The Republic of Albania

Power Transmission and Distribution Project

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Field Survey: October 2007–March 2008

1. Project Profile and Japan's ODA Loan

Map of project area

Tirana Substation

1.1 Background

In Albania under the former socialist administration, emphasis was placed on promotion of water resource development, and multiple hydroelectric power plants were constructed. Export of surplus electric power was a precious source of foreign currency, which amounted to 16 million dollars in 1992; however, in the latter 1990's, Albania became an importer of electric power. Meanwhile, assistance from the former socialist governments stopped in the latter 1980's, and sudden changes in the political establishment starting in 1990 dealt a blow to the economy. The GDP dropped 60% during 1990 to 1992, and as the disorder in Albania deepened along with riots caused by the breakdown of a pyramid scheme in 1997 and refugee problems, investment in electric power facilities was nearly nonexistent. As the facilities aged and malfunctions increased, power outages occurred frequently.

1.2 Objective

The objective of this project is to promote efficient management of energy resources together with promoting improvement of the stability and reliability of electric power supply facilities by reducing technical loss, etc., through repair and reinforcement of Albania's main transmission and distribution network, and thereby contribute to the improvement of the living environment and economic development in the project area.

1.3 Borrower / Executing Agency

Albania Power Corporation (KESH) (guaranteed by the government of Albania) / Albania Power Corporation (KESH)

1.4 Outline of Loan Agreement

Loan Amount / Loan Disbursed Amount	3,124 million yen / 3,072 million yen
Exchange of Notes / Loan Agreement	December 1996 / December 1996
Terms and Conditions -Interest Rate -Repayment Period (Grace Period) -Procurement	 2.3% 30 years (10 years) General untied
Final Disbursement Date	October 2005
Main Contractors (only contracts over 1 billion yen)	Joint venture of VA Tech Transmission & Distribution GMBH & CO. KEG (Australia), Messina S.r.l. (Italy), and Elkabel Ltd. (Bulgaria)
Consulting Services (only contracts over 100 million yen)	N.A.
Feasibility Study (F/S), etc.	F/S prepared in November 1993 (prepared by Italian consultant using World Bank funds)

2. Evaluation Result (rating: C)

2.1 Relevance (rating: a)

2.1.1 Relevance at the time of appraisal

The 1996–1998 National Development Plan, which sets the real annual GDP growth rate of 7.5% as a goal, advocated continuation of concessional foreign borrowing to fund the necessary public investment. In the pubic investment program, the sector with the largest fund allocation was infrastructure development, which includes the energy sector. In the energy sector, the government was expected to fill a regulatory and managerial role to promote efficient management and economical usage of energy resources, rather than directly intervene, and in the short to medium term, state-owned enterprises were to take over the production and distribution of energy. While Albania's main energy source was hydroelectric power, the country faced increased electric power loss due to aging of the power generation facilities and the transmission and distribution network, and the deterioration of the electric power supply-demand balance. Therefore, this project aimed to repair and reinforce the electric transmission and distribution facilities was a very urgent project of the highest priority.

2.1.2 Relevance at the time of evaluation

In the 2003–2008 National Development Plan as well, the energy sector, and in particular the electric power sector, is positioned as an important sector. The highest

priority is placed on stabilization of the power supply through repair and reinforcement of the aged power equipment and facilities and on diversification of power sources. According to the Electric Power Sector Strategy (2007–2020), efforts are being made to integrate with Europe's electric power market through modernization of the power sector, securing of a stable power supply, and observance of the EU's directives.

Moreover according to the 7th KESH Action Plan (2007–2009), KESH is aiming to implement company management that conforms to international standards via improvement of power supply services, improvement of company administration through reorganization, and improvement of the financial, economic, and technological status. The repair and reinforcement of aged power generation, transmission, and distribution facilities and the decrease of power loss are urgent issues, and so this project aimed at stabilizing electric power supply is a project of high importance.

Implementation of the project was consistent with the national plan, etc., both at the time of appraisal and at the time of the ex-post evaluation, and so the relevance of project implementation was extremely high.

