

PMR Operational Report

| | | | |
|-----------------------------|-----------------------------|---|----------|
| Operation Number | PR-L1146 | Chief of Operations Validation Date | 04/08/19 |
| Year- PMR Cycle | Second period Jan-Dec 2018 | Division Chief Validation Date | 04/09/19 |
| Last Update | 03/20/19 | Country Representative Validation Date | 04/10/19 |
| PMR Validation Stage | Validated by Representative | | |

Basic Data

Operation Profile

| | | | |
|---------------------------|--|---|---|
| Operation Name | Promoting Private Sector Investments in Energy Efficiency in the Industrial Sector in Paraguay | Loan Number | 4568/GN-PR |
| Executing Agency | Agencia Financiera de Desarrollo | Sector/Subsector | FM-FES - FINANCIAL MARKETS-FINANCING FOR ENVIRONMENTAL SUSTAINABILITY |
| Team Leader | NETTO DE A. C. SCHNEIDER, MARIA E. | Overall Stage | Approved |
| Operation Type | Loan Operation | Country | PARAGUAY |
| Lending Instrument | Investment Loan | Convergence related Operation(s) | |
| Borrower | Agencia Financiera de Desarrollo | | |

Environmental and Social Safeguards

| | | | |
|---|-----|--|----|
| Impacts Category | B13 | Was/Were the objective(s) of this operation reformulated? | NO |
| Safeguard Performance Rating | | Date of approval | |
| Safeguard Performance Rating - Rationale | | | |

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 |
| PR-L1146 | 20,000,000 | 20,000,000 | 0 | 20,000,000 | 40,000,000 | 20,000,000 | 0 | 0.00% | 20,000,000 |
| Aggregated | 20,000,000 | 20,000,000 | 0 | 20,000,000 | 40,000,000 | 20,000,000 | 0 | 0.00% | 20,000,000 |

Expense Categories by Loan Contract (cumulative values)

PMR Operational Report

RESULTS MATRIX

IMPACTS

Impact Nbr. 0: Promote energy efficiency (EE) investments by MSMEs in Paraguay.

Observation: Measures the quantity of energy required to generate PGY 1 million of output in the industrial sector. Target was established considering the falling trend of this ratio since 2000, when it was over 0.50.

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | EOP 0 |
|-----------|---|-----------------|----------|---------------|------|------|------|------|------|------|------|-------|
| 0.0 | Energy intensity in the industrial sector | toe/million PGY | 0.38 | 2011 | P | | | | | | 0.29 | 0.29 |
| | | | | | P(a) | | | | | | | 0.00 |
| | | | | | A | | | | | | | 0.00 |

Details

Means of verification: : Official figures from the Base de Indicadores de Eficiencia Energética (BIIE) and the Balance Energetico Nacional

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

PMR Operational Report

RESULTS MATRIX

OUTCOMES

Outcome Nbr. 0: The general objective of the program is to promote energy efficiency (EE) investments by MSMEs in Paraguay, improving their productivity in the long-term. The specific objectives are: (i) to increase access to medium and long-term finance for EE investment projects by MSMEs; and (ii) to reduce greenhouse gas (GHG) emissions, supporting the achievement of the country's climate change goals

Observation: The programming of execution and its corresponding annual products and results consider local mandatory procedures that have an impact in the actual launch date of the program after the signing of the contract (expected in 2018). In particular, an approval by congress is required, which may take up to one year. For this reason, a Y0 is being included in the matrix, during which no reporting of products is expected.

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | EOP | EOP 0 |
|-----------|---|--|----------|---------------|------|------|------|-------|-------|-------|-------|------|--------|
| 0.0 | Micro, small and medium enterprises (MSME) that finance EE projects with funds from the program | Micro / small / medium enterprises (#) | 0.00 | 2017 | P | | | 41.00 | 73.00 | 93.00 | 93.00 | - | 300.00 |
| | | | | | P(a) | | | | | | - | 0.00 | |
| | | | | | A | | | | | | - | | |

Details

Means of verification: Annual report on program execution by AFD.

Observations: Measures number of eligible EE projects implemented by MSMEs, aggregated for all technologies

| Pro-Gender | No | Pro-Ethnicity | No |
|------------|---|---------------|-------|
| | Climate-related investments (# MSMEs provided with) | | |
| | | P | 41.00 |
| | | P(a) | |
| | | A | |

| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | EOP 0 |
|-----------|---|-----------------|----------|---------------|------|------|------|------|------|------|------|-------|
| 0.1 | Financing from third parties mobilized by the program | mls US\$ | 0.00 | 2017 | P | 0.00 | 0.00 | 0.60 | 1.10 | 1.40 | 1.40 | 4.50 |
| | | | | | P(a) | | | | | | | 0.00 |
| | | | | | A | | | | | | | |

Details

Means of verification: Includes all sources of financing (debt or equity) additional to program resources. Target estimate based on the average total investment required per project and a 90/10 debt to equity ratio. Real values will be monitored and validated with information provided by AFD in periodical reports, which will include detail on sources of financing per individual project.

