



RESTRUCTURING PAPER  
ON A  
PROPOSED PROJECT RESTRUCTURING  
OF  
DOMINICA GEOTHERMAL RISK MITIGATION PROJECT  
APPROVED ON MARCH 18, 2019  
TO  
THE COMMONWEALTH OF DOMINICA

FEBRUARY 18, 2022

ENERGY & EXTRACTIVES

LATIN AMERICA AND CARIBBEAN

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**ABBREVIATIONS AND ACRONYMS**

ARAP	Abbreviated Resettlement Action Plan
CD	Country Director
CDB	The Caribbean Development Bank
CO <sub>2</sub>	Carbon Dioxide
CTF	Clean Technology Fund
DA	Designated Account
DFID	Department for International Development
FCDO	Foreign Commonwealth Development Office
DGDC	Dominica Geothermal Development Company
DOMLEC	Dominica Electricity Services Limited
DGPP	Domestic Geothermal Power Plant
EPC	Engineer-Procure-Construct
ESMP	Environmental and Social Management Plan
ESIA	Environmental and Social Impact Assessment
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GoCD	Government of the Commonwealth of Dominica
GoNZ	Government of New Zealand
MW	Mega Watt
PDO	Project Development Objective
RAP	Resettlement Action Plan
RVP	Regional Vice President
SAGS	Steam Above Ground System
SIDS DOCK	Small Island Developing States DOCK
TA	Technical Assistance



CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2021)

Currency Unit:

SDR0.71 = US\$1

US\$1.400 = SDR 1

FISCAL YEAR

July 1 – June 30

**BASIC DATA**

**Product Information**

Project ID P162149	Financing Instrument Investment Project Financing
Original EA Category Full Assessment (A)	Current EA Category Full Assessment (A)
Approval Date 18-Mar-2019	Current Closing Date 28-Feb-2026

**Organizations**

Borrower The Commonwealth of Dominica	Responsible Agency Dominica Geothermal Development Company
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**Project Development Objective (PDO)**

Original PDO

The objective of the proposed Project is to help: a) diversify the domestic power generation mix in Dominica by integrating clean, renewable geothermal energy; and b) demonstrate the potential of larger development of the geothermal resource.



Summary Status of Financing (US\$, Millions)

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Net		
					Commitment	Disbursed	Undisbursed
IDA-63760	18-Mar-2019	03-May-2019	28-Feb-2020	28-Feb-2026	17.20	0	16.95
TF-A9531	18-Mar-2019	03-May-2019	28-Feb-2020	31-May-2022	2.00	2.00	0
TF-A9532	18-Mar-2019	03-May-2019	28-Feb-2020	28-Feb-2026	.95	0	.95
TF-A9533	18-Mar-2019	03-May-2019	28-Feb-2020	28-Feb-2026	9.00	0	9.00
TF-A9545	18-Mar-2019	03-May-2019	28-Feb-2020	30-Jun-2023	10.00	0	10.00

Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No

I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

A. Introduction

1. The proposed restructuring of the Dominica Geothermal Risk Mitigation Project (GRMP, P162149) is to facilitate activities related to the drilling works and consulting services for the transmission network necessary for the development of the Domestic Geothermal Power Plant (DGPP) and PDO achievement.

2. The GRMP, the first World Bank-financed geothermal project in the Caribbean, was approved by the Board of Directors on March 18, 2019 and became effective on February 28, 2020. The GRMP’s total financing of US\$51.45 million comprises (a) IDA credit (US\$17.2 million); (b) Foreign Commonwealth Development Office (FCDO-formerly DFID) grant (US\$10 million); (c) Small Island Developing States DOCK facility (SIDS DOCK) grant (US\$2 million); (d) Clean Technology Fund (CTF) grant (US\$9.953 million); (e) New Zealand Ministry of Foreign Affairs grant (\$2 million) and (f) Counterpart funding (US\$10.3 million). The project closing date is February 28, 2026. The Dominica Geothermal Development Company Ltd (DGDC) is the project implementing agency.

3. This is the third restructuring of the project. The first restructuring in December 2020 was to extend retroactively the closing date of the SIDS DOCK grant from June 30, 2020 to May 31, 2021. The second restructuring, approved in May 2021, extended the closing date of the SIDS DOCK grant one year further to May 31, 2022. This restructuring responds to three formal requests made by the Government of the Commonwealth of Dominica (GoCD). GoCD sent the first letter (May 5, 2020) for a restructuring to repurpose the IDA loan and use the DFID and SIDS DOCK grants to support transmission lines, substations, and battery storage investments. Extensive discussions between the Bank and the client led to the follow-up letter from the government (August 7, 2020), requesting to add the drilling of a new reinjection well using DFID and SIDS DOCK grant and use the IDA loan for the new transmission and substations investment. The Bank consequently proposed a two-step restructuring process to which the government agreed in the third letter (December 3, 2021). That letter also confirmed the scope of this proposed restructuring as the first step, covering additional drilling and Transmission Integration Technical Assistance, including a request to release the US\$6 million Contingent Financing for the drilling.



