

# PMR Operational Report

<b>Operation Number</b>	BA-L1012	<b>Chief of Operations Validation Date</b>	03/19/18
<b>Year- PMR Cycle</b>	Second period Jan-Dec 2017	<b>Division Chief Validation Date</b>	04/03/18
<b>Last Update</b>	03/16/18	<b>Country Representative Validation Date</b>	04/04/18
<b>PMR Validation Stage</b>	Validated by Representative		

## Basic Data

### Operation Profile

<b>Operation Name</b>	Deployment of Cleaner Fuels and Renewable Energies in Barbados	<b>Loan Number</b>	3843/OC-BA
<b>Executing Agency</b>	National Petroleum Corporation	<b>Sector/Subsector</b>	EN-REH - ENERGY-ENERGY SECTOR REHABILITATION AND EFFICIENCY
<b>Team Leader</b>	PRADO, VERONICA	<b>Overall Stage</b>	Approved/Pending Eligibility
<b>Operation Type</b>	Loan Operation	<b>Country</b>	BARBADOS
<b>Lending Instrument</b>	Investment Loan	<b>Convergence related Operation(s)</b>	
<b>Borrower</b>	BARBADOS		

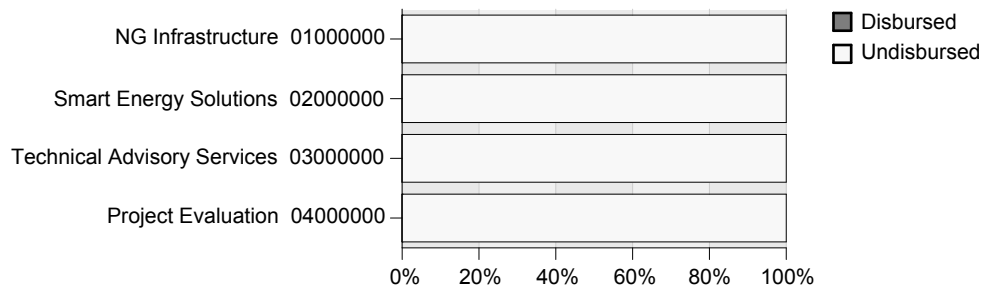
## Environmental and Social Safeguards

<b>Impacts Category</b>	B	<b>Was/Were the objective(s) of this operation reformulated?</b>	NO
<b>Safeguard Performance Rating</b>		<b>Date of approval</b>	
<b>Safeguard Performance Rating - Rationale</b>			

## 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-L1012	34,000,000	34,000,000	0	0	34,000,000	34,000,000	0	0.00%	34,000,000
Aggregated	34,000,000	34,000,000	0	0	34,000,000	34,000,000	0	0.00%	34,000,000

## Expense Categories by Loan Contract (cumulative values)



Please note that the Overall Stage represents the stage of the operation at the time of this report's publication, which might not necessarily match the stage of the operation during the PMR Cycle to which the report pertains. Please also 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.

## PMR Operational Report

### RESULTS MATRIX

#### IMPACTS

**Impact Nbr. 0:** Expected long-term impacts include a reduction in the electricity tariff that contributes to one of the goals in the Barbados Country Strategy and GHG emissions reductions from power generation.

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		EOP 2023
0.0	Total GHG emissions resulting from power generation in Barbados	Million tons CO2 equivalent t/year	2.00	2015	P	1.50
					P(a)	
					A	
Details						
Pro-Gender	No			Pro-Ethnicity	No	

Indicator		Unit of Measure	Baseline	Baseline Year		EOP 2023
0.1	Average national electricity tariff in Barbados	US\$/KWh	0.28	2015	P	0.25
					P(a)	
					A	
Details						
Pro-Gender	No			Pro-Ethnicity	No	

## PMR Operational Report

### RESULTS MATRIX

#### OUTCOMES

**Outcome Nbr. 0:** Expected Result 1: Ensure Natural gas service continuity

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2019	2020	2021	2022	2023	EOP 2023
0.0	Annual Natural Gas sales by NPC to residential, commercial and industrial clients	Million cubic feet (mmcf)	511.00	2015	P	511.00	511.00	538.00	575.00	600.00	600.00	600.00
					P(a)	511.00	511.00	538.00	575.00	600.00	600.00	600.00
					A							
Details												
Pro-Gender		No		Pro-Ethnicity		No						

**Outcome Nbr. 2:** Expected Result 3: Reduce CO2 emission reductions from NPC/BNOCL operational and administrative facilities

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2019	2020	2021	2022	2023	EOP 2023
2.0	Annual CO2 emission reductions from implementing smart energy solutions in NPC and/or BNOCL operational and administrative facilities	Tons CO2 equivalent / year	0.00	2015	P	0.00	0.00	0.00	1,500.00	1,500.00	6,000.00	9,000.00
					P(a)	0.00	0.00	0.00	1,500.00	1,500.00	6,000.00	9,000.00
					A							
Details												
Pro-Gender		No		Pro-Ethnicity		No						

