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IMPLEMENTATION COMPLETION AND RESULTS REPORT

Loan Number 8429-AL

ON A

LOAN

IN THE AMOUNT OF EUR 112.1 MILLION
(US\$150 MILLION EQUIVALENT)

TO THE

REPUBLIC OF ALBANIA

FOR THE

POWER RECOVERY PROJECT

December 24, 2021

Energy and Extractives Global Practice
Europe and Central Asia Region

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CURRENCY EQUIVALENTS
(Exchange Rate Effective November 19, 2021)

Currency Unit = Euro (EUR)

Albanian Lek 1 = US\$0.01

US\$1 = Albanian Lek 107.4

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ABC	Aerial Bundled Conductor
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
E&S	Environmental and Social
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
EIRR	Economic Internal Rate of Return
ENPV	Economic Net Present Value
ERDB	European Reconstruction and Development Bank
ERE	Energy Regulatory Authority
ESMF	Environmental and Social Management Framework
EU	European Union
FIRR	Financial Internal Rate of Return
FNPV	Financial Net Present Value
GDP	Gross Domestic Product
GoA	Government of Albania
GWh	Giga-watt Hour
HV	High Voltage
IDA	International Development Association
IPP	Independent Power Producer
ISR	Implementation Status and Results Report
IT	Information Technology
KESH	Albanian Power Corporation (<i>Korporata Elektroenergjitike Shqiptare</i>)
KfW	<i>Kreditanstalt Für Wiederaufbau</i>
kV	Kilo-volt
LV	Low Voltage
M&E	Monitoring and Evaluation
MoIE	Ministry of Infrastructure and Energy
MOF	Ministry of Finance
MTR	Midterm Review
MV	Medium Voltage
MVA	Mega-Volt-Ampere

MW	Mega-watt
O&M	Operation and Maintenance
OSHEE	Electricity Distribution Operator (<i>Operatori Shperndarjes se Energjise Elektrike</i>)
OST	Transmission and System Operator
PAD	Project Appraisal Document
PDO	Project Development Objective
PIU	Project Implementation Unit
PMU	Project Management Unit
RAP	Resettlement Action Plan
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
TA	Technical Advisory
USAID	United States Agency for International Development
WPS	Wholesale Public Supplier

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P144029	The Power Recovery Project
Country	Financing Instrument
Albania	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
Republic of Albania	Ministry of Infrastructure and Energy

Project Development Objective (PDO)

Original PDO

The project development objective is to improve reliability of power supply and financial viability of the power sector.

FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing			
IBRD-84290	150,000,000	126,380,801	84,512,507
Total	150,000,000	126,380,801	84,512,507
Non-World Bank Financing			
Borrower/Recipient	51,300,000	0	0
Total	51,300,000	0	0
Total Project Cost	201,300,000	126,380,801	84,512,507

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
29-Sep-2014	30-Jan-2015	07-May-2018	30-Nov-2019	30-Jun-2021

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
06-Mar-2020	79.96	Change in Results Framework Change in Loan Closing Date(s) Cancellation of Financing Reallocation between Disbursement Categories Change in Legal Covenants Change in Implementation Schedule
06-May-2020	80.30	
04-Nov-2020	81.48	

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Moderately Satisfactory	Modest

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	07-Jun-2015	Satisfactory	Satisfactory	.16
02	05-Jan-2016	Satisfactory	Satisfactory	6.01
03	17-Oct-2016	Satisfactory	Moderately Satisfactory	6.23
04	06-May-2017	Satisfactory	Moderately Satisfactory	13.84
05	31-Dec-2017	Moderately Satisfactory	Moderately Unsatisfactory	51.84
06	29-Jun-2018	Moderately Satisfactory	Moderately Unsatisfactory	64.42
07	30-Dec-2018	Moderately Satisfactory	Moderately Unsatisfactory	74.51
08	24-Jun-2019	Moderately Satisfactory	Moderately Unsatisfactory	75.67
09	14-Nov-2019	Moderately Satisfactory	Moderately Satisfactory	77.85
10	04-Jun-2020	Moderately Satisfactory	Moderately Satisfactory	80.30
11	18-Jun-2020	Moderately Satisfactory	Moderately Satisfactory	80.30
12	20-Nov-2020	Moderately Satisfactory	Moderately Satisfactory	81.48
13	25-Jun-2021	Moderately Satisfactory	Moderately Satisfactory	87.29

SECTORS AND THEMES

Sectors

Major Sector/Sector (%)

Energy and Extractives 100

Public Administration - Energy and Extractives 2

Other Energy and Extractives 98

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3) (%)

Private Sector Development 15

Jobs 15

Job Creation 15

Finance	5
Finance for Development	5
Disaster Risk Finance	5
Public Sector Management	3
Rule of Law	3
Legal Institutions for a Market Economy	3
Urban and Rural Development	45
Urban Development	15
Urban Infrastructure and Service Delivery	15
Rural Development	15
Rural Infrastructure and service delivery	15
Disaster Risk Management	15
Disaster Response and Recovery	5
Disaster Risk Reduction	5
Disaster Preparedness	5
Environment and Natural Resource Management	32
Climate change	32
Mitigation	32

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. At the time of appraisal in 2014, Albania had achieved significant progress in poverty reduction having propelled from being one of the poorest countries in Europe in the 1990s to middle-income status in 2008. Albania's poverty fell from 25.4 percent in 2002 to 12.8 percent in 2008. However, poverty rose again from 2008, reaching 14.3 percent in 2012.¹ Extreme poverty decreased from about 5 percent in 2002 to 1.2 percent in 2008 but increased to 2.2 percent in 2012. Similarly, shared prosperity—consumption growth of the bottom 40 percent—improved between 2005 and 2008 but then deteriorated between 2008 and 2012 with consumption declining for all economic groups (1.3 percent), including those at the bottom 40 percent.

2. Significant slowdown to the country's growth was mainly attributed to the global financial crisis in 2008 and the subsequent eurozone crisis. Before the emergence of the global crisis, during 2005–2008, the economy grew at an average annual rate of 6.2 percent enabling an increase in household expenditures of the bottom 40 percent by 2.6 percent per year. Albeit having avoided a recession, the gross domestic product (GDP) growth slowed to less than 3 percent on average between 2009 and 2012 as exports, remittances, and inflows suffered particularly from Albania's close ties with the Greek and Italian economies.

3. Albania's fiscal deficit widened significantly in 2013 to 6.2 percent. Fiscal deficit averaged 3.4 percent between 2005 and 2012, except in 2008 and 2009, when it deteriorated sharply. Fiscal pressures rose further during the energy shortage in 2012 due to the Government's support to the power generation company Albanian Power Corporation (*Korporata Elektroenergjitike Shqiptare*, KESH) in the form of guarantees for power imports. As a result, the Government accumulated significant budgetary arrears, related to not only public works but also health, education, water, value added tax refunds, corporate income tax repayments, electricity bills, and social benefits. The stock of payment arrears was estimated at about US\$710 million or 5.3 percent of GDP. To address this, the World Bank prepared a Fiscal Development Policy Operation targeting to (a) strengthen public financial management and arrears clearance and (b) improve fiscal sustainability through tax, pension, and energy sector reform.

Sectoral Context

4. At appraisal, Albania's power sector comprised the KESH, the Transmission and System Operator (OST), and Electricity Distribution Operator (*Operatori Shperndarjes se Energjise Elektrike*, OSHEE) that were responsible for generation, transmission, and distribution, respectively.² The Energy Regulatory

¹ Albania's Living Standards Measurement Study (LSMS), 2012.

² During 2001, KESH underwent structural changes, resulting in the establishment of three vertically integrated state-owned entities for generation, transmission, and distribution. Previously, KESH was exclusively responsible for generating, transmitting, and distributing electricity to customers as well as exchanges with neighboring countries.



Authority (ERE) was responsible for sector regulation. All three companies were publicly owned.³ There were six high voltage (HV) eligible (or qualified) customers with annual consumption of 600 GWh per year (14 percent of all electricity sales) that were granted the right to become deregulated customers and choose their own supplier, that is, these customers were not obligated to buy electricity from KESH under a regulated tariff regime. KESH was responsible for the overall power supply for the regulated market in Albania. KESH operated as a power generation company as well as a wholesale public supplier (WPS). The arrangement required KESH/WPS to meet the demand within the regulated market by first buying all the available power generated from KESH Gen and then from local independent power producers (IPPs) before purchasing any power imports.

Box 1. Failed Privatization of Distribution Operations: 2009–2014

The GoA awarded the license for distribution operations to CEZ a.s. in March 2009, which gave 76 percent of the shares of OSHEE to Czech power utility CEZ a.s. The privatization of OSHEE was aimed at securing investments needed to improve operational efficiency, reduce power losses, and improve revenue collections in the distribution subsector. However, this initiative did not deliver the expected results, commitments, and set targets due to disagreements between the parties regarding bad debt provisions, rate of loss reduction, and end user tariffs. Consequently, the ERE revoked the distribution license in 2013 and CEZ a.s. initiated an international investment arbitration against the GoA seeking compensation for damages incurred due to its investment in the power distribution company. On June 23, 2014, GoA and CEZ a.s. agreed to terminate arbitration proceedings and entered into an amicable agreement. Subsequently, CEZ a.s. returned the complete ownership of OSHEE to the GoA.

5. Electricity demand scenario in Albania had seen ups and down. Demand within Albania fell to 79 percent of the 1989 level by 1992 because of declines in industrial production. Thereafter, it rose by 10.4 percent per year to 6,160 GWh in 2000. By 1998, Albania had become a net electricity importer. From the second half of 2000, the need for imports increased greatly because of a fall in hydropower production caused by reduced rainfall. The country faced large-scale load shedding and thus serious adverse macroeconomic effects, as adequate electricity could not be imported due to transmission network and financial constraints. The fall in hydropower production between 2000 and 2002 had a direct and significant adverse impact on national economic output—as the load shedding reduced industrial production and caused other businesses to resort to costly thermal/liquid fuel backup generators. KESH was unable to pay for more than a small proportion of the imports needed out of its own resources because of financial difficulties caused by widespread illegal use of electricity, poor payment of bills, and retail prices which were below the cost of imported electricity.

6. The challenges faced by KESH were a manifestation of long-standing management problems in the power sector related to high losses due to theft, below-cost end user tariffs, and poor revenue collections. There were several attempts to address these through IDA-supported initiatives but with little success. To resolve these challenges, the GoA provided financial support to KESH,⁴ which diverted funds from other critical needs including poverty reduction measures.

³³ Until June 2014, 76 percent of OSHEE was owned by a Czech public company, CEZ a.s. Full ownership reverted to the Government of Albania (GoA) as part of an amicable settlement agreement with CEZ a.s.

⁴ The largest level of support was US\$31 million in 2001.



7. Evidently, most of the challenges in the Albanian power sector were due to incomplete reforms and weak sector governance. Resolution of the sector’s issues was thwarted by various factors, including (a) weak enforcement and unjustified delays in implementing a new deregulated market rules, (b) lack of payment discipline, (c) poor collection rates, (d) inadequate cost-reflective tariff levels and fragile independence of the regulator, and (e) periodic impasses in decision-making due to elections. The combination of poor performance by the distribution company and weak sector reforms resulted in a major financial crisis—at that time it was projected that the combined deficit would reach about US\$550 million in 2015 (4.83 percent of 2015 GDP) and increase to over US\$800 million in 2018 (5.28 percent of 2018 GDP). These, together with recurrent power shortages due to variabilities in rainfall in a power system that depended rather exclusively on hydrogeneration,⁵ resulted in sustained fiscal support through guarantees and liquidity injection to KESH.

8. To deal with insolvency of OSHEE and illiquidity of KESH and OST, the GoA put in place a comprehensive road map of short- and medium-term measures to improve the power market model. These included (a) enforcing bilateral contracts and payments among KESH, OST, OSHEE, and IPPs according to market rules; (b) designing a new tariff methodology for regulated consumers; (c) gradually opening the power market for medium voltage (MV) commercial customers; and (d) moving toward a more competitive and sustainable renewable energy market, in line with international trends. The World Bank-financed Power Recovery Project was launched to support the implementation of this road map by the GoA.

9. At appraisal, the power sector faced significant fiscal problems and needed serious reforms due to the abovementioned challenges.

10. By the end of the project, KESH and OST maintain their roles as the public power generation and transmission utilities, respectively. Private power generators account for about 40 percent of installed capacity in Albania. During 2020, OSHEE was further unbundled into a distribution service operator, a supply entity for regulated customers, and another supply entity for non-regulated customers. The Albanian Power Exchange was established and preparing toward the commercial operation of the day-ahead market, which has been delayed to 2022. Table 1 is a snapshot of the basic data for 2014 and 2020 that are relevant to the power sector.

Table 1. Power Sector Basic Data for 2014 and 2020

Parameter	Figures in 2014	Figures in 2020
Population ⁶ - million	2.89	2.85
Electricity customers -number	1,185,972	1,258,100
Access rate - percentage	100.00	100.00
Installed generation capacity - MW	1,821	2,523
Available generation capacity - MW	1,724	2,426
Annual energy - generation -GWh ⁷	4,726	5,315

⁵ Albania’s power sector remained vulnerable from the climatic variations that severely affected outputs of generating plants, most of which were hydroelectric power plants. The droughts of 2002, 2008, and 2011 in Albania and its neighbors added to the difficulties for the country’s power sector. The GoA and the World Bank agreed to work for a risk management strategy with a US\$30 million facility to cover for the reduced power by KESH to the regulated market.

⁶ Albania Institute of Statistics: <http://www.instat.gov.al/media/8305/population-on-1-january-2021.pdf>.

⁷ Includes generation from concessions and IPPs.



Parameter	Figures in 2014	Figures in 2020
Annual energy imported (received) - GWh ⁸	3,356	3,329
Annual energy exported (delivered) - GWh	288	963
Energy injected to transmission system - GWh	4,290	4,714
Transmission losses - GWh	161	172
Transmission losses - percentage	2.10	2.20
Total supply to distribution - GWh	6,484	6,605
Total distribution sales - GWh	4,313	5,112
Distribution losses - GWh	2,621	1,493
Distribution losses - percentage	37.80	22.60
Annual energy billed - GWh	5,012	5,925
Total network losses - GWh	2,782	1,665
Total network losses - percentage	35.69	21.93
Collection factor - percentage	91.90	95.30
Annual demand growth rate - percentage	-2.10	-0.30

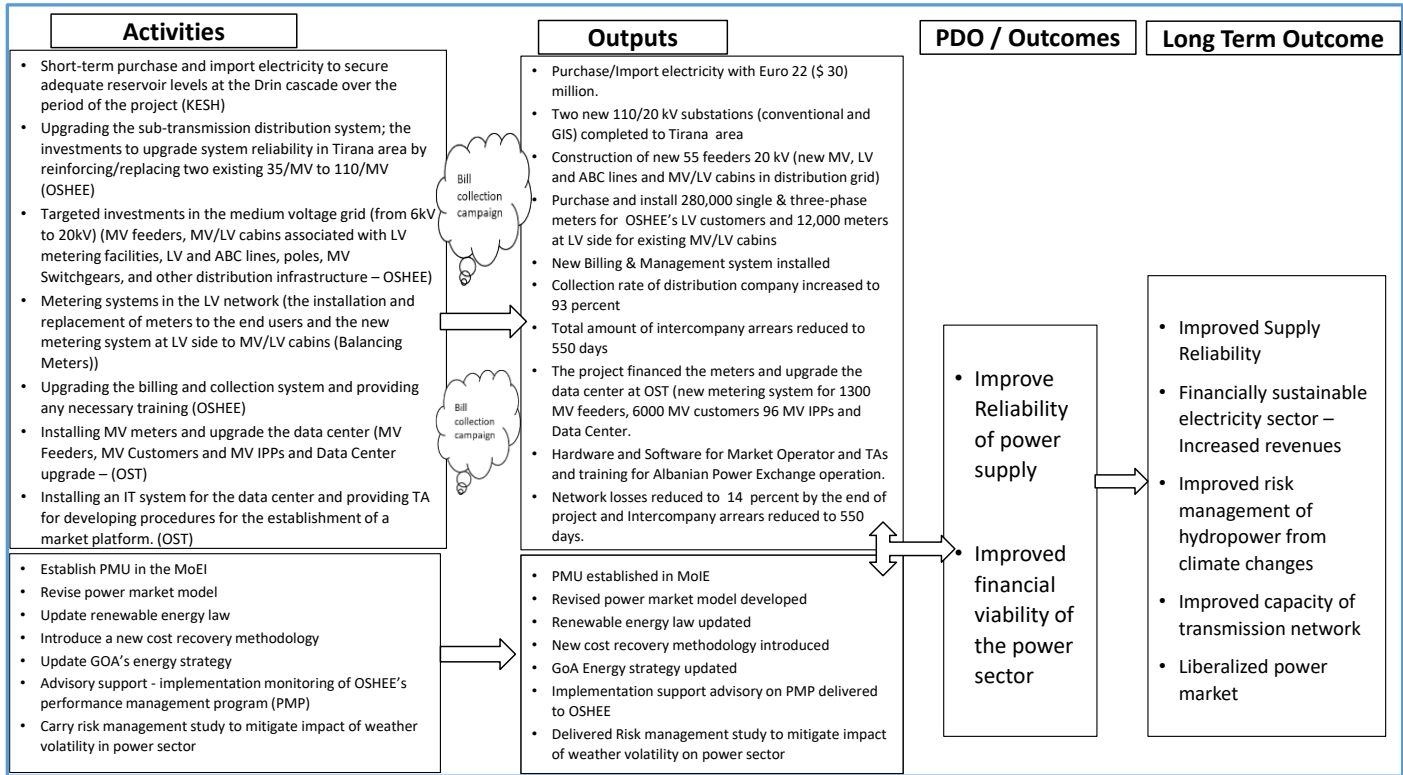
Theory of Change (Results Chain)

11. The Theory of Change (TOC) diagram or narrative was not included in the Project Appraisal Document (PAD); therefore a TOC, as shown in figure 1, has been constructed based on the project design, as presented in the PAD. The objective of the project, which is to improve reliability of power supply and financial viability of the power sector, has not changed since project appraisal. The objective was to be achieved through physical investments in the network together with several technical assistance initiatives. The critical assumptions underlying the TOC and the progress from activities to longer-term outcomes are as follows: (a) project cost and schedule remain within limits as agreed at project appraisal, (b) bill collection campaign is launched in time and sustained subsequent to the closing of the project, and (c) implementation of long-term loss reduction measures to improve the operation efficiency of the system.

⁸ Includes energy exchanges and purchased imports.



Figure 1. Theory of Change at Appraisal



Project Development Objectives (PDOs)

12. The PDO was “to improve reliability of power supply and financial viability of the power sector.”

Key Expected Outcomes and Outcome Indicators

13. The key set of expected outcome indicators of the PDO was as follows:

- Electricity losses per year in the project area
- Collection rate of distribution company
- Reliability of MV level at Tirana area
- Total amount of intercompany arrears

14. Besides, there were several intermediate indicators to enable monitoring and evaluation (M&E) of project activities.

Components

15. The project activities comprised four components as shown in table 2.

Table 2. Project Components

Component Description	Estimated Costs (US\$, millions)	Actual Costs (US\$, millions)
Component 1: Short Term Complementary Power Import Support	30.0	25.55
Component 2: Upgrading Distribution Infrastructure	93.0	43.53
2.a. Upgrading the sub-transmission distribution system		6.27
2.b. Targeted investments in the medium voltage grid (6–20 kV)		29.51
2.c. Metering systems in the LV network		5.15
2.d. Upgrading billing and collection system		2.60
Component 3: Transmission Meter/Data Center Upgrade	20.0	11.74
3.a. OST investments in meters for MV customers, MV feeders, IPPs, and data center		10.07
3.b. IT systems and rules (extension of existing SCADA with 12 S/st)		1.67
Component 4: Supporting Power Sector Reforms and Project Implementation	7.0	3.38
4.a. Priority power sector reforms (Metering Strategy and Distribution Tariff Method)		0.51
4.b. Project implementation support (TA and PMU staff)		2.87
4.c. Management advisory services		
4.d. Risk management mechanisms for weather volatility		
Total	150	84.2

16. Subcomponents 2.a, 2.b, and 3.b were all aimed at supporting the first part of the PDO, that is, to improve supply reliability and had a total actual funding of US\$37.45 million. Subcomponents 2.a., 2.c., 2.d., and 4.a with a total actual funding amount of US\$14.5 million supported the second part of the PDO that is related to sector financial viability.

