

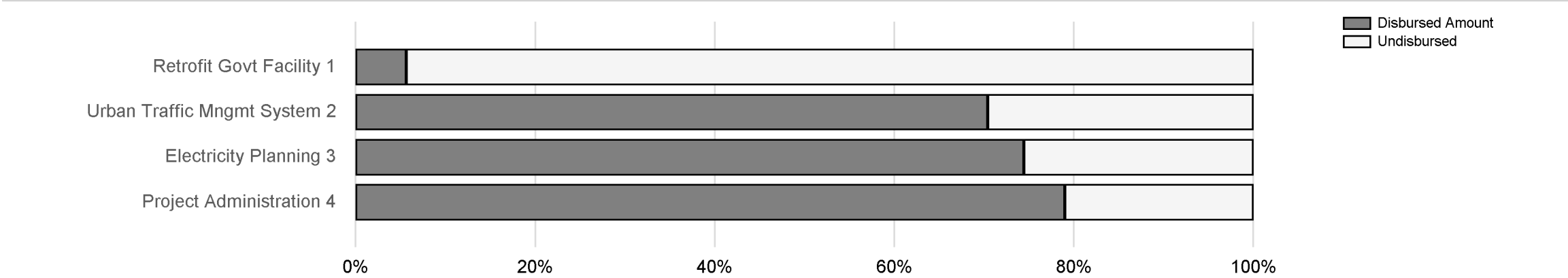
# PMR Public Report

|                      |                                  |                                        |          |
|----------------------|----------------------------------|----------------------------------------|----------|
| Operation Number     | JA-L1056                         | Chief of Operations Validation Date    | 10/16/22 |
| Year- PMR Cycle      | First period Jan-Jun 2022        | Division Chief Validation Date         |          |
| Last Update          | 10/03/22                         | Country Representative Validation Date |          |
| PMR Validation Stage | Validated by Chief of Operations |                                        |          |

|                                          |                                                                             |                                                           |                                                                   |
|------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
| Basic Data                               |                                                                             |                                                           |                                                                   |
| Operation Profile                        |                                                                             |                                                           |                                                                   |
| Operation Name                           | Energy Management and Efficiency Programme                                  | Loan Number                                               | 3877/OC-JA                                                        |
| Executing Agency                         | Petroleum Corporation of Jamaica, MINISTRY OF SCIENCE ENERGY AND TECHNOLOGY | Sector/Subsector                                          | ENERGY-ENERGY EFFICIENCY AND RENEWABLE ENERGY IN END USE          |
| Team Leader                              | AIELLO, ROBERTO GABRIEL                                                     | Overall Stage                                             | Disbursing (From eligibility until all the Operations are closed) |
| Operation Type                           | Loan Operation                                                              | Country                                                   | Jamaica                                                           |
| Lending Instrument                       | Investment Loan                                                             | Convergence related Operation(s)                          |                                                                   |
| Borrower                                 | JAMAICA                                                                     |                                                           |                                                                   |
| 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 |
| JA-L1056       | 15,000,000            | 15,000,000  | 0                 | 15,000,000             | 30,000,000          | 15,000,000             | 3,838,432            | 25.59%      | 11,161,568         |
| Aggregated     | 15,000,000            | 15,000,000  | 0                 | 15,000,000             | 30,000,000          | 15,000,000             | 3,838,432            | 25.59%      | 11,161,568         |

|                                                         |  |  |  |  |  |  |  |  |  |
|---------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| 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: Reduction of Jamaica’s debt by avoiding fuel imports through the promotion of energy efficiency in government facilities and fuel conservation in road transportation

Observation:

| Indicator |                                                          | Unit of Measure    | Baseline | Baseline Year | Expected Year of Achievement | EOP 2023 |   |
|-----------|----------------------------------------------------------|--------------------|----------|---------------|------------------------------|----------|---|
| 0.0       | Crude oil imports for refined petroleum products reduced | Million of Barrels | 8.8      | 2015          | 2023                         | P        | - |
|           |                                                          |                    |          |               |                              | A        | - |
| Details   |                                                          |                    |          |               |                              |          |   |