## **B. Project Status**

4. The project development objective (PDO) of the GRMP is to help (a) diversify the domestic power generation mix in Dominica by integrating renewable geothermal energy; and (b) demonstrate the potential of larger development of the geothermal resource. The project's progress toward achievement of the PDO was rated as moderately satisfactory in June 2021 given improvements in procurement and safeguards activities. However, the overall implementation progress is rated as moderately unsatisfactory due to delays in completing the requirements for the proposed restructuring. In March 2021, US\$2 million of SIDS DOCK grant was disbursed to the project Dedicated Account (DA).

5. The project's Financial Management arrangements are satisfactory and there are no changes proposed. The project's first Interim Financial Report (IFR) covering the period from March 2021 to September 30, 2021, was received. The next IFR is due by May 15, 2022. However, the September 30, 2021 IFR was not used to document expenditures as the DGDC used TF A9531 to pay for invoices under four contracts subject to post review, which will be eligible after the proposed restructuring. The first project audit report for the period ended June 30, 2021, was due by December 31, 2021. However, given the low expenditures during the period of US\$743,245, the Bank approved a request from the DGDC for an exception to combine the audit period from March 1, 2020 – June 30, 2021, with the period of July 1, 2021 – June 30, 2022. The combined audit report is due to the Bank by December 31, 2022.

6. The environmental and social performance of the project to date is satisfactory and DGDC has progressed on implementing the Resettlement Action Plan (RAP). A total of twenty-five affected properties are owned by twenty-four Project Affected People (PAP) (as one PAP owns two affected properties). As of December 2021, negotiations were completed and compensation was approved for eighteen affected properties of which five were paid, and negotiations are in progress for the remaining seven. The Grievance Redress Mechanism is in place and functioning and so far, no complaints have been received.

7. Project Procurement Strategy for Development (PPSD), including the proposed new drilling and the consulting services for new transmission lines and substations, was reviewed by the Bank and found satisfactory. Procurement was launched for the drilling and consulting services for the transmission network in March 2021. As of November 2021, five small contracts under the updated PSD were awarded, with a total cost of US\$4.3 million. Three other contracts with an estimated cost of US\$14.7 million are ready for award, including the largest package valued at US\$12 million for the integrated drilling. While the contract for the Owner's Engineer for the geothermal works can be attributed to the project's existing scope, all other contracts fall under the proposed new drilling and consulting services for the transmission network. The GoCD was informed that the expenditures under the signed four contracts would be eligible for financing under the project only after approval of the project restructuring.

## **C. Rationale for the Restructuring**

8. Procurement activities commenced in July 2019, when the DGDC issued the request for bids for the major contract for Design, Supply, and Installation (also called the Engineer-Procure-Construct or EPC contract) of the DGPP. However, the procurement process was cancelled due to insufficient and costly responses from the market. To identify issues behind the procurement challenge, the DGDC launched a market survey and speeded up several technical studies. The new technical data that emerged on the characteristics and the capacity of the existing production and re-injection indicated the need to modify the project technical scope, design, and implementation approach.

9. In a letter to the World Bank dated May 5, 2020, the GoCD proposed a new project approach, whereby the DGPP would be constructed with an increased capacity of 10MW for domestic supply by a private consortium, which is also interested in the development of a large power plant for electricity export to neighboring French territories. The GoCD requested the restructuring of the GRMP to support the additional drilling of a new reinjection well for the DGPP and the construction of new transmission lines of 52 km and associated substations to integrate the proposed DGPP into the national grid.



10. Geothermal development continues to be a foundation of Dominica’s national development strategy. The proposed new drilling, which would potentially lead to the construction of a DGPP with increased capacity to 10 MW, is considered a top strategic priority for the GoCD. The National Energy Policy, approved in January 2021, aims at phasing out imported fossil fuels and transitioning to indigenous renewable energy resources, with a target of 100 percent renewable energy by 2030. The restructuring would contribute to these national energy targets by increasing the country’s renewable generation capacity from 48 percent to 59 percent, increasing annual renewable electricity production from 61 percent to 80 percent, and increasing the amount of avoided GHG emissions from 38.5 to 55 tons per year.

