

PMR Operational Report

Operation Number	RG-L1071	Chief of Operations Validation Date	03/24/20
Year- PMR Cycle	Second period Jan-Dec 2019	Division Chief Validation Date	04/07/20
Last Update	03/20/20	Country Representative Validation Date	04/08/20
PMR Validation Stage	Validated by Representative		

Basic Data

Operation Profile

Operation Name	Sustainable Energy Facility (SEF) for the Eastern Caribbean	Loan Number	3561/OC-RG
Executing Agency	CARIBBEAN DEVELOPMENT BANK	Sector/Subsector	EN-INT - ENERGY-ENERGY INTEGRATION
Team Leader	GISCHLER BLANCO, CHRISTIAAN	Overall Stage	Disbursing (From eligibility until all the Operations are closed)
Operation Type	Loan Operation	Country	Regional
Lending Instrument	Investment Loan	Convergence related Operation(s)	RG-G1004, RG-G1009
Borrower	CARIBBEAN DEVELOPMENT BANK		

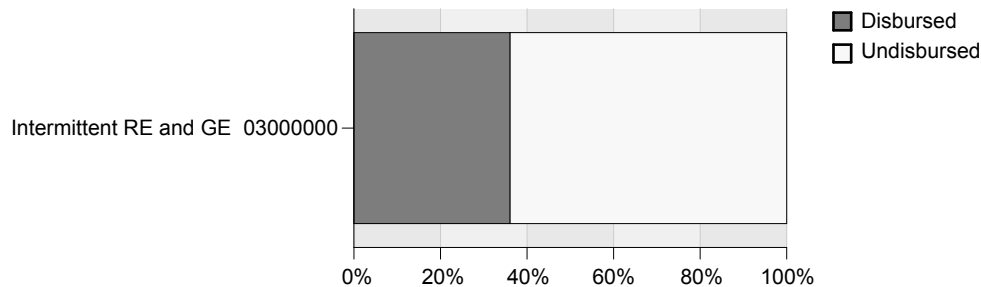
Environmental and Social Safeguards

Impacts Category	B13	Was/Were the objective(s) of this operation reformulated?	NO
Safeguard Performance Rating	Partially Satisfactory	Date of approval	
Safeguard Performance Rating - Rationale	While CDB staff are experienced in environmental and social risk management, there is limited geothermal experience and furthermore, physical supervision of works is slow and shows areas that are not being fully identified and/or corrected. In the case of St. Vincent (subproject in execution), the social aspects of the program have been well implemented (if not a little slowly) however environmental monitoring by the executing agency had not been fully implemented despite the fact that drilling began 6 months ago. This was not flagged previously by CDB. Furthermore, CDB E&S specialists are unable to maintain the pace required for some of the projects, for example the ESIA for Nevis (project in preparation) was not reviewed by E&S specialists for 5 months, who according to the ROP should take the lead and submit to IDB, rather than vice versa.		

Financial Data

Item	Total Cost and Source					Available Funds (US\$)			
	Original IDB	Current IDB	Local Counterpart	Co-Financing / Country	Total Original Cost	Current IDB	Disb. Amount to Date	% Disb	Undisbursed Amount
RG-G1004	3,013,698	3,013,698	0	0	3,013,698	3,013,698	346,000	11.48%	2,667,698
RG-G1009	19,050,000	19,050,000	0	0	19,050,000	19,050,000	14,007,558	73.53%	5,042,442
RG-L1071	20,000,000	20,000,000	29,435,000	0	49,435,000	20,000,000	7,218,524.17	36.09%	12,781,475.83
Aggregated	42,063,698	42,063,698	29,435,000	0	71,498,698	42,063,698	21,572,082.17	51.28%	20,491,615.83

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.

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IMPACTS

Impact Nbr. 0: Define impact statement

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2023	EOP 2023
0.0	Average electricity tariff for customers in ECC	US\$/KWh	0.33	2015	P		0.30
					P(a)		0.30
					A		

Details

Means of verification: Measures the average electricity tariff in the 6 ECC covered by the program.

