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Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 14-Nov-2018 | Report No: PIDISDSA21541



BASIC INFORMATION

A. Basic Project Data

Country Dominica	Project ID P162149	Project Name Dominica Geothermal Risk Mitigation Project	Parent Project ID (if any)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date 03-Sep-2018	Estimated Board Date 27-Feb-2019	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) The Government of the Commonwealth of Dominica	Implementing Agency Dominica Geothermal Development Company	

Proposed Development Objective(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) help demonstrate the potential of larger development of the geothermal resource.

Components

DEVELOPMENT OF DOMESTIC GEOTHERMAL POWER GENERATION CAPACITY (SGPP)
CONTINGENT FINANCING IN AID OF ADDITIONAL DRILLING
TECHNICAL ASSISTANCE FOR ADVANCING LGPP TO DEVELOPMENT STATUS AND SOLICITING PRIVATE SECTOR INVESTMENT

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	51.50
Total Financing	51.50
of which IBRD/IDA	17.20
Financing Gap	0.00

DETAILS

World Bank Group Financing



International Development Association (IDA)	17.20
IDA Credit	17.20
Non-World Bank Group Financing	
Counterpart Funding	10.30
Borrower	10.30
Trust Funds	22.00
Clean Technology Fund	10.00
Support for Small Island Developing States (SIDS) DOCK Suppo	2.00
Free-standing Single Purpose Trust Fund	10.00
Other Sources	2.00
NEW ZEALAND: Ministry of Foreign Affairs	2.00

Environmental Assessment Category

A-Full Assessment

Decision

The review did authorize the team to appraise and negotiate

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Other Decision (as needed)

B. Introduction and Context



Country Context

- 1. The Commonwealth of Dominica is a small island state in the Eastern Caribbean Region that faces growth and sustainability challenges due to natural hazards and external shocks.** With an area of 750 square kilometers, a population of 73,543 and a gross domestic product (GDP) of US\$581.48 million, the Commonwealth of Dominica (Dominica) is an upper-middle income member of the Organization of Eastern Caribbean States (OECS). While historically its economy has been heavily reliant on agriculture, agriculture's contribution to GDP has declined considerably from 30 percent in the early 1990s to 15 percent in 2016 mostly due to the loss of preferential access to the European Union market. Foreign direct investment has also contracted following 2008 global economic crisis. Recurrent meteorological events have severely affected Dominica's economy and pose an ongoing threat to poverty reduction and long-term development. Average annual losses from weather-related events between 1996 and 2015 are estimated at 7.9 percent of GDP, making Dominica the second most affected country globally during this period. On September 18, 2017, Hurricane Maria hit the island with catastrophic effect. Almost every household and economic sector, was affected. Damages totaled US\$931 million and losses US\$382 million, equal to 226 percent of 2016 GDP. The immediate impact on poverty, livelihood and output has been severe. US\$35.1 million of income was lost and the poverty headcount ratio could increase to 42.8 percent without extensive mitigation measures. Response from development partners has been immediate, extensive and well-coordinated. The World Bank has arranged for the largest financing support through emergency operations targeting housing and infrastructure recovery as well as agriculture and small businesses.
- 2. Building resilience is Dominica's utmost priority and this entails a more diversified and greener energy mix.** Due to recent events, the Government of the Commonwealth of Dominica (GoCD) has adopted the National Resilient Development Strategy (NRDS), which sets Dominica's mission and pathway towards becoming "*the first climate-resilient country in the world*". This emphasizes the need of leveraging the country's large indigenous geothermal energy resources to diversify the energy mix. Geothermal is an equally green yet more resilient alternative baseload capacity than hydropower, which accounts for a third of Dominica's installed generation capacity and is fragile to climate events, as well as is more cost-efficient than diesel-based capacity, which accounts for a predominant part of Dominica's energy mix.
- 3. Restoring growth, accelerating poverty reduction and achieving shared prosperity will require enhancing competitiveness in traditional economic sectors and capturing new ones.** While progressively recovering from the disaster, the country must focus on increasing productivity in traditional economic sectors as well as seizing new ones. This first and foremost require addressing the inadequacy and high costs of infrastructure services, especially electricity. Lower electricity costs would enable a shift to more energy-intensive, higher added-value businesses, such as agro-processing. They would also allow Dominica to better compete price-wise with other Caribbean touristic destinations, as tourism picks up again. A key growth opportunity is associated with developing geothermal energy for exports to neighboring countries; electricity produced domestically could earn to Dominica large revenues and significantly boost GDP growth.