11. Dominica’s economy was estimated to have contracted by 11.0 percent in 2020 following COVID-induced shocks with a near complete halt in tourism (25 percent of GDP and employment) and other restrictions on domestic activities. Economic growth in 2021 is forecast to rebound to 3.7 percent, with growth accelerating to 7.8 percent in 2022 as tourism and the global economy further recover. Geothermal developments bode well for future growth prospects, as does Dominica’s commitment to becoming a fully climate resilient economy, given that this could drive increases in tourism, but is also expected to mitigate future economic impacts in the sector due to adaptations for sea-level rise, hurricanes, flooding, etc. Against this backdrop, the investment in the geothermal power project remains among the GoCD’s highest economic priorities, aiming at building-back-better in accordance with its Climate Resilience and Recovery Plan 2020-2030.

12. The proposed restructuring would allow the following adjustments:

- (i) Component 1: The additional drilling activities will provide an adequate reinjection capacity, which is needed to develop the DGPP and meet the PDO. The new drilling would also secure additional production capacity, enabling a capacity increase of the DGPP from 7 MW to 10 MW, which would enhance the PDO results. Successful drilling would substantially reduce the upstream resource risks, increase bankability of the downstream development of the DGPP, and reduce geothermal energy costs. It would facilitate DGDC’s finalization of negotiations with its private partners and allow the final agreements to be submitted to the Bank for due diligence.
- (ii) Component 2: The release of US\$6 million of the CTF contingent grant to Component 1 will co-finance the additional drilling of the reinjection well. The CTF grant, together with the grants from FCDO and SICK DOCK, would substantially reduce the negative impacts of the additional drilling to the geothermal energy costs and electricity tariff to consumers in Dominica. The remaining US\$3 million from the CTF grant will be available to support future drilling in line with the grant’s original design. This will require the modification of the conditions for the future release of funds, if necessary.
- (iii) Component 3: Change in component name to **“Technical Assistance and Project Implementation Support”** will simplify and align to the planned activities. It will support technical assistance for a proposed potential new transmission investment to integrate a larger geothermal power plant to the national grid, independent monitoring of the environmental and social performance of the project, studies to promote the direct use of geothermal energy in addition to electricity production; and finally, support project implementation and capacity building.

13. The above changes will necessitate changes in the PDO indicators, intermediate indicators, components, activities, costs, legal covenants, and other areas described in Section II. Description of Proposed Changes.

14. The Bank is closely communicating with GoCD and DGDC regarding the importance of the due diligence to mitigate any risk to the proposed restructuring. The key risk is the possibility that the Bank’s due diligence of the proposed DGPP is not completed or the private financing deal for the DGPP will not proceed as intended after the restructuring is approved by the Bank. The GoCD has demonstrated its high commitment through the appointment of an experienced and competent team of advisers to support the revision and negotiation of the project agreements with the private developers and with DOMLEC. Regular updates and reviews of the key project documents of the DGPP by the Bank have indicated that at



present substantial progress has been made and that the residual risks are manageable. The World Bank is also closely communicating with multilateral and regional development partners, who are interested in providing loans to the private-led DGPP, to ensure coordination between the Bank's due-diligence requirements and those of other partners.

## II. DESCRIPTION OF PROPOSED CHANGES

15. **Proposed Changes.** The following changes are proposed under the level 2 project restructuring.

### (a) **Result Frameworks**

(i) *PDO-level result indicators.* Updating of the target dates of the key indicators from Year 3 to Year 5 to allow adequate time for implementation of the additional drilling, and revising indicators as follows:

“Generation Capacity of Geothermal Energy Facilitated under the project (MW)”: the target of 7 MW is achieved in Year 5 instead of Year 3;

“Increased Share of Renewable Energy Capacity in the Domestic Generation Mix (percentage)”: the target of 51% is achieved in Year 5 instead of Year 3;

“Estimated GHG Emission Reduction Compared to a Business-as- Usual Baseline (tones/year)”: the target of 38,223 tones/year is achieved in Year 5 instead of Year 3;

“Share of women employed in tourism activities facilitated by the project and/or by the Government in proximity of the power plant” (Percentage): reduce the target for Year 3 and Year 4 to 0%; and

Replace the indicator for “Preliminary Feasibility of Larger Development of the Geothermal Field” (Yes/No) by “Preliminary Feasibility of Direct Use of Geothermal Energy” (Yes/No) with the target being achieved in Year 4.

(ii) *Intermediate Results Indicators*

#### • Component 1

Rename the indicator for “Small Geothermal Power Plant (SGPP) Constructed” with “Domestic Geothermal Power Plant (DGPP) and Steam Above Ground System Constructed” (Number), with the target achieved (1) in Year 5;

Remove the indicator for “Steam Above Ground System (SAGS) Constructed (Percentage) which is already included in the above indicator;

Add a new indicator for “A re-injection well and a production well drilled” (Yes/No) with target of Yes achieved in Year 3;

#### • Component 2:

Add a new indicator for “Geothermal resources for electricity generation confirmed through additional production and injection wells” (MW) with target of 10MW in Year 4;

Delete the indicator for “Insurance for Contingent Drilling Established.”