Pro-Gender No **Pro-Ethnicity** No

Indicator		Unit of Measure	Baseline	Baseline Year		2023	EOP 2023
0.1	Regional penetration of indigenous renewable energy sources for power generation within the ECC	%	0.00	2016	P		30.00
					P(a)		30.00
					A		

Details

Means of verification: Measures the average electricity tariff in the 6 ECC covered by the program.

Pro-Gender No **Pro-Ethnicity** No

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OUTCOMES

Outcome Nbr. 0: Reduction in electricity consumption from public lighting sectors with EE projects financed by the program

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
0.0	Electricity saved by EE applications, measures & programs	GWh/year	0.00	2016	P	4.00	6.00	11.30	11.30	11.30	11.30	11.30	66.50
					P(a)	4.00	6.00	11.30	13.20	15.30	15.30	16.30	66.60
					A	0.00	3.00	3.50					6.50
Details													
Means of verification: Report from CDB based on utility sales reports													
Pro-Gender		No		Pro-Ethnicity		No							

Outcome Nbr. 1: Reduction in imports of fossil fuels for electricity generation in ECC due to EE projects financed at any stage by the program.

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
1.0	Reduction in imports of fossil fuels for electricity generation	Thousand barrels of oil	0.00	2016	P	6.50	9.70	18.30	18.30	18.30	18.30	18.30	107.70
					P(a)	6.50	9.70	18.30	18.40	24.30	24.30	30.40	108.30
					A	0.00	4.90	6.00					10.90
Details													
Means of verification: Executing Agency (EA)													
Observations: Estimation based on efficiency levels and number of retrofitted lamps; to be provided by the Executing Agency (EA) based on information from governments and utilities in ECC. Final calculations to be checked with the utilities and the governments in the ECC (ex-post CBA)													
Pro-Gender		No			Pro-Ethnicity				No				

Outcome Nbr. 2: Greenhouse Gas (GHG) emissions avoided by EE projects financed at any stage by the program

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
2.0	GHG emissions avoided due to EE projects	ktCO2e/yr	0.00	2016	P	3.00	4.50	8.60	8.60	8.60	8.60	8.60	50.40
					P(a)	3.00	4.50	8.60	8.60	10.60	10.60	15.90	50.40
					A	0.00	2.30	3.00					
Details													
Means of verification: IDB methodology													
Observations: IDB estimations made following IDB methodology, based on number of lamps installed, efficiency levels of lamps, and an average conversion factor (ex-post CBA)													
Pro-Gender		No			Pro-Ethnicity			No					

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Outcome Nbr. 3: ECC with legal and regulatory frameworks that enable Geothermal Energy (GE) development

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
3.0	# countries that have GE legal and regulatory frameworks	# countries	1.00	2015	P		1.00	1.00					3.00
					P(a)		1.00	1.00	1.00				3.00
					A	0.00	0.00	0.00					
Details													
Means of verification: Report from CDB													
Pro-Gender		No		Pro-Ethnicity				No					

Outcome Nbr. 4: Women trained in construction, operation and/or maintenance of RE and EE infrastructure and projects

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
4.0	Women trained in the field of SE out of the total number of people trained using Program resources	%	0.00	2016	P								25.00
					P(a)							25.00	
					A		35.00						
Details													
Means of verification: Report from CDB													
Observations: Reports from the CDB based on information from governments and private project sponsors. Measured as an average of individual GE sub-projects at the end of the program													
Pro-Gender		No		Pro-Ethnicity				No					

Outcome Nbr. 5: GHG emissions avoided by geothermal projects financed at any stage by the program

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
5.0	GHG emissions avoided due to RE projects	ktCO2e/yr	0.00	2016	P				310.20	310.20	310.20	310.20	1,240.90
					P(a)				310.20	310.20	310.20	310.20	1,240.90
					A								
Details													
Means of verification: IDB estimations													
Observations: IDB estimations made following IDB methodology, based on installed capacity, electricity generation, and an average conversion factor (ex-post CBA).													
Pro-Gender		No		Pro-Ethnicity				No					

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Outcome Nbr. 6: Reduction in imports of fossil fuels for electricity generation in ECC with geothermal projects financed at any stage by the program