17. A high-level description of the project components is provided in the following paragraphs.

Component 1: Short Term Complementary Power Import Support (estimated at US\$30 million exclusive of taxes)

18. This component was aimed to provide US\$30 million support to KESH/WPS to purchase short-term complementary power imports to meet KESH/WPS' power supply obligations. The main outcome of the component was to secure adequate reservoir levels at hydropower facilities in the Drin cascade in the short term. In the medium term, this support under the component was meant to be complemented by analytical work under Component 4 to develop a robust risk management strategy to mitigate weather related volatility.



Component 2: Upgrading Distribution Infrastructure (estimated at US\$93 million exclusive of taxes)

19. This component comprised of four subcomponents:

- **Upgrading the sub-transmission distribution system.** Upgrade the sub-transmission network around Tirana to improve system reliability by upgrading two existing substations from 35 kV MV to 110 kV MV including new 110 kV lines.
- **Targeted investments in the medium voltage grid (6–20 kV).** Improve system reliability and performance by installing of MV cable lines, low voltage (LV) aerial bundled conductor (ABC) lines, LV concentric cable and concrete poles, MV metal clad switchgears, and MV/LV distribution transformer cabins with associated LV metering facilities.
- **Metering systems in the LV network.** Support the purchase and installation of (a) 230,000 single-phase and three-phase meters; (b) LV coaxial cables; (c) ABC cables and accessories; and (d) three-phase regular conductor cables.
- **Upgrading billing and collection systems.** Upgrading the billing and collection system and providing necessary training for its implementation.

Component 3: Transmission Meter/Data Center Upgrade (estimated at US\$20 million exclusive of taxes)

20. This component comprised two subcomponents:

- **OST investments in meters for MV customers, MV feeders, IPPs, and data center.** Support toward the purchase of power meters and upgrade of OST's data center.
- **IT systems and rules.** Financing the supply and installation of IT system for the data center and providing technical assistance for developing procedures to establish a market platform for IPPs and eligible customers.

Component 4: Supporting Power Sector Reforms and Project Implementation (estimated at US\$7 million exclusive of taxes)

21. This component supported priority power sector reforms to facilitate the recovery of the power sector and improve performance of the distribution subsector through provision of management and technical advisory (TA) services and comprised four subcomponents.

- **Priority power sector reforms,** which included (a) revising the power market model (to introduce more competition in the sector and reduce the borrower's power supply obligation as per the relevant European Union [EU] directives); (b) revising the renewable energy law (to ensure sustainability of IPPs); (c) introducing a new cost recovery tariff methodology (to reflect updates in the power market model); (d) updating the borrower's current energy strategy; and (e) designing implementation and monitoring of social outreach programs targeting electricity consumers and key stakeholders.
- **Project implementation support.** Support toward the establishment of a Project Management Unit (PMU), within the Ministry of Energy and Infrastructure (MoEI), through recruitment of relevant staff and provision of goods, operating costs, and TA services.



- **Management advisory services.** Support toward the recruitment of specialized advisory services to help implementation and monitoring of OSHEE's Performance Management Program, including, among others, loss reduction and collections increase for the period of the project.
- **Risk management mechanism for weather volatility.** Support toward the carrying out of a risk management study to mitigate the impact of weather volatility in the power sector.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

22. The project was approved by the World Bank Board on September 29, 2014, with an implementation time frame of five years and two months and an initial project closing date of November 30, 2019. The project went through two level 2 restructurings during implementation. The PDO did not change, although some changes were made to the PDO-level outcome indicators. Some target values were revised downwards, whereas some indicators were dropped and new indicators included. The two restructurings are as follows:

- (a) **First restructuring - November 26, 2019.** This restructuring entailed (i) 12-month extension of the project closing date to November 30, 2020; (ii) partial cancelation of the project loan amount by approximately EUR 17.6 million; (iii) updates to the Results Framework; and (iv) revision of the legal covenants on OSHEE's Revenue Escrow Account to reflect that OSHEE will pay the monthly energy purchase to KESH in full when due. The extension of the project closing date was to facilitate substantial completion of the infrastructure upgrades that were supported under Component 2 and Component 3, especially the installation of distribution balancing meters that were required for the distribution loss reduction. The project had experienced delays in the initial years of implementation mainly due to procurement delays and lack of counterpart funding for the investments under Component 2.
- (b) **Second restructuring - December 15, 2020.** This retroactive restructuring entailed the extension of project closing date by 7 months to June 30, 2021, bringing the cumulative extension of the project to 19 months. The project closing date extension was to accommodate (i) the completion of four supply and installation contracts that had been disrupted by the COVID-19 pandemic; (ii) the final supply and installation contract for power distribution meters data management system to be procured and substantially completed; (iii) additional distribution equipment to be procured from project savings to replace equipment that was damaged during the 2019 earthquake; and (iv) completion of the remaining TA supporting the Electric Metering Strategy and the Government's Financial Recovery Plan. The retroactive extension was due to a delay by the GoA in authorizing and submitting a formal request for the restructuring to the World Bank. The request for extension had been made by the line ministry over two months in advance. The approval for submission to the World Bank required official clearances by all ministries and a legal opinion by the Ministry of Justice. The process was also delayed by coronavirus-related disruptions. The formal request for closing date extension, which was dated December 2, 2020, was submitted to the World Bank on December 4, 2020, that is, four days after the project had closed (November 30, 2020).



Revised PDOs and Outcome Targets

23. The Results Framework of the project was modified through the first level 2 restructuring of November 2019, including deleting some indicators that were no longer relevant, adding an indicator for citizen engagement, lowering the losses target to account for the scope reduction of the balancing metering infrastructure on the MV and LV power network, and indicating the substation capacity added to improve reliability in mega-volt-amperes (MVA) instead of in percentage of maximum load.

Revised PDO Indicators

Table 3. Revised PDO-level Indicators

Indicator	Baseline Value	Original Target	Formally Revised Target Values	Actual Achieved at Completion or Target Years
Indicator 1	Electricity losses per year in the project area			
Value: percentage	45	14	23	22.61
Applicable date	12/31/2013	11/29/2019	06/30/2021	06/30/2021
Comment	The original target was reviewed as part of the November 2019 restructuring to reflect the expected failure to install the balancing metering infrastructure on the MV and LV power network by the project closing date.			
Indicator 1 supplemental (a)	Total net injected power			
Value: megawatt-hour (MWh)	7,145,000	7,850,000	Deleted	Deleted
Applicable date	12/31/2013	11/29/2019	06/30/2021	06/30/2021
	The indicator was intended to be used to calculate Indicator 1 'Electricity distribution losses per year'. The indicator was deleted to avoid demand estimating errors as both the distribution losses and end user consumption had decreased in prior years.			
Indicator 1 supplemental (b) and (c)	Electricity losses per year - technical/non-technical			
Value: percentage	15.30/28.80	12.60/1.40	Deleted	Deleted
Applicable date	12/31/2013	11/29/2019	06/30/2021	06/30/2021
Comment	These sub-indicators were deleted to streamline the PDO-level indicators and measure only the overall distribution losses in the project area because the metering installations and other methodologies for measuring technical and non-technical losses could no longer be realized by the closing of the project.			
Indicator 2	Collection rate of distribution company			
Value: percentage	78	93	-	95.30
Applicable date	12/31/2013	11/29/2019	06/30/2021	06/30/2021



Indicator	Baseline Value	Original Target	Formally Revised Target Values	Actual Achieved at Completion or Target Years
Indicator 3	Reliability of MV level at Tirana area (changed to 'Added capacity of MV level network in Tirana area')			
Value: percentage (changed to MVA)	100%	70%	80 MVA	80 MVA
Applicable date	12/31/2013	11/29/2019	06/30/2021	06/30/2021
Comment	The indicator was changed from 'percentage overload in the project area' to 'capacity added in the MV level network' to measure the new capacity of Kombinat substation (80 MVA) that was constructed under the project, as opposed to total Tirana area substation capacity of 551 MVA. The justification being that the increased substation capacity through the project, which translates to less service disruptions, helped improve reliability.			
Indicator 4	Total amount of intercompany arrears			
Value: No. of days	1,200	550	550	550
Applicable date	12/31/2013	11/29/2019	06/30/2021	06/30/2021
Comment	Clarification was provided to show that the indicator is measuring receivables (arrears and current) that arise from KESH's electricity sales and OST's transmission fees to OSHEE net of provisions for bad debt. It was further clarified that KESH's receivables from OSHEE were going to remain substantially on KESH's balance sheet for over 10 years. This is due to the back-to-back arrangement with the European Reconstruction and Development Bank's (ERDB) support that provides about EUR 200 million loan repayable over 10 years to refinance KESH's short-term loans, which allows OSHEE to pay down the receivables to KESH over 10 years to match the ERDB loan repayment.			

Revised Components

24. The components as modified during the first restructuring of November 2019 are as summarized in table 4.

Table 4. Revised Project Components

Component Description	Initial Cost Allocation (US\$, millions)	Revised Cost Allocation (US\$, millions)
Component 1: Short Term Complementary Power Import Support	30.00	29.06
Component 1 was not revised as part of the restructuring as US\$29.06 million of the original allocation had already been committed. The remaining US\$9,370 was canceled resulting in a final allocation of US\$29.06 million.		
Component 2: Upgrading Distribution Infrastructure	93.00	75.60



Component Description	Initial Cost Allocation (US\$, millions)	Revised Cost Allocation (US\$, millions)
Component 2 experienced substantial delays in project implementation until the midterm review (MTR) mission in mid-2018. Of the original US\$93 million, about US\$49.50 million had been committed by November 2019. US\$17.40 equivalent was canceled because of the reduced scope of OSHEE’s procurement package for LV panels and balancing meters and other cost savings. The final allocation for Component 2 was US\$75.60 million.		
Component 3: Transmission Meter/Data Center Upgrade	20.00	16.65
By the first restructuring in November 2019, approximately US\$14.72 of the original allocation had been committed. Approximately US\$3.35 million was canceled due to the dropping of the market platform support, which had been financed under a separate TA (Power sector implementation support) that was provided by IFC and complemented by the World Bank.		
Component 4: Supporting Power Sector Reforms and Project Implementation	7.00	5.00
By the first project restructuring, several TA activities originally planned for support under the project had been completed outside the project with help from other development partners. ⁹ Consequently, US\$2.00 million equivalent was canceled from this component.		
Total	150	126.31

Other Changes

25. There were no other changes to the project apart from the ones already highlighted earlier.

Rationale for Changes and Their Implication on the Original Theory of Change

26. The closing date extension under the first restructuring was to enable substantial completion of the infrastructure upgrades under Components 2 and 3, particularly the upgrading of the distribution system to improve supply reliability and reduce power losses and the upgrading of the transmission meter/data center, respectively. The first restructuring was also intended to proactively cancel some project funds that were no longer required due to scope reduction in activities and other savings. The second restructuring entailed closing date extension of six months to facilitate (a) completion of the ongoing project activities that had been delayed because of the COVID-19 related supply chain bottlenecks and travel restrictions, (b) procurement and substantial completion of the supply and installation contract for power distribution meters data management system, (c) procurement of additional distribution equipment to replace some equipment that had been damaged during the 2019 earthquakes using project savings, and (d) completion of the remaining TA supporting the Electric Metering Strategy and the Government's Financial Recovery Plan.

27. Other notable changes that were made during the first restructuring include the following:

- (a) The cancellation of the uncommitted project funds under Component 1 (US\$0.94 million), Component 2 (US\$17.40 million), Component 3 (US\$3.35 million), and Component 4 (US\$2.00 million). Some cancelations and savings were realized under the IBRD loan due to

⁹ TA activities completed outside the project include (a) TA on revising power sector model to introduce more competition and reduce public power supply obligations, (b) TA on revising renewable energy law, (c) TA on cost recovery tariff methodology, (d) TA on Albanian Energy Strategy, (e) TA on OSHEE performance management program, (f) TA on establishing Albanian power balancing mechanism and power exchange, and (g) TA on weather volatility in the power sector.



the dropping of the Tirana Center substation and the balancing meters procurement package. Tirana Center substation was dropped due to the inability of the client to acquire land for the investment. Procurement of the balancing meters was canceled due to delays in procurement processing, which made it challenging for the contracts to be awarded and completed within the project time frame. OSHEE has, however, proceeded to roll out balancing meters separately from the project.

- (b) The lowering of the loss reduction target because of the expected cancellation of the MV/LV balancing meters from the scope of the project.
- (c) The changing of the reliability indicator description and target from percentage overload in the project area to capacity added in the MV level network that is related to the new transformation capacity of 80 MVA constructed under the project at Kombinat substation, as opposed to percentage overload of the 551 MVA capacity of Tirana substation. The change in the target for loss reduction was necessary to align the target with what the project could reasonably achieve, but was still ambitious from a best practice perspective. The change in description and parameter for measuring reliability did not have any significant impact on the TOC since the envisaged investments that were aimed at supporting reliability improvements did not change.

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

28. The project implementation occurred during two World Bank country engagement periods, the Country Partnership Strategy (CPS) (FY11–FY14) (Report No. 54188–AL) and the subsequent Country Partnership Framework (CPF) (FY15–FY19) (Report No. 98254). The PDO remained relevant at the close of the CPS (FY11–FY14) and has remained relevant throughout CPF (FY15–FY19). The Albanian power sector faced a wide range of problems which included insolvency of OSHEE and illiquidity of KESH and OST. Under the project, a comprehensive road map of short- and medium-term measures were laid down to improve the power market model.

29. The project remained relevant to the CPF (FY15–FY19) specifically Focus Area 2: Creating Conditions for accelerated private sector growth. The most relevant objective under the Focus Area 2 being objective 2c: Support enhanced energy security, efficiency, and supply. The project activities covered all aspects of this objective,¹⁰ including: (a) supporting diversification of power supply options through the short-term complementary power import support (Component 1); (b) improving power supply reliability and operation efficiency through grid strengthening investments, loss reduction

¹⁰ As pointed out in the CPS, the unreliability and poor quality of electricity supply had regularly been cited by Albanian firms of all sizes as being among the most critical constraints they faced. The operation directly addressed this issue and supported both the 2010 CPS and the 2012 progress report recognizing the energy sector as one of the pillars of the joint GoA/World Bank group strategy (refer to paragraph 19 of PAD)



interventions, and revenue collection improvements (Components 2 and 3); and (c) addressing climate-related risks and their impact on hydropower generation (Component 4). Further, a comprehensive road map of short-term and medium-term measures was laid down under the project to improve the power market model in recompose to OSHEE's insolvency and the illiquidity of KESH and OST.

30. Based on the alignment of project's PDO with the CPF (FY15–FY19), the PDO is assigned a relevance rating of High.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

31. The PDO, which is “to improve reliability of power supply and financial viability of the power sector,” has two aspects: reliability of power supply and financial viability of the power sector. Although each aspect of the PDO has been assessed separately, a single combined efficacy rating of the PDO has been provided considering all the targeted outcomes. Overall project's scope remained the same, even though there was some cancelation and partial incompleteness of a few activities. There was, thus, no need to apply a split rating and the project is assessed against the revised objectives or outcome targets. This makes sense given that the level of ambition, difficulty, and scope remained unchanged.

32. Further, the project provided short-term liquidity support to the sector under Component 1 to finance power imports to supplement the available hydropower generation capacity in the Drin cascade that had reduced due to unfavorable hydrological conditions. The targeted power imports were completed, and the funds allocated have been fully utilized. The implementation of this component, which was a substantial part of the project for funding, did not have an intermediate or PDO-level indicator to track its implementation progress and impact at approval stage. However, an intermediate indicator “Complementary Power Purchased” was added at the first restructuring, and was fully achieved. A related TA under Component 4 to develop a robust risk management strategy to mitigate weather-related hydrological volatility was delivered outside the project, but the recommended risk management options had not been implemented when the project closed.

33. The reliability of power supply is captured by PDO-level Indicator 3, which was changed from ‘Reliability of MV level at Tirana area’ to ‘Added capacity of MV level network in Tirana area’ under the first project restructuring (refer to table 5). It is noted that this PDO-level indicator only captures the investments related to the new capacity of 80 MVA installed at Kombinat substation near Tirana (Subcomponent 2.a), but excludes reliability improvements that could have accrued due to other project investments in the distribution network under Subcomponent 2(b).¹¹ Hence, it would suffice to say that supply reliability was improved due to (a) the construction of the new substation transformation capacity of 80 MVA at Kombinat, which was completed in May 2021; (b) the upgrade of the distribution system that includes the installation of distribution transformer cabins and cables in Tirana, Fushe Kruje, Durrës-Kavaje, Lushnje, Fier, and Vlore, which were completed ahead of the project closing date; and (c) SCADA extension to 12 substations and installation of communication links with OST's control center, which was completed after the project closing date in July 2021. Also, the substantial reduction in network losses

¹¹ These investments include MV cable lines, LV ABC lines, LV concentric cable and concrete poles, MV metal clad switchgears, and MV/LV distribution cabins with associated LV metering facilities.



achieved through the project does contribute to reliability improvements by making additional energy available to the end users, while reducing the levels of load shedding and other load curtailment/limiting measures in the network.

34. The reliability improvements, which the project has contributed to partly, have been measured using the System Average Interruption Duration Index (SAIDI)¹² and the System Average Interruption Duration Index (SAIFI)¹³ for the OSHEE distribution network. According to the OSHEE Business Plan (2021–25), SAIDI and SAIFI indexes nationally decreased from 122.00 to 58.79 and 49.10 to 29.99, respectively, between 2015 and 2019. In Tirana, the main load center, SAIFI and SAIDI reduced from 43 to 17 and 84 to 27, respectively, between 2015 and 2020. It is expected that the reliability indexes will continue to improve because of the project investments and interventions under Components 2, 3, and 4.

Table 5. PDO-level Indicators Related to Reliability of Power Supply

PDO-level Results Indicator	Unit of Measure	Baseline	Target	June 2021 (Actual)
Indicator 3: Reliability of MV level network in the Tirana area				
(a) Capacity of medium-voltage network	MVA	0.00	80.00	80.00

35. Based on the project design and PDO-level indicators, the reliability part of the PDO has been fully met. The revision of this indicator under the restructuring appears to be less ambitious than it should for such a project/investment. Some sub-indicators should have been reflected here, for example, those related to distribution network refurbishment. These include some MV/LV network strengthening investments that increased the capacity and dependability of the network to provide reliable supply to end-users, while reducing technical losses.

36. The financial viability of the power sector is captured under PDO-level Indicators 1 (Electricity losses per year in the project area), 2 (Collection rate of distribution company), and 4 (Total amount of intercompany arrears).

37. PDO-level Indicator 1 (Electricity losses per year in the project area) for reducing network losses was substantially met due to the large reduction in percentage losses of more than 22 percent (45 percent down to 22.65 percent) at project closure. This is a major achievement of the project and has contributed significantly toward both parts of the project activity—supply reliability and financial viability improvements.

38. PDO-level Indicator 2 (Collection rate of distribution company) has been exceeded based on OSHEE’s Annual Report for 2020. The collection rate increased because of improvements to metering installations and the upgrading of the billing system that were supported under the project (a fully achieved intermediate indicator).

¹² SAIDI measures total duration in minutes (or hours) of outage that the average customer experiences.

¹³ SAIFI measures how often the average customer experiences outage (frequency).



39. PDO-level Indicator 4 (Total amount of intercompany arrears) for reducing arrears among the three power utilities has not been met.¹⁴ This is partly due to (a) the decision to settle historical arrears over 10 years (financed by a loan from EBRD); (b) the dispute among power utilities on the electricity balancing costs in recent years, which is awaiting a court decision; and (c) limited financial liquidity of power utilities because of high electricity imports in recent years.

