

PMR Operational Report

| | | | |
|-----------------------------|----------------------------------|---|----------|
| Operation Number | BA-L1025 | Chief of Operations Validation Date | 10/10/19 |
| Year- PMR Cycle | First period Jan-Jun 2019 | Division Chief Validation Date | |
| Last Update | 10/04/19 | Country Representative Validation Date | |
| PMR Validation Stage | Validated by Chief of Operations | | |

Basic Data

Operation Profile

| | | | |
|---------------------------|---|---|---|
| Operation Name | Public Sector Smart Energy (PSSE) Program | Loan Number | 2748/OC-BA |
| Executing Agency | INTER-AMERICAN DEVELOPMENT BANK | Sector/Subsector | EN-EEC - ENERGY-ENERGY EFFICIENCY AND RENEWABLE ENERGY IN END USE |
| Team Leader | PRADO, VERONICA | 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-X1003 |
| Borrower | BARBADOS | | |

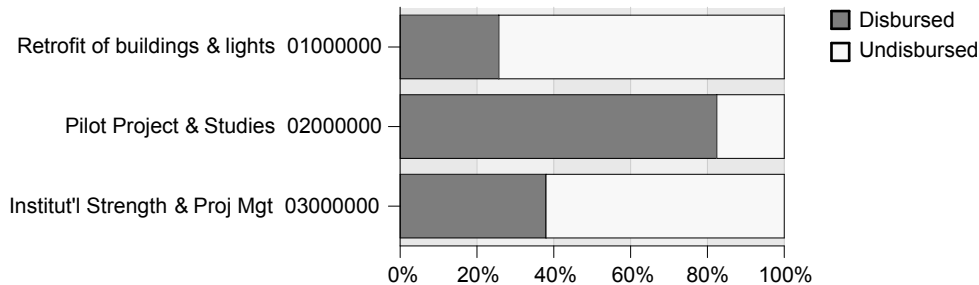
Environmental and Social Safeguards

| | | | |
|---|---|--|----|
| Impacts Category | A | Was/Were the objective(s) of this operation reformulated? | NO |
| Safeguard Performance Rating | Satisfactory | Date of approval | |
| Safeguard Performance Rating - Rationale | Currently the program in the process of identifying the contractor for the management of hazardous waste coming from the retrofitting of buildings, to ensure it follows International Standards. Once identified, the waste management plan should be put into place. The project is also starting the assess the thematic associated with the OTEC technology, even though still in early stages. | | |

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 |
| BA-L1025 | 17,000,000 | 17,000,000 | 0 | 7,664,000 | 24,664,000 | 17,000,000 | 6,580,471.73 | 38.71% | 10,419,528.27 |
| BA-X1003 | 0 | 7,626,493.47 | 0 | 0 | 5,810,000 | 7,626,493.47 | 4,270,519.96 | 56.00% | 3,355,973.51 |
| Aggregated | 17,000,000 | 24,626,493.47 | 0 | 7,664,000 | 30,474,000 | 24,626,493.47 | 10,850,991.69 | 44.06% | 13,775,501.78 |

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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RESULTS MATRIX

IMPACTS

Impact Nbr. 1: PSSE Financial savings cumulative to date (real 2012 US\$).

Observation: Financial savings from the reduction in electricity purchased from BL&P by the GOBA, as well as the sale of electricity produced by the solar PV systems to BL&P, and reduction in fuel purchased for the GOBA vehicle fleet.

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2020 | EOP 2020 |
|---|---|-----------------|---------------|---------------|------|------|------|---------------|
| 1.1 | PSSE Financial savings cumulative to date (real 2012 US\$). | US\$ | 0.00 | 2012 | P | | | 11,284,963.00 |
| | | | | | P(a) | | | 11,284,963.00 |
| | | | | | A | | | |
| Details | | | | | | | | |
| Means of verification: Power consumption Information provided by the Government and by the utility (BL&P) | | | | | | | | |
| Pro-Gender | | No | Pro-Ethnicity | | No | | | |

Impact Nbr. 2: Avoided CO2 emissions by the PSSE Program (cumulative to date).