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
6.0	Reduction in imports of fossil fuels for electricity generation	Thousand barrels of oil	0.00	2016	P				662.00	662.00	662.00	662.00	2,648.00
					P(a)				662.00	662.00	662.00	662.00	2,648.00
					A								
Details													
Means of verification: IDB estimations													
Observations: IDB estimations based on estimated installed capacity and electricity generation to be provided in EA reports based on information from governments and utilities in ECC. Final calculations to be checked with the utilities and the governments in the ECC (ex-post CBA).													
Pro-Gender		No	Pro-Ethnicity					No					

Outcome Nbr. 7: Geothermal power generation capacity installed in projects facilitated or financed at some stage by the program

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023	
7.0	MW of geothermal capacity	MW	0.00	2016	P							55.00	55.00	
					P(a)						55.00	55.00		
					A									
Details														
Means of verification: Report from CDB.														
Observations: Estimations of expected installed capacity based on quality of resource confirmed once exploration wells are drilled														
Pro-Gender		No	Pro-Ethnicity			No								
	Renewable					P								
						P(a)								55.00
						A								

Outcome Nbr. 8: Geothermal projects financed at any stage by the program that moved on from early exploration to production drilling or from early exploration or production drilling to construction of plants and/or electricity generation

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
8.0	Number of GE projects financed that moved to the following stage of development	Number of GE projects	0.00	2016	P		1.00	1.00	1.00	1.00			4.00
					P(a)		1.00	1.00	1.00	1.00			4.00

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8.0	Number of GE projects financed that moved to the following stage of development	Number of GE projects	0.00	2016	A								
Details													
Means of verification: Reports from the CDB													
Observations: Report from CDB with information from ECC and private project sponsors													
Pro-Gender		No			Pro-Ethnicity		No						

Outcome Nbr. 9: Women participate in consultation processes related to GE projects

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
9.0	% of women who participate in consultations	%	0.00	2016	P								45.00
					P(a)							45.00	
					A								
Details													
Means of verification: Reports from the CDB													
Observations: Reports from the CDB based on information from governments and private project sponsors (Measured as an average of individual GE sub-projects at the end of the program).													
Pro-Gender		No			Pro-Ethnicity			No					

Outcome Nbr. 11: GEF Performance Ratings

Observation:

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
11.0	Rating of Likelihood of Achieving Project Global Environmental Objective (DO) (Scale: 1 - 6, where 1 = Highly Satisfactory [HS] and 6 = Highly Unsatisfactory [HU])	#	0.00	2015	P								
					P(a)							1.00	
					A	1.00	1.00	1.00					
Details													
Means of verification: SAPR from CDB													
Observations: The Team Leader will establish the corresponding ranking based on the SAPR													
Pro-Gender		No			Pro-Ethnicity			No					

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
11.2	Rating of Implementation Progress (IP) (Scale: 1 - 6, where 1 = Highly Satisfactory [HS] and 6 = Highly Unsatisfactory [HU])	#	0.00	2015	P								
					P(a)								1.00

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11.2	Rating of Implementation Progress (IP) (Scale: 1 - 6, where 1 = Highly Satisfactory [HS] and 6 = Highly Unsatisfactory [HU])	#	0.00	2015	A	1.00	1.00	1.00					
Details													
Means of verification: SAPR from CDB													
Observations: The Team Leader will establish the corresponding ranking based on the SAPR													
Pro-Gender		No			Pro-Ethnicity		No						
Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	2022	2023	EOP 2023
11.3	Rating of overall Risk that may affect project performance (RISK) (Scale 1 - 4, where 1 = High Risk [H] and 4 = Low Risk [L])	#	0.00	2015	P								
					P(a)								4.00
					A	4.00	4.00	4.00					
Details													
Means of verification: SAPR from CDB													
Observations: The Team Leader will establish the corresponding ranking based on the SAPR													
Pro-Gender		No			Pro-Ethnicity		No						

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OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 Component I - Energy Efficiency

	Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
				2019	EOP 2023	2019	EOP 2023
1.1	Funding operations provided for EE projects	Number of funding operations a	P		3	720,000	13,000,000
			P(a)	0	6	1,000,000	25,651,000
			A	0	4	2,007,000	6,717,000

