PD-AAR-167 39632

AID 1020-25 (10-70) REPORT U-446

PAGE 1

PROJECT APPRAISAL REPORT (PAR)

1. PROJECT NO.	2. PAR FOR PERIOD:	3. COUNTRY	4. PAR SERIAL NO.
489-22-220-663	6/67 TO 12/76	Korea	77-7

5. PROJECT TITLE

2nd Transmission and Distribution Project

6. PROJECT DURATION: Began FY 68 Ends FY 77	7. DATE LATEST ~~PIP~~ CAP	8. DATE LATEST PIP	9. DATE PRIOR PAR
	1966		

10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: $10,575,145	b. Current FY Estimated Budget: $ -0-	c. Estimated Budget to completion After Current FY: $ -0-

11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

a. NAME	b. CONTRACT, PASA OR VOL. AG. NO.
The Okonite Company	Contract Loan No. 489-H-047

I. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

A. ACTION (X) USAID	AID/W	HOST	B. LIST OF ACTIONS	C. PROPOSED ACTION COMPLETION DATE
			The attached PAR is based on a review of the Capital Assistance Paper, the Burns and Roe Feasibility Study, and Mission files. The total project originally consisted of 36 subprojects. One subproject was subsequently deleted; and four alternate subprojects were substituted for four of the original ones. The attached list identifies the final 35 subprojects actually financed by the loan. Of the 35, 32 have been completed, 1 is in design, and 2 are under construction. Of the 3 remaining subprojects, USAID input will be limited to funding the technical assistance provided by the Okonite Co. Dollar procurement for the other subprojects is completed. No actions are proposed.	

D. REPLANNING REQUIRES

REVISED OR NEW: ☐ PROP ☐ PIP ☐ PRO AG ☐ PIO/T ☐ PIO/C ☐ PIO/P

E. DATE OF MISSION REVIEW

PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE	MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE
James Callaway 1/14/77	Dennis P. Barrett 1/18/77

AID 1020-25 (10-70) PAGE 2 PAR	PROJECT NO. 489-22-220-663	PAR FOR PERIOD TO 6/67 to 12/76	COUNTRY Korea	PAR SERIAL NO. 77-7

II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS

A. INPUT OR ACTION AGENT: CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY	B. PERFORMANCE AGAINST PLAN: UNSATISFACTORY 1	2	SATISFACTORY 3	4	5	OUTSTANDING 6	7	C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X): LOW 1	2	MEDIUM 3	4	HIGH 5
1. The Okonite Company				X						X		
2.												
3.												

Comment on key factors determining rating

The Okonite Company was the supplier of materials for the underground oilostatic cable transmission system and provided technical representatives to oversee fabrication and installation. Relationships with Host Country officials have remained good, and performance of technical services have progressed approximately as planned.

	1	2	3	4	5	6	7	1	2	3	4	5
4. PARTICIPANT TRAINING N. A.												

Comment on key factors determining rating

	1	2	3	4	5	6	7	1	2	3	4	5
5. COMMODITIES				X						X		

Comment on key factors determing rating

There were delays in both procurement and installation. At this time however, it appears that successful installation will be completed by the end of June 1977.

		1	2	3	4	5	6	7	1	2	3	4	5
6. COOPERATING COUNTRY	a. PERSONNEL			X						X			
	b. OTHER												

Comment on key factors determining rating

This relatively low rating is primarily due to the lack of continuity of KECO management personnel and difficulties in obtaining the cooperation of other Host Country agencies.

	1	2	3	4	5	6	7	1	2	3	4	5
7. OTHER DONORS N. A.												

(See Next Page for Comments on Other Donors)

AID 1020-25(10-70) PAGE 3 PAR	PROJECT NO. 489-22-220-663	PAR FOR PERIOD 6/67 to 12/76	COUNTRY Korea	PAR SERIAL NO. 77-7

II. 7. Continued: Comment on key factors determining rating of Other Donors

III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS*		TARGETS (Percentage/Rate/Amount)					
		CUMULATIVE PRIOR FY	CURRENT FY 76 TO DATE	CURRENT FY 76 TO END	FY 77	FY 78	END OF PROJECT
Engineering Services 1 Subproject	PLANNED	1	-	-	-	-	1
	ACTUAL PERFORMANCE	1	-				
	REPLANNED			-	-		1
Substation Equipment 16 Subprojects	PLANNED	16	-	-	-	-	16
	ACTUAL PERFORMANCE	14	-				
	REPLANNED			-	2	-	2
Distribution Conversion 14 Subprojects	PLANNED	14	-	-	-	-	14
	ACTUAL PERFORMANCE	14	-				
	REPLANNED			-	-	-	14
Transmission Material 4 Subprojects	PLANNED	4	-	-	-	-	4
	ACTUAL PERFORMANCE	3	-				
	REPLANNED			-	1	-	4

B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS	COMMENT:
1.	*Note: It is currently anticipated that all 35 subprojects will be completed prior to the June 30, 1977 TDD:
2.	COMMENT:
3.	COMMENT:

AID 1020-25 (10-70) PAGE 4 PAR	PROJECT NO. 489-22-220-663	PAR FOR PERIOD 6/67 to 12/76	COUNTRY Korea	PAR SERIAL NO. 77-7

IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged.