2.2 Efficiency (rating: c)

2.2.1 Outputs

The project was co-financed by six donors, the Japan Bank for International Cooperation (JBIC), the European Bank for Reconstruction and Development (EBRD), the World Bank, the Swiss government, the European Investment Bank (EIB), and the Italian government. (EIB was not participating in the project at the time of the appraisal, but EIB's participation was decided during the plan review (2001) during the implementation, as described below.) Some changes were made in the plan outline and the output, as shown below in Table 1. The changes were the addition of 1) construction and reinforcement of transmission lines, 2) construction and reinforcement of substations, 3) development of the distribution network, and 5) technical assistance. All of the changes are considered to be appropriate.

As stated above, the scope of "1) construction and reinforcement of transmission lines" was altered because it was decided to implement additional construction such as transmission and distribution lines, which were urgently needed, when EIB joined the project. In "2) construction and reinforcement of substations," Fiber which was originally to be covered by the World Bank was covered by JBIC's ODA loan because World Bank financing became unavailable due to changes in the scope of other items that required increased funds. In "3) development of the distribution network," Shkoder and Elbasan which originally were to be covered by the World Bank were covered by EIB which joined the project midway, due to the same reasons as 2). Regarding "5) technical assistance," the World Bank implemented technical assistance related to financial

management and training related to project management (including procurement and disbursement) in the "T/A for strengthening environmental management and KESH's financial affairs," while it cancelled the "T/A for training on privatization and legislation of the Ministry of Minerals and Energy Resources."

Table 1: Project Outline and Project Output

Item	Plan/Actual	Planned Investors	Actual Investors
1) Construction and reinforcement of transmission lines	Additions made	EBRD	EBRD, EIB
2) Construction and reinforcement of substations	Additions made	JBIC, EBRD, World Bank, Switzerland	JBIC, EBRD, World Bank, Switzerland, EIB
3) Development of the distribution network	Additions made	JBIC, World Bank	JBIC, World Bank, EIB
4) Upgrading of the power supply system	Under implementation	Italy	Italy
5) Technical assistance	Additions made	Switzerland, World Bank	Switzerland, World Bank (partially implemented)
6) Installation of meters and meter boxes	Additional project	—	World Bank, EIB, Italy, KESH
7) Other (consulting services)	As planned	EBRD, Switzerland	EBRD, Switzerland

Table 2: Project Outline and Project Output by Donor

Investor		Item	Plan	Actual
JBIC	1	Repair of substation	7 locations (Traktori, Selita, Tirana, Shkozet, Kavaja, Shkodra 2, Vlora)	8 locations (Addition: Fiber)
	2	Reinforcement of substation	Tirana (220kV Bays – 4 locations, 110kV Bays – 25 locations)	74 locations for 2 and 3 (No detailed data), MV cables 131 km, LV cables 111 km
	3	Repair of distribution network	Tirana (MV/LV 420 locations, MV cables 100 km, LV cables 130 km)	
EBRD	1	Transmission lines	2 lines, 110 kV (Elbasan–Cerrik–Korce, 105 km) 220 kV (Elbasan 1–Elbasan 2, 4 km) 110 kV (Zemblak–Korce, 15 km)	Basically as planned
	2	Construction of substation	Zemblak, 400/110 kV	Basically as planned
	3	Consulting services	24 MM	35.5 MM
World Bank	1	Repair of distribution network	8 locations (Shkoder, Durres, Elbasan, Vlore, Fieri, Berati, Lac, Saranda)	6 locations (Shkoder and Elbasan were implemented by EIB)
	2	Repair of substation	1 location (Fiber)	0 locations (Fiber was implemented by JBIC)
	3	Technical assistance	Strengthening of environmental management and KESH's financial affairs, training on privatization and legislation of the Ministry of Minerals and Energy Resources, investment evaluation	Basically as planned (However, the training on privatization, etc., was cancelled.)
	4	Meters	No plan	Installation of meters and meter boxes (33,300 units)
Switzerland	1	Construction of substation	Durres, 220/110 kV	As planned
	2	Technical assistance	8.7 MM	11.3 MM
	3	Consulting services	Design of the Durres Power Plant, construction management (75 MM)	91.6 MM
EIB (All items are additions)	1	Transmission lines	No plan	Construction of 2 lines, 110 kV (Elbasan 1–Cerrik, 2.9 km, etc.) Repair of Tirana ring connection, 110 kV (60 km LT cables, etc.) Reinforcement (Vau Dejes, Shkodra, etc.) Urgent repairs (Tirana, etc., transmission lines 21.6 km, 20 kV buried cables 13 km, etc.)
	2	Repair of substation	No plan	Vlora 1, 110/20 kV
	3	Repair of distribution	No plan	Shkoder, Elbasan (Buried cables 20 kV, 10 km;