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| Pro-Gender | | No | Pro-Ethnicity | | | | | No | | | | |
|------------|-------------------------------|-----------------|---------------|---------------|------|------|------|------|------|------|------|-------|
| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | EOP 0 |
| 0.2 | Average maturity of sub-loans | years | 5.00 | 2017 | P | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.00 |
| | | | | | P(a) | | | | | | | |
| | | | | | A | | | | | | | |

PMR Operational Report

RESULTS MATRIX

OUTCOMES

| Details | | | | | | | | | | | | |
|---|--|-----------------|----------|---------------|---------------|------|------|------|-----------|-----------|-----------|------------|
| Means of verification: Annual report on program execution by AFD | | | | | | | | | | | | |
| Observations: Measures the length of the amortization period for the portfolio of sub projects financed in order to compare with alternative financing sources available (market average and/or AFD financing without program resources). | | | | | | | | | | | | |
| Pro-Gender | | No | | | Pro-Ethnicity | | | No | | | | |
| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | EOP 0 |
| 0.3 | Annual energy savings from sub projects financed by the program (accumulated) | toe | 0.00 | 2017 | P | 0.00 | 0.00 | 0.00 | 0.00 | | 0.02 | 0.03 |
| | | | | | P(a) | | | | | | | |
| | | | | | A | | | | | | | |
| Details | | | | | | | | | | | | |
| Means of verification: Source: Annual report on program execution by AFD. | | | | | | | | | | | | |
| Observations: y:2020: 0.001; Y: 2021: 0.004. Indicator shows accumulated annual savings from all beneficiary sub projects in the portfolio financed by the program. Final target was estimated based on an average consumption of beneficiary firms, and efficiency ratios of EE systems installed and includes accumulated savings of all projects financed. As sources may include electricity and firewood, energy measures (consumption and savings) are standardized by using tons of oil equivalent (toe) as unit. Energy savings = energy consumed by beneficiary firms * [1 – (efficiency of system installed – efficiency of original system)]. Target value differs from Y5 value, as savings from those projects financed in Y5 can only be accounted for in Y6, which is not included in the matrix. A projection for projects financed in Y5 is added to the target. | | | | | | | | | | | | |
| Pro-Gender | | No | | | Pro-Ethnicity | | | No | | | | |
| Indicator | | Unit of Measure | Baseline | Baseline Year | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | EOP 0 |
| 0.4 | Average annual greenhouse gas (GHG) emissions reductions from sub projects financed by the program (accumulated) | TM CO2e | 0.00 | 2017 | P | 0.00 | 0.00 | 0.00 | 21,903.00 | 48,259.00 | 90,021.00 | 131,784.00 |
| | | | | | P(a) | | | | | | | |
| | | | | | A | | | | | | | |
| Details | | | | | | | | | | | | |
| Means of verification: Annual report on program execution by AFD and conversion factor from internationally accepted GHG inventory guidelines. | | | | | | | | | | | | |
| Observations: Indicator is based on the accumulated CO2e emissions avoided by EE energy savings produced in sub projects financed. Final target was estimated based on envisaged EE savings Conversion factors from: (i) default emission factor for stationary combustion of wood/wood waste in manufacturing industries and construction from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (112,000 kg of CO2 per TJ); and (ii) Latin America's average conversion factor for electricity (0.188 kg CO2 per kWh) from the List of international emission conversion factors for electricity. . GHG emissions = energy consumption x CO2 emission factor. Target value differs from Y5 value, as savings from those projects financed in Y5 can only be accounted for in Y6, which is not included in the matrix. A projection for projects financed in Y5 is added to the target. | | | | | | | | | | | | |
| Pro-Gender | | No | | | Pro-Ethnicity | | | No | | | | |

RESULTS MATRIX

OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 Component I: Increase access to medium and long-term finance for EE investment projects by MSMEs

| | | | | PHYSICAL PROGRESS | | FINANCIAL PROGRESS | |
|-----|---|-----------------|------|-------------------|-------|--------------------|-------|
| | Output | Unit of Measure | | 2018 | EOP 0 | 2018 | EOP 0 |
| 1.1 | Energy efficiency (EE) credit line used | Million US\$ | P | 0 | 40 | | 40 |
| | | | P(a) | | 0 | | 0 |
| | | | A | | 0 | | 0 |

Total Cost

| | | | | | | |
|--|------------|------|--|--|--|----|
| | Total Cost | P | | | | 40 |
| | | P(a) | | | | 0 |
| | | A | | | | 0 |

CHANGES TO THE MATRIX

No information available for this section

PMR Operational Report

IMPLEMENTATION STATUS AND LEARNING

Lesson Learned - Categories

Project Management Capacity