2. Same as in CAP ☒ YES ☐ NO

The purpose of the project is to expand and improve Korean Electric Company's transmission and distribution system.

B. 1. Conditions which will exist when above purpose is achieved.	2. Evidence to date of progress toward these conditions.
Increased availability and improved reliability of electric power for industrial growth and private consumption.	1. TRANSMISSION & SUB-STATIONS Increased Power Supply to: a. Downtown Seoul 160,000 KVA b. Kangnam & Seoul-Inchon Areas 270,000 KVA c. Yongnam Industrial Area 93,300 KVA d. Downtown Busan 12,000 KVA Total: 535,300 KVA 2. DISTRIBUTION a. Reduced average voltage drop from 16% (pre-project) to 5%. b. Power loss savings of 15,400,000 KWH/YR

V. PROGRAMMING GOAL

A. Statement of Programming Goal

To develop a transmission and distribution system adequate to effectively utilize KECO's increasing power generation capability.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Cite evidence.

Although there are still areas in South Korea that lack adequate and reliable sources of power, execution of this project has made a significant contribution towards improvement. Because of delays however and the inordinate length of time necessary for completion, KECO is still faced with an urgent need for additional expansion in both generation and distribution.

AID 1[illegible] REPORT U-445

PROJECT APPRAISAL REPORT (PAR)

PAGE 1

1. PROJECT NO.	2. PAR PREPARATION	3. COUNTRY	4. PAR SERIAL NO.
489-22-220-663	6/67 12/76	Korea	77-7

5. PROJECT TITLE

2nd Transmission and Distribution Project

6. PROJECT DURATION	7. DATE LATEST PAR	8. DATE LATEST PIP	9. DATE PRIOR PAR
Begun FY 68 Ends FY 77	CAP 1966		

10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: $10,575,145	b. Current FY Estimated Budget: $ -0-	c. Estimated Budget to completion After Current FY: $ -0-

11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

NAME	12. CONTRACT, PASA OR VOL. AG. NO.
The Okonite Company	Contract Loan No. 489-H-047

13. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

a. ACTION BY USAID	a. ACTION BY HOST	b. LIST OF ACTIONS	c. PROPOSED ACTION COMPLETION DATE
		The attached PAR is based on a review of the Capital Assistance Paper, the Burns and Roe Feasibility Study, and Mission files.	
		The total project originally consisted of 36 subprojects. One subproject was subsequently deleted; and four alternate subprojects were substituted for four of the original ones. The attached list identifies the final 35 subprojects actually financed by the loan. Of the 35, 32 have been completed, 1 is in design, and 2 are under construction. Of the 3 remaining subprojects, USAID input will be limited to funding the technical assistance provided by the Okonite Co. Dollar procurement for the other subprojects is completed.	
		No actions are proposed.	

14. REPLANNING REQUIRED REVISED OR NEW ☐ PROP ☐ PIP ☐ PRO AG ☐ PIO/T ☐ PIO/C ☐ PIO/P

15. DATE OF MISSION REVIEW

PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE	MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE
James Callaway 1/14/77	Dennis P. Barrett 1/18/77

AID 1020-25 (10-70) PAGE 2 PAR	PROJECT NO.	DATE OF REPORT	COUNTRY	PAR VERIAL NO.
	489-22-220-663	6/67 to 12/76	Korea	77-7

II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS

A. INPUT OR ACTION AGENT: CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY	B. PERFORMANCE AGAINST PLAN: UNSATISFACTORY 1	2	SATISFACTORY 3	4	5	OUTSTANDING 6	7	C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X): LOW 1	2	MEDIUM 3	4	HIGH 5
1. The Okonite Company				X						X		
2.												
3.												

Comment on key factors determining rating

The Okonite Company was the supplier of materials for the underground oilostatic cable transmission system and provided technical representatives to oversee fabrication and installation. Relationships with Host Country officials have remained good, and performance of technical services have progressed approximately as planned.

	1	2	3	4	5	6	7	1	2	3	4	5
4. PARTICIPANT TRAINING N. A.												

Comment on key factors determining rating

	1	2	3	4	5	6	7	1	2	3	4	5
5. COMMODITIES				X						X		

Comment on key factors determining rating

There were delays in both procurement and installation. At this time however, it appears that successful installation will be completed by the end of June 1977.

		1	2	3	4	5	6	7	1	2	3	4	5
6. COOPERATING COUNTRY	a. PERSONNEL			X						X			
	b. OTHER												

Comment on key factors determining rating

This relatively low rating is primarily due to the lack of continuity of KECO management personnel and difficulties in obtaining the cooperation of other Host Country agencies.

	1	2	3	4	5	6	7	1	2	3	4	5
7. OTHER DONORS N. A.												