		network		overhead lines 20 km, etc.)
	4	Meters	No plan	Installation of meters and meter boxes (75,000 units)
Italy	1	Power supply system	Upgrading of supply system (central power supply station, terminal units)	Scheduled for implementation in near future
	2	Meters	No plan	Installation of meters and meter boxes (75,000 units)
KESH	1	Meters	No plan	Installation of meters and meter boxes (100,000 units)

2.2.2 Project period

Whereas the project period planned at the time of appraisal was January 1997 to September 2000 (3 years 9 months), the actual project period was January 1997 to October 2005 (8 years 10 months), a 136% increase over the plan.

The reason why the project period exceeded the plan was that the World Bank and EBRD suspended their loans to the project during the project implementation due to the deterioration of KESH's management ability, accompanying social and economic instability. The loan suspension continued for two and a half years from 1998, and was lifted in 2001, due to improvement in KESH's performance. Together with reviewing the project plan at that time, it was decided that EIB would participate as a new donor.

As other reasons for the delay accompanying the loan suspension, it may be mentioned that time was required to process EIB's co-financing and time was also required for the World Bank and EBRD to review the project plan. Furthermore, JBIC did not adopt the loan suspension, but because the construction period was significantly delayed due to the loan suspension by the World Bank and EBRD, KESH requested an extension of the loan term, and so the loan term was extended from October 2002 to October 2005.

2.2.3 Project cost

The total project cost planned at the time of appraisal was 12,430 million yen (ODA loan portion: 3,124 million yen), but the actual project cost was 16,523 million yen (ODA loan portion: 3,072 million yen). The total project cost increased by 32% over the planned amount.

The reason for the significant increase in project cost is that the latter amount includes cost of the additional projects, etc., which were newly agreed upon after the loan suspension. (KESH handled the additional projects as part of this project, and due to KESH's management system, it was difficult to accurately calculate the expense of these additional projects.)

It is likely that the project cost's percentage of increase would decrease if one took into consideration that, when initiating the additional loan projects for KESH, the World Bank cancelled part of the existing project and the additional loan provided by the Italian

government (11 billion lira) was not included in the project cost planned at the time of appraisal.

2.3 Effectiveness (rating: b)

2.3.1 Operation and effect indicators

2.3.1.1 Power loss rate

Table 3 displays the power loss rate for Albania nationwide. As of 2006, transmission loss had been reduced considerably, but there were hardly any improvements in distribution loss and non-technical loss.

Considering that transmission loss exceeded 10% up to 2003, it may be said that this project resolved a bottleneck by intensively carrying out repair and reinforcement work on the transmission system facilities. Moreover, the total loss rate in 2007,[1] at 33.5%, represents a significant improvement, and in the capital city of Tirana which benefited from the ODA loan, the total loss rate in 2007 was 30.2%.

Distribution loss appears to be in a downtrend as a result of this project's boosting of distribution voltage and repair of transformers. However, to realize a large reduction in loss, it is necessary to implement countermeasures across a broad range. (Nevertheless, construction only for the purpose of reducing distribution loss is not economical, and so this construction should be coordinated with other construction.) Meanwhile, because measures to reduce distribution loss do not produce effects quickly in the short term, it is likely that a decline will be seen in distribution loss henceforth.

