

# SUSTAINABLE ENERGY FACILITY FOR THE EASTERN CARIBBEAN PROGRAM

Mid-Term Evaluation

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## MID-TERM REVIEW REPORT

Prepared for:  
Caribbean Development Bank

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## ACRONYMS

A&B	Antigua and Barbuda
BMC	Borrowing Member Country
CARICOM	Caribbean Community Caribbean
CBA	Cost Benefit Analysis
CCREEE	Centre for Renewable Energy and Energy Efficiency
CDB	Caribbean Development Bank
CTF	Clean Technology Fund
CLO	Community Liaison Officer
DOM	Dominica
ECC	Eastern Caribbean Countries
EE	Energy Efficiency
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
GCF	Green Climate Fund
GE	Geothermal Energy

GEF	Global Environment Facility
GEOLAC	Geothermal Congress for Latin America and the Caribbean
GHG	Greenhouse Gas
GRE	Grenada
IDB	Interamerican Development Bank
IRENA	International Renewable Energy Agency
LAC	Latin America and the Caribbean
M&E	Monitoring and Evaluation
MTR	Mid Term Review
NEP	National Energy Policy
NURC	National Utility Regulatory Commission
OCR	Ordinary Capital Resources
OECD-DAC	Organization for Economic Cooperation and Development - Development Assistance Committee
OECS	Organization of Eastern Caribbean States
OOCUR	Organization of Caribbean Utility Regulators
PPP	Public Private Partnerships
PURC	Public Utility Research Center
RAP	Resettlement Action Plan
RBM	Result Based Management
RE	Renewable Energy
REEEU	Renewable Energy and Energy Efficiency Unit
SAPR	Semi Annual Progress Report

SEF	Sustainable Energy Facility
SKN	Saint Kitts and Nevis
SL	Santa Lucia
SVG	Saint Vincent and the Grenadines
SVGCL	St. Vincent Geothermal Company Limited
ToC	Theory of Change
ToR	Terms of Reference
TT	Tracking Tool

# 1. EXECUTIVE SUMMARY

The objective of the SEF is to contribute to the diversification of the energy matrix in the ECC by supporting the development of Renewable energy (RE) projects - with an emphasis on Geothermal energy (GE) and Energy efficiency (EE) projects - to reduce the region's dependence on liquid fossil fuels. More specifically, SEF aims to contribute to the reduction in the cost of power generation and electricity tariffs. The program is organized around three main components to achieve its objective: i) Energy efficiency; ii) Regulatory framework, institutional strengthening, and capacity building, and iii) Renewable energy:

The SEF is financed through a Global Credit Loan to the CDB, chargeable to IDB's Ordinary Capital Resources (OCR). In addition, the SEF includes resources from the CTF and the GEF for the financing of non-reimbursable investments and technical assistance. These resources - channeled through IDB - are provided to CDB as the executing agency for the programme and complemented with local counterpart resources provided by CDB. CDB makes use of different financial instruments - as appropriate for meeting each Borrowing Member Country's (BMC) needs to develop their sustainable energy potential. SEF eligible countries are the six independent ECC that are BMCs of CDB: Antigua and Barbuda (A&B), Dominica, Grenada, Saint Kitts and Nevis (SKN), Saint Vincent and the Grenadines (SVG), and Saint Lucia.

Even though this Mid-Term Review (MTR) is meant to fulfill a specific M&E requirement from the Global Environment Facility (GEF) regarding in particular the performance of the GEF funding under the SEF, there is also a programme level M&E requirement to perform an MTR, thus this MTR covers all the SEF components given the fully blended nature of the programme, including funding from the Interamerican Development Bank (IDB), Caribbean Development Bank (CDB), Clean Technology Fund (CTF), and GEF. It should be noted that in 2018, an expansion of the SEF was approved with Funds from the Green Climate Fund (hereby referred to as SEF Expanded) which is not covered by the mid-term review, but is referred to, to adequately contextualize the assessment of the performance of the SEF, especially over the longer term.

