

PMR Public Report

Operation Number	EC-L1160	Chief of Operations Validation Date	03/31/22
Year- PMR Cycle	Second period Jan-Dec 2021	Division Chief Validation Date	04/22/22
Last Update	03/21/22	Country Representative Validation Date	04/28/22
PMR Validation Stage	Validated by Representative		

Basic Data

Operation Profile

Operation Name	Investment Plan to Support the Transition of the Energy Matrix in Ecuador	Loan Number	3710/OC-EC, 3711/KI-EC
Executing Agency	MINISTERIO DE ELECTRICIDAD Y ENERGIA RENOVABLE	Sector/Subsector	ENERGY-ENERGY SECTOR REHABILITATION AND EFFICIENCY
Team Leader	THYS, PIERRE KENOL	Overall Stage	Fully Disbursed
Operation Type	Loan Operation	Country	Ecuador
Lending Instrument	Investment Loan	Convergence related Operation(s)	
Borrower	REPUBLICA DE ECUADOR		

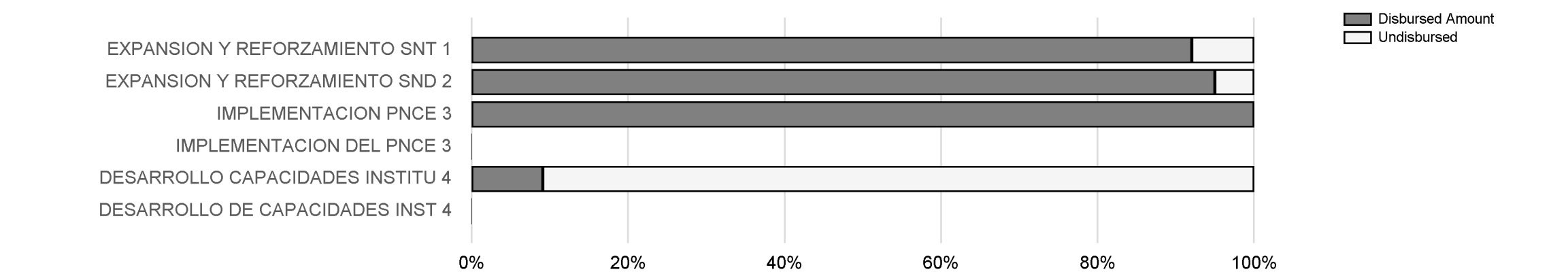
Environmental and Social Safeguards

Impacts Category	B	Was/Were the objective(s) of this operation reformulated?	NO
Safeguard Performance Rating		Date of approval	
Safeguard Performance Rating - Rationale			

Financial Data

	Total Cost and Source					Available Funds (US\$)			
Operations	Original IDB	Current IDB	Local Counterpart	Co-Financing / Country	Total Original Cost	Current IDB	Disb. Amount to Date	% Disbursed	Undisbursed Amount
EC-L1160	143,000,000	143,000,000	17,090,000	0	160,090,000	143,000,000	143,000,000	100.00%	-
Aggregated	143,000,000	143,000,000	17,090,000	0	160,090,000	143,000,000	143,000,000	0.00%	-

Expense Categories by Loan Contract (cumulative values)



Please note that inactive indicators and outputs are not displayed; totals in the actual cost table may not match the sum of the cost of the outputs displayed, due to the cost of inactive outputs.

RESULTS MATRIX

General Development Objectives

General Development Objectives Nbr. 0: Apoyar el avance del CME, mejorar los indicadores del sector y apoyar los planes de recuperación en las zonas afectadas por el sismo.

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year	Expected Year of Achievement	EOP 2021	
0.0	Mejoramiento de la calidad del servicio en el SNT (disminución de la ENS por fallas y mantenimiento)	MWh/año	233662	2015	2021	P	10,343
						A	10,343

Details

Means of Verification: Reporte de avance del Programa

Observations: CELEC EP-TRANSELECTRIC

The General Development Objective indicator target is expected to be observed by the operation's "Fully Justified" date in Convergence (CO): No

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator			
Indicator		Unit of Measure	Baseline	Baseline Year	Expected Year of Achievement	EOP 2021	
0.1	Volúmen promedio anua de intercambios regionales de energía (Ecuador-Colombia-Perú)	GWh/año	496	2015	2021	P	867
						A	867