Non-technical loss is the difference between the amount of power actually used by power consumers and the amount of usage billed to the consumers. However, it is difficult to accurately grasp the state of illegal connections to power lines and unlawful usage of meters. Electricity theft, which is generally the cause of non-technical loss, may be reduced by switching low-voltage wires from naked wires to insulated wires to make theft difficult, and KESH is taking measures within its operation and maintenance system, such as strengthening checks for theft. Moreover, customers without meters are billed a fixed charge, and when these fixed-rate customers consume more than the contracted amount of electricity, the excess amount is calculated as non-technical loss. KESH is promoting the installation of meters and endeavoring to reduce loss. In this project, approximately 283,300 meter boxes were installed. In addition, a mass-media campaign is being conducted to prevent electricity theft and non-payment of electricity charges, and this is helping to reduce loss.

[1] Because the details for the 2007 data have not yet been released, the 2007 data is not included in Table 3.

Table 3: Electric Power Loss Rate (%)

		97	98	99	00	01
Internal consumption	Plan	—	0.7	0.5	0.5	0.8
	Actual	0.5	0.6	0.5	0.7	0.9
Transmission	Plan	—	13.8	14.4	—	12.5
	Actual	14.4	15.3	15.3	12.4	11.0
Distribution	Plan	—	36.2	32.9	—	12.0
	Actual	41.2	40.8	36.7	12.2	15.6
Non-technical[2]	Plan	—	—	—	—	16.5
	Actual	—	—	—	18.8	18.1
Total power loss rate	Plan	—	44.4	43.3	51.2	41.8
	Actual	45.9	51.3	47.5	44.1	45.6
		02	03	04	05	06
Internal consumption	Plan	1.1	1.89	1.8	1.81	1.87
	Actual	1.5	1.89	1.8	1.78	1.82
Transmission	Plan	11.5	11.0	5.47	4.11	5.04
	Actual	11.5	10.5	5.7	4.09	3.41
Distribution	Plan	14.4	13.9	19.3	19.4	18.0
	Actual	14.4	13.8	18.2	21.8	21.7
Non-technical	Plan	15.2	13.3	16.7	16.8	15.6
	Actual	15.2	17.0	15.8	16.4	17.6
Total power loss rate	Plan	42.2	40.1	43.3	42.2	40.4
	Actual	42.6	43.2	41.4	44.0	44.6

(Source: KESH)

2.3.1.2 Power supply-demand balance

In Albania where rainfall is abundant, power generation has relied on hydroelectric power, but starting around 1998, chronic power shortages began to occur due to drought. Until 1997, Albania exported surplus electric power, but in 1998, the country hastily imported 500 GWh due to the above-mentioned power shortage. Subsequently because rainfall was low and the amount of power generated dropped, 2,200 GWh was imported in 2002. In recent years although there has been rainfall, the water level of reservoirs has not recovered and in 2007 when rainfall was low, there was a sharp increase in the amount of power imported.

However, outages were not due to accidents and defects in the power system but rather due to the power supply shortage due to the drop in the amount of power generated. So, it may be said that this project resolved the critical bottleneck in power facilities. Electricity is imported mainly from Bulgaria, Romania, and Bosnia via Greece, but the capacity of the international connection line between Albania and Greece is limited to 2,500 GWh. Recently, competition over the purchase of electric power from neighboring countries is intensifying because Greece's demand for electricity is growing and power generation

[2] KESH does not accurately distinguish between non-technical and technical loss and did not calculate non-technical loss until 1999.

was suspended at Bulgaria's nuclear power plant, causing the cost of imported electricity to rise.

Table 4: Power Supply-Demand Balance (GWh)

	2003	2004	2005	2006	2007
Internal generation	4,811	5,395	5,356	5,451	3,813
Imports	916	478	524	605	1,888
Supply	5,727	5,873	5,880	6,056	5,701
Demand	6,389	6,429	6,640	6,465	6,659
Difference	-662	-556	-760	-409	-958

* Figures for 2007 are forecasts. (Source: KESH)

As shown on Table 4 "Power Supply-Demand Balance," supply has not kept pace with demand in recent years, and load restrictions occur frequently. Rainfall was abundant in 2006, and so power generation capacity improved slightly; however, the recovery of the reservoirs' water level was only temporary, and KESH's financial position became tight due to the increase in imported electricity. According to KESH, the power supply improved in 2008 because there had been abundant rainfall around the end of 2007, and it is expected that supply restrictions will be eased; however, there is a high degree of unreliability in hydroelectric power generation because the power supply is strongly controlled by the amount of water passing through the dams. Moreover, because electric power is also used for heating in Albania, power shortages are not only a national economic problem but also a social problem.

