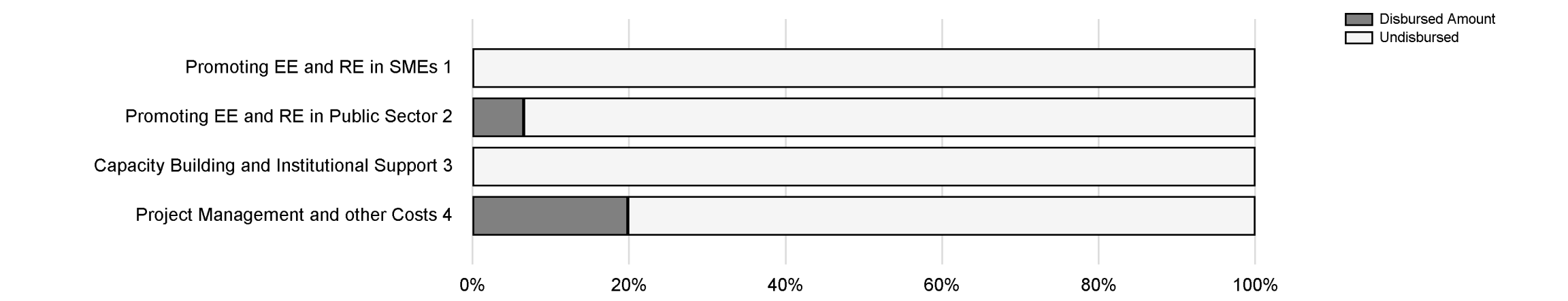


# PMR Public Report

Operation Number	BA-L1043	Chief of Operations Validation Date	03/31/23
Year- PMR Cycle	Second period Jan-Dec 2022	Division Chief Validation Date	04/14/23
Last Update	03/27/23	Country Representative Validation Date	04/27/23
PMR Validation Stage	Validated by Representative		
Basic Data			
Operation Profile			
Operation Name	Sustainable Energy Investment Program (Smart Fund II)	Loan Number	4865/OC-BA
Executing Agency	MINISTRY OF ENERGY AND WATER RESOURCES (MEWR)	Sector/Subsector	ENERGY
Team Leader	ECHEVERRIA, CARLOS BLADIMIR	Overall Stage	Disbursing (From eligibility until all the Operations are closed)
Operation Type	Loan Operation	Country	Barbados
Lending Instrument	Investment Loan	Convergence related Operation(s)	BA-G1002
Borrower	BARBADOS		
Environmental and Social Safeguards			
Impacts Category	B	Was/Were the objective(s) of this operation reformulated?	NO
Safeguard Performance Rating	Partially Satisfactory	Date of approval	
Safeguard Performance Rating - Rationale	Based on the current stage of the operation, the PEU does not fully consistent with the requirement according to Directive B10 4.25 regarding hazardous waste final disposal. However, it is ongoing working to ensure compliance with IDB Policies. The PEU contracted an authorized Contractor/Subcontractor to perform the management of the hazardous waste of the retrofitted buildings and Air Condition replacements. The hazardous waste management Plan has not been implemented fully by the contractors, only best environmental and social and health and safety industry practices and guidelines such as the use of appropriate transportation, use of Technology (gas cylinder storage and Ozone Depleting Substances recovery), and use of Personal Protection Equipment, among others). Evidence of final disposal and reports still pending to be provided by the PEU to verify the information, and this has driven the performance rating to Partially Satisfactory.		

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
BA-G1002	15,463,142	15,463,142	0	0	15,463,142	15,463,142	303,198.86	1.96%	15,159,943.14
BA-L1043	30,000,000	30,000,000	0	0	30,000,000	30,000,000	3,944,201.25	13.15%	26,055,798.75
Aggregated	45,463,142	45,463,142	0	0	45,463,142	45,463,142	4,247,400.11	9.34%	41,215,741.89
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:** To reduce Barbados' dependency on imported fossil fuels through the increased use of RE and EE technologies.