Sectoral and Institutional Context

4. **Dominica has a small power system that relies heavily on diesel to produce electricity.** Prior to hurricane Maria, Dominica's installed generation capacity totaled 26.7 megawatt (MW), of which more than 20 MW were diesel-based. The residual 6.6 MW derived from three small cascading run-of-the-river hydro plants. The power system is operated by a single, vertically integrated private concessionaire, Dominica Electricity Service Limited (DOMLEC). Previously, its license was exclusive; but, since the approval of the Electricity Supply Act (ESA) in 2006, the Independent Regulatory Commission (IRC) – the regulator – may license other generators. DOMLEC served 36,467 customers, most of which residential, accounting for 98 percent of the island's population.

5. **Dominica's power system suffered widespread devastation due to Hurricane Maria.** Electricity service completely ceased following the disaster because of the widespread and severe damages to the transmission and distribution (T&D) system. At least 75 percent of the network was damaged or destroyed; damages to generation sites varied from moderate to severe. Recovery of the national power system has progressed steadily, although at a slower pace than expected. DOMLEC expects to reconnect all customer and have load returning to pre-hurricane levels in one-year time.

6. **Owing to the reliance on imported diesel, Dominica has historically faced overly high and volatile electricity prices.** The average retail price of electricity in Dominica, at around US\$33 per kWh as of end of December 2016, was among the highest in the world. In addition, customers are exposed to the volatility of international oil prices, which make it difficult for Dominica's people and firms to predict their electricity costs. High and volatile electricity prices severely hit domestic consumers, and especially the poor, and pose a major burden on firm competitiveness. Increased costs of diesel imports also create a severe negative impact on the country's balance of trade. Lowering and stabilizing electricity costs was the single most impending priority for Dominica's power sector ahead of Hurricane Maria and is even more so now, as the country needs to seek any opportunity for recovery and accelerated growth.

7. **Developing geothermal resources can critically help lower electricity costs, build a more resilient power sector and be a 'game changer' for Dominica.** As an underground resource, geothermal steam cannot be lost due to weather events and the above-ground infrastructure can be built with enhanced resilient features. As such, in Dominica, geothermal is the most resilient alternative to diesel for supplying baseload generation. As an indigenous resource, geothermal offers a natural hedge against the price volatility of imported fuels. The volume of geothermal resources, largely exceeding domestic needs, provides a transformational growth opportunity for the country, if larger capacity is built for electricity export purposes. Developing geothermal capacity is instrumental to building resilience in the face of climate change and external shocks and can realistically transform Dominica's economy in the long run.

8. **Dominica has made major progress towards developing the Wotten Waven-Laudat geothermal field in the Roseau Valley enlisting support from various development partners including the World Bank.** With the assistance of the European Union (EU), the Government of France, the Regional Councils of Guadeloupe and Martinique and the Agence Française de Développement (Afd), the GoCD completed surface studies and drilled three slim-hole wells, which confirmed the existence of a geothermal resource that could provide as much as 100 MW of geothermal capacity. The following drilling of two production/injection wells confirmed sufficient steam availability at the wellhead to develop a 7 MW plant. Since 2013, the World Bank in association with some other donors has continued to provide technical assistance (TA) to the GoCD to help advance preparation of the green-field site at Wotten Waven-Laudat according to industry and international standards. In line with industry practice worldwide, the GoCD has decided to embrace a modular expansion of the geothermal field. Specifically, a 7 MW small geothermal power plant (SGPP) will first be developed to feed domestic demand. This will also confirm the production capability of the steamfield, which is a prerequisite to further expansion of the Wotten Waven-Laudat field. Thereafter, depending on resource availability, a large