Observation:

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2020 | EOP 2020 |
|---|---|-----------------|----------|---------------|------|------|------|-----------|
| 2.1 | Avoided CO2 emissions by the PSSE Program (cumulative to date). | tCO2 | 0.00 | 2012 | P | | | 32,528.00 |
| | | | | | P(a) | | | 32,528.00 |
| | | | | | A | | | |
| Details | | | | | | | | |
| Means of verification: Reports prepared by Government of Barbados - Energy Division | | | | | | | | |
| Pro-Gender | | No | | Pro-Ethnicity | | No | | |

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OUTCOMES

Outcome Nbr. 1: RE capacity installed in government buildings

Observation:

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2020 | EOP 2020 |
|---|--|-----------------|---------------|---------------|------|------|------|----------|
| 1.1 | Electricity Generated from Solar PV Systems (MWh/year, MWh to date generated). | MWh | 0.00 | 2012 | P | | | 6,073.00 |
| | | | | | P(a) | | | 6,073.00 |
| | | | | | A | | | |
| Details | | | | | | | | |
| Means of verification: Reports prepared by Government of Barbados- Energy Division | | | | | | | | |
| Observations: Assuming an output of 1,700/kW/year for solar PV. Note: this includes the 50kW PV system installed for charging the Electric Vehicles in Component 2. | | | | | | | | |
| Pro-Gender | | No | Pro-Ethnicity | | No | | | |

Outcome Nbr. 2: Energy saving with EE technologies in public lighting and buildings

Observation:

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2020 | EOP 2020 |
|---|--|-----------------|----------|---------------|---------------|------|------|-----------|
| 2.1 | Electricity Saved through retrofits (energy efficient public lights and energy efficient equipment in public buildings) (MWh/year, MWh to date saved). | MWh | 0.00 | 2012 | P | | | 28,608.00 |
| | | | | | P(a) | | | 28,608.00 |
| | | | | | A | | | |
| Details | | | | | | | | |
| Means of verification: Reports prepared by Government of Barbados Energy Division | | | | | | | | |
| Pro-Gender | | No | | | Pro-Ethnicity | | No | |

Outcome Nbr. 3: Fossil Fuels Saved from the implementation of the pilot projects (barrels of oil equivalent).

Observation:

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2020 | EOP 2020 |
|-----------|--|-----------------|----------|---------------|------|------|------|----------|
| 3.1 | Fossil Fuels Saved from the implementation of the pilot projects (barrels of oil | barrels of oil | 0.00 | 2012 | P | | | 240.00 |
| | | | | | P(a) | | | 240.00 |

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OUTCOMES

| | | | | | | | | |
|---|--------------|----------------|------|------|---|---------------|--|--|
| 3.1 | equivalent). | barrels of oil | 0.00 | 2012 | A | | | |
| Details | | | | | | | | |
| Means of verification: Reports prepared by Government of Barbados - Energy Division | | | | | | | | |
| Pro-Gender | | | No | | | Pro-Ethnicity | | |
| | | | | | | No | | |

Outcome Nbr. 4: public awareness increased in public sector for RE and EE

Observation:

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2020 | EOP 2020 |
|---|--|-----------------|---------------|---------------|------|------|------|----------|
| 4.1 | Percentage of survey respondents participating at events that report high awareness and support of sustainable energy practices (Number of respondents that answered ?high awareness and support of sustainable energy?/ Total number of survey res | % | 0.00 | 2012 | P | | | 80.00 |
| | | | | | P(a) | | | 80.00 |
| | | | | | A | | | |
| Details | | | | | | | | |
| Means of verification: Reports prepared by Government of Barbados - Energy Division | | | | | | | | |
| Pro-Gender | | No | Pro-Ethnicity | | No | | | |