#### • Component 3:

Replace “Pre-Feasibility study for the larger geothermal power plant completed” (Yes/No) with “A Stakeholder Consultation on Direct Use of Geothermal conducted” (Yes/No), with target of Yes achieved in Year 3;



Delete the indicator for “Outreach to Market to Solicit Private Sector Interest to Invest in DGDC Completed” (Yes/No);

Change the target date for the indicator for Gender and Geothermal Energy Workshop Conducted (Yes/No) to Year 4 instead of Year 2.

**(b) Component and Costs**

(i) Component 1 (Part 1)

Change the component name to “Facilitating Development of Domestic Geothermal Power Generation Capacity” from “Development of Domestic Geothermal Power Generation Capacity”

Revision of the component description to include the drilling of a new production well and reinjection well as follows:

*“Drilling of the RV-P2 production well and the RV-I2 reinjection well at the Wotten Waven-Laudat geothermal field in the Roseau Valley, including construction of two well pads and corresponding access roads to the well pads, all aiming at facilitating the development of a domestic geothermal power plant (DGPP) and the associated steamfield above-ground systems.”*

Change in cost allocation:

- Reduction of IDA allocation by US\$2.5 million from US\$17.2 million (SDR 12.30 million) to US\$14.7 million (SDR 10.514 million)
- New allocation of CTF Grant to this component in the amount of US\$6 million.

(ii) Component 2 (Part 2)

Revision of the component description to update conditions for CTF support as follows:

*“Provision of support to drill additional production and/or reinjection wells at Wotten Waven-Laudat geothermal field if: (a) the WW-P1 and RV-P2 production wells do not adequately meet the Defined Minimum Level of Production; and/or (b) if the capacity of the RV-I2 reinjection well falls below the Defined Minimum Reinjection Capacity.”*

Change in Definitions. The definition of the Defined Minimum Production Capacity, and Define Minimum Reinjection Capacity in all legal documents will be revised as follows:

*“Defined Minimum Level of Production” means the level of production achieved when the Level of Production physical parameters reach the following values: (i) mass flow two-phase fluids >100 kg/s; (ii) enthalpy two-phase fluids >1,100 kJ/kg; (iii) operating pressure at wellhead = 6.0 bara as further specified in the Operational Manual.”*

and

*“Defined Minimum Reinjection Capacity” means the minimum reinjection capacity for hot reinjection is as follows: i) mass flow of single phase fluids (liquid@160°C) > 80 kg/s, ii) operating pressure =6.0 bara; and for cold reinjection is as follows: i) mass flow of single phase fluids (liquid@40°C) > 20 kg/s, ii) operation pressure = 1.0 bara as further specified in the Operational Manual.”*

Cost allocation. Reduce the allocation of CTF Grant under the component from US\$9 million to US\$3 million.

(iii) Component 3 (or Part 3):



Change the component name to “Technical Assistance and Project Implementation Support” from “Technical Assistance for Advancing a Large Geothermal Power Plant to Development Status and Soliciting Private Sector Investment.”

Revision of the component description to include more details on existing and new technical assistance and remove technical assistance related to solicitation of private sector interest in large geothermal power plants as follows:

*“Provision of technical assistance for, inter alia: (a) supporting the promotion of direct use of geothermal energy; and (b) carrying out technical studies, environmental and social assessment, management plans, and resettlement action plans for a potential transmission network integration of the DGPP to the national grid if the increase of its geothermal capacity materializes; independent monitoring of the environmental and social performance of the Project and the DGPP; and capacity building for Project implementation.”*

Change in cost allocation: Add a new allocation of IDA to this component in the amount of US\$2.5 million (SDR 1.786 million).

**(c) Reallocations between Disbursement Categories**

- (i) **CTF Contingent Financing.** In December 2021, the DGDC provided to the Bank the evidence required to release CTF contingent financing in the form of its Owner’s Engineer assessment, according to which all three existing reinjection wells -- WW-R1, WW-03, and WW-01 -- do not meet the Defined Minimum Reinjection Capacity as specified in the legal agreements of the project, including the CTF Grant Agreement. The evidence was reviewed by the World Bank and found satisfactory.

Therefore, the disbursement condition originally envisaged for the proposed release of US\$6 million CTF funding is met. Considering that the additional drilling to be included as part of the project through this restructuring will now be reflected under Component 1, the US\$6 million will be allocated to Component 1. The remaining US\$3 million will remain contingent under Component 2 to support further drilling in case the new reinjection well RV-I2 fails to meet the Defined Minimum Reinjection Capacity or the new production well RV-P2 combined with the existing production well WW-P1 fail to meet the Defined Minimum Production Capacity for the re-configured DGPP. Thus, the disbursement conditions for Component 2 are to be amended accordingly.