geothermal power plant (LGPP) with a capacity of 40-100 MW could be developed for supplying electricity exports to Guadeloupe and/or Martinique through undersea cables.

9. **The GoCD seeks to attract private participation to take geothermal development forward.** The GoCD has taken the lead and borne the initial and riskier investments to confirm the geothermal resource at the Wotten Waven-Laudat, with the ultimate objective to attract a private developer. As result, resource risks associated with SGPP have been minimized. Nonetheless, the incipient stage of the geothermal market and the lack of a track record of deals in the Caribbean region still create a perception of a high-risk environment among prospective private investors. Following two failed attempts to enlist a private partner, and pressed by the urgent need to displace diesel generation to reduce electricity costs in the country, the GoCD has resolved to proceed and develop SGPP with public funding. Going forward, only the private sector can develop LGPP and achieve the scale at which Dominica expects to expand its geothermal capacity. Prospects for LGPP are inextricably linked to SGPP. A SGPP that is successfully developed and properly operated will confirm the viability of expanding the Wotten Waven-Laudat field. Therefore, in addition to accommodating a key national goal, the development of SGPP is an integral part of the GoCD's strategy to de-risk the next, larger, and more complex investments in the field and find a qualified private developer for LGPP.

10. **Arranging low-cost financing, mobilizing global industry knowledge, and enhancing investor confidence are critically needed to move the geothermal program forward.** Analyses conducted by the World Bank have shown that access to low-cost financing has the highest impact in terms of reduction of the electricity retail price once SGPP is built. Equally important is to develop and operate SGPP successfully and ensure proper steamfield management. To this extent, insurance against contingencies, and global industry knowledge and practice are also needed. To address the remaining barriers associated with development of the Wotten Waven-Laudat field, upon request by the GoCD, the World Bank in coordination with other development partners has designed the Dominica Geothermal Risk Mitigation Project (the Project).

C. Proposed Development Objective(s)

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Development Objective(s) (From PAD)

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) assess the viability of exporting geothermal-based electricity to regional islands.



Key Results

The primary results arising upon completion of the proposed Project are expected to be:

- (a) Generation capacity of geothermal energy constructed under the Project (MW, as measured by the installed capacity of SGPP);
- (b) Increased share of renewable energy capacity in the domestic generation mix (percentage);
- (c) Preliminary feasibility ascertained regarding the prospects for regional electricity trade through exports of geothermal power;
- (d) Estimated GHG emissions reduction compared to a business-as-usual baseline (tCO₂e); and
- (e) Number of women benefiting from Community Development Fund's income generating activities (number).

D. Project Description

The proposed Project will comprise of three strategic components:

- (a) **Component 1: Development of Domestic Geothermal Power Generation Capacity (US\$38.2 million)** – This component will entail construction of a 7 MW small geothermal power plant (SGPP) and the associated steamfield above-ground systems (SAGS), based on the existing well inventory that has been drilled by the GoCD, plus the transmission interconnection to the nearest sub-station at Laudat¹ for dispatching electricity into the DOMLEC system.
- (b) **Component 2: Contingent Financing in Aid of Additional Drilling (US\$9 million)** – Under this component, funds will be set aside to finance the drilling of additional (make-up) production and/or reinjection wells in case the productivity of the existing production well declines below an acceptable level and/or the injectivity of the reinjection well does not adequately support power production.
- (c) **Component 3: Technical Assistance for Advancing LGPP to Development Status and Soliciting Private Sector Investment (US\$1 million)** – This component will finance a comprehensive set of analysis that will help make an informed decision on expanding the geothermal field and identify a clear roadmap for developing LGPP. The exact activities will be selected so as to avoid overlapping with analytical work financed by other donors, which may directly or indirectly relate to Dominica's geothermal development program.