Details

Means of Verification: Reporte de avance del Programa

Observations: CELEC EP-TRANSELECTRIC

The General Development Objective indicator target is expected to be observed by the operation's "Fully Justified" date in Convergence (CO): No

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator			
Indicator		Unit of Measure	Baseline	Baseline Year	Expected Year of Achievement	EOP 2021	
0.2	Mejora de la continuidad del servicio de distrbución eléctrica-Disminución de la ENS	MWh/año	15421	2015	2021	P	14,650
						A	12,550

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

The General Development Objective indicator target is expected to be observed by the operation's "Fully Justified" date in Convergence (CO): No

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator			
Indicator		Unit of Measure	Baseline	Baseline Year	Expected Year of Achievement	EOP 2021	
0.3	Mitigación cambio climático-Emissiones de CO2 anuales disminuídas por desplazamiento de GLP por electricidad (kt CO2 eq/año)	kTonCO2 eq/año	169.81	2015	2021	P	30.25
						A	151.2

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

The General Development Objective indicator target is expected to be observed by the operation's "Fully Justified" date in Convergence (CO): No

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator			
Indicator		Unit of Measure		Baseline	Baseline Year	Expected Year of Achievement	EOP 2021
0.4	Volúmen de GLP desplazado por el PNCE	BEP	434543	2015	2021	P	82,559
						A	217,791
Details							

Means of Verification: Reporte de avance del Programa

Observations: MEER

The General Development Objective indicator target is expected to be observed by the operation's "Fully Justified" date in Convergence (CO): No

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator			

RESULTS MATRIX

Specific Development Objectives

Specific Development Objectives Nbr. 0: Componente I.Expansión y Reforzamiento del SNT

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
0.0	km de líneas de transmisión en 230kV incrementados	km	2166.4	2015	P	2,166.4	-	-	2,248.4
					A	2,166.4	-	3,057.54	3,057.54

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator					

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
0.1	Capacidad de transformación nueva instalada en el SNT	MVA	9343	2015	P	9,343	-	-	9,568
					A	9,343	-	15,375.55	15,375.55

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator					

Specific Development Objectives Nbr. 1: Componente I.Expansión y Reforzamiento del SND

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
1.0	FMIk: Frecuencia media en interrupciones por KVA	veces/año	8.27	2015	P	7.01	-	-	7
					A	4.89	-	5.01	5.01

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator					

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
1.1	TTIk: Tiempo total de interrupciones (horas)	horas/año	7.17	2015	P	6.85	-	-	6
					A	4.64	-	6.19	6.19

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator					

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
1.2	Viviendas sin servicio eléctrico y viviendas con servicio eléctrico mejorado, atendidas por el programa	# of households	0	2015	P	15,183	-	-	15,183
					A	13,619	-	16,250	16,250

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	2.5 Households with improved access to energy services (#) (C)

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
1.3	Clientes afroecuatorianos e indígenas beneficiados por el programa	# of households	0	2015	P	8,718	-	-	8,718
					A	-	-	17,024	17,024

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	2.5 Households with improved access to energy services (#) (C)

Specific Development Objectives Nbr. 2: Componente III. Implementación del PNCE

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
2.0	Número de Cocinas Eléctricas de Inducción vendidas con el Fondo de Cocción Eficiente	# of households	270000	2015	P	348,746	-	-	348,746
					A	348,746	-	348,746	348,746

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	2.5 Households with improved access to energy services (#) (C)

Specific Development Objectives Nbr. 3: Componente IV.Desarrollo de Capacidades Institucionales

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
3.0	Instituciones fortalecidas en integración energética regional	número de instituciones	0	2015	P	1	-	-	2
					A	1	-	2	2

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
3.1	Empresas Eléctricas e instituciones capacitadas en gestión y monitoreo LOSPEE	número de entidades	0	2015	P	16	-	-	21
					A	16	-	21	21

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2020	2021	EOP 2021
3.2	Mujeres capacitadas con el Programa	número de mujeres	0	2015	P	15	-	-	20
					A	15	-	20	20

Details

Means of Verification: Reporte de avance del Programa

Observations: MEER

Evaluation Methodology: -

Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	

RESULTS MATRIX

OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 Componente I.Expansión y Reforzamiento del SNT