**Outcome Nbr. 1:** Expected Result 2: Increase the number of LNG suppliers to Barbados to enhance energy security

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2019	2020	2021	2022	2023	EOP 2023
1.0	Number of international/regional Liquefied Natural Gas (LNG) suppliers to Barbados	# of LNG suppliers	1.00	2015	P	2.00	2.00	2.00	2.00	2.00	2.00	2.00
					P(a)	2.00	2.00	2.00	2.00	2.00	2.00	2.00
					A							
Details												
Pro-Gender		No	Pro-Ethnicity		No							

**Outcome Nbr. 3:** Expected Result 4: Increased operational efficiency in NG transmission and distribution

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2019	2020	2021	2022	2023	EOP 2023
3.0	NPC's Annual Operational cost per customer	US\$/ customer	5.20	2015	P	5.20					4.30	4.30

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### RESULTS MATRIX

#### OUTCOMES

3.0	NPC's Annual Operational cost per customer	US\$/ customer	5.20	2015	P(a)	5.20					4.30	4.30
					A							
Details												
Pro-Gender	No				Pro-Ethnicity	No						

**Outcome Nbr. 4:** Expected Result 5: Increase private sector participation to develop an LNG project

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2018	2019	2020	2021	2022	2023	EOP 2023
4.0	Number of private sector partners with a contract awarded to implement the Small LNG Plant	# of private sector partners	0.00	2015	P	0.00	1.00	0.00	0.00	0.00	0.00	1.00
					P(a)	0.00	1.00	0.00	0.00	0.00	0.00	1.00
					A							
Details												
Pro-Gender	No				Pro-Ethnicity	No						

RESULTS MATRIX

OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

Component Nbr. 1 Component 1: Natural Gas Infrastructure

				PHYSICAL PROGRESS	FINANCIAL PROGRESS
				EOP 2023	EOP 2023
Output	Unit of Measure				
1.1	Monitoring and control systems upgraded/replaced	# of systems	P	7	0
			P(a)	7	6,241,431.5
			A	0	0
1.2	Pipelines for transmission and distribution replaced, realigned and/or installed	Km of pipeline	P	10	0
			P(a)	10	8,286,400.2
			A	0	0
1.3	Natural Gas distribution stations upgraded	# of stations	P	1	0
			P(a)	1	250,000
			A	0	0
1.4	On-road Natural Gas distribution fleet acquired or modernized	# of vehicles	P	12	0
			P(a)	12	1,500,000
			A	0	0
1.5	Small LNG Plant constructed at the Port	Binary (yes/no)	P	1	0
			P(a)	1	7,355,461.95
			A	0	0

Component Nbr. 2 Component 2: Smart Energy Solutions

				PHYSICAL PROGRESS	FINANCIAL PROGRESS
				EOP 2023	EOP 2023
Output	Unit of Measure				
2.1	RE capacity installed in NPC/BNOCL/newly created entity facilities	kW	P	1,150	0
			P(a)	1,150	4,704,826.05
			A	0	0
2.2	EE and/or RE equipment installed in NPC and/or BNOCL or newly created entity's operational and administrative facilities	Binary (yes/no)	P	1	0
			P(a)	1	1,360,000
			A	0	0

## RESULTS MATRIX

### OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

#### Component Nbr. 3 Component 3: Technical Advisory Services

				PHYSICAL PROGRESS	FINANCIAL PROGRESS
				EOP 2023	EOP 2023
Output	Unit of Measure				
3.1 Studies developed to improve NPC and/or BNOCL or newly created entity's corporate governance, environmental, legal and regulatory functions, quality management systems, and information technology	# of studies	P		4	0
		P(a)		4	1,223,000
		A		0	0
3.2 NPC and/or BNOCL or newly created entity personnel trained in technical and management areas to support Natural Gas expansion	# of men	P		12	0
		P(a)		0	150,000
		A		0	0
3.3 NPC and/or BNOCL or newly created entity personnel trained in technical and management areas to support Natural Gas expansion	# of women	P		5	0
		P(a)		0	0
		A		0	0
3.4 Bidding documents developed to secure 3 mmcfpd supply of LNG using a PPP scheme	Bidding documents package	P		1	0
		P(a)		0	0
		A		0	0
3.5 Bidding documents developed to select a private sector partner for a PPP LNG project	Bidding documents package	P		1	0
		P(a)		0	0
		A		0	0

#### Other Cost

Program Management, Monitoring and Evaluation	P		
	P(a)		2,598,142.5
	A		0

#### Total Cost

Total Cost	P		0
	P(a)		33,669,262.2
	A		0

### CHANGES TO THE MATRIX

No information available for this section