The MTR conclusions after its analysis of the 5 evaluation criteria of the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC), namely: (i) relevance, (ii) effectiveness, (iii) efficiency, (iv) impacts; and (v) sustainability of the program, are as follows:

Overall, **the relevance of the SEF** to support ECC countries in their shift towards low emission development pathways is satisfactory. The MTR finds that the SEF is congruent to the energy sector priorities in the ECC, as well as with the GEF priorities and the mandates of the CDB and IDB. The SEF also shows a good level of complementarity with other initiatives that are ongoing in the region, but the blending of multiple funding sources through the SEF sometimes creates a confusion on who is funding what, which negatively affects the visibility of the SEF, and can lead to double counting of the results of CDB-funded initiatives.

The SEF design process could have benefitted from the definition of a more robust theory of change identifying more clearly impact pathways and underlying assumptions and risks to be managed to achieve the overall objective of the facility. The coherence between the SEF's

overall objective and the sub-projects is moderate, which can be explained by the demand-driven approach pursued by the CDB which would gain from the perspective of the evaluator to be complemented by a more proactive and strategic approach to help ensure program result achievement.

At the program level, the SEF design process duly considered national needs. At the sub-project level, governments needs were also well considered during the design. Environmental and Social Safeguards are fully integrated in the IDB and CDB procedures and are therefore mainstreamed, and duly considered by SEF sub-projects. While gender consideration is also a requirement from the banks and therefore considered in SEF sub-projects, the contribution of SEF sub-projects to gender equality is limited, which is in part due to the nature of the project themselves.

**With respect to effectiveness**, taking into consideration the challenges faced and delays incurred during this first phase of the programme, the project partners with the SEF Expanded timeline and budget are now in a position to likely achieve the SEF expected outcomes by the extended completion date, if appropriate measures are taken to focus efforts moving forward. This conclusion is in line with the disjunction noted in the relevance section of this report between outputs identified and outcomes sought in the logic model.

At mid-term, progress towards the achievements of outcomes is limited for all outcomes under all 3 Components. An analysis of expected targets from current and potential future sub-projects under the original SEF timeline and budget showed that outcomes were unlikely to be achieved under Component 1 and 3 by program completion if the SEF timeline and budget had not been expanded, while the likelihood of achievement of expected outcomes under Component 2 is difficult to assess given the SEF's demand-driven approach.

A total of 14 sub-projects have been funded by the SEF to date (6 under Component 1, 5 under Component 2, and 3 under Component 3) across the 6 expected beneficiary countries. The contribution of sub-projects to the achievement of SEF expected outputs varies across components: it is highly satisfactory under Component 1, moderately unsatisfactory under Component 2 and satisfactory under Component 3. Overall, the output under Component 1 has been achieved, outputs under Component 2 and Component 3 are below the targets, with some either on track or significantly below. The delivery of outputs has been affected by a variety of internal factors as well as external ones such as extreme weather events, capacity constraints, technical issues, or Covid-19.

**With respect to efficiency**, overall SEF's operations can be considered moderately efficient, with a few avenues for improvements. Even though overall SEF's expenditures are on track (representing 58% of the SEF budget), the cost-effectiveness at mid-term is moderately unsatisfactory given that progress towards the achievement of outcomes has been rather limited to date.

As of December 31, 2019, the total expenditure of SEF Program resources represented approximately 58% of SEF's total budget (USD 71.5 million). In terms of funding sources, expenditures from CTF funding and CDB counterpart funding are above 50% while expenditures from IDB and GEF resources are lower, at respectively 36 and 24%. These will have to be sped up in the second half of the SEF program. Co-financing to the GEF is higher than originally planned at mid-term, with additional co-financing from the GCF under the SEF



Expanded also tripling the original commitments at GEF CEO endorsement. In terms of Components, the rate of expenditures against initial budget under Component 1 is very high (91%), the rate of expenditure under Component 3 is high standing at 67% at mid-term, while the rate of expenditure under Component 2 is extremely low (5%). In terms of yearly expenditures, even though they were slow to pick up in 2017, they are in line with and even exceeding budgetary plans at mid-term. Expenditures under Component 3 were much faster than initially expected, while expenditures under Component 1 and even more so under Component 2 were slower.