E. Implementation

The Dominica Geothermal Development Company Ltd. (DGDC) is the implementing agency of the proposed Project and will develop, own and operate SGPP. The company is founded under corporate law and is a private company in all respects, despite the GoCD currently being its only shareholder. Funds made available to the Project from the World Bank and other development partners (CTF, DFID, SIDS DOCK) will be channelled to DGDC through the GoCD.

DGDC is governed by a fully independent Board composed of four Directors headed by an Executive Chairman. The company's staff comprises five professionals including: (i) a Project Manager, who has the responsibility to oversee all project activities; (ii) a Financial Controller; and (iii) a dedicated safeguard team, including an Administration and

¹ The transmission interconnection to Laudat will include the construction of a new transmission line to the existing hydro power station, covering a distance of about 300 meters.



Safeguards Officer, a Community Liaison Officer and a Site and Office Attendant. DGDC is being assisted by international specialists with global experience in geothermal development programs, all contracted by DGDC using **own** funds. Jacobs New Zealand Ltd. (Jacobs) has been recently appointed as Owner's Engineer. All civil works, the geothermal power plant and associated steam gathering system to be constructed under component 1 will be procured through a single Engineer-Procure-Construct (EPC) contract.

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F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Project stakeholders include: landowners in the project area, communities within the Roseau Valley, local businesses including the tourism industry, regulatory agencies, community groups, local and central authorities. These parties were all consulted, in addition to civil society and agencies interested in the environmental and social impacts of the project. A Stakeholder Engagement Plan has been prepared. It establishes the ground rules for continuous engagement and dialogue with various stakeholders during preparation, construction and operational phases. It clearly outlines the responsibilities of the DGDG for stakeholder engagement. It is expected that this plan will be reviewed throughout the construction phase and annually during the operational phase. A robust process of stakeholder consultations and dialogue was carried out, beginning in 2013 and continued for the ESIA, as part of the Stakeholder Engagement. The consultations documented community concerns about: the potential risks associated with the geothermal plant; the potential impacts (which can be both positive and negative) on ecotourism that is a key economic activity in the valley, among others. Expectations about job creation were also mentioned. Consultations held as part of project preparation include: three public meetings between December 2016 and August 2017. A total of 15 focus group meetings were held as part of the ESIA baseline data collection. Together, all the consultation meetings provided the opportunity for representatives of local hotels and resorts, handicraft vendors, hot springs businesses, and unemployed parties in the area to express their concerns towards the project. Following Hurricane Maria in September 2017, five focus group meetings were held in Laudat, Wotten Waven and Trafalgar to identify the impacts of Hurricane Maria on the community and to understand how conditions in the Project area have changed since the ESIA baseline data was collected pre-Hurricane Maria. During this round of consultations, communities expressed additional concerns coming out of the hurricane experience. Volume 2 of the ESIA presents a summary of the consultation comments and how these are responded to all through the ESIA.



G. Environmental and Social Safeguards Specialists on the Team

Gibwa A. Kajubi, Social Specialist

Ximena Rosio Herbas Ramirez, Environmental Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered
Performance Standards for Private Sector Activities OP/BP 4.03	Yes	Applies because of the private sector nature of the project. The applicable Performance Standards are: PS1 - Assessment and Management of Environmental and Social Risks and Impacts; PS2 - Labor and Working Conditions; PS3 - Resource Efficiency and Pollution Prevention; PS4 - Community Health, Safety and Security; PS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources; PS7 - Indigenous Peoples; PS8 - Cultural Heritage. Involuntary Resettlement will be addressed through the application of OP/BP4.12. Additional information on environmental and social risk management, except for involuntary resettlement, can be found in the Environmental and Social Review Summary (ESRS) and the DGDC's Environmental and Social Action Plan (ESAP).
Natural Habitats OP/BP 4.04	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered
Forests OP/BP 4.36	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered
Pest Management OP 4.09	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered The project is not expected to use pesticide or other related products