**Observation:** In terms of Frequency of Measurement, the Indicator will be verified at the end of Project execution (6 years) through the PEU Report

Indicator		Unit of Measure	Baseline	Baseline Year	Expected Year of Achievement	EOP 2026	
0.0	Decrease in imported fossil fuels for electricity generation	# of barrel of oil	0	2018	2026	P	60,155
						A	-

**Details**  
**Means of Verification:** PEU Report

**Observations:** This indicator will be calculated based on the annual electricity from grid avoided, with 10,200 kj/kWh, and 6,311,532 kj/barrel of oil. See M&E Plan

**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 2026	
0.1	Increase in RE generation installed	% MW	0	2018	2026	P	41.3
						A	-

**Details**  
**Means of Verification:** PEU Report

**Observations:**

**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: Reduce Electricity Consumption by Implementing RE and EE Measures												
Observation:												
	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
0.1	Increase in Electricity saved due to EE measures (SMEs)	MWh	0	2018	P	-	-	-	-	-	-	8,505
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								
	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
0.2	Increase in Electricity saved due to AC rebates	MWh	0	2018	P	-	-	-	-	-	-	1,034
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								
	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
0.3	Increase in Electricity saved due to EE measures (Public Buildings)	MWh	0	2018	P	-	-	-	-	-	-	8,820
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								
	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
0.3	Expansion of RE installed capacity (associated to SMEs)	MW	0	2018	P	-	.07	.18	.32	.46	.62	.62
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	2.22 Installed power generation capacity from renewable sources (MW) (C)							

	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
0.4	Expansion of RE installed capacity (associated to Public Buildings and Electric Mobility)	MW	0	2018	P	-	-	2.43	6.49	8.52	10.55	10.55
					A	-	-	-	-	-	-	-

Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator	2.22 Installed power generation capacity from renewable sources (MW) (C)							

Specific Development Objectives Nbr. 1: Reduce GHG emissions from liquid fossil fuels used for Power Generation and Transport

Observation:												
	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
1.0	Increment in Electricity generated from RE sources (associated to SMEs)	MWh	0	2018	P	-	-	-	-	-	-	1,393
					A	-	-	-	-	-	-	-
Details												

Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								

	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
1.1	Increment in electricity generated from RE sources (associated to Public Buildings and Electric Mobility)	MWh	0	2018	P	-	-	-	-	-	-	17,470.5
					A	-	-	-	-	-	-	-

Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								

	Indicator	Unit of Measure	Baseline	Baseline Year		2021	2022	2023	2024	2025	2026	EOP 2026
1.2	Annual GHG Emissions avoided by the Program	tons CO2 eq.	0	2018	P	-	-	694	11,965	20,530	31,004	31,004
					A	-	-	-	-	-	-	-

Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								

Specific Development Objectives Nbr. 2: Increase Institutional Capacity for the Management of RE and EE programs

Observation:												
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Indicator		Unit of Measure		Baseline	Baseline Year	2021	2022	2023	2024	2025	2026	EOP 2026
2.0	Local financial institutions lending for EE/RE projects	# institutions	0	2018	P	-	-	-	-	-	-	2
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								
Indicator		Unit of Measure		Baseline	Baseline Year	2021	2022	2023	2024	2025	2026	EOP 2026
2.2	Implementation of a plan for deployment of electric mobility	# plans	0	2018	P	-	-	-	-	-	-	1
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								
Indicator		Unit of Measure		Baseline	Baseline Year	2021	2022	2023	2024	2025	2026	EOP 2026
2.3	Young people empowered and trained to work on EE and RE	# persons	0	2018	P	-	-	-	-	-	-	80
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								
Indicator		Unit of Measure		Baseline	Baseline Year	2021	2022	2023	2024	2025	2026	EOP 2026
2.3	Private Sector funds to invest in RE and EE technologies (leverage)	US\$(000)	0	2018	P	-	-	92	276	369	461	461
					A	-	-	-	-	-	-	-
Details												
Means of Verification: PEU Report												
Observations:												
Evaluation Methodology: -												
Pro-Gender	No	Pro-Ethnicity	No	CRF indicator								

RESULTS MATRIX

OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 Promoting EE and RE in Small and Medium Enterprises (SMEs)

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2022	EOP 2026	2022	EOP 2026
1.01	Pre-investment studies completed	# studies & pilots	P	10	80	97,884.34	783,074.74
			P (a)	5	80	100,000	783,074.74
			A	13	13	-	-
1.02	Credit line used in EE and RE projects	# loans	P	10	47	2,517,180.31	11,830,747.4
			P (a)	3	47	900,000	11,830,747.4
			A	3	3	-	-
1.03	A/C Rebate Facility completed	# rebates	P	250	1,000	125,000	500,000
			P (a)	25	1,000	-	500,000
			A	-	-	-	-

