rehabilitation of about 500 km of 220 kV and 110 kV transmission lines, twenty six 110 kV and eight 220 kV substations, and about 1,600 MVA in power transformers; (c) restoring the electricity supply to more than 40,000 households through rehabilitation or reconstruction of about 600 km of high voltage and medium voltage distribution lines; (d) acquiring spare parts and service vehicles (134 specialized maintenance vehicles) for generation, transmission and distribution facilities; (e) rehabilitating coal mines and increasing their output; and (f) carrying out four studies on least-cost investment strategy, electricity tariffs, and rehabilitation of power plants and transmission system. Completion of the rehabilitation of part of the physical components has suffered some delays caused by late availability of funds from some co-financiers or late delivery of equipment by suppliers : Jablanica

hydropower plant to early July 1999, Kakanj thermal power plant (unit No.6) to May 1999, Una hydropower plant (replaced the telecommunication and control component) to end-2000, and a few 220kV and 110 kV power transformers to September 1999. In the period 1996-1998 electricity sales increased from 1,700 GWh to about 2,700 GWh and revenues grew from KM 198 million to KM 380 million (revenues collected went from 82 percent to 120 percent of cash operating expenses), electricity tariff reached a level close to 7 UScent/kWh, which is the average of efficiently operated electricity companies in Western Europe, collection improved from 48 percent to 91 percent (40 days of billing), and coal production has reached 2.7 million tons per year (97 percent higher than in 1996) ensuring coal supply to the coal fired power plants.

**4. Significant Achievements :**

The Borrower's performance was highly satisfactory during project preparation, implementation and in complying with covenants. Particularly, in project implementation management involving difficult administration of a large number of co-financiers (more than 13). The numerous components of the project were substantially completed in a very short period of time (30 months). Delays in completing some physical components were caused by factors out of Borrower's control. Also, the Bank performed remarkably in catalyzing co-financing to close a large financial gap (about US\$63 million) during project implementation.

**5. Significant Shortcomings :**

None

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
<b>Outcome :</b>	Satisfactory	Satisfactory	
<b>Institutional Dev .:</b>	Partial	Substantial	Post-war turnaround in financial performance has been remarkable - sector restructuring is being addressed under follow up project.
<b>Sustainability :</b>	Likely	Likely	
<b>Bank Performance :</b>	Highly Satisfactory	Highly Satisfactory	
<b>Borrower Perf .:</b>	Highly Satisfactory	Highly Satisfactory	
<b>Quality of ICR :</b>		Satisfactory	

**7. Lessons of Broad Applicability :**

It is advisable to avoid the use of a Project Start-Up Advance (PSA) to procure goods and services before Board Approval because the handling transfers and adjustments of funds between projects (in this case the District Heating, Gas and Power Projects) create difficulties when disbursements are to be made . It would be better to consider the use of an enlarged Project Preparation Facility (PPF) for such purposes.

**8. Audit Recommended?**  Yes  No

**Why?** It would be advisable to audit this project together with the Second Electric Power Reconstruction project (Credit 3071-BA) and the Reconstruction Assistance Project (Credit 3028-BA) in order to evaluate the progress made in power sector restructuring in Bosnia and Herzegovina .

**9. Comments on Quality of ICR :**

The ICR includes a concise and clear description of the project implementation and results, an extract of the Borrower's contribution to the ICR, a good Aide Mémoire combining the last supervision with the ICR mission, a satisfactory plan for future project operation, and a map . The recalculation of the ERR of the project is satisfactory .