- (ii) **For CTF Grant Number TFOA9533:** Create a new disbursement category of Goods, works, non-consulting services, consulting services, Operating Costs and Training for Component 1 (Part 1) in the amount of US\$6 million and reduce the allocation to the existing category for Component 2 (Part 2) from US\$9 million to US\$3 million. Details are provided in Section IV.
- (iii) **For IDA:** create a new disbursement category of Goods, works, non-consulting services, consulting services, Operating Costs and Training for Component 3 (Part 3) in the amount of SDR 1.786 million and reduce the allocation to the existing category for Component 1 (Part 1) from SDR 12.3 million to SDR 10.514 million.

- (d) Disbursement Estimates.** The disbursement estimates have been revised as provided in Section IV.

- (e) Legal Covenants.** Revise Section I.D (k) (i) of Schedule 2 of the legal agreements to clarify the safeguard requirements to DGPP as the project’s associated facility. Add Section I.D (k)(ii) the safeguard requirements to the new transmission investments in case the GOCD decides to undertake it as follows:

*“(i) to take all measures to ensure that the DGPP associated with the Project is carried out in accordance with the Performance Standards, the Environmental and Social Instruments and all Applicable*



*Environmental and Social Laws; and (ii) in the event that the Recipient decides to carry out a transmission network integration of the DGPP to the national grid as a result of the materialization of the DGPP's increased geothermal capacity, to ensure that said investments are carried out in accordance with the Performance Standards, the relevant environmental and social assessment, management plans, and resettlement action plans, and all Applicable Environmental and Social Laws."*

The Financing Agreement (FA), FCDO, SIDS DOCK, CTF Grant Agreements (GAs), and relevant appendices were also updated with changes to the terms, definitions, and disclosure dates in the safeguard instruments.

- (f) **Technical Analysis.** The World Bank team reviewed several technical studies for the resource re-testing, new drilling, and re-configuration of the DGPP, and found recommendations for additional drilling and the study for the transmission line to be technically justified. Therefore, changes were made to (i) add new drilling activities for reinjection and production wells and (ii) finance the consulting services related to the proposed transmission lines and substations.
- (g) **Environmental and Social Analyses.** The project was processed using the Performance Standards for Private Sector Activities (OP/BP 4.03).<sup>1</sup> Several environmental and social (E&S) instruments were prepared by the Borrower and approved by the Bank during the original project appraisal to cover the geothermal plant and other associated infrastructures. According to the revised scope of works under the proposed restructuring, the DGPP and the associated SAGS will be constructed by a private developer. The updating of the safeguards instruments of the reconfigured DGPP, including the additional drilling, has been supported by the Inter-American Development Bank (IDB) and the Caribbean Development Bank (CDB). The development of the DGPP meets the criteria of an Associated Facility, and the World Bank's Operational Policy 4.03 will apply to the development of the geothermal plant and all associated systems.  
  
The updated ESIA has identified a number of environmental, health, and safety impacts associated with the civil works. In particular, risks associated with the works supported by the World Bank include (a) air emissions, increased noise, dust, and solid and waste generated from construction activities; (b) erosion and sedimentation; and (c) potential impacts on biodiversity. The updated ESMP outlines measures to mitigate and monitor risks and impacts identified as part of the ESIA, through avoidance, minimization, and compensation/offset that will be applied to the construction and operation of the power plant and reinjection pipelines and wells. It includes the requirement to develop site specific plans as needed, such as for biodiversity management; erosion and sediment control; air, water, and noise management; emergency response; occupational health and safety. An abbreviated RAP<sup>2</sup> was prepared and approved in 2018 (2018 ARAP); however, due to project design changes, a new RAP was prepared in 2021 (also called 2021 RAP). The new RAP incorporates the legacy PAPs<sup>3</sup> as well as all PAPs who will be affected by the updated project design. The total number of PAPs increased from fourteen in the 2018 ARAP to twenty-four, including two legacy PAPs. Three PAPs have their residential structure affected and two PAPs are economically displaced. The remaining lands are abandoned agriculture lands.
- (h) **Other changes.** Retroactive effectiveness of the restructuring to March 31, 2021 is proposed to allow the documentation of eligible expenditure under the signed contracts procured following the Bank procedures.

<sup>1</sup> While the project is under WB OP/BP 4.03, WB OP 4.12 applies to the land acquisition process for the project.

<sup>2</sup> The document is formally called Abbreviated Resettlement Action Plan (ARAP or 2018 ARAP) as the number of displaced people is less than 200.