2.3.1.3 Number of consumers

Table 5 displays the number of consumers. Although the number of consumers is increasing, the number of consumers without meters is also increasing. Consumers without meters are billed for a fixed amount, which is set at 300 kWh in the summer and 400 kWh in the winter. Because there are no incentives to conserve electricity, the consumers' usage exceeds the set amounts, and this is a factor in the increase of non-technical loss.

Starting in 2007, KESH began improving the fairness of measurements by replacing malfunctioning meters and strengthening its service charge collection system by halting transmission when consumers do not pay their bills.

Table 5: Number of Consumers

	2004		2005	
	With meter	Without meter	With meter	Without Meter

Ordinary households	697,514	67,334	676,347	129,541
Commercial	79,051	1,476	76,234	13,274
Large consumers	8,055	216	6,822	1,661
Total	784,620	69,026	759,403	144,476
	2006		2007	
	With meter	Without meter	With meter	Without meter
Ordinary households	759,449	101,020	790,745	96,498 7,2452*
Commercial	91,113	13,850	96,498	12,580 2,094*
Large consumers	8,124	1,486	8,164	1,201 336*
Total	858,686	116,356	895,407	86,233 17,110*

(Source: KESH)

2.3.1.4 Rate of service charge collection

Table 6 shows the rate of service charge collection. The rate of service charge collection is in an improving trend, and in 2007, it improved significantly to 90%. By customer type, the collection rate for ordinary households is 75% to 80% and for commercial consumers is over 90%. However, because the collection rate in rural areas remains low, the 7th KESH Action Plan, with the cooperation of the local government, aims to improve collection from the northern region where payment tends to be particularly in arrear.

Table 6: Rate of Service Charge Collection (%)

	2001	2002	2003	2004	2005	2006	2007
Total	61.9	79.4	89.7	88.9	92	88.4	—
Actual	61.6	84.5	88.3	86.1	63.8	82.7	90.0

* Figures for 2007 are forecasts. (Source: KESH)

2.3.2 Internal rate of return

Table 7 shows the internal rate of return at the time of the appraisal and at the time of the ex-post evaluation. FIRR was not calculated at the time of the appraisal. The costs were calculated as the investment cost and the operation and maintenance costs, and the benefits were calculated as the reduction of electric power accidents and technical loss. The project life was calculated as 20 years. The reason why the international rate of

return declined is because of the increase in investment cost and the delay in the occurrence of the benefit due to the construction delay.

Table 7: Internal Rate of Return

	Time of Appraisal	Time of Ex-Post Evaluation
EIRR	24%	20.7%

2.4 Impact

2.4.1 Environmental impact

Alterations were made in the scope of the project, but environmental studies were conducted as required, with appropriate measures being taken for environmental problems. Moreover in this project, KESH prepared an environmental management plan by itself with technical assistance from the World Bank and is working on conservation of the natural environment, such as by giving consideration to the selection of sites for transmission lines and substations. The environmental management plan also stipulates that the impact of electromagnetic waves, which are said to affect the human body, will be minimized (a regulation of Albania and the EU) and that equipment will not be procured if it uses polychlorinated biphenyls (PCBs). The plan also includes consideration for elimination of leakage such as oil and wastewater at substations and prevention of groundwater contamination. Handling and processing of oil, etc., is specified in a manual and, prevention of environmental pollution is thoroughly implemented. No problems such as groundwater contamination have been reported. Furthermore, based on the recommendations of the above plan, an environmental department that specializes in environmental conservation was established in KESH in 2003.