Physical Cultural Resources OP/BP 4.11	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered
Indigenous Peoples OP/BP 4.10	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered There are no indigenous people in the project area
Involuntary Resettlement OP/BP 4.12	Yes	This policy is triggered because any associated land acquisition will be carried out by the Government of the Commonwealth of Dominica (GoCD). The GoCD will transfer the land acquired to the DGDC for its operations. An abbreviated resettlement action plan (ARAP) has been prepared to guide the land acquisition process. The Project will require land from 13 landowners for the construction of the power plant and the reinjection pipeline. For the reinjection line, a corridor of up to 10 m is required and DGDC will determine the exact land to be acquired based on technical and financial considerations. The ARAP sets out land acquisition guidelines and procedures (for negotiation and compensations). Twelve PAPs have requested cash compensations while one has opted for replacement land. The GoCD will negotiate with the landowner, acquire the needed land by paying the agreed compensation and transfer the land to DGDC. Grievance redress related to land acquisition would be addressed by the Department of Lands and Surveys of the Ministry of Housing and Lands. If the DGDC receives any land acquisition-related complaints, complainants will be directed to the Ministry of Housing and Lands. DGDC will coordinate with the Ministry to report on land acquisition related grievances. The DGDC will be responsible for all other project-related grievance redress including monitoring and evaluation.
Safety of Dams OP/BP 4.37	No	Because the project applies OP 4.03 World Bank Performance Standards, no safeguards policies are triggered The project will not construct or rely on dams
Projects on International Waterways OP/BP 7.50	No	The project will not affect the quality or quantity of international waterways or groundwater.



Projects in Disputed Areas OP/BP 7.60	No	The project will not be implemented in disputed areas
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KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The ESIA identifies the predicted impacts and key management and mitigation measures related to Component 1. It consists of various instruments which include the abbreviated resettlement action plan (ARAP) and a stakeholder engagement plan (SEP). The main social impacts are related to direct and indirect employment opportunities and the needed land acquisition. There will be minor impacts in terms of economic displacement to livelihoods, especially as related to the tourism activities around the MTPNP World Heritage Site.

Prior to Hurricane Maria, the social assessment revealed the presence of a few vulnerable (physically disadvantaged and elderly) persons within the communities adjoining the project sites. Following the hurricane, vulnerability conditions have worsened. The ARAP addresses the needs of those people and women in terms of compensation pertaining to and reflecting their full activities. Women and vulnerable people were encouraged to actively participate in all Project-related resettlement consultations and negotiations and several focus group meetings were targeted at women. All compensation due to female-headed households will be given to only the female family head. The Dominica Geothermal Development Company (DGDC), which will own and operate the power plant, will provide support to vulnerable project-affected-persons (PAPs) through coordination with relevant GoCD departments, to ensure that cash payments, and upon request, employment training, counseling in domestic matters and any other assistance that may be requested are made available.

The ARAP has identified 13 properties that will be acquired for the project: 2 properties for the power plant, portions of six properties to define a corridor of up to 10m for the reinjection pipeline, as well as five properties (in close proximity to the power plant site) expected to be affected by noise, construction and visual impacts. DGDC will determine the exact land to be acquired for the reinjection line by the GoCD based on technical and financial considerations. The ARAP sets out land acquisition guidelines and procedures (for negotiation and compensations). The GoCD will acquire the land needed for the Project and transfer it to DGDC.