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2021	EOP 2021	2021	EOP 2021
1.01	Construcción L/T Milagro-Babahoyo 230kV, 47km, doble circuito, 1200 ACAR	%	P	-	100	-	15,505,157
			P (a)	1.8	100	2,297,075.65	13,388,371.06
			A	0.2	98.4	378,218.09	11,469,513.5
1.02	S/E Milagro 138kV, ampliación	%	P	-	100	-	1,018,727.98
			P (a)	1.84	100	253,997.12	1,244,286.85
			A	0.21	98.37	22,082.05	1,012,371.78
1.03	S/E Babahoyo 138kV y 69kV, ampliación	%	P	-	100	-	3,525,224.84
			P (a)	1.09	100	666,109.41	4,939,171.41
			A	0.2	99.11	272,816.66	4,545,878.66
1.04	S/E Quevedo, ampliación 1 Bahía Línea 230kV	%	P	-	100	-	1,353,724.27
			P (a)	13.06	100	584,976.62	11,811,695.28
			A	8.46	95.4	3,135,463.43	9,767,579.34
1.05	S/E San Gregorio, ampliación patio 230kV, conexión Quevedo y San Juan de Manta	%	P	-	100	-	4,694,706.64
			P (a)	4.7	100	625,026.4	3,397,608.16
			A	-	95.3	246,791.83	3,276,855.83
1.06	Construcción L/T San Gregorio-San Juan de Manta 230kV, 35km, doble circuito 1200 ACAR (montaje de los dos circuitos)	%	P	-	100	-	14,677,022.83
			P (a)	3.95	100	2,004,029.57	10,799,345.57
			A	0.46	96.51	486,519.09	9,281,835.09
1.07	Construcción S/E San Juan de Manta 230/69kV, 225MVA	%	P	-	100	-	19,645,436.44
			P (a)	4.33	100	6,204,773.17	14,839,521.67
			A	0.08	95.75	971,449.24	13,943,318.25

Component Nbr. 2 Componente II.Expansión y Reforzamiento del SND

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2021	EOP 2021	2021	EOP 2021
2.01	Proyectos de subtransmisión, fiscalizados y energizados	número de proyectos	P	-	6	-	4,299,066.13
			P (a)	-	6	1,028,519.11	3,812,994
			A	-	6	408,567.66	3,603,692.47
2.02	Proyectos de Distribución, fiscalizados y energizados	número de proyectos	P	-	47	-	6,461,933.87
			P (a)	6	65	37,881.6	6,985,065.02
			A	3	65	561,012.75	6,985,065.02
2.03	Proyectos de automatización de subestaciones fiscalizados y energizados	número de proyectos	P	-	11	-	720,000
			P (a)	11	13	401,404.92	2,177,490.89
			A	13	13	1,871,526.89	2,177,490.89
2.04	Proyectos de automatización de alimentadores fiscalizados y energizados	número de proyectos	P	-	40	-	5,472,000
			P (a)	12	49	1,435,403.12	4,298,173.91
			A	21	49	357,577.03	4,298,173.91
2.05	Proyectos de electrificación rural con extensión de red, fiscalizados y energizados	número de proyectos	P	-	389	-	26,375,000
			P (a)	13	450	1,685,550.38	26,144,155.75
			A	20	450	1,704,065.16	26,144,155.75
2.06	Proyectos de electrificación rural sin extensión de red, fiscalizados y energizados	número de proyectos	P	-	7	-	1,132,000
			P (a)	-	7	-	1,042,120.43
			A	-	7	-	1,042,120.43

Component Nbr. 3 Componente III. Implementación del Plan Nacional de Cocción Eficiente

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2021	EOP 2021	2021	EOP 2021
3.01	Cocinas de inducción eléctricas financiadas con este programa	unidades vendidas	P	-	78,746	-	50,050,000
			P (a)	-	78,746	-	50,050,000
			A	-	78,746	-	50,050,000
3.02	Circuitos expresos instalados	número de circuitos	P	-	75,462	-	3,269,000
			P (a)	-	75,462	-	3,269,013.84
			A	-	75,462	-	3,269,013.84