40. The infrastructure supported by the project was not only oriented toward PDOs but also to establish the proper infrastructure for the new electricity market and further deregulation of electric customers. It may be noted that Component 3 was directly focused on that objective. With the project’s support, OST installed 1,704 out of the target 2,328 meters. In addition, OSHEE helped install 609 meters for private commercial customers and 98 meters for MV connected IPPs. Collectively, they contributed to the achievement of the “Number of OST meters” intermediate indicator target, which aimed at improving metering infrastructure for MV customers and IPPs and enabling further deregulation of electric customers. Despite the intermediate indicator “Number of medium voltage customers in the deregulated market” of 96 did not meet the revised target of 1,000, the infrastructure put in place under this project is ready to enable further deregulation of customers.

Table 6. PDO-level indicators Related to Financial Viability of the Power Sector

PDO-level Results Indicator	Core	Unit of Measure	Baseline	Revised Target	December 2020 (Actual)
Indicator 1: Electricity losses per year in the project area		Percentage	45.00	20.0	22.6
Indicator 2: Collection rate of distribution company		Percentage	78.00	93.00	95.30
Indicator 4: Total amount of intercompany arrears		Days	1,200	550	1,290

41. Based on the above, the part of the PDO related to financial viability of the power sector has been partially met.

42. At the time the project started, donor coordination in the sector was still weak in Albania. Evidence of this includes the implementation of some key sector TA activities that had been identified for funding under the project through financing by other development partners without prior discussion and agreement with the World Bank team. These TA activities include (a) TA on power market model to introduce more competition and reduce public power supply obligation (supported by Energy Community); (b) TA on revising renewable energy law (supported by Energy Community); (c) TA on cost recovery tariff methodology (supported by United States Agency for International Development - USAID),

¹⁴ The Albanian authorities had addressed intercompany arrears through Energy Sector Arrears’ Reduction Action Plan. The key measures of this plan included: (a) a 2018 agreement for OSHEE to pay arrears to KESH over 10 years; (b) KESH taking a new EBRD loan, about EUR 200 million, and refinanced its high interest overdraft/short-term loan; (c) OSHEE agreed with OST to make additional payment of 6.5 percent on top of each monthly bill from OST to OSHEE. By 2020, however, there was limited improvement in intercompany arrears among public power utilities due to increased financial stress from high electricity imports in chronic dry years and the new dispute on electricity balancing cost. Also, a number of unexpected negative factors outside the project control, such as the 2019 earthquake, two consecutive droughts in 2019 and in 2020, and the coronavirus pandemic adversely affected the utilities’ operations and their financial performances.



followed by TA on a new distribution tariff methodology (supported under this project); (d) TA on establishing Albanian power balancing mechanism and Albanian Power Exchange (supported by IFC); and (e) TA on weather volatility in the power sector (by the World Bank). Donor coordination has improved through regular meetings to minimize unnecessary overlaps and synergize donor support to the sector.

Justification of Overall Efficacy Rating

43. The achievement of the reliability part of the PDO is considered Substantial. The achievement of the sector's financial viability of the PDO is also considered Substantial, given the mixed achievement of indicators related to it: (a) improvement of collection rate (of OSHEE) was achieved satisfactorily; (b) reduction of network losses was substantially met; although the indicator for reduction in intercompany arrears was not fully achieved.¹⁴ The funding of project, both budget and actuals, that went toward reliability improvement is significantly higher than that for financial viability, while excluding funding for activities that were utilized toward other objectives (that is, more than two-thirds of total funds were utilized to support improvement of the system reliability). On this basis, the impact of funding for reliability improvement activities is considered relatively larger. Thus, the overall efficacy rating of the project is considered Substantial since the 'reliability' part of the PDO, which had a large share of the funding, was substantially achieved. Therefore, the overall efficacy rating of the project is considered Substantial given the Substantial rating for the reliability as well as financial viability part of the PDO.

C. EFFICIENCY

Assessment of Efficiency and Rating

44. Efficiency was assessed by considering two areas of the project: (a) project design and implementation efficiency and (b) economic analysis of the actual investments made relative to the assumptions made during preparation.

45. Project closing was delayed by one year and seven months, due to additional time spent on procurement and contracting and restrictions imposed under COVID-19 pandemic. Apart from the contractors, staff of the PMU and implementation teams of OSHEE and OST faced restrictions on their movements. The World Bank's supervision missions were also put on hold from March 2020 and were held remotely. The actual project cost was much lesser than the project cost agreed at appraisal, in fact providing significant savings. The project savings of US\$23.69 million reflect around 15.8 percent of the envisaged project cost at appraisal. The savings are attributed to non-completion of some components, mainly the cost of balancing meters and LV for Component 2, which will be completed by OSHEE and OST from their own resources; the cost of the market platform for Component 2, which was financed under a separate TA financed by IFC; and the cost of the TA activities under Component 4 which were dropped or reduced as they had been picked up by other donors. There were also some small savings under Component 1 due to reduction in purchased electricity. Overall, the implementation efficiency is considered as Modest.

Economic Analysis

46. The post-completion economic analysis includes two cases. In the first case, for comparability with the estimates at appraisal, the post-completion analysis includes an estimation based on the same



methodology as was used at appraisal but updated for actual results and figures realized during project implementation. The second case considers changes that occurred during implementation which could not be appropriately covered under the appraisal methodology.

47. **Case 1.** This uses the same methodology as described in the appraisal analysis earlier but the projections at appraisal are replaced by the actual data and results realized during implementation. One significant change is that the additional up-front benefit assumed at appraisal (referred to earlier) was not included in the post-completion analysis since it did not materialize due to a change in priorities by the GoA. This resulted in a reallocation of the funds (US\$30 million) from the original intended use of financing power imports (US\$21.7 million) in 2017 to supplement power available for distribution. On this basis, the post-completion estimates are economic internal rate of return (EIRR) 6.4 percent and with a negative ENPV of Lek 1,094 million (US\$10 million) at a discount rate of 8 percent. The comparable figures from the appraisal analysis are EIRR 8.1 percent and a small positive ENPV at a discount rate of 8 percent. The post-completion estimates of economic viability are lower than those projected at appraisal due to the slower than projected improvements realized in all three benefit indicators during implementation.

48. **Case 2.** This differs from Case 1 in the valuation of the reduction in unserved energy realized during implementation. Based on the reported results, a significant contribution of the project was the reduction in unserved energy from an annual baseline level of 375 GWh in 2013 to 71 GWh in 2020. The improvement will continue to contribute to the benefits beyond 2020 as well. This outcome could not be appropriately captured under the appraisal methodology. Under Case 2, the project’s incremental benefits and costs are the following.

49. Reduction in technical losses valued at the cost of power delivered to the distribution company.
Reduction in power consumption valued at the cost of power delivered to the distribution company.
Reduction in unserved energy valued at the average retail tariff (as a proxy for the consumers’ willingness-to-pay)—conservatively, it is assumed that only 50 percent of the reduction in unserved energy would have been used by consumers.

Capital Costs and Operation and Maintenance (O&M) Costs (net of taxes and duties)

50. A summary of the key assumptions (appraisal and the post-completion base case) in the analysis is provided in table 4.2. The base case assumes conservatively that the improvements in reduction of technical losses, non-technical losses, and unserved energy achieved as of 2020 will continue at the same levels as in 2020 with no further improvements up to 2029 (the end of the assessment period).

51. However, it should be noted that the GoA’s plan for further improvements in the power sector includes a target to reduce total power sector losses (technical and non-technical) to 16.5 percent by 2025. Recognizing this, besides the base case, two additional scenarios have been examined: achievement of the target by 2025 (as planned by GoA) or by 2029 (in case of delay).

Table 7. Post-Completion Estimates

Scenario	EIRR (%)	ENPV (Lek, millions)
Case 1	6.4	-1,094
Case 2 - base case	12.2	1,423
GoA target achieved by		



2025	22.2	6,139
2029	20.5	4,745

52. In view of the above results for economic analysis and a Modest rating for implementation efficiency, the project’s efficiency is rated Modest.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

53. As indicated in the respective discussions on the relevance, efficacy, and efficiency, the PDO remained highly relevant throughout the entire implementation time frame. The project has helped improve supply reliability and financial viability of the power sector. Substantial improvement in revenue collection has sustained positive operating cash flows among public power utilities for most years during the project. Together with reduced losses (both technical and commercial), these have translated to moderate improvements in overall sector financial viability. The interventions/investments under the project have also laid the foundation for further improvements in sector’s operational and financial sustainability by the GoA, including establishing a cost-reflective tariff regime.

54. The project has enabled substantial power sector reforms, in coordination with the Government, regulator, utilities, the Energy Community, and development partners. Looking back to the failed privatization in the power sector leading to this project, in the past seven years Albania power sector has substantially prepared itself for reforms and migration to a market-based competitive structure. The utilities are putting in place the necessary infrastructure to enable deregulation of more customers. New power generation capacity has been added, including fully commercial merchant plants and more recently, competitively auctioned solar power plants. These new generators are able to supply the domestic market as well as the export market. The public supply obligation was transferred from the public generating utility to the regulated retail supplier, paving the way for a more targeted regulated supply, potentially reducing public obligation. The power distribution business has been further unbundled to enable alternative suppliers to enter the market. The Albanian Power Exchange was established and is moving toward commercial operations.

55. Based on these findings, the overall outcome rating is considered as Moderately Satisfactory. This rating is justified through the following: (a) there were moderate shortcomings in the operation’s achievement of its objectives, that is, the efficacy was rated Substantial; (b) the operations’ efficiency was Modest, as explained earlier; and (c) the relevance was rated High, as discussed earlier.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

56. The project’s design did not include any measures to address specific gender gaps. However, gender impacts were included in the Results Framework: percentage of female project beneficiaries was included as an intermediate results indicator of 52 percent of direct project beneficiaries, which had a target of 200,000. Thus, the project had a positive impact on the female population in the project areas benefiting from improved electricity supplies, provision of metering facility, and engagement with the



electricity supply authorities. No adverse impacts to the female population occurred from one or more of the project components.

Citizen Engagement

57. The initial project design did not include any measures to address citizen engagement. During the first project restructuring in November 2019, a new indicator was included to record the responsiveness and impact of the efforts made by the project in response to citizen feedback during implementation. Consequently, the sector agencies have enhanced citizen engagement skills that will continue to be used in future projects.

Institutional Strengthening

58. Under Component 4, TA activities were aimed toward institutional strengthening of the entities, OSHEE, OST, and KESH. The three entities, especially their implementation units, and the PMU established under the MoIE, gained experience working with counterparts on project planning, design, procurement, and implementation. The experience and skills gained in areas such as metering, revenue collection, and stakeholder engagement will provide improved capacity to OSHEE and OST in the future. Besides, the MoIE gained useful experience to improve its monitoring capacity and to strengthen its capacity to lead the recovery program. Implementation of Financial Recovery Plan remained challenging given the decision-making and related actions were spread over the Ministry of Finance (MOF), MoIE, regulator, and the three electricity companies—nevertheless all these entities and their staff gained valuable experience toward the implementation of a sector recovery plan.

Mobilizing Private Sector Financing

59. The unsuccessful privatization of distribution sector demonstrated to all the stakeholders that a fast-track privatization of the sector without full political buy-in and support can be full of challenges. Albeit mobilization of private sector financing not being one of the objectives of the project, the operation provided indirect support and impetus to private sector financing for the country's electricity sector in many ways. The project supported the gradual and predictable reduction of Government guarantees for power imports. The reduction in Government guarantees would normally make available more space for the MOF to address other critical needs of the economy. As a result of improvements in the supply and distribution efficiency, electricity customers will benefit from improved service quality and reliability. Also, the improved bill collection rate strengthens the ability of the sector to sustain itself financially. These developments create strong incentives to the private sector to participate in economic development of the country. Besides, improvement in the network capacity of the sector entities made them more attractive for the investors. The participation of international financial institutions and donors in the sector also increased interest from private sector financiers.

Poverty Reduction and Shared Prosperity

60. The project contributed to poverty reduction and shared prosperity in Albania. The strengthening of transmission and distribution network together with improved metering will provide a better quality of supply, which will eventually help small businesses to grow thus creating job opportunities and increased business activities. Besides, reduction of network losses shall lower the energy sector deficit thus



contributing to a possible reduction of end user tariffs (or limit tariff increases) and eventually helping with poverty reduction. A stronger and financial sustainable energy sector will also have the technical capacity and financial space to develop well-structured pro-poor programs and cross-subsidization programs. Alternatively, this will contribute to decrease in transfers from the Government, which can be used for other programs aimed at reducing poverty and promoting shared prosperity.

Other Unintended Outcomes and Impacts

61. The project positively affected the reform process in the sector. There has been continued political support for the implementation of the loss reduction measures together with an appreciation for improving the sector's financial situation. The various metering programs launched provided an increased transparency on the energy flows not only between the different players in the sector (KESH/OST/OSHEE) but also among the different voltage levels included in their systems, especially within the distribution grid. The objectives of the Government's Financial Recovery Plan are being continued under the new power sector reform lending operation by *Kreditanstalt Für Wiederaufbau*, (KfW) and *Agence Française de Développement* (AFD), approved in 2021.

Financial Recovery Progress

62. The financial conditions of the three public power utilities have gradually improved when compared with their conditions at the project start. This was aided by the Government's Financial Recovery Plan, supported under this project. The improvement in financial conditions is evidenced in (a) improved bill collections, (b) targeted capital expenditure, (c) positive operating cash flows, (d) profitability in some wet years, and (e) reduced energy losses. See annex 4 for additional details.

63. Component 3 was aimed to facilitate OST toward the procedures of transferring of HV industrial customers to the deregulated market, which effectively reduced GoA's obligation, through KESH/WPS, to provide guarantees of about US\$50 million per year to KESH/WPS and put Albania at the forefront of market reforms required by EU directives. Under this project, OST effectively benefited from enhancing the installation of new meters to facilitate the market restructuring and open it for MV commercial customers to be removed from the regulated consumer group. The transmission component is critical for subsequent opening of the MV market and establishment of the Albanian Power Exchange and balancing market.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

64. Several key factors were important at the time of project preparation, the most relevant being the revival of OSHEE from an unsuccessful privatization and reentry as a public sector entity. The financials of the sector were substantially affected along with other negative results such as increasing trend of network losses and poor collections. The other negative factor was the reduced hydropower generation in the country, thereby necessitating significant level of electricity imports from the neighboring countries. Furthermore, poor supply reliability was viewed as a binding constraint for economic growth and



diversification, as it increased the costs of doing business in all economic sectors due to the use of backup liquid fuel generators. The other factors included the losses that were astronomically high at 45 percent and the revenue collection by the distribution utility of 78 percent.

B. KEY FACTORS DURING IMPLEMENTATION

65. The PMU assumed its responsibilities after the project had become effective and thus no preparatory works on design, engineering, and procurement were carried out under its umbrella earlier than effectiveness. This delayed the procurement process, which was important given that there were so many packages that were to be procured. OSHEE and OST with the support of the PMU were responsible for the day-to-day implementation of the project activities. OSHEE and OST oversaw the procurement and implementation whereas the PMU oversaw financial management, disbursements, M&E, technical support (via the Consultants Mercados-Aries International in joint venture with AFRY), and preparation and submission of semi-annually consolidated progress reports and financial statements to the World Bank.

66. Given this, the key factors that were considered during project implementation included (a) the delays in processing procurements due to the PMU being retained late after project approval; (b) overlapping support by other development partners (EU, KfW, USAID) on some of the areas intended to be facilitated under the project; (c) stakeholder buy-in on some areas of project support and interventions such as those related to sector regulatory/policy framework and tariffs; and (d) environmental and social (E&S) impacts of project activities.

67. Furthermore, the advent of the COVID-19 pandemic in the first quarter of 2020 dramatically slowed down the implementation of project activities. For a period, the entire implementation of activities was on hold as the contractors and other related parties were figuring out how to deal with travel and other attendant restrictions. The PMU and Project Implementation Units (PIUs) of OSHEE and OST were working with a skeleton staff. These delays compounded the earlier procurement, deliveries, and construction delays. The COVID-19 also created some supply chain bottlenecks that made it difficult for bidders to source materials from suppliers during procurement and contract implementation. Some international bidders refrained from bidding which led to less competition. Similarly, delays occurred during implementation from the impact of COVID-19. In some instances, goods could not be delivered on time. Another complication was the inability of contractors to mobilize international expertise. The package for balancing meters remained under discussions between the PMU and other stakeholders without resolution on the design, specifications, and deployment areas. By the time of the first restructuring, it was agreed that the remaining project time frame was inadequate to proceed with the procurement and implementation of the balancing meters, and thus the package had to be dropped from the project's scope. The amount allocated for this activity was not utilized for any other activity and thus contributed to the project savings. At project closing in June 2021, there were limited project activities that were expected to continue through funding from the counterparts, including the final installation of



OSHEE meter data management system, single-phase and three-phase meters, and the testing and completion of the OST SCADA extension to 12 substations.¹⁵

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

68. The Results Framework is in line with the TOC presented in paragraph 11 and figure 1. M&E design at appraisal included indicators to monitor project results in areas of loss reduction, collections, supply reliability, and financial recovery of the sector. The approach of measuring reliability alone with transformation capacity increases at one of the substations is questionable, given that there were other components in the project that were likely to contribute to lesser system outages and thus improved reliability. Financial recovery of the project is a huge challenge and measuring this only with the yardstick of intercompany arrears may not be the most prudent approach. Other activities that could have been reflected in the M&E of financial recovery include (a) tariff cost recovery, (b) system losses, (c) bill collection, and (d) level arrears owed to suppliers and service providers.

69. The Results Framework was initially designed with seven PDO-level indicators that were linked to the implementation of Component 2 and Component 3; however, it has been noted that the Results Framework did not include any indicators having direct association with the implementation of Component 1. All the PDO-level indicators were designed to be achieved and within the project implementation time frame with semiannual monitoring and reporting requirement for OSHEE. In that respect, the M&E design provided a framework for establishing the extent of meeting the long-term developmental outcomes of the project by the project closing date.

70. During appraisal, one of the key activities factored into the description and evaluation of the project's achievement of the PDO was the MV/LV balancing meters activity under Component 2. However, there was no indicator linked to this activity.

71. Intermediate indicators were included to help with timely monitoring of implementation progress and progress towards achieving the PDO indicators. Most of the intermediate indicators were related to the financial viability of the sector. There were reliability-related indicators that were tracked during project implementation, but not included in the results framework such as the number of rehabilitated MV/LV networks feeders; the installation of IT systems for the OST data center; and the number of substations provided with SCADA system oversight under the project.

¹⁵ The following activities continued to be implemented after the project's closing date: (a) Component 2 (implemented by OSHEE)—(i) completion of the meters data management system (MDMS) contract by end of August 2021 and (ii) completion of the installation of remaining single-phase and three-phase meters by end of September 2021 and (b) Component 3 (implemented by OST)—(i) the communication links and visibility from SCADA center of all 12 substations to be tested and completed by end of July 2021 and (ii) submission of OST meters supply and installation contract completion report by end of June 2021, showing the latest plan for the remaining installation by end of September 2021



M&E Implementation

72. The PMU with support of the three implementing agencies—OSHEE, KESH, and OST—remained responsible for data collection, analysis, and its reporting to the World Bank team. The M&E framework needed to be revised based on actual progress on implementation, which was significantly delayed. The technical and non-technical losses were merged into network losses under the first restructuring of November 2019. Though this decision was needed given the constraints in availability of data, it should have been taken much earlier. Similarly, for the outcome indicators pertaining to financial viability, necessary changes should have been made much earlier during implementation as the targets for intercompany arrears were unlikely to be achieved and thus more realistic figures could have been set.

73. As shown in table 3, the PDO-level supplemental indicators were deleted during the first restructuring of November 2019. They were initially intended to measure the reduction in technical and non-technical losses resulting in the measurement of losses (both technical and non-technical) being achieved through PDO-level Indicator 1 (electricity losses per year in the project area). Though this decision was needed given the constraints in availability of data, it should have been taken much earlier.

M&E Utilization

74. The M&E findings and data were used during project implementation by the project entities and the World Bank team. The biannual Implementation Status and Results Reports (ISRs) prepared by the World Bank team benefited from the M&E data. Some of the figures relating to operating performance of OSHEE needed to be reviewed for correctness. The M&E framework was helpful in keeping a track of the project progress and constraints, which helped in deciding remedial actions such as closing date extensions, revision of indicator targets, and dropping of project activities. However, there were other tools such as procurement milestones that were used to track progress on key activities and components. The development and implementation of Financial Recovery Plan and related discussions on the subject were facilitated by the M&E data including those from intermediate indicators. Overall, project implementation and completion were facilitated by the utilization of M&E framework.