<sup>3</sup> Legacy PAPs are the PAP affected during the original drilling phase of the areas from 2010-2014. According to the new RAP, there are five legacy PAP, three of which were fully compensated by the project following the OP 4.12. The two remaining legacy PAP are covered in the new RAP.



### III. SUMMARY OF CHANGES

	Changed	Not Changed
Results Framework	✓	
Components and Cost	✓	
Reallocation between Disbursement Categories	✓	
Disbursement Estimates	✓	
Legal Covenants	✓	
Other Change(s)	✓	
Technical Analysis	✓	
Social Analysis	✓	
Environmental Analysis	✓	
Implementing Agency		✓
DDO Status		✓
Project's Development Objectives		✓
PBCs		✓
Loan Closing Date(s)		✓
Cancellations Proposed		✓
Disbursements Arrangements		✓
Overall Risk Rating		✓
Safeguard Policies Triggered		✓
EA category		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓
Economic and Financial Analysis		✓



**IV. DETAILED CHANGE(S)**

**COMPONENTS**

<b>Current Component Name</b>	<b>Current Cost (US\$M)</b>	<b>Action</b>	<b>Proposed Component Name</b>	<b>Proposed Cost (US\$M)</b>
DEVELOPMENT OF DOMESTIC GEOTHERMAL POWER GENERATION CAPACITY (SGPP)	41.50	Revised	FACILITATING DEVELOPMENT OF DOMESTIC GEOTHERMAL POWER GENERATION CAPACITY (SGPP)	47.72
CONTINGENT FINANCING IN AID OF ADDITIONAL DRILLING	9.00	Revised	CONTINGENT FINANCING IN AID OF ADDITIONAL DRILLING	3.00
TECHNICAL ASSISTANCE FOR ADVANCING LGPP TO DEVELOPMENT STATUS AND SOLICITING PRIVATE SECTOR INVESTMENT	0.95	Revised	TECHNICAL ASSISTANCE AND PROJECT IMPLEMENTATION SUPPORT	3.45
<b>TOTAL</b>	<b>51.45</b>			<b>54.17</b>

**REALLOCATION BETWEEN DISBURSEMENT CATEGORIES**

	<b>Current Allocation</b>	<b>Actuals + Committed</b>	<b>Proposed Allocation</b>	<b>Financing % (Type Total)</b>	
				<b>Current</b>	<b>Proposed</b>
IDA-63760-001   Currency: XDR					
iLap Category Sequence No: 1		Current Expenditure Category: GO, CW, NCS, CS, OP & TR - Part 1			
	12,300,000.00	0.00	10,514,000.00	100.00	100.00
iLap Category Sequence No: 2		Current Expenditure Category: GO, CW, NCS, CS, OP & TR - Part 3			
	0.00	0.00	1,786,000.00		100
<b>Total</b>	<b>12,300,000.00</b>	<b>0.00</b>	<b>12,300,000.00</b>		



TF-A9533-001 | Currency: USD

iLap Category Sequence No: 1	Current Expenditure Category: GO, CW, NCS, CS, OP, TR - Part 2			
9,000,000.00	0.00	3,000,000.00	100.00	100.00
iLap Category Sequence No: 2	Current Expenditure Category: GO, CW, NCS, CS, OP, TR - Part 3			
0.00	0.00	0.00	100.00	0
iLap Category Sequence No: 3	Current Expenditure Category: GO, CW, NCS, CS, OP, TR - Part 1			
0.00	0.00	6,000,000.00		100
<b>Total</b>	<b>9,000,000.00</b>	<b>0.00</b>	<b>9,000,000.00</b>	

**DISBURSEMENT ESTIMATES**

Change in Disbursement Estimates  
Yes

Year	Current	Proposed
2019	67,492.80	0.00
2020	778,489.20	0.00
2021	1,023,056.00	2,000,000.00
2022	1,609,799.60	8,470,000.00
2023	2,448,076.00	12,200,000.00
2024	3,639,416.80	3,730,000.00
2025	4,800,021.20	8,090,000.00
2026	2,833,648.40	4,680,000.00