Legacy issues from the exploratory phase. The GoCD acquired land for the exploratory phase (the exploration wells are directly linked to the Bank project). At the suggestion of the Bank, the GoCD carried out an audit of the land acquired during that phase, to ensure that the procedures used meet the standards of PS5. The audit identified gaps in compliance (notably in terms of valuations, documentation and grievance redress) and developed an action plan to address these shortcomings. The Bank concurred with the results of the action plan and closely monitored its implementation. The compensations were paid, in October 2018, for three of the four parcels. The fourth property belongs to a private company, which leased part of its property to the GoCD in 2011. The company is currently in liquidation and there are discussions underway for an equitable arrangement to resolve the lease payment in consideration of the company's tax arrears to the GoCD.

A Workers' camp will be constructed within the project site to house an estimated 50 workers. Associated risks include gender-based violence, unplanned pregnancy, and sexually transmitted infections (STIs), including HIV/AIDS. To address these risks, the social, health and safety procurement clauses covering labor recruitment, safety, and HIV/AIDS will be incorporated into all works contracts.



2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: During project implementation, there is a high probability of direct and indirect employment benefits for vendors, suppliers and service providers. Anticipated long-term project impacts include economic development for the tourism sector, with likely increases in the number of new businesses, and affordable electricity supply for Dominicans, in general.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts. For the power plant, three areas were identified that may be suitable sites, with relatively modest slope and located near existing well pad. The preferred power plant site was selected based on an evaluation of technical and non-technical considerations. Technical considerations include the topography of the land, civil works requirements, access constraints, proximity to the production well, alignment with prevailing wind direction and future development considerations. A civil engineer undertook a site visit to evaluate the volume of earthworks required to prepare different options such as minimization of disruption and removal of soil. Preliminary process engineering was undertaken to assess impacts of the selected site on the steam gathering system and brine injection line routing. Social factors include: the proximity to the local population, the use of topography to shield the site, and the lower/lowest number of affected land owners to reduce acquisition requirements. This resulted in selection of Option 3 for the power plant site.

For the reinjection pipeline, the routes were evaluated based on the constructability, topography, geohazard exposure (i.e. landslides, rock falls, etc.), estimated capital costs, operational considerations and social and environmental constraints. Eight routes were originally identified, reduced to three based on an initial evaluation considering constructability, topography and proximity to local villages. Those three were discussed at a public meeting in December 2016 to obtain feedback from the community. This resulted in the removal of one option (Option C) as it was deemed to interfere too much with the village. The remaining two options are both technically challenging, requiring steep descents, construction of pipe bridges and river crossings. In May 2017, a LIDAR survey was flown, and the results provided the impetus to select the 'Preferred Option' principally based on the detailed topographical data obtained. The Preferred Option also provides benefits over the second-placed one in terms of: disturbance to the local community; potential for interference with existing infrastructure (DOMLEC's hydro power pipelines); possible impacts on tourism at Trafalgar falls; and long-term resilience, by avoiding flooding events which may damage infrastructure. The Preferred Option also avoids areas most severely impacted by flooding and soil erosion from Hurricane Maria. However, there are still geotechnical assessments required to be undertaken for the route prior to construction. The final alignment of the reinjection pipeline can only be determined following preliminary engineering design and subsequently during construction.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The GoCD has prepared a Social Impact Assessment (SIA) and an Abbreviated Resettlement Action Plan (ARAP) that form part of the ESIA. The SIA builds upon the review and analysis of information collected under Environmental and Impact Assessments (ESIAs) carried out before and after the exploration and production drilling phases and considers social risks through the lens of the pre- and post-Hurricane Maria conditions. Stakeholder engagement is addressed through the Stakeholder Engagement Plan (SEP). The ESIA also contains the Environmental and Social Management Plan (ESMP), a Monitoring Plan, and the Framework Environmental and Social Management System (ESMS) developed for the Project.