Justification of Overall Rating of Quality of M&E

75. The M&E framework supported the project implementation, although it had shortcomings in the design, implementation, and utilization, as discussed in earlier paragraphs. The revisions to the result indicators were significantly delayed and no indicator was associated with the implementation of Component 1 at appraisal. As a result of this, the overall rating of the quality of M&E was found to be Modest.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

76. The project was appraised under the previous policies for E&S, under which it was classified as a Category B project, where two policies were triggered: Environmental Assessment OP/BP 4.01 and Involuntary Settlement OP/BP 4.12. As footprints of activities were not known at appraisal, OSHEE prepared an Environmental and Social Management Framework (ESMF) at the time of appraisal. The project achieved E&S compliance during implementation. The World Bank-funded TA provided required assistance in this respect both during the procurement phase and on-site monitoring activities.



77. The issues that arose were managed adequately and on time. Overall, the on-site development was achieved according to the requirements. From the socioeconomic point of view, the project positively affected the local environment in the project areas. The PMU's and PIUs' support and interaction led to the increased knowledge exchange during project implementation thus increasing the capabilities of the three beneficiaries. The overall safeguards ratings for the project remained Satisfactory. Besides, the ratings for Environmental Assessment (BP 4.01) and Involuntary Settlement (BP 4.12) were also Satisfactory. The project triggered OP/BP 4.12 Involuntary Resettlement with the Kombinat substation investment for which land acquisition was completed in December 2017, as per approved abbreviated Resettlement Action Plan (RAP) for the subproject.

78. During the project implementation before the start of pandemic, regular meetings between the World Bank's E&S specialists with PIUs facilitated reporting on E&S compliance in progress reports as well as separately in line with the ESMF and Environmental and Social Management Plan (ESMP) agreed dynamics. During pandemic, because of the travel restrictions, PIUs shared their reports, providing additional information (including photographs of works, extra interventions provided to community from project). The World Bank team organized continuous and regular virtual meetings with the PIUs to receive relevant updates and provide recommendations, as needed, to improve project E&S performance.

79. For grievance redress, the project used OSHEE's customer relations mechanism for logging and addressing any project-related complaints in lieu of a stand-alone grievance redress mechanism, which was acceptable to the World Bank. The project also triggered OP/BP 4.12 Involuntary Resettlement with the Kombinat substation investment for which land acquisition was completed in December 2017 as per approved abbreviated RAP for the activity. The was subsequent to the abandoning of the initial location for the Tirana substation in favor of a location that is under public ownership to avoid acquisition-related complexities while meeting the objectives of OP/BP 4.12. Hence, the project is in compliance with social safeguards requirements.

C. BANK PERFORMANCE

Quality at Entry

80. The project aimed at resolving multiple issues for three entities linked under a vertically integrated structure. The project's objective, which was to improve reliability of power supply and financial viability of the power sector, that is, achieve sector financial recovery within the project time frame, was overly ambitious. Targeting three sector entities from one project is itself challenging. As for OSHEE, which was the project's main beneficiary, it had just returned to public sector following a failed privatization attempt and faced several critical issues. The inclusion of financial recovery of the sector as an additional objective though important, was a huge challenge. Overall, the project entities remained burdened with the scope of activities. The TA activities were much needed for the sector, yet inclusion of several activities in one project is questionable, although some of the activities were later picked up by other donor agencies.

Quality of Supervision

81. The supervision by the World Bank comprised regular implementation support missions to country during which meetings were held with the PMU; PIUs of OSHEE, OST, and KESH; and project



consultants. Sometimes meetings were held with the MOE; MOF; and representatives of EU, KfW, and others. Progress reports were delivered on a half yearly basis by the owner's engineer, which were discussed. The World Bank's ISR would consolidate the information received from the PMU and others. The procurement of meters and related equipment needed more specialized knowledge, therefore the World Bank team provided additional consultancy support. The availability of a co-task team leader in the region/country helped in improved coordination with the client's team. The supervision efforts became more challenging from early 2020 given the restrictions related to the global COVID-19 pandemic, which resulted in World Bank supervision missions being carried out virtually. Overall closing date extension by 19 months may be significant; however, this was owing to difficulties in several fronts including procurement, technical matters, and the COVID-19 related delays. The project was restructured twice and a few subcomponents that could not be completed and had been completed through other means were dropped from the project thus resulting in a saving of US\$37.5 million, that is, approximately 17 percent of the initial project cost estimate. Overall, the World Bank team successfully managed the implementation even though closing had to be delayed twice, which was somehow inevitable. The project's ability to bring down network losses, improve collections, and complete most of the activities is indicative of the World Bank's sustained efforts for the project.

82. The World Bank carried out an MTR mission in July 2018. During the MTR mission, several challenges and areas that necessitated project restructuring and enhanced dialogue with the client counterparts were identified. Some of this had a direct bearing on the achievement of the PDO such as the delays in the implementation of balancing metering investments that are a factor in the loss reduction trajectory. However, project restructuring only took place after more than 12 months in November 2019.

83. In summary, the World Bank was able to carry out all the requisite implementation support missions, including the MTR mission. The size of the team and skill set could have been adapted for the diverse sector technical and financial aspects that the project supported. The task team leadership changed only once during project implementation; however, any transitional issues that could have arisen were mitigated by the presence of the co-task team leader who was based in the country and worked on the project throughout the entire cycle. Further, the World Bank team processed a retrospective extension of project closing date in January 2021 to facilitate completion of the project activities that had been delayed due to the COVID-19 pandemic. Hence, World Bank supervision quality was Moderately Satisfactory.

Justification of Overall Rating of Bank Performance

84. The overall rating of World Bank performance is considered in the context of project's complexity and is assessed as Moderately Satisfactory. In this context, the following areas listed are pertinent: (a) the project had three beneficiaries and several components were implemented for the first time, (b) the PMU had to coordinate extensively with the three PIUs representing the beneficiaries, (c) procurement of some of components posed additional challenges, and (d) the Financial Recovery Plan added another layer of implementation and needed further coordination, particularly with the regulator, MOF, and others. In many cases, the World Bank had to bring all the parties to one table and seek action plans to accomplish certain objectives.



D. RISK TO DEVELOPMENT OUTCOME

85. The risk to development outcome would remain even though there is little doubt on project's sustainability. Even though continued efforts are needed to make the sector financially viable and achieve tangible reduction in intercompany arrears, the technical improvements achieved thus far are significant. For instance, substantial achievement in loss reduction, collections, and reliability are going to move the energy sector in a positive direction. This continued improvement is, however, challenged given that the World Bank may not have a leverage in the sector in the absence of any investment financing for next few years. Other donors have indicated their interest to pick one or more of the investment opportunities that remain available in the country.

86. Another plausible challenge is to do with the hydrological risk that will continue to expose the sector to supply shortages and expensive power imports. This may make it difficult to maintain the required level of supply reliability and affordability.

V. LESSONS AND RECOMMENDATIONS

87. The PMU being the pivotal agency from the client side should have been established well before project's approval, thus allowing it to contribute to project preparation including establishment of indicators, their baselines, and targets. For this project, the PMU was established when the loan and sub-loan agreements were already approved in Parliament and signed by the MOF, MoIE, and sector operators (KESH, OSHEE, and OST).

88. The role and sharing of responsibilities among the PMU and the three PIUs of OSHEE, OST, and KESH remained challenging during implementation. There is no single way that provides solution to challenges of managing implementation jointly as often PMUs are established from nowhere by inducting staff from the sector entities. The PMU should have more capacity so that the back and forth between the PMU and PIUs could be avoided. This could be done by providing the PIUs' staff to the PMU for a reasonable period on a contract basis. Another option would be to keep the PMU responsible up to contract award for various packages and then transferring the responsibilities to the respective PIUs. However, this option also had its own challenges.

89. The project's inability to monitor the improvement in reliability, which is an indicator, should be addressed in future initiatives in the sector. One option, which may be politically difficult, would be to select a few geographical areas for network upgrade and improvement from the relevant substation down to the MV and LV network be included in the project. In such cases, reliability measurement for reduction in outages and their durations would be possible, even though it would not represent the entire network of OSHEE or OST.

90. Financial recovery of the energy sector is a huge undertaking, which faced multiple difficulties for many years. A single investment project may address and achieve progress on a limited number of issues during its implementation period; thus, it would be overoptimistic to expect that a single investment project would resolve all the major issues of the sector. Besides, the sector decisions are mainly under the control of the Government, particularly the MOF. Nevertheless, the project addressed several areas that act as a constraint to improved financial performance. The TA activities targeted some important areas



including supporting much-needed reforms in the sector. Longer-term engagement of the World Bank and other donors through TA or investment project(s) can play a constructive role toward bringing financial recovery to the sector.

91. Under Component 1, the project provided short-term liquidity support to the sector to finance power imports to supplement the available hydropower generation capacity in the Drin cascade that had reduced due to unfavorable hydrological conditions. The targeted power imports were completed, and the funds allocated were fully utilized. The implementation of this component was a significant part of the project for funding. Besides, it supported the country at a difficult time toward reducing the supply-demand gap following a financial crisis in the sector (although the project did not include a pertinent results indicator). For future similar interventions under Investment Project Financing operations, it is recommended that any related reform actions, TAs, or sector analytics be structured as prior actions, dated covenants, or disbursement-linked indicators.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Electricity losses per year in the project area

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Electricity losses per year in the project area	Percentage	45.00	14.00	20.00	22.65
		03-Jul-2014	31-Dec-2019	29-Nov-2019	10-Nov-2020

Comments (achievements against targets):

Objective/Outcome: Collection rate of distribution company

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Collection rate of distribution company	Percentage	78.00	93.00		97.50
		03-Jul-2014	31-Dec-2019		10-Nov-2020



Comments (achievements against targets):

Objective/Outcome: Reliability of MV level at Tirana area

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Capacity of medium-voltage network	Kilovolt-Amphere(KVA)	0.00	0.00	80.00	80.00
		03-Jul-2014	31-Dec-2019	29-Nov-2019	10-Nov-2020

Comments (achievements against targets):

Objective/Outcome: Total amount of intercompany arrears

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Total amount of intercompany arrears	Days	1,200.00	550.00		1,290.00
		03-Jul-2014	31-Dec-2019		10-Nov-2020

Comments (achievements against targets):



A.2 Intermediate Results Indicators

Component: Short Term Complementary Power Import Support

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Complementary Power Purchased	Text	0.00 03-Jul-2014	EUR 21.7 million 29-Nov-2019		EUR 21.7 million 15-Jun-2021
Comments (achievements against targets):					

Component: Upgrading Distribution Infrastructure

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Implementation of a new billing and collection management system	Text	Existing billing system. 03-Jul-2014	The installation is completed and the system is operational. 31-Dec-2019		The installation is completed and the system is operational. 15-Jun-2021
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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Direct project beneficiaries	Number	0.00	200000.00		150,000.00
		03-Jul-2014	31-Dec-2019		15-Jun-2021
Female beneficiaries	Percentage	0.00	50.00		50.00

Comments (achievements against targets):

This indicator is below the target partially due to the lower number of distribution lines and associated infrastructure was upgraded under the project (44 out of 55 distribution feeder lines). There are no additional power distribution substations constructed to accommodate the upgrade of the 11 feeder lines, as envisaged at the beginning of this project.

Tirana area is the main city that benefits from the project; there are more than 120,000 customers in Kombinat area to be supplied by the new Kombinat substation financed under the project. Other cities that benefit from the project are Kavaja, Durres, Vlora, Fushe Kruja, Gjirokastra, Saranda, Lushnja, Fieri, Pogradeci, etc. There are new 120,000 single phase smart meters and 7500 three phase meters installed for low-voltage customers (residential and non-residential) and new metering system for 686 mediumvoltage private commercial customers

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Impact of citizen engagement on project activities reported and disseminated (Yes/No)	Yes/No	No 01-Nov-2019	Y 10-Nov-2020		Yes 15-Jun-2021

Comments (achievements against targets):



Component: Transmission Meter/Data Center Upgrade

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of medium voltage customers in deregulated market	Number	0.00	5000.00	1,000.00	96.00
		03-Jul-2014	31-Dec-2019	29-Nov-2019	15-Jun-2021
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of OST meters installed	Number	0.00	2328.00	2,328.00	1,704.00
		03-Jul-2014	29-Nov-2019	29-Nov-2019	15-Jun-2021
Comments (achievements against targets):					

Component: Supporting Power Sector Reforms and Project Implementation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Debt to Equity Ratio of	Number	0.10	1.60		-0.29



OShEE (shown), KESh and OST		03-Jul-2014	31-Dec-2019		15-Jun-2021
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
OShEE monthly revenues used to pay for energy purchases to KESh and transmission fees to OST	Percentage	40.00 03-Jul-2014	100.00 31-Dec-2019		100.00 15-Jun-2021
Comments (achievements against targets):					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Technical assistance initiated to support power sector reform	Text	No	New market rules in place/ Cost recovery tariff methodology approved	TA to update the Financial Recovery Plan provided	TA to update the Financial Recovery Plan provided.



		03-Jul-2014	31-Dec-2019	29-Nov-2019	15-Jun-2021
Comments (achievements against targets):					



B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1 To improve reliability of power supply of the power sector.	
Outcome Indicators	1. Reliability of MV level at Tirana area
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. Complementary power purchased 2. Direct project beneficiaries; female beneficiaries 3. Impact of citizen engagement on project activities reported and disseminated (Yes/No) 4. Number of medium voltage customers in deregulated market 5. Technical assistance initiated to support power sector reforms.
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<ol style="list-style-type: none"> 1. Short-term power complementary power support 2. Upgrading distribution infrastructure 3. Transmission meter/data center upgrade
Objective/Outcome 2 To improve financial viability of the power sector	
Outcome Indicators	<ol style="list-style-type: none"> 1. Electricity losses per year in the project area 2. Collection rate of distribution company 3. Total amount of intercompany arrears
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. Debt to equity ratio of OSHEE, KESH and OST 2. Number of medium voltage customers in deregulated market 3. OSHEE monthly revenues used to pay for energy purchases to KESH and transmission fees to OST 4. Number of OST meters installed 5. New market rules in place/cost recovery tariff methodology approved
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	<ol style="list-style-type: none"> 1. Short-term power complementary support 2. Upgrading billing and collection system 3. OST investments in meters for MV customers, feeders, IPPs, and data center



ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Arturo S. Rivera	Task Team Leader(s)
Arben Maho	Procurement Specialist(s)
Jonida Myftiu	Financial Management Specialist
Bekim Imeri	Social Specialist
Esra Arikan	Social Specialist
Supervision/ICR	
Rome Chavapricha, Gazmend Daci	Task Team Leader(s)
Arben Maho	Procurement Specialist(s)
Jonida Myftiu	Financial Management Specialist
Arturo S. Rivera	Team Member
Anne N. Ranasinghe	Procurement Team
Mohammad Ilyas Butt	Procurement Team
Bekim Imeri	Social Specialist
Natasa Vetma	Environmental Specialist
Shpresa Kastrati	Team Member
Wazhma Khalili Raheem	Team Member
Dung Kim Le	Team Member
Katsuyuki Fukui	Team Member
Yae Jun Kim	Team Member
Tatyana Vladimirovna Kramskaya	Team Member

B. STAFF TIME AND COST



Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY13	10.992	109,059.31
FY14	29.976	227,366.81
FY15	29.181	133,722.12
Total	70.15	470,148.24
Supervision/ICR		
FY15	29.715	161,478.07
FY16	30.936	182,759.21
FY17	47.831	239,731.13
FY18	53.116	321,111.00
FY19	50.840	326,558.90
FY20	48.679	249,980.29
Total	261.12	1,481,618.60



ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US\$, millions)	Actual at Project Closing (US\$, millions)	Percentage of Approval
Short Term Complementary Power Import Support	30.00	25.55	85.17
Upgrading Distribution Infrastructure	93.00	43.53	46.81
Transmission Meter/Data Center Upgrade	20.00	11.74	58.70
Supporting Power Sector Reforms and Project Implementation	7.00	3.38	48.29
Total	150.00	84.20	56.13



ANNEX 4. EFFICIENCY ANALYSIS

Project-level Economic and Financial Analysis

Analysis at Project Appraisal

1. At appraisal, project-level economic and financial analyses were carried out on an incremental basis, that is, assessing the project's net benefits (benefits less costs) derived from a comparison of the with-project and without-project scenarios. The indicators for economic viability were the EIRR and the ENPV at a discount rate of 8 percent. For the financial viability, the indicators were the financial internal rate of return (FIRR) and the financial net present value (FNPV) at a discount rate of 8 percent.
2. **Economic analysis.** Quantifiable economic benefits of the project were the cost of (a) reduction in technical losses valued at the cost of power purchase, (b) reduction in consumption due to decreased non-technical losses valued at the cost of power purchase, and (c) improved power reliability (reflecting reduction in unserved energy) valued at the cost difference between alternative diesel-based standby power generation and the average retail tariff. An additional benefit that was assumed at appraisal was the estimated benefit from importing power to compensate for the loss of power due to the planned rehabilitation of KESH turbines. This was valued by using the difference between the cost of standby power generation and the average retail tariff. This benefit was assumed to occur in the first year of project implementation. Quantifiable economic costs of the project were the capital costs of the project and the O&M expenses estimated at 5 percent of the capital costs. Total capital costs were estimated at US\$201.3 million (EUR 150.4 million equivalent) including US\$30 million (EUR22.4 million equivalent) for imports of power. All economic costs and benefits were estimated net of applicable taxes and duties.
3. Based on the above, the EIRR was estimated at 12.1 percent and the ENPV at US\$15.7 million at a discount rate of 8 percent. However, it should be noted that the appraisal estimates of EIRR and ENPV were significantly increased due to the up-front anticipated additional benefit described earlier. Without this up-front benefit, the EIRR would have been 8.1 percent with a small positive ENPV at a discount rate of 8 percent.
4. **Financial analysis.** The financial benefits assessed were the value of (a) savings in costs of power imports and power purchase resulting from the reduction of technical losses and (b) increased billed sales resulting from the reduction in non-technical losses. The financial costs were the capital costs and the O&M costs. All costs and benefits were valued including applicable taxes and duties.
5. Based on the above, the FIRR was estimated at 19.6 percent and the FNPV at US\$67.2 million at a discount rate of 8 percent.

Post-Completion Analysis

6. **Economic analysis.** The post-completion economic analysis includes two cases. In the first case, for comparability with the estimates at appraisal, the post-completion analysis includes an estimation based on the same methodology as was used at appraisal but updated for actual results and figures realized during project implementation. The second case considers changes that occurred during implementation that could not be appropriately covered under the appraisal methodology.



7. **Case 1.** This uses the same methodology as described in the appraisal analysis above but the projections at appraisal are replaced by the actual data and results realized during implementation. One significant change is that the additional up-front benefit assumed at appraisal (referred to above) was not included in the post-completion analysis since it did not materialize due to a change in priorities by the GoA. This resulted in a reallocation of the funds (US\$30 million) from the original intended use of financing power imports (US\$21.7 million) in 2017 to supplement power available for distribution. On this basis, the post-completion estimates are EIRR 6.4 percent and with a negative ENPV of Lek 1,094 million (US\$10 million) at a discount rate of 8 percent. The comparable figures from the appraisal analysis are EIRR 8.1 percent and a small positive ENPV at a discount rate of 8 percent. The post-completion estimates of economic viability are lower than those projected at appraisal due to the slower than projected improvements realized in all three benefit indicators during implementation.

8. **Case 2.** This differs from Case 1 in the valuation of the reduction in unserved energy realized during implementation. Based on the reported results, a significant contribution of the project was the reduction in unserved energy from an annual baseline level of 375 GWh in 2013 to 71 GWh in 2020. The improvement will continue to contribute to the benefits beyond 2020 as well. This outcome could not be appropriately captured under the appraisal methodology. Under Case 2, the project’s incremental benefits and costs are the following:

9. Reduction in technical losses valued at the cost of power delivered to the distribution company.
 Reduction in power consumption valued at the cost of power delivered to the distribution company.
 Reduction in unserved energy valued at the average retail tariff (as a proxy for the consumers’ willingness-to-pay)—conservatively, it is assumed that only 50 percent of the reduction in unserved energy would have been used by consumers.