Component Nbr. 4 Componente IV. Desarrollo de Capacidades Institucionales

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2021	EOP 2021	2021	EOP 2021
4.01	Estudios para el apoyo al fortalecimiento institucional en el sector eléctrico en base a LOSPEE y para la integración eléctrica regional, realizados	número de estudios	P	-	8	-	829,000
			P (a)	6	8	829,000	743,161
			A	6	8	283,808.2	283,808.2
4.02	Empresas capacitadas en talleres de capacitación para el fortalecimiento de capacidades en gestión y monitoreo (empresas e instituciones) según lineamientos de la LOSPEE.	número de empresas capacitadas	P	-	25	-	57,000
			P (a)	-	25	28,500	58,500
			A	-	25	30,000	58,500

Other Cost					
	Monitoreo y seguimiento		P		151,000
			P (a)	57,730.29	93,730.29
			A	0	93,730.29
	Unidad de Gestión		P		600,000
			P (a)	191,981	930,836.47
			A	0	930,836.47
	Evaluación Intermedia y Final		P		103,000
			P (a)	121,000	0
			A	0	0

	Auditorías Externas	P		151,000
		P (a)	68,241.6	64,758.4
		A	0	64,758.4
Total Cost				
	Total Cost	P		160,090,000
		P (a)	18,521,199.96	160,090,000
		A	10,729,898.08	152,298,698.12

CHANGES TO THE MATRIX

Section	Name	Type of Change	Sub type	Modified By	Entered in System
Output	Construcción S/E San Juan de Manta 230/69kV, 225MVA	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
	Empresas capacitadas en talleres de capacitación para el fortalecimiento de capacidades en gestión y monitoreo (empresas e instituciones) según lineamientos de la LOSPEE.	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
	Estudios para el apoyo al fortalecimiento institucional en el sector eléctrico en base a LOSPEE y para la integración eléctrica regional, realizados	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
	Proyectos de automatización de alimentadores fiscalizados y energizados	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
			Modify Physical EOP P(a) value - caused by a change in the Physical P(a).	MARIAJULIAM	3/14/2022
	Proyectos de automatización de subestaciones fiscalizados y energizados	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
			Modify Physical EOP P(a) value - caused by a change in the Physical P(a).	MARIAJULIAM	3/14/2022
	Proyectos de Distribución, fiscalizados y energizados	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
			Modify Physical EOP P(a) value - caused by a change in the Physical P(a).	MARIAJULIAM	3/14/2022
	Proyectos de electrificación rural con extensión de red, fiscalizados y energizados	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
			Modify Physical EOP P(a) value - caused by a change in the Physical P(a).	MARIAJULIAM	3/14/2022
	Proyectos de subtransmisión, fiscalizados y energizados	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
	S/E Quevedo, ampliación 1 Bahía Línea 230kV	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022
	S/E San Gregorio, ampliación patio 230kV, conexión Quevedo y San Juan de Manta	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	MARIAJULIAM	3/14/2022

RISKS AND PLANNED RESPONSES

Risk ID	Risk Status		Risk Taxonomy		
2	Active		Economic and Financial Environment		
	Response Actions				
	2.1	Management Strategy		Status	
		MITIGATE		ACTIVE	

Risk ID	Risk Status		Risk Taxonomy
3	Inactive		Goods, and Services
	Response Actions		
	3.1	Management Strategy	Status
		MITIGATE	ACTIVE

Risk ID	Risk Status		Risk Taxonomy
6	Active		Governance Framework
	Response Actions		
	6.1	Management Strategy	Status
		MITIGATE	ACTIVE

Risk ID	Risk Status		Risk Taxonomy
8	Inactive		Goods, and Services
	Response Actions		
	8.1	Management Strategy	Status
		MITIGATE	INACTIVE

Risk ID	Risk Status		Risk Taxonomy
9	Inactive		Goods, and Services
	Response Actions		
	9.1	Management Strategy	Status
		MITIGATE	INACTIVE

Risk ID	Risk Status		Risk Taxonomy
12	Active		Natural Environment
	Response Actions		
	12.1	Management Strategy	Status
		MITIGATE	ACTIVE

Risk ID	Risk Status		Risk Taxonomy
14	Active		Governance Framework
	Response Actions		
	14.1	Management Strategy	Status
		MITIGATE	ACTIVE

Risk ID	Risk Status		Risk Taxonomy
16	Active		Natural Environment
	Response Actions		
	16.1	Management Strategy	Status
		MITIGATE	ACTIVE

IMPLEMENTATION STATUS AND LEARNING

Lesson Learned - Categories
Others - Technical-Sectorial Dimensions