Component Nbr. 2 Component II - Reg. framework, inst. strengthening and capacity building

	Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
				2019	EOP 2023	2019	EOP 2023
2.1	Studies to support energy policy reform, regulation and implementation of renewable energy and energy efficiency projects in the ECC	Number of studies completed	P	1	3	647,609.51	1,942,828.53
			P(a)	0	3	329,380	2,431,677
			A	0	3	259,000	419,400
2.2	Training and capacity building interventions for the EA, SPVs, and/or government employees	Number of interventions comple	P	2	8	258,160.2	1,032,640.8
			P(a)	1	8	170,005	1,256,415
			A	1	5	338,474	588,874

Component Nbr. 3 Component III - Intermittent RE and GE

	Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
				2019	EOP 2023	2019	EOP 2023
3.1	Funding operations for GE projects	Number of funding operations a	P	1	3	1,835,294.12	44,050,000
			P(a)	0	8	10,000,000	39,424,000
			A	0	2	15,500,000	15,500,000
3.2	Number of loans for transmission and distribution projects	Number of loans approved by CD	P		1	5,000,000	10,000,000
			P(a)	0	2	1,716,000	19,466,666
			A	0	1	2,491,000	7,212,000
3.3	Funding operations for intermittent RE projects	Number of funding operations a	P		1	512,360.33	1,024,720.66
			P(a)	0	1	978,000	1,078,000
			A	0	1	205,000	300,000

Other Cost

Project Management		P			28,701.6	143,508
		P(a)			53,077	30,000
		A			0	0
Monitoring and evaluation RG-L1071		P			24,375	305,000
		P(a)			0	100,000
		A			0	0

Total Cost

Total Cost		P			9,026,500.76	71,498,697.99
		P(a)			14,246,462	89,437,758
		A			20,800,474	30,737,274

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CHANGES TO THE MATRIX

Section	Name	Reasons	Type of Change	Subtype	Modified By	Entered in the System
Outcome	Electricity saved by EE applications, measures & programs	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify EOP P(a)	JGARCI AF	03/15/2020
	Reduction in imports of fossil fuels for electricity generation	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify EOP P(a)	JGARCI AF	03/15/2020
Outcome indicator	# countries that have GE legal and regulatory frameworks	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify Historical Actual	JGARCI AF	03/15/2020
	Electricity saved by EE applications, measures & programs	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify Historical Actual	JGARCI AF	03/15/2020
				Modify Physical P(a) value	JGARCI AF	03/15/2020
	GHG emissions avoided due to EE projects	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify Historical Actual	JGARCI AF	03/15/2020
	Reduction in imports of fossil fuels for electricity generation	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify Historical Actual	JGARCI AF	03/15/2020
				Modify Physical P(a) value	JGARCI AF	03/15/2020
	Women trained in the field of SE out of the total number of people trained using Program resources	Actual progress on outcomes was not filled in to date. Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Outcome Indicator	Modify Historical Actual	JGARCI AF	03/15/2020
Output	Funding operations for GE projects	The actual financial progress of output 3.1 was corrected to make corrections to the information reported by the PEU: (i) avoid reporting of parallel financing, (ii) correct disbursement of CTF funds.	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	JGARCI AF	03/17/2020
				Modify Financial Historical Actual	JGARCI AF	03/17/2020
	Funding operations provided for EE projects	Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Output	Modify Baseline and/or Baseline Year	JGARCI AF	03/16/2020
				Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	JGARCI AF	03/13/2020
				Modify Means of Verification	JGARCI AF	03/16/2020
	Number of loans for transmission and distribution projects	Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	JGARCI AF	03/13/2020
	Studies to support energy policy reform, regulation and implementation of renewable energy and energy efficiency projects in the ECC	Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	JGARCI AF	03/13/2020
	Training and capacity building interventions for the EA, SPVs, and/or government employees	Information updated with the inputs from the last Semiannual Progress report from the consultant, received on Feb 2020.	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	JGARCI AF	03/13/2020

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IMPLEMENTATION STATUS AND LEARNING

Lesson Learned - Categories

Legal aspects and public processes