Capital Costs and O&M Costs (net of taxes and duties)

10. A summary of the key assumptions (appraisal and the post-completion base case) in the analysis is provided in table 4.2. The base case assumes conservatively that the improvements in reduction of technical losses, non-technical losses, and unserved energy achieved as of 2020 will continue at the same levels as in 2020 with no further improvements up to 2029 (the end of the assessment period).

11. However, it should be noted that the GoA’s plan for further improvements in the power sector includes a target to reduce total power sector losses (technical and non-technical) to 16.5 percent by 2025. Recognizing this, besides the base case, two additional scenarios have been examined: achievement of the target by 2025 (as planned by the GoA) or by 2029 (in case of delay).

Table 4.1. Post-Completion Estimates

Scenario	EIRR (%)	ENPV (Lek, millions)
Case 1	6.4	-1,094
Case 2 - base case	12.2	1,423
GoA target achieved by		
2025	22.2	6,139
2029	20.5	4,745



12. **Financial analysis.** Two cases are considered. Under Case 1, based on the same methodology as adopted at appraisal, the post-completion estimates are as follows: both the FIRR and the FNPV are negative as compared to those anticipated at appraisal - FIRR 19.6 percent and FNPV US\$67.2 million. The main reason for the significantly lower achievement is the much slower rate of improvement in reduction in technical and non-technical losses than was projected at appraisal. Under Case 2, an additional monetary benefit estimated is the reduction in unserved energy valued at the difference between the average retail tariff and the cost of power purchase. With this, the resulting FIRR is 12.6 percent and the FNPV is Lek 276 million.

Table 4.2. Key Assumptions and Results - Appraisal and Post-Completion (base case 2)

Year	Appraisal				Post-Completion				
	Technical losses (%)	Non-technical losses (%)	Total losses (%)	Reliability improvement (%)	Technical losses (%)	Non-technical losses (%)	Total losses (%)	Reliability improvement (%)	Unserved energy (GWh)
2013	15.2	28.6	43.8	1.5	15.2	28.6	43.8	0.71	375
2014	14.9	25.1	40.0	1.5	15.0	22.8	37.8	0.71	346
2015	14.5	18.5	33.0	1.5	14.9	16.4	31.3	0.85	310
2016	14.2	11.8	26.0	1.5	14.8	13.2	28.0	0.90	269
2017	13.7	6.5	20.2	1.5	14.7	11.9	26.6	0.93	227
2018	13.4	4.7	18.1	1.5	14.5	9.5	24.0	0.98	180
2019	12.9	3.1	16.0	1.5	14.3	8.5	22.8	1.02	130
2020	12.9	3.1	16.0	1.5	14.1	8.5	22.6	1.16	71
2021					14.1	8.5	22.6	1.16	71
2022					14.1	8.5	22.6	1.16	71
2023					14.1	8.5	22.6	1.16	71
2024					14.1	8.5	22.6	1.16	71
2025					14.1	8.5	22.6	1.16	71
2026					14.1	8.5	22.6	1.16	71
2027					14.1	8.5	22.6	1.16	71
2028					14.1	8.5	22.6	1.16	71
2029					14.1	8.5	22.6	1.16	71

Entity-Level Financial Assessment

13. KESH's financial position is improving slowly, although KESH is still significantly exposed to the hydrological condition and has a few ups and downs along the way. After two consecutive difficult years of drought (2019–2020), KESH expects to generate more than 5,000 GWh (versus 3,092 GWh produced by KESH in 2020) due to the favorable hydrology anticipated in 2021, so the financial performance of KESH appears to be back to better than average. In the 2020 dry year, for instance, KESH expects interim net profit of Lek 968 million with earnings before interest, taxes, depreciation, and amortization (EBITDA) margin of 50.8 percent and a net margin of 8.7 percent. But, in a wet year, for instance in 2018, KESH recorded a net profit of Lek 7.6 billion with EBITDA margin of 78.0 percent and a net margin of 46.2 percent. The operating cash flows have been positive in recent years, and the level of cash on hand has improved over time. In addition, due to the public supply obligations for the regulated customers having been transferred from KESH to OSHEE, KESH should no longer face high hydrological risks and high energy

import costs in the dry season (that is, KESH only generates electricity and sells to OST and OSHEE. KESH is no longer responsible for importing electricity).

Table 4.3. KESH's Key Financial Performance in 2014, 2018, 2019, and 2020

<i>(unit: Lek, billions)</i>		2014	2018	2019	2020
Income statement	Total revenues	15.7	16.4	9.3	11.1
	Total expenditure	37.8	8.8	9.1	10.1
	Net profit/loss	(22.1)	7.6	0.2	1.0
	EBITDA	3.3	12.8	4.5	5.7
Cash flows	Operating activities	(5.7)	8.0	2.1	n/a
	Investing activities	(2.1)	(3.3)	(1.9)	n/a
	Financial activities	3.5	11.9	(1.3)	n/a
Cash at the end of period		(33.2)	(16.4)	(17.5)	n/a
Liability		107.1	92.8	92.1	92.2
Long-term loans		34.2	39.9	32.3	43.5
Equity		63.3	74.4	75.5	78.0
Liability to equity ratio		1.7	1.3	1.2	1.2
Debt (LT loans) to equity ratio		0.5	0.5	0.4	0.6
Debt service coverage ratio		(0.12)	0.65	0.11	n/a

14. OST progress on enhancing its financial position has stalled. In 2020, OST recorded a net profit of Lek 546 million (improved from a net loss of Lek 49 million in 2019) with EBITDA margin of 52.9 percent and a net margin of 0.1 percent. Owing to the reduction in transmission costs (that is, reduced technical loss and energy imbalance costs), OST was able to achieve better financial performance in 2020 than that of 2018 and 2019 with the constant revenue stream of about Lek 7 billion. Operating cash flows have remained positive for many years, and restrained capital expenditure has helped increase cash on hand. Despite the progress in recent years, OST's financial performance has not improved overall compared with that in 2014, and its financial performance depends significantly on the adequacy of the regulated transmission usage fees for ongoing operations and new investments.

Table 4.4. OST's Key Financial Performance in 2014, 2018, 2019, and 2020

<i>(unit: Lek, billions)</i>		2014	2018	2019	2020
Income statement	Total revenues	6.9	6.8	7.1	7.0
	Total expenditure	5.1	5.9	7.15	6.5
	Net profit/loss	1.8	0.9	(0.05)	0.5
	EBITDA	4.2	2.8	3.2	4.0
Cash flows	Operating activities	2.8	2.6	2.0	4.0
	Investing activities	(4.5)	(5.6)	(1.8)	(2.2)
	Financial activities	2.5	2.5	0.8	0.2
Cash at the end of period		1.3	0.4	1.4	3.3
Liability		30.8	39.6	40.2	41.7
Long-term loans		20.7	19.8	17.3	15.9
Equity		24.9	31.2	31.8	32.3
Liability to equity ratio		1.2	1.3	1.3	1.3



<i>(unit: Lek, billions)</i>	2014	2018	2019	2020
Debt (LT loans) to equity ratio	0.8	0.6	0.5	0.5
Debt service coverage ratio	1.55	0.28	0.17	0.30

15. The financial position of OSHEE has improved through reduced energy losses, strengthened collection and payment discipline, and controlled capital investment. Owing to good hydrology in 2021, OSHEE anticipates a net profit of about Lek 4 billion, which is Lek 6.4 billion increase from 2020. In 2020, OSHEE suffered from severe drought and increased energy imports. For instance, the energy expenditure in 2020 was Lek 35.2 billion, of which Lek 15.3 billion was for energy import. Capital expenditure has been below than the preset target in the Financial Recovery Plan (partially due to the COVID-19 impact). The financial outlook of OSHEE depends on the separation process of OSHEE group and the allocation of liability/equity among FTL, DSO/OSSH, and USS/FSHU. As the Albanian Power Exchange will bring more competition in the market, OSHEE may benefit from lower trader’s margin and electricity prices in the future. The 2020 audited financial statements for the unbundled OSHEE group (OSHEE holdings, DSO/OSSH, FTL, and USS/FSHU) are still under preparation.

Table 4.5. OSHEE’s Key Financial Performance in 2014, 2018, 2019, and 2020

<i>(unit: Lek, billions)</i>		2014	2018	2019	2020
Income statement	Total revenues	47.3	56.6	59.2	58.7
	Total expenditure	51.8	54.7	63.3	61.1
	Net profit/loss	(4.5)	1.9	(4.1)	(2.4)
	EBITDA	2.0	6.3	0.1	3.3
Cash flows	Operating activities	3.4	4.1	7.6	4.2
	Investing activities	(0.7)	(7.2)	(8.8)	(5.0)
	Financial activities	(1.6)	1.6	4.6	1.1
Cash at the end of period		1.8	0.2	0.3	0.5
Liability		104.4	110.1	119.7	124.4
Long-term loans		16.8	10.5	10.4	11.6
Equity		(71.2)	(35.6)	(35.6)	(38.0)
Liability to equity ratio		-1.5	-3.1	-3.4	-3.3
Debt (LT loans) to equity ratio		-0.2	-0.3	-0.3	-0.3
Debt service coverage ratio		0.51	0.79	0.60	0.57

Implementation Efficiency

16. Much of the project design remained same as articulated at appraisal, changes occurred toward completion schedule and project costs, which are discussed hereunder.

17. The project was completed with a delay of 19 months, which, although significant, must be seen from the context of COVID-19 pandemic within the country and abroad. The pandemic, which remained prevalent for almost 18 months, had an all-round impact on deliveries, transportation, and staff mobilization. Before start of the pandemic, delays occurred due to delays in procurement, repetitive design (and specifications) changes, and eventual decision to cancel procurement of balancing meters. In any case, some of the delays were inevitable and thus closing date extensions were granted to facilitate completion of such activities which had reached advanced completion stage.



18. The project was completed within budget, with some savings (small amount of EUR 0.7 million) attributed to reduced needs for energy imports (and thus expenditure on Component 1) and cancelation of the subcomponent on 'Tirana Center substation' and 'balancing meters' under Component 2. Key changes on project cost were (a) dropping of a subcomponent of Tirana Center substation and balancing meters under Component 2 and (b) partial loan cancelation (EUR 17.6 million) of unutilized funding. The PMU, although supported by international consultants, as owner's engineer, managed project implementation and coordination activities. The PMU had to work closely with the implementing agencies of OSHEE and OST, who took the lead in components related to their respective entities. The PIUs, embedded in the utilities for the project implementation remained active in the field toward installation of cables, cabins, metering system, and other activities. The focus of the PMU remained on overall coordination, data collection, analysis, financial management, and reporting. Even though the project spanned over around seven years, no significant staff turnover was reported. The implementation efficiency of the project is rated Modest.

Overall Rating of Efficiency

19. Given that the operation achieved an implementation efficiency and economic efficiency of Modest, the overall efficiency of the operation is rated Modest.



ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

1. Project Context, Development Objectives and Design

1. Albania's power sector is comprised and operated by the Albania Power Corporation, KESh (generation), Transmission System Operator, OST (transmission) and OShEE (distribution). The sector is regulated by the Energy Regulatory Authority (ERE). Both KESh and OST are publicly owned while 76 percent of OShEE was owned by a Czech public company, CEZ a.s. until June 2014, when it returned the ownership to the Government as part of a settlement agreement. In August 2004, all non-household customers were granted the right to become eligible consumers and choose their own suppliers. Albania has six high voltage (HV) eligible customers with annual consumption of 600 GWh per year (14 percent of all electricity sales), thus removing KESh from the obligation of supplying them under a regulated tariff.

1.1 Context at Appraisal

In 2009 the distribution company was privatized in order to secure investment, improve operational efficiency, reduce power losses, and improve revenue collections. With support from government, it was envisaged that this would overcome mounting losses and lead to lower, more affordable and competitive retail power tariffs over the medium-term. The sector started to deteriorate when the privatization of the distribution company did not play out as anticipated. The expectation was that OShEE was going to reduce losses to 17 % by 2014 and invest around \$150 million over five years in the distribution system. The new management of the company did not succeed in reducing distribution losses or completing the necessary investments as planned. Agreements on the baseline for the level of losses and bad debts were completed later than originally expected, while the Energy Regulator did not adjust the retail tariffs in a timely manner. In addition, bill collections from budgetary and non-budgetary institutions did not improve and the distribution company, managed by CEZ Sh, was unable to effectively reduce technical and non-technical losses.

Power losses increased from 33.7 in 2009 to 51.1 percent by the end of 2012, while cash collection decreased from 85 percent in 2008 to 73 percent in 2011 and down further to 64 percent in 2012. The distribution company is required under the Regulatory Statement to compensate for technical losses and theft of power by importing power as required by the privatization Share Purchase Agreement. Hence, in the fall of 2012, CEZ Sh had exhausted its resources and stopped electricity imports to cover its net losses, while KESh, as the supplier of last resort, used its hydro reservoirs to cover demand and ensure security of supply. On January 21, 2013, ERE revoked CEZ's license due to noncompliance of its obligations under the license and appointed a temporary state administrator to run the distribution system. By taking over the management of the distribution company, ERE also assumed responsibility—and inherently the fiscal risk—for the power imports necessary to compensate for energy losses and rising consumer demand. In May 2013, CEZ a.s. initiated international investment arbitration against the Government of Albania seeking compensation for damages incurred due to its non-protected investment in the power distribution company.

After a suspension of actions in 2013 due to general elections, the Government resumed discussions with CEZ a.s. in January 2014. On June 23rd, 2014, GoA and CEZ a.s. agreed to terminate arbitration proceedings and entered into an amicable agreement. As a result of this settlement CEZ a.s. has returned the complete ownership of the distribution company back to GoA. The government announced its commitment to reduce the high level of losses and improve collection. Thus, the Government requested World Bank support to develop an investment project that will improve the performance of the distribution company, reduce inter-company arrears, and turn the sector around. With the support of its partners, the Government managed to achieve a settlement agreement with CEZ



a.s., which has opened the way for investments in OShEE (formerly CEZ Sh) to turn around the company towards improved performance.

1.2 Original Project Development Objectives (PDO) and Key Indicators

The PRP project development objective is to improve reliability of power supply and financial viability of the power sector. Key PRP/PDO level indicators have included: (i) Total electricity losses per year in the project area; (ii) Collection rate of distribution company; (iii) Reliability of MV level at Tirana area; (iv) KESH/OST arrears in number of days sales equivalent.

The Key Original indicators of the PRP have been as follows:

- Number of medium voltage customers in deregulated market.
- Power sector reforms implemented Implementation of a new billing and collection management system.
- Implemented Risk management mechanism for weather related power imports.
- Share of meters installed by OST.
- Debt-to-Capitalization Ratio of OShEE, KESH and OST
- Debt to Equity Ratio of OShEE, KESH and OST
- OShEE monthly revenues used to pay for energy purchases to KESH and transmission fee to OST
- Direct project Beneficiaries Female beneficiaries

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

During the PRP restructuring on November 2019 taken into account the implementation progresses the original PDO have been revised or deleted as following:

- i)** Electricity distribution losses per year in the project area. (Only for distribution losses. The lower target reflects the lack of metering infrastructure on the medium-and low- voltage power grid network by November 2020. Nevertheless, the indicator is envisaged to reduce further toward 16.5 percent by December 2022 after full completion of metering infrastructure by OSHEE).
- ii)** Collection rate of distribution company/Reliability of MV level at Tirana area (It is proposed to measure and report this indicator based on the new capacity of the Kombinat Substation of 80 MVA (80,000 KVA)
- iii)** KESH and OST's receivables from OSHEE of provisions for bad debt. (Days)/ (It is proposed to clarify this indicator. This indicator measures receivables (arrears and current) that arise from KESH electricity sales and OST transmission fee to OSHEE net of provisions for bad debt. KESH's receivables from OSHEE will remain substantially on KESH's balance sheet for over ten years. This is due to the back-to back arrangement through EBRD where EBRD provides EUR 20148 million loan for KESH to refinance its short-term loans. In turn, OSHEE will be paying down receivable to KESH over more than 10 years to match EBRD loan repayment.

Revised Key Indicators as per Component

Component 1. Short Term Complementary Power Import Support



- i) Complementary Power Purchased (Text)/ It is proposed to revise this indicator to measure short term complementary power import under this project. The original activity (implemented risk management Mechanism for weather related power imports) had experienced delay in implementation due to uncertainty of the liberalization of the Albanian Power Market, particularly on which power sector entity would be faced with hydrological risk after market liberalization. In lieu of this activity, the World Bank indicated a bank-executed TA in 2018 on hydrological risk management to inform power utilities, Ministry of Finance, and Ministry of Infrastructure and Energy. Upon this TA completion in 2019, the government and power utilities may decide to implement the selected mechanism during and after the duration of Power Recovery Project.

Component 2. Upgrading Distribution Infrastructure

- ii) Implementation of a new billing and collection management system (Text)

- (a) Direct project beneficiaries (Number);
(b) Female beneficiaries (Percentage);
(c) Impact of citizen engagement on project activities reported and disseminated (Yes/No)

(This indicator will record the efforts that the project has made to respond to citizen feedback during implementation of this component, documenting responsiveness and impact).

Component 3 Transmission Meter/Data Center Upgrade

- iii) Number of medium voltage customers in deregulated market (Number) (Based on actual procurement and implementation plan. The revised target is derived from the technical assessment carried out under this component.
- iv) Installed OST meters (number)/ (It is proposed to measure this indicator by the number of OST meters procured and installed directly under Power Recovery project Instead.)
- v) Installed OST data center (text) This indicator is New/(The OST data center is already operational starting in May 2019.)

Component 4. Supporting Power Sector Reforms and Project Implementation

- vi) Debt to Equity Ratio of OShEE (shown), KESh and OST (Number)
- vii) OShEE monthly revenues used to pay for energy purchases to KESh and transmission fees to OST (Percentage)

- viii) Technical assistance initiated to support power sector reforms implemented (Text)

(It is proposed to revise the end targets to reflect TA activities directly supported under the Project. A number of activities originally planned under this component and elaborated in the Loan Agreement were carried out outside of the Project, including those supported by other development partners. See Section I (Table 1, Component 4) for details.)

1.4 Main Beneficiaries

The beneficiaries of the PRP are:

- Initially the Ministry of Energy and Industry (MoEI) currently Ministry of Infrastructure and Energy: Support the Ministry's efforts to improve its monitoring capacity and strengthen its



capacity to lead the recovery program in the sector.

- Ministry of Finance (MOF): As a result of gradual and predictable reduction of government guarantees to cover power imports for losses.
- Distribution Company OShEE: The key beneficiary of the project from the reduction of losses and improved billing and collection rates.
- KESH: Albania's main generation company KESH benefit from an improved financial sustainability and capacity to supply at least the regulated market.
- OST: benefits from the enhancement of the installation of new meters to facilitate the market restructuring and removal of medium voltage consumers from the regulated consumer group.
- Electricity customers: As a result of improvements in the supply and distribution efficiency, electricity customers in Albania benefit from improved service quality and reliability.

1.5 Original Components

A. Project Components

The PRP has four components: i) short-term complementary power import support; ii) upgrading distribution infrastructure, iii) transmission meter/data center upgrade; and iv) supporting power sector reforms and project implementation.

Component 1 – Short Term Complementary Power Import Support

Support KESH/WPS with 22.42 MEuro (100% of investment exclusive of taxes) purchase short term complementary power imports to meet KESH/WPS' power supply obligations and secure adequate reservoir levels at the Drin cascade over the period of the project. During 2017, KESH faced with extreme drought and lack of rainfall. Meanwhile, found in such a situation, MIE initiated administrative procedures in approving of a DCM by the Council of Ministers to allow KESH to operate with the electricity purchasing procedures with the funds under the PRP (Component 1). On July 05, 2017 the Council of Ministers issued the DCM no. 483, allowing KESH to import energy under the PRP framework. During September – November 2017, KESH completed the procurement procedure for three tranches of power purchase of 356,550 MWh in total amount of 21.7 MEuro. The remaining IBRD loan balance was cancelled under project restructuring of November 2019.