Component Nbr. 2 Promoting EE and RE in Public Sector

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2022	EOP 2026	2022	EOP 2026
2.01	Pre-investment studies for Government programs EE and RE programs completed	# studies	P	-	40	492,863.64	800,000
			P (a)	-	40	45,000	800,000
			A	-	-	-	-
2.02	RE and EE retrofits in public buildings functioning	# retrofits	P	-	100	117,045.45	23,247,672.66
			P (a)	-	100	-	23,247,673.66
			A	-	-	-	-
2.03	Public buses with charging station systems implemented	# vehicles	P	10	10	1,277,500.01	3,300,000
			P (a)	-	10	1,687,778	3,375,555
			A	-	-	1,350,222	1,350,222
2.04	Public vehicles with charging station system implemented	# vehicles	P	-	10	275,000	1,032,298.96
			P (a)	-	10	112,500	956,743
			A	-	-	-	-

Component Nbr. 3 Capacity Building and Institutional Support

				PHYSICAL PROGRESS		FINANCIAL PROGRESS	
	Output	Unit of Measure		2022	EOP 2026	2022	EOP 2026
3.01	Communication campaigns to promote the use of EE and RE technologies in SMEs and public buildings completed	# campaigns	P	1	7	250,000	440,000
			P (a)	1	7	20,000	440,000
			A	1	2	-	-
3.02	Certifications and training program in EE & RE implemented	# persons	P	20	100	20,000	100,000
			P (a)	20	100	20,000	100,000
			A	-	-	-	-
3.03	Information system on gender for the sector implemented	# programs	P	-	1	53,863.64	100,000
			P (a)	-	1	-	100,000
			A	-	-	-	-
3.04	Young Apprentice Program created and implemented	# programs	P	1	1	92,045.45	100,000
			P (a)	-	1	-	100,000
			A	-	-	-	-
3.05	Comprehensive Studies on sustainable energy and energy transition in Barbados completed	# studies	P	1	4	200,000	646,149.48
			P (a)	-	4	50,000	646,149.48
			A	-	-	-	-

Other Cost				
	Project Management and other Cost	P	514,135.89	2,280,000
		P (a)	541,116.9	2,279,999.92
		A	409,402	540,698
	Fees	P	0	303,198.86
		P (a)	303,198.86	303,198.8
		A	303,198.8	303,198.8
Total Cost				
	Total Cost	P	6,032,518.73	45,463,142.1
		P (a)	3,779,593.76	45,463,142
		A	2,062,822.8	2,194,118.8

CHANGES TO THE MATRIX					
Section	Name	Type of Change	Sub type	Modified By	Entered in System
Output	Communication campaigns to promote the use of EE and RE technologies in SMEs and public buildings completed	Modify Output	Modify Physical Historical Actual	CARLOSEC	3/24/2023
	Public buses with charging station systems implemented	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	CARLOSEC	3/22/2023
	Public vehicles with charging station system implemented	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	CARLOSEC	3/22/2023
	RE and EE retrofits in public buildings functioning	Modify Output	Modify Financial EOP P(a) value - caused by a change in the Financial P(a).	CARLOSEC	3/23/2023



RISKS AND PLANNED RESPONSES

Risk ID	Risk Status		Risk Taxonomy
1	Active		Internal Processes
	Response Actions		
	1.01	Management Strategy	Status
		MITIGATE	ACTIVE

Risk ID	Risk Status		Risk Taxonomy		
2	Active		Internal Processes		
	Response Actions				
	2.01	Management Strategy		Status	
		MITIGATE		ACTIVE	
	2.02	Management Strategy		Status	
		MITIGATE		ACTIVE	

Risk ID	Risk Status		Risk Taxonomy		
3	Active		Goods, and Services		
	Response Actions				
	3.01	Management Strategy		Status	
		MITIGATE		ACTIVE	
	3.02	Management Strategy		Status	
		MITIGATE		ACTIVE	
	3.03	Management Strategy		Status	
		MITIGATE		ACTIVE	

Risk ID	Risk Status		Risk Taxonomy		
4	Active		Internal Processes		
	Response Actions				
	4.01	Management Strategy		Status	
		MITIGATE		ACTIVE	
	4.02	Management Strategy		Status	
		MITIGATE		ACTIVE	

Risk ID	Risk Status		Risk Taxonomy
5	Active		Goods, and Services
	Response Actions		
	5.01	Management Strategy	Status
		MITIGATE	ACTIVE

IMPLEMENTATION STATUS AND LEARNING

Lesson Learned - Categories
Acquisitions and Procurement - Bidding Stage
Acquisitions and Procurement - Provider Performance and Supervision