**Means of Verification:** Annual report from PCJ

**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: Retrofitting HEPA Government Facilities

Observation:

|     | Indicator                                                                                                  | Unit of Measure | Baseline | Baseline Year |   | 2023       | EOP 2023   |
|-----|------------------------------------------------------------------------------------------------------------|-----------------|----------|---------------|---|------------|------------|
| 0.0 | Reduced annual electricity consumed in 73 Health, Education and Public Agency (HEPA) Government facilities | kWh             | 31377402 | 2015          | P | 16,004,807 | 16,004,807 |
|     |                                                                                                            |                 |          |               | A | -          | -          |

Details

Means of Verification: Semestral Reports from Petroleum Corporation of Jamaica and M&E Consulting firm report

Observations:

Evaluation Methodology: -

|            |    |               |    |               |  |
|------------|----|---------------|----|---------------|--|
| Pro-Gender | No | Pro-Ethnicity | No | CRF indicator |  |
|            |    |               |    |               |  |

|     | Indicator                                                                                                                | Unit of Measure        | Baseline | Baseline Year |   | 2023      | EOP 2023  |
|-----|--------------------------------------------------------------------------------------------------------------------------|------------------------|----------|---------------|---|-----------|-----------|
| 0.1 | Reduced annual GHG (CO2) emissions resulting from reduced electricity consumption (kWh) in 73 HEPA Government facilities | Tons of CO2 equivalent | 52401.25 | 2015          | P | 26,728.53 | 26,728.53 |
|     |                                                                                                                          |                        |          |               | A | -         | -         |

Details

Means of Verification: Semestral Reports from Petroleum Corporation of Jamaica and M&E Consulting firm report

Observations:

Evaluation Methodology: -

|            |    |               |    |               |  |
|------------|----|---------------|----|---------------|--|
| Pro-Gender | No | Pro-Ethnicity | No | CRF indicator |  |
|            |    |               |    |               |  |

Specific Development Objectives Nbr. 1: Implementation of an Urban Traffic Management System (UTMS)

Observation:

|     | Indicator                                                                                   | Unit of Measure | Baseline | Baseline Year |   | 2023  | EOP 2023 |
|-----|---------------------------------------------------------------------------------------------|-----------------|----------|---------------|---|-------|----------|
| 1.0 | Reduced annual transport fuel consumed by traffic in the Kingston Metropolitan Region (KMR) | Million litres  | 296.8    | 2015          | P | 192.7 | 192.7    |
|     |                                                                                             |                 |          |               | A | -     | -        |

Details

Means of Verification: Semestral Reports from Petroleum Corporation of Jamaica and M&E Consulting firm report

Observations:

Evaluation Methodology: -

|            |    |               |    |               |  |
|------------|----|---------------|----|---------------|--|
| Pro-Gender | No | Pro-Ethnicity | No | CRF indicator |  |
|            |    |               |    |               |  |

|     | Indicator                                                                          | Unit of Measure | Baseline | Baseline Year |   | 2023    | EOP 2023 |
|-----|------------------------------------------------------------------------------------|-----------------|----------|---------------|---|---------|----------|
| 1.1 | Reduced annual GHG (CO2) emissions from reduced transport fuel consumed in the KMR | Tons of CO2     | 579203   | 2015          | P | 376,044 | 376,044  |
|     |                                                                                    |                 |          |               | A | -       | -        |

Details

Means of Verification: Semestral Reports from Petroleum Corporation of Jamaica and M&E Consulting firm report

Observations:

Evaluation Methodology: -

|            |    |               |    |               |  |
|------------|----|---------------|----|---------------|--|
| Pro-Gender | No | Pro-Ethnicity | No | CRF indicator |  |
|            |    |               |    |               |  |

|     | Indicator                                      | Unit of Measure | Baseline | Baseline Year |   | 2023  | EOP 2023 |
|-----|------------------------------------------------|-----------------|----------|---------------|---|-------|----------|
| 1.2 | Reduced hours of annual travel time in the KMR | Millions hours  | 155.2    | 2015          | P | 99.96 | 99.96    |
|     |                                                |                 |          |               | A | -     | -        |

Details

Means of Verification: Semestral Reports from Petroleum Corporation of Jamaica and M&E Consulting firm report

Observations:

Evaluation Methodology: -

|            |    |               |    |               |  |
|------------|----|---------------|----|---------------|--|
| Pro-Gender | No | Pro-Ethnicity | No | CRF indicator |  |
|            |    |               |    |               |  |

Specific Development Objectives Nbr. 2: Increased Support to Electricity Planning

Observation:

|     | Indicator                                                                            | Unit of Measure        | Baseline | Baseline Year |   | 2023 | EOP 2023 |
|-----|--------------------------------------------------------------------------------------|------------------------|----------|---------------|---|------|----------|
| 2.0 | Number of formal updates or revisions of the IRP performed by MSET on a timely basis | # of updates/revisions | 0        | 2015          | P | 1    | 1        |
|     |                                                                                      |                        |          |               | A | -    | -        |

Details

Means of Verification: Semestral Reports from Petroleum Corporation of Jamaica and M&E Consulting firm report

Observations:

Evaluation Methodology: -

|            |    |               |    |               |  |
|------------|----|---------------|----|---------------|--|
| Pro-Gender | No | Pro-Ethnicity | No | CRF indicator |  |
|            |    |               |    |               |  |

RESULTS MATRIX

OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 Retrofitting HEPA government facilities

|      |                                                                                                                                    |                            |       | PHYSICAL PROGRESS |          | FINANCIAL PROGRESS |            |
|------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|-------------------|----------|--------------------|------------|
|      | Output                                                                                                                             | Unit of Measure            |       | 2022              | EOP 2023 | 2022               | EOP 2023   |
| 1.01 | HEPA government facilities with Energy Efficiency equipment replaced, installed and operating                                      | # of government facilities | P     | 17                | 23       | 8,727,500          | 17,282,500 |
|      |                                                                                                                                    |                            | P (a) | -                 | 23       | 42,749             | 17,149,567 |
|      |                                                                                                                                    |                            | A     | -                 | -        | -                  | 350,437    |
| 1.02 | Consultancy engineering and supervision services for retrofitting 30 Government of Jamaica facilities                              | # of project supervised    | P     | 17                | 30       | 230,000            | 600,000    |
|      |                                                                                                                                    |                            | P (a) | -                 | 30       | 64,155             | 600,000    |
|      |                                                                                                                                    |                            | A     | -                 | -        | -                  | 79,398.74  |
| 1.03 | Energy Efficiency light technology replaced, installed and operating in HEPA government facilities                                 | # of government facilities | P     | -                 | 50       | -                  | 3,043,750  |
|      |                                                                                                                                    |                            | P (a) | -                 | 50       | 75,000             | 2,920,888  |
|      |                                                                                                                                    |                            | A     | -                 | -        | -                  | -          |
| 1.04 | Communication activities completed to raise awareness on Energy Efficient management and maintenance in HEPA government facilities | # of activities            | P     | 1                 | 5        | 50,000             | 250,000    |
|      |                                                                                                                                    |                            | P (a) | 1                 | 2        | -                  | 331,778    |
|      |                                                                                                                                    |                            | A     | -                 | -        | -                  | -          |
| 1.05 | Energy Efficient manuals developed for management and maintenance of HEPA government facilities                                    | # of manuals               | P     | -                 | 3        | -                  | 160,000    |
|      |                                                                                                                                    |                            | P (a) | -                 | 3        | -                  | 204,585    |
|      |                                                                                                                                    |                            | A     | -                 | 1        | -                  | 187,406    |

Component Nbr. 2 Implementation of an Urban Traffic Management System (UTMS)