Component 2 – Upgrading Distribution Infrastructure

Support GoA's and Distribution Company's (OShEE) to reduce distribution losses, improve cash collection and reliability of power supply. The main investments has been focused on: i) supply and installation of transformers and ancillary equipment at selected substations in Tirana; ii) providing targeted investments in the medium and low voltage grid including cable line; concrete poles, metal clad switchgears, power distribution cabins and associated metering equipment; iii) supplying and installing power meters to cater for customers who have no or damaged meters; and iv) upgrading the billing and collection system to implement OShEE performance management program, loss reduction and collection increase plan.

Of the original EUR 69.5m IBRD loan, after restructuring EUR 59.5 m IBRD Loan (90 % of investment exclusive of taxes) EUR 38.56 m is now committed.

Under Component 2/OShEE of the PRP are actually procured, contracted and completed accordingly the packages: Purchasing of i) Concrete Poles; ii) MV-LV Cables & Accessories; iii) Meters for distribution; iv) MV Metal Clads & Distribution Transformation Stations; v) Earthquakes Emergency Equipment; vi) S&I of CRM/Billing System; vii) S&I of MDMS; viii) D&S&I of Construction of New 110/20kV Kombinat SS; ix) D&S& I of Rehabilitation of 3 existing SS in Tirana (Traktora, Farka, Kashari).

Another package not foreseen in the original one was the S&I of Transformation Point



(TP) Balancing Metering Infrastructure, including Head End System (HES) and MDMS” in the amount of 13.6 MLN Euro procured on 2019. This tender was cancelled due to the lack of competition. The package for “LV balancing meters and meter data management system” is being prepared for a rebid. This package was divided into two: (i) S&I of Transformation Point (TP) Balancing Metering Infrastructure, including Head End System (HES) and (ii) Meter Data Management System (MDMS). The first package following consultation among MOIE, OSHEE, PMU and technical consultant, Bank team during period of June-September 2020, OSHEE has not decided to reduce the scope for this package. Bank Team reiterated to OSHEE and PMU that the proposed scope of this package would be too large to be substantially and safely completed by end June 2021 and for this reason decided that this package will not be financed under PRP at this time. Bank team stands ready to consult OSHEE and MOIE on future implementation of balancing meters as part of OSHEE’s overall metering strategy. The second package of MDMS is procured and contracted in early 2021.

Component 3 – Transmission Meter/Data Center Upgrade (IBRD - US\$20.0 million)

Supports OST to facilitate the procedures of transferring of high voltage industrial customers to the deregulated market, which effectively reduced GoA’s obligation, through KESh/WPS, to provide guarantees of about US\$ 50 million/yr to KESh/WPS and put Albania at the forefront of market reforms required by EU directives. Under this Project OST will benefit from the enhancement of the installation of new meters to facilitate the market restructuring and open it for medium voltage commercial customers to be removed from the regulated consumer group. The transmission component is critical for subsequent opening of the MV market and establishment of the Power Exchange and balancing market.

Of the original EUR 14.95m IBRD loan, after restructuring EUR 12.45 m IBRD Loan (80% of investment exclusive of taxes) EUR 11.14 m is now committed, respectively for: (i) “Supply and Installation of Transmission Meter/Data Center” with total value 11,851,605 Euro (80% IBRD and 20% OST, funds); (ii) "Design, Supply, and Installation of Extension of existing OST SCADA/EMS to 110 kV Substations" with total value 2,084,954.5 Euro.

Component 4 – Supporting Power Sector Reforms and Project Implementation

Supports Albania priority power sector reforms to facilitate the recovery of the power sector and improve the performance of the distribution company through provision of management and technical advisory services. In addition to project implementation support, this component was foreseen to finance the technical assistance required to initiate priority reforms to enable the recovery of the power sector and improving the management of the distribution company: a) Priority power sector reforms; b) Project implementation support; c) Management advisory services; d) Risk management mechanism for weather volatility.

Of the original EUR 4.95 million, IBRD loan after restructuring EUR 3.5 million, 2.36m is now committed. Under PRP, the following TA were provided: (i) advice and financial analyses support for the 2018 update of the Financial Recovery Plan (ESMAP grant); (ii) TA for project implementation support; (iii) TA on social outreach program targeting electricity consumers and key stakeholders; (iv) TA to develop Metering Strategy and Standard Policies of the Albanian Power Sector and (v) TA to ERE for the Development of New Electricity Network Tariff Methodologies of Distribution Network.

A number of activities originally planned under this component and elaborated in the Loan Agreement were carried out outside of the Power Recovery Project, including those supported by other development partners. The main activities were:

- i. TA on revising the power market model to introduce more competition and reduce public power



- supply obligation (supported by Energy Community)
- ii. TA on revising renewable energy law (Energy Community)
- iii. TA on cost-recovery tariff methodology (USAID)
- iv. TA on Albanian energy strategy (USAID)
- v. TA on OSHEE performance management program (KFW)
- vi. TA on establishing Albanian power balancing mechanism and Albanian Power Exchange (IFC)
- vii. TA on weather volatility in the power sector (World Bank macro fiscal ASA)

1.6 Other significant changes

As per Loan Agreement the original closing date of the PRO was on November 30, 2019. Based on the actual status of the ongoing contracts, the project on November 2019 was restructured. The restructuring included: (i) 12-month extension of the project closing date to November 30, 2020 from the original closing date; (ii) cancellation of IBRD loan of approximately EUR 20 million due to restructuring and project savings; (iii) updates on the Results Framework; and (iv) updates on the Legal Covenants. Disbursement projections are revised to reflect the extended implementation period.

IBRD loan cancellation were, accordingly, due to:

- Component 1 -- cost savings EUR 0.71m
- Component 2 -- reduced scope of procurement package OSHEE LV panels & balancing meters PRP-S&I-ICB-3/211 (estimated cost reduction EUR 14m)
- Component 3 -- cancelled procurement package OST Establishing Market Place (original planned IBRD loan EUR 1.6m)
- Component 4 -- cancelled technical assistance (estimated cost reduction EUR 2m)

The 12-month extension provided additional time for installation of goods and equipment under the remaining Component 2: Upgrading Distribution Infrastructure and Component 3: Transmission Meter/Data Center Upgrade to be substantially completed by November 2020. The Results Framework would be updated to adjust PDO target “Electricity losses per year in the project area”, reflecting delay in implementation and revised technical estimates. In addition, a number of clarifications and deletions are made to other PDO and Intermediate Results indicators. For Component 4: Supporting Power Sector Reforms and Project Implementation, this restructuring revise end targets to reflect activities directly supported under this Project. Finally, the Legal Covenant on OSHEE’s Revenue Escrow Account is revised to reflect that OSHEE will pay the monthly energy purchase to KESH and the monthly transmission fees to OST in full when due.

Another deadline extension of Loan Agreement has been issued on November 2020. The second 7-month extension of the project closing date to June 30, 2021 from the extended closing date of November 30, 2020.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

Project Design and Implementation

The early design process was quite challenging itself due to the then status of the power distribution operator (previously CES and after under administration). The financial situation was similar to being bankrupt with unprecedentedly low indicators related to collection rate, debt ratios, lack of investment, dilapidated infrastructure, etc. The then situation was even more challenging when considering the problems faced by KESH and OST too. The design also considered the security of supply by having a



separate component for KESH which was having the rehabilitation of Koman PP and was not in a position to generate at full capacity.

The design phase of PRP was carried out in full cooperation and consultation between the MIE and the entities in addition to the WB Team and experts. At the time when the PRP was being prepared, designed and structured the PMU was not established. The main beneficiary representatives were from the high-level management of the KESH, OSHEE and OST and the Ministry of Energy too.

The PMU was established and started its activity only after the PRP was structured and launched. The PMU was established when loan and sub loan agreements of the PRP were already approved in the Parliament and signed by the MoF, MIE and Power Operators of the Sector (KESH, OSHEE and OST).

Due to these prevailing challenges and difficulties the sector was facing in addition to the unpredicted outcome of the then unsolved dispute of CEZ it was not possible to present the best possible design and structure.

The main component of the PRP remains C2. It should be noted during implementation in the early stages there were some changes to the structure of this component. For example, the original plan was for the rehabilitation and strengthening of two SS in Tirana: Old Kombinat and Zogu Zi. With the new management of OSHEE after the entire company was returned to the Government there were proposals which were presented to the WB. The Old Kombinat SS was replaced with building a new SS Kombinat. The Zogu Zi SS was replaced with the proposal for a new SS in Tirana Center, these were fully agreed and approved by the WB with changes in the Procurement Plan. Other changes were introduced within other sub-components of supply in terms of types and quantity, such as cables, power transformers and poles. Therefore, the efforts and responsiveness of the MIE, OSHEE and WB has been present since the early stages of implementation. There were extended discussions and consultation between MI/OSHEE and the WB on the meters, quantity and typology which could be the best option, and about the qualification criteria preferred by OSHEE.

The SS Tirana Center had a lengthy process of design which was further affected by the land ownership issues and the final location. The whole process then failed to be materialized due to disputed land ownership and the requested compensation by the landowners which was beyond the allowances stipulated in the national legislation.

The initial Procurement Plan was based in certain assumptions. The initial risk assessment would have been helpful to provide ideas on how the project could be changed if assumptions could not be met. If this possibility (failed privatization) was included and analyzed before, it would have given the foreseen potential mitigation measures.

A continuous M&E (monitoring & evaluation) task should be included, which is the case in many Projects, in which a separate M&E expert is engaged for that.

The final restructuring took place on November 26, 2019, in which the PRP Indicators, Objectives and Budgets of PRP were restructured according to the necessary required changes related with the real situation of the Sector bringing PRP in a more realistic position by updating PDO indicators and targets to be achieved at the end of PRP.



The PMU and PIUs teams gained a huge experience on managing and coordinating of all required commitments on a successful implementation of all the projects under the PRP Components and Subcomponents.

The PMU team during the PRP time, had the chance to work beside a very qualified and supportive WB team of experts. The PMU had the opportunity to gain more expertise through this excellent and continuous cooperation.

The PMU team was led in its work by the most updated WB guidelines which added more value to the quality of work.

PMU team was assisted by a highly qualified team of experts from the TA Consortium which further contributed and added quality to the PRP implementation.

PMU team learned and gained an excellent valuable experience on managing of such an important Project, not only by point of managing and coordinating view but also by being directly involved in every step and details of:

- Evaluation process of bidding procedures
- Preparation of Bidding Documents
- Preparation of Technical Specifications
- Deep Involvement in the implementation of the projects
- Managing and evaluating of the achievements, indicators and objectives of every project under respective Components of PRP
- Permanently pursue of achievement of the expected targets and deducting of them by deep analysis, conclusions on how to improve the actions and which steps should be taken to make of PRP a successful Project.
- Coordinating the collaboration of all interested stakeholders by assisting them directly and involving and coordinating in mean time too, the TA team experts in getting the best choices and solutions for any potential issues or problems they have been faced.

The continuous interrelation and cooperation between the TA Team and the PMU throughout all the Project have been positive for its knowledge strengthening, mainly related to technical and procurement aspects.

Specifically, for training, it was held a Study Tour during Jun19 including sessions about Operation Control systems, smart metering architecture, etc.

The PMU has been capable for handling the overall Project, TA has been focused on some technical specific aspects and issues with the commitment from remaining stakeholders in the Project and the coordination complexity of all of them.

To ensure this capacity remains, PMU and PIUs should have a permanent character and not be dissolved after the completion of the Project.

Main Challenges and Obstacles



OSHEE and OST with the support from the PMU, were responsible for the day-to-day activities related to project implementation. OSHEE and OST were in charge of procurement and implementation whereas the PMU was in charge of financial management, disbursements, M&E, technical support (via the Consultants Mercados-Aries International in JV with AFRY) and preparation and submission of semi-annually consolidated progress reports and financial statements to the World Bank. The main challenges were the following:

Coordination between PMU and PIU-s

In general, the coordination between PMU and PIU-s during the project time can be evaluated as a satisfactory collaboration.

It can be said that there were a lot of good examples of a good coordination and collaboration during the PRP time between PMU and PIU-s. There were a lot of efforts made by all the involved people and experts to facilitate the implementation processes of the projects which brought at the end the results we see today. Results which their own show in mean time the achievements of which we are happy and also the failures of which we are not satisfied. Of course, there are a lot of things related with the coordination between PMU and PIU-s which should and could have been done in better way. In few words it can be said that the main issue related with the coordination between these entities were somehow caused by the organizational structure itself.

PMU opinion is that a more flexible and stronger structure would have been more efficient in managing the implementation of the projects under PRP. It means that it would have been better to have only one managing unit in charge of managing of all projects under PRP.

This unit assisted by a supportive strong Consultant and Experts from Power Operators, would have better results in avoiding a lot of issues evidenced during implementation process of which the PRP was faced with. At least a lot of unnecessary evidenced delays caused by the involvement of a lot of other structures through the PIU's-structure would have been avoided.

- 1.1. Delays in implementing regulatory framework: Mix deployment of medium voltage meters for customers to be liberalised by "system operator" TSO and deployment of grid meters inside OSHEE's network by OST was not ideal, hence OST was responsible to carry out works inside OSHEE's network and the data from grid metering points are primarily important to OSHEE rather than OST.

The main reason that this project was assigned to OST is that in 2011, GoA moved high voltage industrial customers to the deregulated market. In order to facilitate this process, the project supported OST to i) providing power meters and upgrading a data center; and ii) supplying and installing an IT system for the data center and providing technical assistance for developing procedures for the establishment of a market platform for independent power producers and some eligible customers.

Since OST at that time was in charge to manage high voltage industrial customers to the deregulated market, it was reasonable that this assignment to be given to OST.

By today's point of view considering the experience gained and the actual deregulated market situation it would have been better to assign this project to the Distribution Operator, since the costumers projected to be transferred to the deregulated Market were and still are OSHEE's customers which knows better these customers and could have carried out in an easier manner with the problems this project was



faced during implementation process.

Related with this project it can be stated that.

- One entity working on other company's assets is always conflicting. A potential solution would have been the distribution of the works directly for the company's ongoing the assets. Also, though PMU had the authority, the misalignments with the Procurement Plan have also caused difficulties to the PMU in its coordination role and could have had a potential solution with a bigger technical coordination, supported by the TA.
- This could also have facilitated the flexibility against changes (example: smart metering LV) to accommodate evolving requirements during the Project.
- The projected number of customers supposed to be transferred in the deregulated market was not correct. Especially the estimation number of MV costumers was inaccurate and much more than the existing ones.

Besides the good intention of having a consolidated deregulated market with a high number of participants, it should have been better estimated the number of potential customers which should have been transferred to this market. This should have been done by putting down first, some criteria of which would have been possible to classify which customers could go to the deregulated market. These Criteria, such as the customers power installed and the consumption were used only during the implementation process, which brought to a significant decrease of the number of MV customers to be transferred in the deregulated market. By putting these criteria since at the beginning it could have helped in a better estimation of the budget required for this project and in a more accurate quantity of metering units procured. Actually, even though these criteria are used only 683 out of 1067 of MV metering units procured are installed.

- At the end of the project these customers which will be transferred to the deregulated market, would be managed by whoever structure would be in charge to manage the deregulated market no matter of who was in charge to implement this project.
- Related with the second subcomponent of a market platform for independent power producers and the eligible customers, it seems that it was not the right time to implement it.
- Since the conclusion is that this project should have been better managed by OSHEE, then it would have been better too, that for OST to have been assigned a proper project in TS within PRP, which are potentially a lot, and which would have anyhow a positive impact on the transmission system.

1.2. Technology changes: Deployment of low-cost electronic meters to reduce number of unmetered customers in the original design vs. deployment of smart meters in bigger cities and using the dismantled meters to close metering gaps in rural areas.

Related to this the experience in the distribution system has shown that:



- No matter of which kind of meters have been used and how many meters are deployed, during the time in distribution system, the expected impact in reducing the losses was a disputable issue. The experience during these years after the democratic changes, let say of this long transitional time, has shown that there is not a direct connection between meters installed, whatever they are, and the impact in the loss reduction. A lot of new meters have been purchased and installed in the distribution system during these last 20 years and a lot of customers still are reported without meters, and the impact was never the expected one.
- The loss reduction attempted programs before being technical and managing issues of the Power sector are mainly social and political issues. Only when this issue comes in the focus of political forces there is the chance the loss reduction programs to be effective and give the expected impact on improving the health of the Power Sector. Having said that, it explains that when combined government measures and development programs such as actual PRP, comes together, then it is possible to expect and have improved indicators as we can actually verify in the power sector at the end of this PRP.
- The PRP approach by this point of view is correct and in line with the Albanian Government policies of power sector and the expectations, especially after the restructuring of the supplying and installing power meters project under Component II.
- The dispute of simple electronic meters versus smart meters is a normal one, which shows that the distribution sector after that long transitional unstable period when no matter of what kind of meters were installed no any difference was evidenced, indicates that there were new potentials on how the distribution sector saw itself in the near future. It indicated too, that the distribution sector was ready to apply the new technologies next to important managing measures which had given the first positive impacts and which would support the implementation of new technologies including smart meters for a further improvement of the sector. As indicates the recently accepted metering strategy, the combined good policies with the smart meters would bring optimal impact on loss reduction programs, it is an indicator that the smart meters are now not only a perspective but also a necessity for the sector. Unfortunately, the first important designed project of Balancing Meters based in smart meters failed to be implemented for the reasons we have given in the respective paragraphs, but this does not mean that it is not necessary anymore.

1.1. Procurement Process:

Delays in the procurement process affected the Project schedule and resulted in partial execution (one of its biggest problems) and loss of funds. Difficulties related, among others, to stringent technical and financial requirements required by OSHEE which prevented bidders to be qualified, and to lack of procurement capacity within OSHEE and OST.

Also following issues:

- In the bidding documents the issues of qualification requirements
- Billing system software update
- Lead role by PMU vs PIUs

The reason mentioned at “i) The stringent technical and financial requirements of OSHEE”, were mainly associated to the Balancing Meters after the cancelation of the first round considering the lessons learned from the failed first round of the tender when one of the original bidders



continued with a never-ending process of claims at all levels which also added to significant delays and time wastage.

Related with the second point” ii) lack of procurement capacity within OSHEE and OST”, PMU opinion is that there was no lack of procurement capacities. It cannot be stated that the delays are directly connected with procurement capacities of the PIUs. It is more a matter of positioning of PIU’s Operators toward WB, PMU and TA recommendations than procurement capacities, which brought the delays.

The same above explanation could be given also for the following points (a) and (b). For the point (c) the PMU opinion is given in the coordination issues. PMU opinion is that a more flexible and stronger structure would have been more efficient in managing the implementation of the projects under PRP. It means that it would have been better to have only one managing unit in charge of managing of all projects under PRP.

Time loss for discussion of qualification criteria could have been avoided with an increased coordination among all participants (see previous point potential solutions). A questionnaire was issued after the first balancing tender to investigate the reason why bidders did not submit a bid after purchasing the bidding documents. It showed amongst others, that many bidders were not able to meet the financial qualification criteria and alternatively were also not able to find suitable JV partners who would be able to meet these criteria.

As experienced in other projects, a conceptual procurement training for PIUs (despite their previous experiences) could have taken place at the start of the project, clarifying since the beginning how technical requirements should look like and how bidding documents should have been prepared.

Also, a clearer distribution of roles would have positively impacted on these delays: the PIUs responsible for the technical content of the bidding document and the PMU responsible for the ITB, the qualification criteria and the contractual part.

Under the Project, it is noted that the role of the PIUs in the procurement process could have been too extensive, considering the limited knowledge on the WB principles and allowing the PMU to involve more procurement aspects and optimize them.

In addition, the impact of COVID-19 cannot be ignored during procurement and contract implementation. It was evident that bidders were not able to provide their bids on-time. Some international bidders refrained from bidding which led to less competition.

During contract implementation delays occurred due to COVID-19 as well. In some instances, goods could not be delivered on time. More complicated was the impossibility to mobilize international staff by the Contractors.

1.2. Not implementation of all expected smart meters:

Discrepancies between OSHEE and the WB regarding the project design, project areas and quantity of smart meters to be installed on the field results in cancelation of this package which was not replaced with any other activity.

The balancing metering was considered to be one of the most important with highest



relevance to the sector and particularly related to loss reduction actions. The PMU opinion is that at that stage, there was not enough time in disposition till the closing date PRP to insure a successful implementation of a such big and important project.