In 2006, with the support of the United Nation Development Program and the Global Environment Facility, Albania's Ministry of Environment prepared a National Implementation Plan for Reduction and Disposal of Persistent Organic Pollutants which covers reduction and treatment of pollutants such as PCBs. Accompanying that, tests were conducted for the presence of PCBs in equipment such as transformers which number as many as 100,000 units, and no PCBs were detected. In this way, KESH is actively working on reduction of persistent organic pollutants. Furthermore, because the land for the transmission lines and substations was land owned by KESH, no new land acquisition or resident relocation measures were implemented in this project.

2.4.2. Beneficiary survey

In the ex-post evaluation (October 2007–March 2008), a beneficiary survey was conducted in interview form of ordinary households (100 households) and 50 companies (sample selected to reflect the actual percentages of KESH customers: 8% large users, 9%

service industry, 6% businesses, and 27% commercial) which were randomly selected from the project's target area (i.e., the city and suburbs of Tirana).

2.4.2.1. Ordinary households

Of the respondents from ordinary households,[3] 83% had experienced power outages more than once per day, and 100% had experienced voltage fluctuations. As a result, 45% of the respondents said that malfunction of electrical appliances occurred frequently, and 32% replied that they prevent malfunction by using voltage regulators.

Of the respondents, 28% replied that service had improved after the project in terms of the stable supply of electric power, etc. Eight of the respondents said that they were using some sort of illegal connection. Nearly all were paying service charges on time, and 62% replied that they would have no objection to an electricity fee hike if the service were better, such as if outages were eliminated. On the other hand, there were also respondents who stated that their expenditures increased due to a recent fee hike and they were having difficulty making ends meet.

2.4.2.2. Companies

Of the respondents from companies,[4] 54% use electricity 16 hours or more per day, 26% use electricity 8 to 10 hours per day, and 8% use nighttime electricity (8 hours). Of the companies, 81.6% experience outages for 2 to 4 hours 1 to 2 times per day. 65% of respondents stated that there are fluctuations in voltage. 53% of respondents suffered damage such as malfunctions of facilities or equipment, and the loss due to malfunction is estimated at 1,000 to 80,000 lekë. 84%of respondents avoid damage by taking some sort of measures, and over 80% of the companies have installed diesel power generators.

Electric power is the most important input at all companies. Of the companies, 74% replied that they would accept an electricity fee hike if the service would be improved, such as if power outages were eliminated.

Furthermore, in the interview conducted by the executing agency, some companies replied that service had improved following the project in terms of the stability of the voltage supply, increased supply amount, reduction of technical loss, reduction of outages, and more accurate electricity fee calculation.

[3] Of the respondents 52% were men and 48% were women, and 2% had completed elementary school, 47% had completed junior high school, and 51% had completed high school. As for the monthly service charges per household, 72% of households were charged 5,000 lekë or less, 23% were charged 5,000 to 10,000 lekë, and 5% were charged 10,000 lekë or more. The charges represent approximately 10% of income.

[4] Of the companies surveyed, 53% had annual sales of 10 million lekë or less and 70% had 9 or more employees. The types of respondents were: 12% large companies, 16% government agencies, 18% service industry, and 54% commercial.

Beneficiary survey in progress

Electric power generator
in front of a store

2.5 Sustainability (rating: a)

2.5.1 Executing agency

The executing agency is Korporata Elektroenergjitike Shqiptare (KESH) which conducts the generation, transmission, and distribution of electric power.

2.5.2 Operation and maintenance system

In implementing this project, a project monitoring office was established to carry out project monitoring and procurement monitoring in a unified manner. Under its president, KESH has two vice presidents, with one in charge of finance and the other in charge of technology. The vice president in charge of technology assumed the position of project monitoring office head for this project. For the operation and maintenance system following project completion, it was decided to assign personnel during the construction period, in accordance with the manual distributed during procurement. Following a series of reorganizations at KESH, a transmission company and a distribution company began operation and maintenance of their respective facilities.