(See Next Page for Comments on Other Donors)

AID 1020-25(10-70) PAGE 2 PAR	PROJECT NO. 489-22-220-663	PERIOD FOR PERIOD 6/67 to 12/76	COUNTRY Korea	PAR SERIAL NO. 77-7

II. 7. Continued: Comment on key factors affecting rating of Other Data

III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS *		TARGETS (Percentage/Rate/Amount)					
		CUMULATIVE PRIOR FY	CURRENT FY 76 TO DATE	CURRENT FY 76 TO END	FY 77	FY 78	END OF PROJECT
Engineering Services 1 Subproject	PLANNED	1	-	-	-	-	1
	ACTUAL PERFORMANCE	1	-				
	REPLANNED			-	-	-	1
Substation Equipment 16 Subprojects	PLANNED	16	-	-	-	-	16
	ACTUAL PERFORMANCE	14	-				
	REPLANNED			-	2	-	2
Distribution Conversion 14 Subprojects	PLANNED	14	-	-	-	-	14
	ACTUAL PERFORMANCE	14	-				
	REPLANNED			-	-	-	14
Transmission Material 4 Subprojects	PLANNED	4	-	-	-	-	4
	ACTUAL PERFORMANCE	3	-				
	REPLANNED			-	1	-	4

B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS	COMMENT:
1.	*Note: It is currently anticipated that all 35 subprojects will be completed prior to the June 30, 1977 TDD:
2	COMMENT:
3.	COMMENT:

AID 1020-25 (10-70) PROJECT				PAR SERIAL NO.
PAGE 6 PAR	489 22-220-663	6/67 to 12/76	Korea	77-7

IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged

2. Same as in CAP ☒ YES ☐ NO

The purpose of the project is to expand and improve Korean Electric Company's transmission and distribution system.

B. 1. Conditions which will exist when above purpose is achieved.

Increased availability and improved reliability of electric power for industrial growth and private consumption.

2. Evidence to date of progress toward those conditions.

1. TRANSMISSION & SUB-STATIONS

Increased Power Supply to:

a. Downtown Seoul	160,000 KVA
b. Kangnam & Seoul-Inchon Areas	270,000 KVA
c. Yongnam Industrial Area	93,300 KVA
d. Downtown Busan	12,000 KVA
Total:	535,300 KVA

2. DISTRIBUTION

a. Reduced average voltage drop from 16% (pre-project) to 5%.

b. Power loss savings of 15,400,000 KWH/YR

V. PROGRAMMING GOAL

A. Statement of Programming Goal

To develop a transmission and distribution system adequate to effectively utilize KECO's increasing power generation capability.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Give evidence.

Although there are still areas in South Korea that lack adequate and reliable sources of power, execution of this project has made a significant contribution towards improvement. Because of delays however and the inordinate length of time necessary for completion, KECO is still faced with an urgent need for additional expansion in both generation and distribution.

8

36 Subprojects

		Foreign Exchange Component	Date of Compl. or Status
I	Engineering - 1 Subproject	$183,211.65	June 70
II.	Telemetering, System Control, Data Transmission and Communications Equipment - 1 Subproject		Cancelled
III.	Substation Equipment - 16 Subprojects	4,231,051.93	
	a. Yangpyongdong	502,759.79	Sep. 73
	b. Taebang	202,569.98	Dec. 73
	c. Hwayang	298,512.72	Jan. 76
	d. Sungdong	246,084.44	Sep. 74
	e. Pohang	479,356.43	Feb. 75
	f. Seoul T/P	62,861.58	Mar. 76
	g. Hyonje	78,169.32	under design
	h. Sunhwa	385,379.45	Sep. 76
	i. Tongdaemoon	296,527.73	Nov. 76
	j. Chongro	601,509.80	under const.
	k. Wangshimni	93,627.57	Aug. 76
	l. Boopyong	52,197.58	Nov. 74
	m. Yongsan	315,807.48	Mar. 74
	n. Choryang	9,961.78	Jun. 74
	o. Ulsan	256,905.38	Sep. 73
	p. Songhyon	348,824.90	Jun. 74

IV.	Distribution Conversion	14 Subprojects	$1,728,593.93	Compl. in 73
	a. Sungbuk		105,908.76	"
	b. Taebang		202,796.54	"
	c. Changdong		167,571.70	"
	d. Susaik		113,323.64	"
	e. Hwayang		194,175.90	"
	f. Chongro		13,409.78	"
	g. Sunhwa		11,583.72	"
	h. Tongdaemoon		11,188.26	"
	i. Yongdongpo Guro		296,518.36	"
	j. Jannam		26,612.58	"
	k. Wangshimni		255,896.02	"
	l. Hyonjo		24,236.72	"
	m. Tangin-ri Ahyon		24,236.72	"
	n. Nampusan		281,155.03	"
V	Transmission Material	4 Subprojects	$4,432,287.78	
	a. Songhyon-Bonpyong Line		63,669.83	Sep. 73
	b. City of Seoul		3,340,518	under const.
	c. Transmission & Distribution Equip.		756,830.95	Dec. 74
	d. Static Capacitors		262,469	Dec. 73
		Total	$10,575,145.29	

10