**LEGAL COVENANTS**

Loan/Credit/TF	Description	Status	Action
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IDA-63760	Financing Agreement; Schedule 2 - Project Execution; Section I. Implementation Arrangements; A. Institutional Arrangements; Par. 1: The Recipient shall cause DGDC to operate and maintain, throughout Project implementation, a Project team to be responsible for the overall implementation, management, monitoring and evaluation of the Project with qualified and experienced staff in sufficient numbers, as well as with adequate funds, facilities, services and other resources acceptable to the Association, as further detailed in the Project Operations Manual.	Complied with	No Change
IDA-63760	Financing Agreement; Schedule 2 - Project Execution; Section I. Implementation Arrangements; A. Institutional Arrangements; Par. 4: The Recipient, through the Ministry of Housing and Lands, shall no later than one (1) month after the Effective Date, enter into a separate agreement (Cooperation Agreement) with DGDC, under terms and conditions acceptable to the Association, to facilitate and coordinate the implementation of the Environmental and Social Instruments and the ESAP, including, inter alia, details on the roles and responsibilities for land acquisition, as further detailed in the ARAP. Except as the Association shall otherwise agree, the Recipient shall not assign, amend, abrogate or waive the Cooperation Agreement or any of its provisions.	Complied with	No Change
IDA-63760	Financing Agreement; Schedule 2 - Project Execution; Section I. Implementation Arrangements; B. Subsidiary Agreement; Par. 1: To facilitate the carrying out of the Project, the Recipient shall make part of the proceeds of the Financing allocated from time to time to Category (1) available to DGDC under a subsidiary agreement between the Recipient and DGDC, under terms and conditions approved by the Association ("Subsidiary Agreement") which shall include, inter alia: (a) the roles and responsibilities of DGDC with regard to the implementation of the Project; and (b) the obligation of DGDC to comply with the technical, fiduciary and environmental and social requirements applicable to the Project in accordance with the provisions of this Agreement.	Complied with	Revised



Proposed	The same requirement but add "and Category (2)" next to "Category (1)".	Expected soon	
IDA-63760	<p>Financing Agreement; Schedule 2 - Project Execution; Section I. Implementation Arrangements; C.Project Operations Manual; Par. 1:The Recipient shall carry out, and cause DGDC to carry out, the Project in accordance with a manual (the Project Operations Manual), which consists of different schedules setting forth, respectively, rules, methods, guidelines, specific development plans, standard documents, and procedures for the carrying out of the Project, including, inter alia, the following: (a) the detailed description of Project activities, their sequencing and the prospective timetable and benchmarks in relation thereto; (b) the Project administrative, accounting, auditing, reporting, financial, and disbursement procedures, including all pertinent standard documents and model contracts; (c) the plan for the monitoring, evaluation and supervision of the Project; (d) the Environmental and Social Instruments, the Performance Standards, the ESAP and the form of Bi-annual Monitoring Report of the Project; (e) the detailed definition, methodology and content of the Defined Minimum Level of Production; (f) the detailed definition, methodology and content of the Defined Minimum ReInjection Capacity; (g) the grievance redress mechanism; and (h) the performance indicators for the Project.</p>	Complied with	No Change
IDA-63760	<p>Financing Agreement; Schedule 2 - Project Execution; Section I. Implementation Arrangements; D. Environmental and Social Management of the Project; Par. 1 (c): The Recipient shall cause DGDC to provide adequate resources to ensure that the implementation of the Environmental and Social Management System is continued and effective and that the Environmental and Social Management System is operated, and the social and environmental performance of the Project is managed in a manner consistent with the Performance Standards and the Environmental and Social Instruments.</p>	Complied with	No Change



IDA-63760	Financing Agreement; Schedule 2 - Project Execution; Section I. Implementation Arrangements; D. Environmental and Social Management of the Project; Par. 2: The Recipient, through the Ministry of Housing and Lands, shall take all measures to implement the ARAP in a manner and timeframe satisfactory to the Association. To this end, the Recipient shall ensure, inter alia, that: (i) prior DGDC carrying out works which involve resettlement (as determined by the Association), Affected Persons are compensated at replacement costs, resettled and provided with assistance in accordance with the ARAP, as appropriate; and (ii) complaints related to land acquisition are addressed in a timely and adequate manner, as further detailed in the ARAP.	Partially complied with	No Change
IDA-63760	Section I.D(1)(k) of Schedule 2- Financing Agreement:(ii) in the event that the Recipient decides to carry out a transmission network integration of the DGPP to the national grid, to ensure that said investments are carried out in accordance with the Performance Standards, the relevant environmental and social assessment, management plans, and RAPs, and all Applicable Environmental & Social Laws.	Not yet due	New
IDA-63760	Section I.D(1)(k) of Schedule 2- Financing Agreement: (i) to take all measures to ensure that the DGPP associated with the Project are carried out in accordance with the Performance Standards, the Environmental and Social Instruments and all Applicable Environmental and Social Laws.	Not yet due	New



**Results framework**

**COUNTRY: Dominica**

**Dominica Geothermal Risk Mitigation Project**

**Project Development Objectives(s)**

The objective of the proposed Project is to help: a) diversify the domestic power generation mix in Dominica by integrating clean, renewable geothermal energy; and b) demonstrate the potential of larger development of the geothermal resource.