KESH is undergoing reorganization[5] and is scheduled to be split into power generation, transmission, and distribution operations. Following a Cabinet decision in 2003, Transmission System Operator (TSO) began operations while simultaneously managing the transmissions sector. In 2004, the distribution sector was split off and established separately, and in 2007 Distribution System Operator (DSO) was established. The power plants are scheduled to be split into three companies (3 dams in the Drini River system, 2 dams in the Mati River system, and other dams) which will remain subsidiaries of KESH. The organization underwent a de facto split, but the assets and liabilities are still under KESH. Completion of the accounting procedures, etc., is scheduled during 2008. Furthermore, the distribution sector is scheduled to be privatized during 2008.

[5] To rebuild operations and strengthen the Project Management Unit (PMU), the Italian government, the World Bank, and the EBRD, etc., are also assisting other projects.

Currently, KESH is a holding company which owns all assets and coordinates and controls all operations. KESH has a staff of 6,600 persons, of which 5,500 are employed in distribution, 950 are employed in power generation, and 150 are employed at the KESH headquarters.

As part of the reforms in the electric power sector, an independent "regulator" agency was created in 2004 and began operation in 2006. The agency supervises the sector, issues business permits, and revises electric power rates, with the objectives of smoothly promoting the privatization of electric power companies and the introduction of the principle of competition in Albania, maintaining transparency and impartiality, and dedicating itself to the protection of investors and consumers. The agency is staffed by a committee of five persons who are appointed by Albania's People's Parliament.[6]

2.5.3 Technical capacity

Through regular training, efforts are being made to boost project scouting, formation, loan funding, and implementation and management capacity for investment projects. Substations funded by JBIC and other donors are equipped with the latest technology and computerized management systems, which are managed by KESH staff. The high-voltage electric line network was prepared using a GIS system, and currently that system is being used for planning of expansion, etc., of the distribution network, etc. A technical manual has been prepared which covers management of circuit breakers, transformers, and protection systems and automatic control devices as well as creation of databases and general operation and maintenance. The technical manual is revised periodically.

2.5.4 Financial status

In FY1994, Albania introduced a new accounting system, and submission of a Balance Sheet and a Profit and Loss Statement became obligatory. KESH conducted accounting in accordance with International Financial Reporting Standards (IFRS) for the first time in FY2006; however, the auditor points out that an accurate study could not be conducted due to incomplete accounting data. FY2006 was the transitional year for KESH's accounting practices, and KESH aims to meet international accounting standards starting in FY2007.

Because the accounting practices system changed in FY2006 as described above, it is difficult to compare data over the years. However, in recent years operating profit has risen, and it appears that management is in good condition. Still, it is forecast that the finances will be tight because the amount of imported electric power tripled between 2006

[6] The committee members are nominated by a selection committee composed of the People's Parliament's industrial committee head and economic committee head and the Minister of Industry and Economy, and appointed by the People's Parliament. The chairperson's term of office is five years, the term of office of two members is three years, and the term of the remaining two is four years.

and 2007, and moreover, the cost of imported electric power rose to 9.1 lekë/kWh.

Operating profit in FY2006 (after tax) was 3,308.6 million lekë (approximately 4,300 million yen). Income from electric power, etc., was 26,657 million lekë. Operating expenses consisting of materials purchases, electric power purchase, and wages were 19,748 million lekë, and maintenance expenses were 366.6 million lekë. Operating profit (after tax) in 2005 was 6,105 million lekë and in 2004 was 4,958 million lekë.[7] Operating expenses (materials purchases, electric power purchase, and wages, etc.) in 2005 were 16,436 million lekë and in 2004 were 16,216 million lekë. Maintenance expenses in 2005 were 477.1 million lekë and in 2004 were 372.1 million lekë.

Because the cost of imported electric power is soaring, a heavy burden will be placed on KESH's finances if the amount of imported electric power increases. Because the cost of imported electric power was 4.4 lekë/kWh in FY2004 but rose to 9.1 lekë/kWh in FY2007, electric service charges rose from 7.25 lekë/kWh to 7.4 lekë /kWh in July 2006. Service charges were not revised in FY2007, but in FY2008 KESH applied to the above-mentioned independent regulator to raise service charges by 40%.