The Environmental and Social Management Plan (ESMP) sets out the mitigation, monitoring requirements, responsibilities and enhancement measures to be put in place for Component 1. For Component 2, there are no



additional requirements to address social concerns beyond those set in the ESIA as any additional production well(s) will be drilled from the same well pad as the existing well, but directionally away from the existing wells, thus minimizing any potential additional environmental or social impacts. If additional production wells are planned outside the current footprint addressed in the existing ESIA, the DGDC will screen proposed activities to determine likely social impacts and will prepare the relevant social safeguards instruments to address significant social risks. Under Component 3 for future expansion of the geothermal field, outside the existing footprint, it could be necessary to prepare additional environmental and social safeguards instruments. The proposed timeline is presented in the ESAP. Under Component 3, the DGDC will prepare a strategic and/or specific environmental and social assessment to accompany the short/long-term planning for the geothermal sector in Dominica.

The Ministry of Trade, Energy & Employment has delegated authority to the DGDC to act on its behalf with respect to the implementation of the ARAP. To this end, the Ministry has signed MoU agreements with relevant Government institutions that DGDC would need to coordinate in this regard.

As project implementing agency unit, DGDC will be responsible for the management and supervision of all project activities, including safeguards. DGDC's structure to implement the ESMS relies on the Project Manager (PM), and a dedicated safeguard team, who will be responsible for safeguards implementation, including stakeholder engagement and grievance redress issues. The safeguard team consists of: (i) an Administration and Safeguards Officer; (ii) a Community Liaison Officer; and (iii) a Site and Office Attendant. DGDC's human resources policies and procedures will provide a description of functions/positions and requirements. Throughout project preparation, including the development of the ESIA, Jacobs New Zealand Ltd. (Jacobs), which was hired with support from the Government of New Zealand, provided capacity building on safeguards to DGDC. The PM has in-depth, applied experience related to all aspects of geothermal development, including safeguards compliance. Additional support for environmental and social management is expected to be provided by an external expert who will be contracted by the French Development Agency (AFD) and seconded to DGDC.

Management of environmental and social risks and impacts during construction will be the primary responsibility of the EPC contractor to be selected to build the geothermal power plant and the associated infrastructure. DGDC will be responsible for reviewing, approving and supervising implementation of the detailed plans and procedures, consistent with the framework ESMP that will be developed and implemented by the EPC contractor. Staff will be trained in environmental and social management, auditing and monitoring procedures as per the outline in the Framework ESMS.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

During the geothermal drilling phase, eleven public meetings were held in the potentially affected communities - Laudat, Trafalgar and Wotten-Waven - between November December 2013 and January 2014. To further illustrate the workings of a geothermal power plant, community members visited an operational geothermal power plant in Guadeloupe, in 2012. School children and teachers from the community also visited the drilling sites within that same year. DGDC also prepared a stakeholder engagement plan and grievance redress mechanism as part of its social risk management system.

During the current Project development phase, several public consultation meetings and fifteen focus-group discussions were held between 2016 and 2017. Following the passage of Hurricane Maria in September 2017, further consultations were held with community members to determine if there were vulnerability issues to be considered. A non-technical summary draft of the environmental & social impact assessment (ESIA) was discussed at separate



meetings in Laudat, Trafalgar and Wotten Waven in July 2018. The draft document was also disclosed on the DGDC’s website. The main issues raised during the consultations were related to construction impacts, land acquisition and involuntary resettlement, operational accidents and impacts on tourism. Volume 2 of the ESIA presents a summary of the consultation comments and how these are addressed in the Project design.

B. Disclosure Requirements

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank	Date of submission for disclosure
10-Oct-2018	22-Oct-2018

"In country" Disclosure

Dominica
18-Oct-2018

Comments

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes



All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

CONTACT POINT

World Bank

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Borrower/Client/Recipient

The Government of the Commonwealth of Dominica

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APPROVAL

Task Team Leader(s):	Elvira Morella
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Approved By

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