So the decision of cancelation of the project was properly done in the right time. There was no time for replacement, and also there is no other similar activity fulfilling this function.

Main Achievements

- 1.3. New Kombinat Substation is finalized and commissioned; Three Tirana SS are rehabilitated (Farka and Kashar completed and Traktora under implementation process).
- 1.4. OSHEE/ New Billing system implemented to cover 1,2 million customers across the country.
- 1.5. New Meter Data Management System to cover more than 1,2 million meters across the country.
- 1.6. Replacement of smart/electronic meters
- 1.7. Implementation of boundary meters.
- 1.8. XXX

Stakeholders Engagement

The Project has been implemented with the cooperation of the said entities. The coordination has been fluid and productive. However, the following items have created some difficulties and sometimes miss coordination:

- 1.9. Conflicting objectives: emphasis on loss reduction and improving financial position of OSHEE was in the original project design. However, OSHEE's main interest seemed to also include rehabilitation measures of the distribution grid to improve service quality to increase willingness to pay.
- 1.10. Vague project ownership: since different agencies were participating at the same time and sometimes with cross interactions, sometimes there have been noticed a lack of project ownership by the utilities beyond all PMU's efforts. A clearer set of KPIs on each of the players could have helped to align all interests and create more ownership and improving coordination.
- 1.11. Important involvement of WB direct experts may have created confusion about different roles. In this regard, the PMU's Consultant -which could have been providing a more permanent and closer support than the WB's experts- has been seldom required by OSHEE or OST to support during the implementation of the most conflictive activities.
- 1.12. Due to lack of knowledge of WB procurement regulations within the PIUs misunderstandings created delays. As indicated, experienced gained in one tender was not carried forward to the next tenders. Where it was noted (during tender evaluation or during post-tender investigations) that qualification criteria were not suitable, the same criteria were proposed over again.

Lessons Learned



- 1.13. It's important to adapt the qualification requirements in Bidding Documents to the reality of the market and to align national technical standards with international ones to avoid process cancellation due to no qualified bidders and to increase the number of qualified bidders.
- 1.14. Billing system software updates: OSHEE has no alternatives to main supplier available in the region to support operation and further upgrade of the system (custom upgrade due to specific needs). Therefore, there's no competition if OSHEE requires functional upgrades to the software and they are slaves to the main supplier. For this reason, it is preferable to use Commercial Off-The Shelf software (COTS) with the availability of several independent companies that can do any future customization that is required by the client. The Billing System solution implemented in this project seemed to be COTS but, in the end, there was needed too much customisation. It would be preferable to have more emphasis on COTS and a demo that proofs availability (once more) of 80-90% of the required functionalities in order to reduce project specific software developments and the related risks.
- 1.15. The role of the PMU in the procurement process should be strengthened. Instead of shifting all procurement responsibilities to the PIUs, these PIUs should provide technical input and assist in technical bid evaluation only. The PMU should coordinate the entire procurement process including preparation bidding documents, focal point for clarifications, receipt of bids and the place for bid evaluation. After award of the contract the contract implementation may be handed over to the PIU. In case of contract variations, the PMU should be consulted.

TA on-site monitoring has been helpful to complement the relevant PIUs control, helping with the follow up of both planning issues and technical issues. Some more monitoring may have helped to maintain coordination between the parties.

Role of project management consultants?

The PMU Team worked alongside a very qualified team of TA who also gained additional experience by dealing with the PRP challenges aside from the provision of expertise and advice to the PMU Team. During the PRP implementation next to daily communication, consultation, and collaboration with the TA Team a dedicated training program was also carried out according to the planned schedule.

Financial recovery objective remained to be achieved by the three entities.

Financial recovery objective that remains to be achieved need to mobilize additional funds to:

- rapidly inject liquidity into the system to ensure the financial stability of the sector and imports (if needed) by OSHEE;
- clean up the finances of the sector to strengthen its consolidated balance sheet, restore financial viability, operational liquidity and creditworthiness of market participants. This is a prerequisite for the functioning of a creditworthy day-ahead-market; and
- sustain operations and provide access to domestic financial markets.

The revised Power Sector Financial Recovery Plan remains centered on three main pillars:

- Operational efficiency.
- Institutional capacity building; and



- Corporate governance and financial sustainability, and infrastructure improvements.

Addressing large energy losses and funding a projected aggregate deficit of about ALL 19 billion is necessary and long overdue. This position is unsustainable and can only be reversed by the urgent implementation of a comprehensive program of actions over the medium-term, including improvement in cash collections, reduction of energy losses, strong and experienced management teams at each of the utilities, adjustment of retail tariffs to a cost reflective level, and implementation of the new market model to facilitate the progressive migration of medium voltage commercial customers from the regulated market, and establishment of a competitive independent power market operated on commercial principles.

By end 2017 OSHEE repaid all but €23 million of the CEZ a.s. settlement of €85 million agreed in 2014. The final installment will be paid in total in 2018. This is good progress and a major step towards the early implementation of the World Bank supported Sector Recovery Plan and the Reform Process.

It is clear that KESh has maintained the burden of the below-cost reflective tariffs in the past and the collapse of the OSSh (now OSHEE) privatization. The company has been used to finance OSHEE's imports since the privatization in 2008. This burden delayed payments to IPPs, VAT, tax, social security and debt service payments to GoA, and by running up its overdraft to the limit imposed by the domestic banks. By end 2014 it reached the limit of its overdraft facilities and exhausted its capacity to provide additional support to the sector and, absent additional assistance, could again pose a serious threat to security of energy supply and fiscal stability of the country. The GoA recognizes this risk and is determined to enact further irreversible measures to turn the sector around and put it on a sustainable growth and fully bankable trajectory.

Moreover, OSHEE is unable to access the domestic financial markets due to its weak balance sheet and, as mentioned earlier, has only survived by passing-on its obligations to both KESh and MoFE by deferring debt service, payments for energy from KESh, and VAT/income tax and social security. However, with the creation of an escrow account pursuant to the provision of the new WB Power Recovery Project, KESh is now being paid in full for energy sales to OSHEE.

A detailed analysis based on the current 2018 Five Year Business Plans (as amended) for each of the companies, now shows that the sector can be financed within the existing framework agreed with the IMF and turned around by aggressive corrective actions to enhance operational efficiency, institutional capacity and financial sustainability, and strong and transparent corporate governance. A capital injection from the owner, however, is still needed to mitigate the vulnerability of the sector stability.

To date the government has, as mentioned, abolished the two-tier tariff structure for households and introduced a cost reflective tariffs for all categories of consumers from January 2015. The weighted average retail tariff was increased by 9.1 percent from ALL 9.8/kWh to ALL 10.7 kWh, due to the increase in non-household tariffs of 15 percent; and actively supported a vigorous and on-going outreach and enforcement program to reduce the theft of electricity and improve revenue collections. Results so far are encouraging with total energy losses reduced from 38 percent in 2014 to 26.4 percent in 2017 and collections increased from 78 percent to 97 percent over the same period, including the outstanding invoices prior to 2017.

The government is fully committed to improving efficiency, institutional capacity and financial sustainability by implementing the following important actions. The actions include:



- a. Further reducing losses and improving revenue collections by accelerating the implementation of the Power Recovery Project. Achieving the following agreed time bound operational targets (in percentage terms) is key to turning-around the sector, minimizing the support required from shareholders, energy consumers, suppliers, and taxpayers:

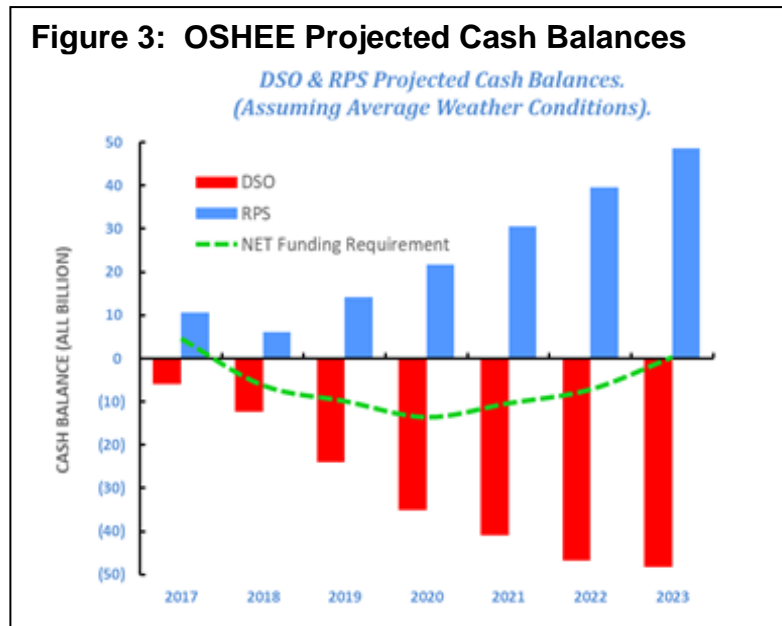
Table 6: Revised Loss Reduction and Revenue Collection Targets

	Total Losses (%)	Revenue collections ¹ (%)
2014	37.8	91.9
2015	31.3	98.3
2016	28.0	92.0
2017	26.4	97.0
2018	25.0	95.0
2019	23.0	95.0
2020	20.0	95.0
2021	16.5	95.0
2022	15.0	95.0

¹ Represents total collections including sales from prior years

- b. Restructuring the sector, strengthen its financial position and mobilize resources to close the projected funding deficit. While anticipated, this has been compounded by the drought in 2017 and the resulting cost of additional imports. These restructuring includes inter alia:
- In compliance with Articles 26 and 31 of Directive 2009/72/EC and Art. 35 of the PSL and the new Power Law, the formal unbundling OSHEE into its independent component parts, DSO and RPS, by spinning off RPS and transferring associated staff, assets and liabilities to a new incorporated joint stock company (this will be undertaken during 2018 and commissioned by Jan 1, 2019), and installing a new commercial billing system consistent with the new structure.

As illustrated by the dotted line in Fig. 3 the resulting funding gap of the company (DSO) could be funded in one of three ways: (i) comprising an arms-length market related long-





term loan from RPS to DSO, (ii) the transfer of RPS surpluses through annual dividends and government equity infusions into DSO, or (iii) the mobilization of resources from the donor community.

- Deferring non-essential capital expenditures, introduction of stringent hard budget constraints and cost control measures to improve efficiency, productivity and conserve cash, especially over the next three to four years. Consequently, capital expenditures will be carefully scrutinized by the supervisory board/s as well as line Ministry through a prioritization process consistent with the safety of the system, agreed loss reduction program and those that show the greatest returns in the short-term.

Table 7:

Preservation of the IPPs' contractual rights in a Liberalized Market.

As part of the reforms and to comply with the new Power Law (2015), the obligation to purchase power from IPPs under pre-established terms was in effect as transferred from KESH to OShEE.

With the introduction of the proposed independently owned and operated power exchange, all participants in the sector, both producers and consumers, will be required to participate at market prices in the power exchange.

To avoid counterparty risk, the exchange will include a clearing house to settle all transactions between buyers and sellers secured by bank guarantees from both parties.

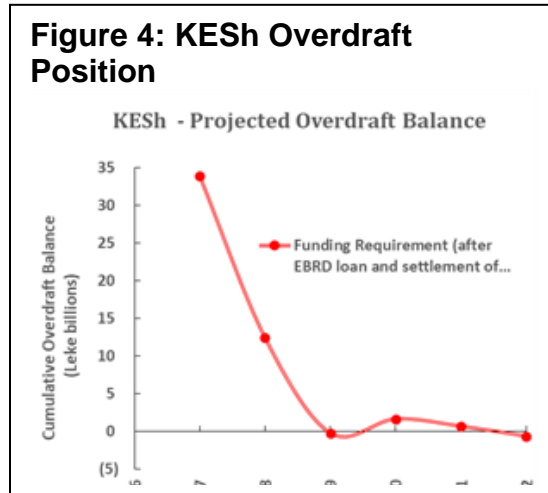
The clearing house will administer and enforce all contracts for differences (Cfd) preserve existing contractual obligations that will be used to compensate both the IPPs and OShEE for the difference between market prices and regulated tariffs for sales by IPPs and KESH on the one hand and purchases by OShEE on the other.

- With the abolition of the WPS, the IPPs' sales contracts were settled in full in 2015 and thereafter transferred to OShEE. The price premium paid by OSHEE is covered implicitly in regulated retail prices and consequently does not and should not create new arrears to IPPs to accumulate.
- In addition, MIE should move to an auction-based system for new renewable energy projects, to mitigate the financial burden on OSHEE and contingent fiscal liabilities.
- Introducing "renewable energy obligation" as a fixed charge to be applied to the end customers, in accordance with the respective amount of electricity metered and delivered by suppliers to these customers.
The ERE will approve the obligation for renewable energy to be paid by suppliers on an annual basis and the methodology and the procedure for determining this obligation.
- All budgetary and non-budgetary institutions (including the water utilities) are or will be subject to both escrow accounts and internal mechanisms within the treasury department to insure prompt payment for all energy purchases. MoFE should apply controlling mechanisms during the budget planning and approval process.
- The expensive overdraft facilities of KESH will be refinanced by a medium-term loan of €218 million from EBRD. To ensure the timely debt service, improve aggregate cash flow and pay down outstanding revenue receipts due from OSHEE. To this end, EBRD has agreed to a 14-year loan in an amount of Euro 218 million to be drawn down subject to stringent but realistic conditions, in two tranches in 2017 and 2018.



- To ensure that the EBRD loan is fully serviced, OSHEE has agreed to reduce its arrears to KESH. The EBRD loan was approved by Parliament in 2016, the first tranche of which million will be disbursed in an amount of €118 million in 2018.

The short- to medium-term arrangement is illustrated in



impact on KESH of this Fig 4;

- Capital expenditures scrutinized by the well as line Ministry process consistent with the safety of the system, agreed loss reduction program and those that show the greatest returns in the short-term.
- In compliance with Article 75 of Power Energy Law, Capex for investment with long-term return, but necessary for Distribution network, to be extended in long term repayment contracts in order Capex to be according to financial projections of FRP. Through long-term repayment investments, most of yearly budget for coming years 2018 – 2022 will be utilized for Capex with direct impact in loss reduction. Meanwhile Distribution Operator will be able to complete its 5 years investment plan by guaranteeing not only Loss reduction plan, but also: a) network development as requested from GoA as per economy development, b) improvement of distribution network of structure for adopting for market opening as requested by Secretariat, c) development of network for adapting in accordance with renewable power production program.
- The consolidation of the Renewable Energy Operator that is responsible for billing and collection from each electricity supplier of renewable energy obligation applied to all end customers, in accordance with the respective amount of electricity measured and delivered to these clients.

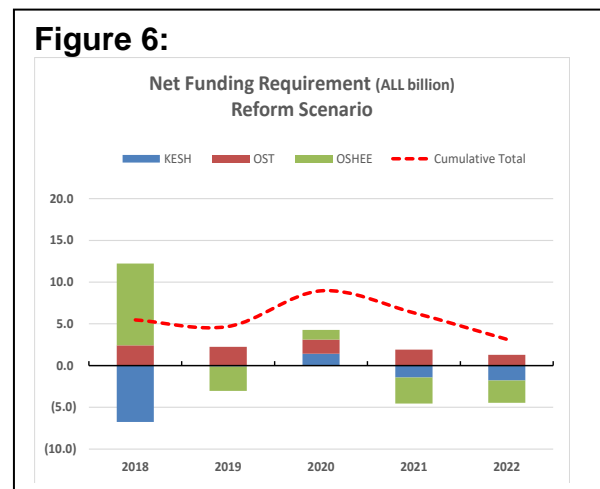
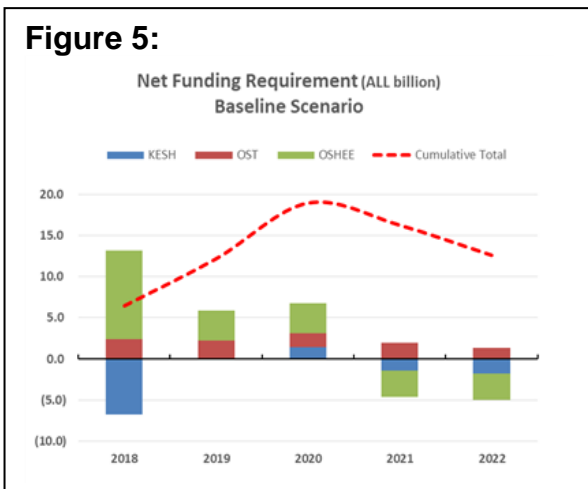
will be carefully supervisory board/s as through a prioritization

A review of the retail tariff regime should be considered to include:

- Setting reasonable fees and in accordance with the tariff levels approved by the ERE for independent power producers, eliminating the creation of new debt as a result of the power supply beyond the levels agreed in the fee.
- Approval by the ERE of three network access tariffs at voltage levels of 35kV, 20/10/6kV, and 0.4kV respectively to enable the smooth migration of clients connected to medium voltage from the regulated market.
- The government used the US\$ 30 million of the WB loan allocated to KESH for importing electricity power on the end of 2017 based on the hydro risk mitigation program in place, as well as dam security and rehabilitation programs are completed. As the risk of weather volatility has been transferred to OSHEE and therefore this facility will no longer needed.



- Maintain appropriate internal cost reflective tariffs for the supply, transmission and distribution and sale of energy for the regulated tariff market¹⁶;
- Moving to an auction-based system for new renewables to avoid the financial burden on OSHEE and fiscal contingent liabilities.
- Distribution tariffs will be based on the revised loss reduction plan set out in Table 6: The decision to transfer the price setting of KESH to the MoIE is inappropriate and should be review and reversed prior the next tariffing period
 - c. Vlora TPP will be refurbished and re-commissioned pending the supply of TAP gas (with its resulting lower variable cost structure) and the arbitration conflict with the contractor responsible for the installation has been resolved.
 - d. Improving corporate governance, transparency and independence of the regulator.
 - e. Reforming the market model and the legal/regulatory framework to progressively open the energy market and migrate commercial LV consumers from the regulated market¹⁷; and
 - f. The financial impact of these actions on sector are set-out in detail in Annex III and summarized in Figs. 5 and 6 below. This demonstrates that if Government stays the course, with the timely drawdown of the EBRD loan, borrowing requirements will be manageable and within the support proposed by MoFE of ALL 9.0 billion net for the key period to end2020 before the sector becomes cash positive and begins the long road back to financial health. With the refinancing of the KESH overdraft by EBRD in 2018/19, it is apparent from the cash balances set out in figs. 3 and 4. KESH and RPS are adequately financed and b) sufficient internal resources will be generated to finance the revised investment plan proposed by DSO.



It may also be seen that with strong financial discipline and robust oversight of the components of the financial recovery plan, that KESH will be able to:

- Remain within its revised credit facilities and continue to redeem its outstanding short-term debt beyond 2018. However, this depends on OSHEE’s ability to pay down its arrears to KESH same terms and conditions as the EBRD loan.

¹⁶ Is important to recall that retail tariffs were set on a levelized basis and any temptation to reduce these in the medium term should be resisted as this will result in the under recovery of costs in the earlier years of the levelized period.

¹⁷ However, the cost benefit analysis of this should be carefully reviewed given the inherent cross subsidy of household consumers by commercial customers under the abolition of the block tariff.



- Demonstrate, with the proposed support from the Budget that the sector is fully funded and, with some adjustment to be approved by the WB, be in compliance with the financial covenants under the Power Recovery Project; and
- Be able to sustain regulated tariffs at affordable levels for the foreseeable future. It must be emphasized, that these estimates are dependent on a) maintain retail tariffs in the medium-term and b) long-run average climatic conditions and therefore vulnerable to adverse hydrological conditions in the absence of a sound risk management and a comprehensive hedging strategy.

Fig. 6 above shows the scope and duration of the net additional financing that will be required in the event that a) the World Bank Power Recovery Project is extended and implemented as planned, b) the conditions precedent of the EBRD loan are met in a timely manner, c) a tight rein is kept on *capital spending and ensure it does not exceed ALL 7.75 billion in each of the next five years*, and d) hydrological conditions remain at or above long-term average conditions or are suitable hedged.