In FY2008 and FY2009, KESH aims to significantly increase its budget for maintenance expenses over the amount of the previous fiscal year and to enhance the maintenance of the facilities. Furthermore, KESH plans to endeavor to reduce costs by reviewing personnel reductions and job types and grades, by hiring personnel suited to the business structure, and by conducting re-education.

2.5.5 Operation and maintenance status

Currently, there are no particular problems in the operation and maintenance of the electric power facilities. The operation and maintenance expenses are scheduled to increase, and if the budget is secured, it appears that operation and maintenance will be implemented suitably.

3. Feedback

3.1 Conclusion

Given the above, this project can be evaluated as moderately satisfactory.

3.2 Lessons Learned

N.A.

3.3 Recommendations

N.A.

[7] According to Albanian accounting standards.

Comparison of Original and Actual Scope

	Item	Plan	Actual	Investor
Output	Construction and reinforcement of transmission lines	2 lines, 110kV (Elbasan–Cerrik–Korce, 105 km) 220 kV (Elbasan 1–Elbasan 2, 4 km) 110 kV (Zemblak–Korce, 15 km)	Basically as planned	EBRD
		No plan	Construction of 2 lines, 110 kV (Elbasan 1–Cerrik, 2.9 km etc.) Repair of Tirana ring connection, 110 kV (60 km LT cables, etc.) Reinforcement (Vau Dejes, Shkodra, etc.) Urgent repairs (Tirana, etc., transmission lines 21.6 km, 20kV buried cables 13 km, etc.)	EIB (addition)
	Construction and reinforcement of substations	Repairs in 7 locations (Traktori, Selita, Tirana, Shkozet, Kavaja, Shkodra 2, Vlora)	8 locations (Addition: Fiber)	JBIC
		Reinforcement in Tirana (220 kV Bays – 4 locations, 110 kV Bays – 25 locations)	74 locations, MV cables 131 km, LV cables 111 km	JBIC
		Construction (Zemblak, 400/110 kV)	Basically as planned	EBRD
		Repair in 1 location (Fiber)	0 locations (Fiber was implemented by JBIC)	World Bank
		Construction (Durres, 220/110 kV)	As planned	Switzerland
		No plan	Repair in Vlora 1 (110/20 kV)	EIB
		Repairs in Tirana (MV/LV 420 locations, MV cables 100 km, LV cables 130 km)	(No detailed data)	JBIC
	Development of the distribution network	Repairs in 8 locations (Shkoder, Durres, Elbasan, Vlore, Fieri, Berati, Lac, Saranda)	6 locations (Shkoder and Elbasan were implemented by EIB)	World Bank
		No plan	Shkoder, Elbasan (Buried cables 20 kV, 10 km; Overhead lines 20 km, etc.)	EIB
	Power supply system	Upgrading of supply system (central power supply station, terminal units)	Scheduled for implementation in near future	Italy
	Technical assistance	Strengthening of environmental management and KESH's financial affairs, training on privatization and legislation of the Ministry of	Basically as planned (However, training on privatization, etc., was cancelled.)	World Bank

		Minerals and Energy Resources, investment evaluation		
		8.7 MM	11.3 MM	Switzerland
	Consulting services	24 MM	35.5 MM	EBRD
		Design of Durres Power Plant, construction management (75 MM)	91.6 MM	Switzerland
	Installation of meters and meter boxes	No plan	33,300 units	World Bank
		No plan	75,000 units	EIB
		No plan	75,000 units	Italy
		No plan	100,000 units	KESH
Project Period		January 1997–September 2000 (3 years 9 months)	January 1997–October 2005 (8 years 10 months) (construction completed September 2005)	
Total Project Cost	Foreign currency	9,229 million yen	16,668 million yen	
	Local currency	3,201 million yen	2,236 million yen	
	Total	12,430 million yen	18,904 million yen	
	ODA loan portion	3,124 million yen	3,072 million yen	
	Exchange rate	1 yen = 0.99 lekë	1 yen = 0.79 lekë	