**Project Development Objective Indicators by Objectives/ Outcomes**

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
<b>Generation capacity of geothermal energy facilitated under the Project (MW)</b>								
Generation Capacity of Geothermal Energy Facilitated under the Project (Megawatt)		0.00	0.00	0.00	0.00	0.00	7.00	7.00
<b>Action: This indicator has been Revised</b>	<b>Rationale:</b> <i>The immediate target of the commissioning date of the domestic geothermal power plant is revised from February 2023 to February 2025.</i>							
<b>Increased share of renewable energy capacity in the domestic generation mix (percentage)</b>								
Share of Renewable Energy Capacity in the Domestic Generation Mix (Percentage)		24.70	24.70	24.70	24.70	24.70	51.00	51.00
<b>Action: This indicator has been Revised</b>	<b>Rationale:</b> <i>The immediate target of achieving an increased share of RE in the domestic generation mix is revised to Year 5 in accordance with the updated commissioning date of the DGPP.</i>							



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
<b>Preliminary feasibility of direct use of geothermal energy completed (Action: This Objective has been Revised)</b>								
Preliminary Feasibility of Direct Use of Geothermal Energy Completed (Yes/No)		No	No	No	No	Yes	Yes	Yes
<b>Action: This indicator has been Revised</b>	<b>Rationale:</b> <i>The Preliminary feasibility study will be undertaken for the direct use of geothermal energy as the Pre-FS for the larger development of the geothermal field is no longer needed.</i>							
<b>Estimated GHG emissions reduction compared to a business-as-usual baseline (tCO2)</b>								
Estimated GHG Emissions Reduction Compared to A Business-As-Usual Baseline (Tones/year)		0.00	0.00	0.00	19,111.00	19,110.00	38,223.00	38,223.00
<b>Action: This indicator has been Revised</b>	<b>Rationale:</b> <i>The immediate targets to achieve the GHGs emission reduction are revised in accordance with the updated commissioning date of the DGPP in Year 5.</i>							
<b>Increased income generating opportunities for women</b>								
Share of women employed in tourism activities facilitated by the project and/or by the Government in proximity of the power plant (Percentage)		0.00	0.00	0.00	0.00	0.00	30.00	60.00
<b>Action: This indicator has been Revised</b>	<b>Rationale:</b>							



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
<p><i>The immediate targets are revised in accordance with the updated project implementation plan.</i></p>								

**Intermediate Results Indicators by Components**

Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
<p><b>Facilitating Domestic Geothermal Power Plant (DGPP) (Action: This Component has been Revised)</b></p>									
Domestic Geothermal Power Plant (DGPP) and Steam Above Ground System Constructed (Number)		0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
<p><b>Rationale:</b>  <b>Action: This indicator has been Revised</b> <i>The name of the small geothermal power plant is revised as domestic geothermal power plant (DGPP). The target year of completion of DGPP is revised from February 2023 (Year 3) to February 2025 (Year 5) to allow time for the additional drilling.</i></p>									
A re-injection well and a production well are drilled and tested. (Yes/No)		No	No	No	Yes	Yes			Yes
<p><b>Action: This indicator is New</b></p>									
<p><b>Steam Above Ground System (SAGS) (Action: This Component has been Marked for Deletion)</b></p>									



Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
Steam Above Ground System (SAGS) Constructed (Percentage)		0.00	0.00	0.00	0.00	50.00	100.00	100.00	100.00
<b>Action: This indicator has been Marked for Deletion</b>	<b>Rationale: The indicator has been included in the indicator of Facilitating Domestic Geothermal Power Plant.</b>								
<b>Insurance for Contingent Drilling (Action: This Component has been Revised)</b>									
Insurance for Contingent Drilling Established (Yes/No)		No	No	No	No	No	Yes	Yes	Yes
<b>Action: This indicator has been Marked for Deletion</b>	<b>Rationale: This indicator is no longer needed.</b>								
Geothermal resources for electricity generation confirmed through additional production and injection wells (Megawatt)		0.00	0.00	0.00	10.00	10.00			10.00
<b>Action: This indicator is New</b>	<b>Rationale: The drilling of the additional production and reinjection wells are supported with the contingent financing</b>								
<b>Technical Assistance and Project Implementation Support (Action: This Component has been Revised)</b>									
Gender and Geothermal Energy Workshop Conducted (Yes/No)		No	No	No	No	Yes	Yes		Yes



Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
<i>Action: This indicator has been Revised</i>									
A stakeholder consultation on Direct Use of Geothermal Energy is conducted. (Yes/No)	No	No	Yes	Yes	Yes			Yes	
<i>Action: This indicator is New</i>									



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Dominica Geothermal Risk Mitigation Project (P162149)

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