RESULTS MATRIX

OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 RE and EE in public buildings

| | Output | Unit of Measure | | PHYSICAL PROGRESS | | FINANCIAL PROGRESS | |
|-----|--|-----------------|------|-------------------|----------|--------------------|--------------|
| | | | | 2019 | EOP 2020 | 2019 | EOP 2020 |
| 1.1 | Streetlight installation completed | % | P | | 85 | | 9,977,800 |
| | | | P(a) | 60 | 85 | 5,293,250 | 6,383,308.08 |
| | | | A | 19 | 19 | 3,877,677 | 3,948,831.05 |
| 1.2 | Number of public buildings retrofitted with EE | Buildings | P | | 12 | | 4,150,000 |
| | | | P(a) | 3 | 12 | 375,661 | 3,856,564 |
| | | | A | | 0 | | 0 |
| 1.3 | PV in Public Buildings Installed | kW | P | | 1,190 | | 5,500,000 |
| | | | P(a) | 500 | 3,100 | 2,306,710 | 7,526,382.49 |
| | | | A | 1,411 | 3,166 | 904,593 | 3,937,403.49 |

Component Nbr. 2 Pilot projects

| | Output | Unit of Measure | | PHYSICAL PROGRESS | | FINANCIAL PROGRESS | |
|-----|--|-------------------|------|-------------------|----------|--------------------|--------------|
| | | | | 2019 | EOP 2020 | 2019 | EOP 2020 |
| 2.1 | Public Electric Vehicles with Solar PV installed and pilot completed | Electric vehicles | P | | 8 | | 300,000 |
| | | | P(a) | 2 | 10 | 670,200 | 1,607,292.4 |
| | | | A | | 8 | | 423,291.4 |
| 2.2 | Ocean studies completed | Studies | P | | 1 | | 1,000,000 |
| | | | P(a) | 0 | 1 | 100,364 | 1,000,031.09 |
| | | | A | | 0 | 7,316 | 91,292.09 |

Component Nbr. 3 capacity building

| | Output | Unit of Measure | | PHYSICAL PROGRESS | | FINANCIAL PROGRESS | |
|-----|---|------------------|------|-------------------|----------|--------------------|--------------|
| | | | | 2019 | EOP 2020 | 2019 | EOP 2020 |
| 3.1 | Capacity Building training/activities completed | numbr of people | P | | 0 | | 1,395,000 |
| | | | P(a) | 10 | 20 | 202,798 | 844,529.2 |
| | | | A | 3 | 13 | 33,742 | 159,863.2 |
| 3.2 | Public awareness events completed | number of people | P | | 100 | | 305,000 |
| | | | P(a) | 50 | 100 | 66,000 | 935,000 |
| | | | A | 25 | 25 | | 0 |
| 3.3 | Monitoring and evaluation activities completed | activities | P | | 4 | | 500,000 |
| | | | P(a) | 1 | 4 | 77,000 | 528,419 |
| | | | A | 1 | 2 | | 252,879 |
| 3.4 | Number of Jobs created in ETD for implementing the PSSE Program | Positions | P | | 4 | | 1,153,000 |
| | | | P(a) | 0 | 9 | 325,463 | 1,599,273.74 |
| | | | A | | 9 | 170,809 | 1,366,664.74 |

Other Cost

| | | | | | | |
|--|------------------------------|------|--|--|--|---------|
| | Administrative fees expended | P | | | | 383,200 |
| | | P(a) | | | | 383,200 |
| | | A | | | | 0 |

Total Cost

| | | | | | | |
|--|------------|------|--|--|-----------|---------------|
| | Total Cost | P | | | | 24,664,000 |
| | | P(a) | | | 9,417,446 | 24,664,000 |
| | | A | | | 4,994,137 | 10,180,224.97 |

CHANGES TO THE MATRIX

No information available for this section

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IMPLEMENTATION STATUS AND LEARNING

| Lesson Learned - Categories |
|-----------------------------|
| |