|      |                                                                                                             |                      |       | PHYSICAL PROGRESS |          | FINANCIAL PROGRESS |           |
|------|-------------------------------------------------------------------------------------------------------------|----------------------|-------|-------------------|----------|--------------------|-----------|
|      | Output                                                                                                      | Unit of Measure      |       | 2022              | EOP 2023 | 2022               | EOP 2023  |
| 2.01 | Equipment necessary to upgrade the central control system purchased, installed and operating                | Binary (yes=1, no=2) | P     | -                 | 1        | -                  | 359,820   |
|      |                                                                                                             |                      | P (a) | 1                 | 1        | 2,111,628          | 3,389,764 |
|      |                                                                                                             |                      | A     | 1                 | 1        | 1,321,864          | 2,600,000 |
| 2.02 | Equipment necessary to modernize and coordinate traffic signals purchased, installed and operating          | Binary (Yes+1; No=0) | P     | -                 | 1        | -                  | 2,521,606 |
|      |                                                                                                             |                      | P (a) | 1                 | 1        | 182,904            | 221,864   |
|      |                                                                                                             |                      | A     | -                 | -        | -                  | -         |
| 2.03 | Number of packages of support training and capacity building in intelligent transportation system delivered | # of packages        | P     | -                 | 4        | -                  | 618,574   |
|      |                                                                                                             |                      | P (a) | 1                 | 1        | -                  | -         |
|      |                                                                                                             |                      | A     | 3                 | 3        | -                  | -         |

Component Nbr. 3 Support to Electricity Planning

|      |                                                                                                                                                 |                     |       | PHYSICAL PROGRESS |          | FINANCIAL PROGRESS |           |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|-------------------|----------|--------------------|-----------|
|      | Output                                                                                                                                          | Unit of Measure     |       | 2022              | EOP 2023 | 2022               | EOP 2023  |
| 3.01 | Number of technical studies (inclusive of IT software diagnostic study) to support IRP revision or update completed                             | # of studies        | P     | -                 | 2        | -                  | 230,000   |
|      |                                                                                                                                                 |                     | P (a) | -                 | 4        | 172,500            | 634,650   |
|      |                                                                                                                                                 |                     | A     | -                 | 1        | 97,895             | 222,545   |
| 3.02 | Number of training modules completed to support technical capacity in Ministry of Science, Energy and Technology (MSET) to revise or update IRP | # Training Modules  | P     | -                 | 3        | -                  | 100,000   |
|      |                                                                                                                                                 |                     | P (a) | -                 | 3        | 60,000             | 100,000   |
|      |                                                                                                                                                 |                     | A     | -                 | 1        | -                  | -         |
| 3.03 | Number of technical experts contracted to reinforce capacity and develop training plans within MSET to enable staff to revise/update IRP        | # technical experts | P     | -                 | 5        | -                  | 1,200,000 |
|      |                                                                                                                                                 |                     | P (a) | -                 | 3        | 180,366            | 822,549   |
|      |                                                                                                                                                 |                     | A     | -                 | 3        | -                  | 642,183   |
| 3.04 | Appropriate IT software for coordinating IRP purchased, installed and operating                                                                 | # of Software       | P     | -                 | 1        | -                  | 250,000   |
|      |                                                                                                                                                 |                     | P (a) | -                 | 1        | -                  | 250,000   |
|      |                                                                                                                                                 |                     | A     | -                 | -        | -                  | -         |
| 3.05 | Diagnostic study completed on IT Software required in MSET to support IRP coordination                                                          | # studies profile   | P     | -                 | -        | -                  | -         |
|      |                                                                                                                                                 |                     | P (a) | 1                 | 1        | -                  | 200,000   |
|      |                                                                                                                                                 |                     | A     | -                 | -        | -                  | -         |

| Other Cost |                           |       |              |              |
|------------|---------------------------|-------|--------------|--------------|
|            | Project Management        | P     | 475,625      | 2,853,750    |
|            |                           | P (a) | 322,365      | 2,685,869    |
|            |                           | A     | 0            | 1,377,885    |
|            | Monitoring and Evaluation | P     | 88,333.34    | 530,000      |
|            |                           | P (a) | 18,065       | 488,486      |
|            |                           | A     | 0            | 119,969      |
| Total Cost |                           |       |              |              |
|            | Total Cost                | P     | 9,571,458.34 | 30,000,000   |
|            |                           | P (a) | 3,229,732    | 30,000,000   |
|            |                           | A     | 1,419,759    | 5,579,823.74 |