As demonstrated, it is expected that the finances of the sector can be turned around within the next two to three years, and thereafter placed securely on a sustainable trajectory as it returns to profitability and slowly rebuilds its equity base and independent borrowing capacity. In addition, Table 8 demonstrates the scope of the turn-around in revenue and net profits expected taking into accounts the proposed market model and power exchange, migration of high and medium voltage consumers, cost recovery tariffs and medium-term leveled retail tariffs.



Clearly this plan is not without risk particularly in regard to following aspects:

- financial leverage.
- vulnerability to weather events; and
- plan execution.

With respect to the first aspect, it may be noted that with the systematic de-capitalization of the sector, it's somewhat leveraged position—as indicated in the financial table summarized in Table 9 below.

Debt to total capitalization” ratios of this magnitude not only strand a large portion of the sector’s debt service costs by the existing regulatory framework, but also amplify financial shocks; and together with adverse weather patterns almost guarantees (absent the Government staying the course and the introduction of risk mitigating measures) a further financial crisis within the next few years.

Absent any improvement in performance, and consequently retained profits, new funding should be introduced as equity if possible, to expand the sector’s equity base, enhance aggregate equity during the

Table 8: Aggregate Financial Performance (ALL millions)

		Audited Results			<i>(ALL millions)</i>				
		2015	2016	2017	-----Projected-----				
					2018	2019	2020	2021	2022
Revenue									
KESH		19,558	17,154	11,214	10,531	6,162	6,119	6,299	6,357
OST		6,349	5,816	5,967	7,622	9,088	9,429	9,501	9,763
DSO			22,384	28,090	22,989	22,545	22,843	21,995	21,787
RPS		57,940	51,622	53,543	58,647	54,706	51,857	52,684	53,281
Total Revenue		83,847	96,976	98,813	99,789	92,501	90,248	90,479	91,189
Net Profits									
KESH		(22,221)	814	(53)	3,432	686	886	902	921
OST		1,237	927	1,416	702	1,241	1,443	1,432	1,509
DSO				(2,876)	(2,150)	(2,251)	(2,467)	(2,619)	(2,755)
RPS		15,493	18,719	1,696	9,535	7,853	7,383	7,994	8,105
Total Net Profit		(5,491)	20,460	183	11,518	7,530	7,245	7,708	7,780
Net Annual Cashflow									
KESH ¹		1465	948	(4,071)	22,098	13,109	(1,418)	1,427	1,789
OST		(645)	(387)	581	(2,416)	(2,240)	(1,694)	(1,922)	(1,294)
DSO			(451)	2,262	(6,300)	(11,700)	(11,190)	(5,755)	(5,741)
RPS		918	(1,429)	5,197	(4,465)	8,068	7,506	8,963	8,912
Total Cash Flow		1,738	(1,319)	3,969	8,916	7,236	(6,795)	2,713	3,665

¹ Includes EBRD Loan

recovery phase, and reduce the negative impact of excessive financial leverage in a highly volatile global environment.



Table 9: Aggregate Sector Leverage

(ALL millions)

	Audited Results			-----Projected-----				
	2015	2016	2017	2018	2019	2020	2021	2022
Debt								
KESH ¹	74,558	76,244	78,149	71,600	70,070	66,589	62,378	57,790
OST	29,940	30,549	30,416	30,183	32,495	32,843	31,662	28,220
DSO			6,704	15,004	31,004	42,194	47,949	53,077
RPS	19,502	17,743	14,579	10,259	9,082	7,904	7,560	7,047
Total Debt	124,000	124,536	129,848	127,046	142,651	149,530	149,550	146,134
Equity								
KESH	76,202	77,387	77,276	80,708	81,394	82,280	83,182	84,103
OST	28,579	29,107	30,444	31,146	32,387	33,830	35,261	36,770
DSO		2,547	2,547	397	(1,853)	(4,320)	(6,939)	(9,694)
RPS	(55,755)	(33,881)	(33,881)	(24,346)	(16,493)	(9,110)	(1,116)	6,989
Total Equity	49,026	75,160	76,386	87,905	95,435	102,680	110,388	118,169
Debt/Capitalization Ratio	71.7%	62.4%	63.0%	59.1%	59.9%	59.3%	57.5%	55.3%

With respect to the third aspect, the GoA recognizes that a plan, no matter how good, cannot succeed without proper execution. In this regard the Government proposes to:

- a. Prepare and introduce an agreed cost-effective risk management strategy and mechanism to address climatic volatility and reduce the potential financial impact of below average hydrological conditions.
- b. Bolster OSHEE management through a results-based management assistance or a similar type of service described in and provided for under the WB energy sector recovery project to ensure that the costs, loss recovery, and collection targets are monitored and met, which is key to the success of the turn-around plan.
- c. In addition, it proposes to corporatize state owned sector participants, and improve corporate governance and managerial performance, by:
 - enhancing the powers of the supervisory board/s,
 - enforcing corporate accountability,
 - increasing transparency and the public/private dialogue,
 - introducing independent non-executive directors to strengthen the board and help to formulate policy and monitor management performance, especially in the technical and financial areas; and
 - adopting only and only commercial practices (e.g., value maximization) within an independent regulatory environment.
- d. Separation of the operations of OSHEE by taking off the function of distribution and supply as envisaged by the proposed new Power Law by incorporating RPS and transferring associated staff, assets and liabilities to this new entity. These must be carried out the period by end 2018 to comply with the Power Law. The new trading billing systems (billing) currently under implementation will be designed to take into account this structure.

These actions are the least that would be required to stabilize the system and put the utilities on a sound financial footing. The World Bank is uniquely placed to coordinate the international community and mobilize the resources needed to turn the sector around within a reasonable period of time and place it on a sustainable footing to ensure security of supply. Continued commitment to the reform efforts in the energy sector is essential to reduce the risks to the budget as well the negative impact on growth created by power shedding and outages of the recent past

Constraints, risks and uncertainties



There are overall implementation risks of the plan comprising the shorter-term barriers of market model uncertainty, corporate governance, etc. and in the longer-term customer behavior and political interference, etc. Changes needed to the sector structure and legislation to improve efficiency and move towards a deregulated market include inter alia:

- a. *Financial Issues.* The size and scope of the additional financing required depends on average hydrological conditions, exchange rates and global interest rates, which are to a large extent beyond the control of the Government. Nonetheless, GoA should ensure that these risks are mitigated, especially weather volatility. The impact of this volatility on the additional funding required is demonstrated in the Figure 7: below and underscores the need to hedge against extreme climatic events. This risk can be further contained by reducing capital expenditures and adopting other mitigating measures as demonstrated in Fig 8.

Figure 7: Funding Gap Distribution (baseline)

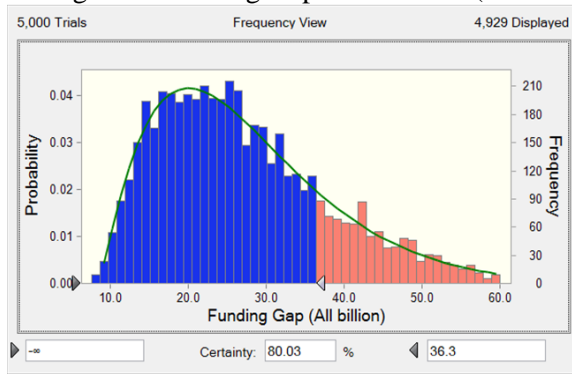
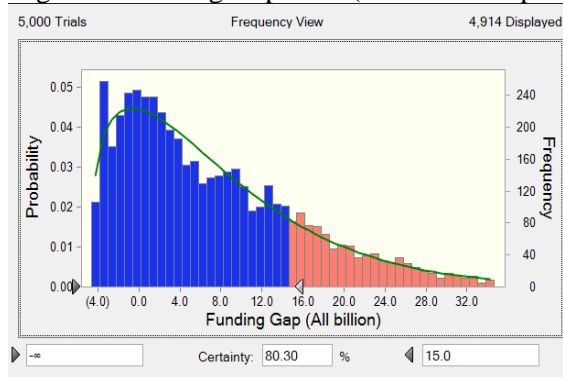


Figure 8: Funding Gap Dist. (incl. red in capex)



- b. Lack of financial discipline and misallocation of capital. The sector has and continues to be cash constrained as it recovers of form severe operational inefficiencies and previous mismanagement, compounded by inter-company cash imbalances. This requires the companies to live within their means and for management to scrutinize carefully their annual investment plans to respect hard budget constraints and the economic allocation of capital.



- c. *Public Resistance to Change.* Changing tariffs, prosecution of theft, and enforcement of payment through disconnection may result in the public resisting the improvement initiatives. This will continue to be addressed by the public relations campaign¹⁸.
- d. *Political risk.* Regular management change following change in government and politically motivated hiring hurts ability to promote strong internal staff. Electoral promises can undermine consumer behaviour. To avoid this risk Government should seek agreement among major political parties prior to campaigns to avoid electoral promises of bill forgiveness, and introduce more transparent processes for selection of top management based on merit, or seek a management contract
- e. *Risk management and corporate governance.* Implementing a comprehensive risk management strategy to make more compliant the client and market with companies and on the other side to be improved the procedures of boards of companies more connected with managerial styles across the sector.
- f. *Legislative Issues.* The 2015 Law on the Power Sector will need to be amended in order to implement some of the proposed reforms.
- g. *Judicial (Court) System.* The court system must be willing to implement punishments and forced executions for theft of electricity and nonpayment of energy bills
- h. *Prosecutors.* Prosecutors must be aggressive in enforcing the law and bringing theft/non-payment cases to court.
- i. *Ability of OShEE to dismiss and prosecute employees for corruption.* The management must have the will to dismiss and prosecute employees facilitating electricity theft or mismanagement of cash. Political pressure must not be placed on management to retain dishonest employees. The courts must not be used as a way for employees to be reinstated. In the event OShEE has demonstrated this to be limited and have successfully prosecuted institutions for abusive and corrupt practices
- j. *Social Subsidy for Vulnerable Customers.* ALL 1.7 billion social subsidy for electricity to vulnerable households for the coming years will be funded in the Government Budget.
- k. *Distribution Company Management Capacity.* Will current OShEE management be willing and able to implement the loss reduction and collection improvements as aggressively as the forecast assumes? The support from the management assistance will be needed to provide sound management practices and somewhat insulate the company from outside pressure. Despite delays in the implementation of such assistance, OShEE has significantly improved instructional capacity and made progress in the reduction in network losses.
- l. *Reduction in the Number of Unmetered Consumers.* It was critical that the new meters should be acquired and (securely) installed as soon as possible to reduce the non-technical losses. To date OShEE have ensured that all *customers have meters* and that flat rate billing and losses arising therefrom has been eliminated
- m. *Increase in Commercial and Industrial Prices.* Despite market exposure and possible political resistance, the plan assumes that 35kV and 20/10/6kV consumers leave the regulated tariff environment and pay prices based on import prices.
- n. *Regional Energy Prices.* Since Albania must import energy to supplement hydro generation, the country is exposed to risks inherent in regional energy markets.
- o. *The Situation with Vlore TPP.* The forecast assumes Vlore TPP will be rehabilitated and will be put into service. This will depend on world market prices of fuel, which are somewhat beyond the control of KESH. Also, the conflict is not yet resolved by the international arbitration related to the conflict on the defect in the cooling system resulted during the testing period once installation was completed and delivered by the contracted party.

¹⁸ The risk of the public resistance to change has been significantly reduced. OShEE customers are already conscious to "energy is an economic good that must be paid to have" and the collection performance provides continuity and consistency.



- p. *Debt of Budgetary and non-Budgetary Consumers.* It is assumed that prior debts of budgetary customers will be offset with taxes and other Government obligations. This would resolve old issues. While non-budgetary customers remain a threat to the collection targets of the company (the water supply companies).
- q. *Taxation Issues.* Tax Department is an important factor related to the collection of the arrears and the current invoices from the private consumers, as they determine whether invoices of electric energy included in the annual financial statement are liquidated. Paying VAT on uncollected energy losses and uncollected invoices reduces corporate cash flow, profits and income tax collections.

Outcomes and Result Indicators

Other Areas

Lesson Learned

Key areas on which lessons were learned by the project stakeholders particularly the Ministry, OSHEE, OST, KESH and other agencies? Areas may relate to project design, procurement, implementation arrangements, project monitoring and many others.

Related with the project design

- The targets should have been more realistic.
- The structure of the Project Management Unit should have been larger in order to cover all aspects the projects and subprojects under all the PRP. For example, one additional engineer, legal expert and monitoring and evaluation expert could have further added to the PMU capacity. These could have avoided back and forth with the PIUs. In addition, a stronger PMU could have been more effective in avoiding all the unjustified delays caused by the involvement of many stakeholders, which not always have been in the same line with the general way of view of WB and PMU /TA The role of the PMU in the procurement process should be strengthened. Instead of shifting all procurement responsibilities to the PIUs, these PIUs should provide technical input and assist in technical bid evaluation only. The PMU should coordinate the entire procurement process including preparation bidding documents, focal point for clarifications, receipt of bids and the place for bid evaluation. After award of the contract the contract implementation may be handed over to the PIU. In case of contract variations, the PMU should be consulted.
- The experience gained in this PRP shows that turn-key Projects should be in the future projects the main way of thinking during their preparation
- Another lesson learned is that the projects should be focused in doing investments in the hottest arias not in a partial way, but including all the area's technical problems, starting from the Substations till the end customer including MV and LV systems and measuring too. This would give the opportunity to measure better the impact and compare it with the targets to be achieved of the said project. In mean time it gives the chance to put new standards in the distribution sector and bringing good practices on how the future investments should be done.



- It's important to adapt the qualification requirements in Bidding Documents to the reality of the market and to align national technical standards with international ones to avoid process cancellation due to no qualified bidders and to increase the number of qualified bidders.
- Regarding Billing system software updates PMU is in line with TA following opinion: OSHEE has no alternatives to main supplier available in the region to support operation and further upgrade of the system (custom upgrade due to specific needs). Therefore, there's no competition if OSHEE requires functional upgrades to the software and they are slaves to the main supplier. For this reason, it is preferable to use Commercial Off-The Shelf software (COTS) with the availability of several independent companies that can do any future customization that is required by the client. The Billing System solution implemented in this project seemed to be COTS but in the end there was needed too much customisation. It would be preferable to have more emphasis on COTS and a demo that proves availability (once more) of 80-90% of the required functionalities in order to reduce project specific software developments and the related risks.

Arrangements for project's operation upon completion and project's sustainability

Arrangements for sustainability of the completed project components.

The entire PR rationale is based on the current and future sustainability. There are several arrangements to be mentioned in this regard, we would highlight the warranty, SLA and ESCROW arrangements.

The OST and OSHEE have established separate dossiers to record warranty and SLA requirements. This way, every incidence is recorded and checked against the contractors' or suppliers' obligations. Both PIUs have established a single point of contact to coordinate the obligations. The details of the ESCROW contract are safely stored and will become into force when the supplier is no longer able to fulfil his obligations.

Besides these three, it can also be mentioned the Performance Bonds (if any) and if needed, extensions to the warranty period could be procured by OSHEE/OST from the suppliers/manufactures as required. The completed projects are taken over by OSHEE and OST and all relevant management and administration apply for their operation and maintenance.

Arrangements for in-complete components in terms of their safe storage, implementation, and funding.

Both PIUs OST and OSHEE have stored components which are not yet used into their own warehouses. Warehouses are secured, and inventory is taken and regularly checked. Besides, all assets already implemented and in store are covered by insurance. The installation of new stock items will be financed by the entities itself.

OST and OSHEE should detail the insurances in place and their validity and implement them time before the expiration of the warranty period to ensure the possibility of claim over any defective items. Also an interesting point to develop is the warranty period for the goods in the warehouse and what happens if they are installed later and found to be defective.

Action plans to continue on financial recovery plan and to achieve project's financial objectives.



There are several activities that may be done in this area, highlighting the following among others:

- Continue with the Road map of planned reforms
- Conduct network rehabilitation to reduce technical losses and increase system availability (i.e., higher energy supply)
- Expand the smart metering program with additional rollouts
- Implement modern Loss Reduction programs in the company, including (but not limited to):
 - o Reorganization of activities to make them more socially oriented and closer to the consumer
 - o New methodologies for fraud and irregularities detection such as Artificial Intelligence monitoring for cases detection.

Environmental and Social (E&S)

Any particular issues on E&S compliance.

The PMU and the PIUs with the support of the TA and the WB have ensured the full compliance and observance of the E&S needs during procurement phases and, from on-site monitoring activities reviewed, there have been no relevant issues regarding E&S. Overall, the on-site development observed has been according to the requirements. From the socio-economic point of view, the Project has also positively impacted the local environment in the Country, provided the labor needs associated.

Capacity of PMU and OSHEE, OST improved on E&S compliance issues.

The PMU and PIUs support and interaction has led to the exchange of experience and knowledge during the long development of the Project, increasing the capabilities of these Units.

Other Areas

Progress achieved towards reform process in the energy sector

There has been a continued strong political support for the implementation of the loss reduction measures and the increased awareness of the necessity improving the financial situation of the sector. The various metering programs developed have led to an increased transparency on the energy flows not only between the different players in the Sector (KESCH / OST / OSHEE), but also among the different voltage levels included in their systems, especially within the distribution grid.

Institutional strengthening achieved due to the project

The implementation of new substations and grid enhancement, and the smart metering development shall have a twofold long-term impact in poverty:

- The implementation of new substations and grid improvements shall allow a better quality in the supply of energy which shall help to increase the capacity to develop small business that require continues and sustained quality



- The reduction of losses shall reduce the energy sector deficit and shall allow either or a combination of reduction of end user tariffs (which shall help poverty reduction) or the reduction of transfers from the Government, which can use the released funds for other activities tending to reduce poverty.

Project's contribution to poverty reduction within the country

The implementation of new substations and grid enhancement, and the smart metering development shall have a twofold long-term impact in poverty:

- The implementation of new substations and grid improvements shall allow a better quality in the supply of energy which shall help to increase the capacity to develop small business that require continues and sustained quality
- The reduction of losses shall reduce the energy sector deficit and shall allow either or a combination of reduction of end user tariffs (which shall help poverty reduction) or the reduction of transfers from the Government, which can use the released funds for other activities tending to reduce poverty.

Project's contribution to increased interest of donors and counterpart funding

- The project has led to a stabilization of the financial situation of the beneficiaries and has improved their profitability.
- Awareness on the necessity of further improving of the billing and collection rates and further improving the supply quality increase the attractiveness of investments into the sector.

Impact of the project towards gender issues

The Project was successfully implemented by gender balanced teams, both in the PMU and in the implementing agencies, showing that this approach can be extended to many other projects.

Technical Assistance

Areas of the energy sector benefited from completion of TA activities.

From the TA view and considering the wide scope of the Technical Assistance (procurement, general technical assistance, monitoring, metering, systems, market, etc.) all areas of the Sector have been benefitted, (KESH, OST, OSHEE).

Also, as previously mentioned, both PMU and PIUs' continuous support and interaction has led to the increasing of their capabilities.

Challenges faced towards implementation of the studies.

Besides the ones specifically commented in previous questions (coordination, procurement, etc.) it can also be highlighted the difficulties that arose from conflicting national and international standards and



practices. For some components the availability of goods compliant with national and international standards was very limited (e.g., power cables).

In this regard, the alignment of billing and settlement processes with international standards would lead to a wider choice of solutions based on more standardized software applications.



ANNEX 6. SUPPORTING DOCUMENTS (IF ANY)

List of Supporting Documents

1. The World Bank, Power Rehabilitation Project (PRP): Project Appraisal Document, Report No. PAD1031, September 8, 2014.
2. The World Bank, Loan Agreement, PRP, between GoA and IBRD, Loan Number 8429-AL, dated November 3, 2014.
3. The World Bank, PRP, Albania - Aide Memoires, Management Letters, Implementation Status and Results Reports, Official Letters, and all other Official Project Documents, 2014–2020.
4. Restructuring paper on a proposed restructuring of PRP, 2019. Report number-RES36385.
5. RVP's approval of Retroactive Extension of the Closing Date for the Albania Power Recovery Project (P144029) (Loan No. 8429-AL), dated December 15, 2020.
6. Procurement Plans and Audit Reports, PRP, 2014–2021.