No information available for this section

RISKS AND PLANNED RESPONSES

| Risk ID | Risk Status      |                     | Risk Taxonomy                      |
|---------|------------------|---------------------|------------------------------------|
| 3       | Active           |                     | Economic and Financial Environment |
|         |                  |                     |                                    |
|         | Response Actions |                     |                                    |
|         | 3.1              | Management Strategy | Status                             |
|         |                  | ACCEPT              | ACTIVE                             |
|         |                  |                     |                                    |
|         |                  |                     |                                    |

| Risk ID | Risk Status      |                     | Risk Taxonomy       |
|---------|------------------|---------------------|---------------------|
| 6       | Active           |                     | Natural Environment |
|         |                  |                     |                     |
|         | Response Actions |                     |                     |
|         | 6.1              | Management Strategy | Status              |
|         |                  | MITIGATE            | ACTIVE              |
|         |                  |                     |                     |
|         |                  |                     |                     |
|         |                  |                     |                     |

| Risk ID | Risk Status      |                     | Risk Taxonomy        |
|---------|------------------|---------------------|----------------------|
| 9       | Active           |                     | Governance Framework |
|         |                  |                     |                      |
|         | Response Actions |                     |                      |
|         | 9.1              | Management Strategy | Status               |
|         |                  | MITIGATE            | ACTIVE               |
|         |                  |                     |                      |
|         |                  |                     |                      |

| Risk ID | Risk Status      |                     | Risk Taxonomy         |
|---------|------------------|---------------------|-----------------------|
| 12      | Active           |                     | Political Environment |
|         |                  |                     |                       |
|         | Response Actions |                     |                       |
|         | 12.1             | Management Strategy | Status                |
|         |                  | MITIGATE            | ACTIVE                |
|         |                  |                     |                       |
|         |                  |                     |                       |

| Risk ID | Risk Status      |                     | Risk Taxonomy                      |
|---------|------------------|---------------------|------------------------------------|
| 15      | Active           |                     | Economic and Financial Environment |
|         |                  |                     |                                    |
|         | Response Actions |                     |                                    |
|         | 15.1             | Management Strategy | Status                             |
|         |                  | MITIGATE            | ACTIVE                             |
|         |                  |                     |                                    |
|         |                  |                     |                                    |
|         |                  |                     |                                    |

| Risk ID | Risk Status      |                     | Risk Taxonomy                      |
|---------|------------------|---------------------|------------------------------------|
| 18      | Active           |                     | Economic and Financial Environment |
|         |                  |                     |                                    |
|         | Response Actions |                     |                                    |
|         | 18.1             | Management Strategy | Status                             |
|         |                  | MITIGATE            | ACTIVE                             |
|         |                  |                     |                                    |
|         |                  |                     |                                    |

| Risk ID | Risk Status      |                     | Risk Taxonomy       |
|---------|------------------|---------------------|---------------------|
| 21      | Active           |                     | Goods, and Services |
|         |                  |                     |                     |
|         | Response Actions |                     |                     |
|         | 21.1             | Management Strategy | Status              |
|         |                  | MITIGATE            | ACTIVE              |
|         |                  |                     |                     |
|         |                  |                     |                     |
|         |                  |                     |                     |

| Risk ID | Risk Status      |                     | Risk Taxonomy        |
|---------|------------------|---------------------|----------------------|
| 24      | Active           |                     | Governance Framework |
|         |                  |                     |                      |
|         | Response Actions |                     |                      |
|         | 24.1             | Management Strategy | Status               |
|         |                  | MITIGATE            | INACTIVE             |
|         |                  |                     |                      |
|         |                  |                     |                      |

| Risk ID | Risk Status      |                     | Risk Taxonomy       |
|---------|------------------|---------------------|---------------------|
| 27      | Active           |                     | Natural Environment |
|         |                  |                     |                     |
|         | Response Actions |                     |                     |
|         | 27.1             | Management Strategy | Status              |
|         |                  | MITIGATE            | ACTIVE              |
|         |                  |                     |                     |
|         |                  |                     |                     |

| Risk ID | Risk Status      |                     | Risk Taxonomy       |
|---------|------------------|---------------------|---------------------|
| 30      | Active           |                     | Natural Environment |
|         |                  |                     |                     |
|         | Response Actions |                     |                     |
|         | 30.1             | Management Strategy | Status              |
|         |                  | MITIGATE            | ACTIVE              |
|         |                  |                     |                     |
|         |                  |                     |                     |
|         |                  |                     |                     |



IMPLEMENTATION STATUS AND LEARNING

| Lesson Learned - Categories |
|-----------------------------|
| Project Management Capacity |