Regarding the role played by the implementing (IDB) and executing (CDB) agencies, IDB's supervision and oversight of the program is considered aligned with what was initially planned, with a high satisfaction from stakeholders. CDB's execution of the program is in line with what was originally planned. Even though the CDB presents a few internal weaknesses which are discussed in the efficiency section, the Bank proved to have key strengths that make it well suited for the execution of the SEF, which is corroborated by the satisfaction of most of the stakeholders interviewed.

The quality of the M&E system of the SEF at design stage is satisfactory, and though a few M&E activities incurred some delays, the overall timeliness of and budget allocation for M&E activities seems appropriate. Although the reporting on achieved results could be improved in the SAPR, the reports can overall be considered of satisfactory quality. However, the SEF M&E is lacking a standardized reporting template being used at the sub-project level, as well as a more systematic way of collecting lessons learned at the sub-project level to aggregate them at the program level and then track ways in which they were addressed. There is also room for improvement in terms of dissemination of lessons learned at the regional level, between countries and with other donors.

**In terms of SEF impacts,** at this stage the SEF has not yet tangibly contributed to the diversification the energy mix in ECC countries. As such, an extension of the SEF programme and additional resources were agreed and mobilised by programme partners under the SEF Expanded to increase this likelihood. The overall role of the SEF as a catalyzer on the GE agenda in the BMC is well recognized, as is proven, amongst other things, by its ability to leverage additional resources and co-financing beyond original expectations to address this challenge.

The MTR indeed concluded that the performance of the SEF at mid term under its original timeline and budget did not indicate a strong probability that the facility could generate its expected impacts in terms of (i) reduction of the average electricity tariff for customers in ECC from 0.33 to USD 0.30 USD/kWh, and (ii) increase in the regional penetration of indigenous renewable energy sources for power generation within the ECC from 10 to 30% without the approved extension.

The MTR brought to light some positive unintended impacts generated by the SEF in terms of awareness and engagement towards GE in ECC, integration of energy sources at the national level, commitment of other partners in the regions, reputational benefit for the CDB, and sustainable development benefits for local populations. No major adverse unintended impacts were revealed at this stage by the MTR.

**At mid-term, the sustainability of SEF's results** is moderately unlikely, but the facility has the potential to introduce key changes to ensure that key building blocks are in place at program completion to further pave the way towards a longer-term transformation of the energy market in the ECC countries, especially considering the SEF-Expanded phase.

The SEF was designed on a sound economic analysis and has a system in place to manage risks to sustainability. Even though the facility does not have an explicit exit strategy, the fact that it is embedded in the longer-term support from the CDB for sustainable energy in the ECC, is likely to make the SEF's legacy sustainable, at the condition that the CDB has the capacity and resources to take up the challenge beyond the facility and uses the remaining years under the SEF to put in place the key building blocks to further pave the way towards market transformation in the ECC countries.

That being said, gaps in capacities at the CDB remain to be addressed to ensure the achievement of SEF's longer-term results and their sustainability. In particular, the CDB needs additional support to shift to a more proactive approach and build a more strategic pipeline of sub-projects with ECC countries on RE and EE to allow for this broader market change dynamics to take roots, with a particular focus on the market for GE of course.

Conversely, strategic, continuous and long-term support is required at the national level to help governments develop legally, financially, and technically-sound sustainable energy projects; strengthen the regulatory framework; maintain ECC's interest in GE, and introduce transformational changes in their national energy markets; all of which are key for the sustainability of SEF's results.

The SEF's leveraging effect has been solid, as an additional USD 80 million in financing from the GCF has been secured, which makes the need for a more strategic and proactive approach at the Facility level even more crucial to ensure optimal use of those resources to bring impacts at scale in line with the SEF original ambitions.

This MTR concludes with some **key recommendations** around the following broad lines of action and detailed in the recommendation section of the report:

- Adjust the scope of the SEF to better manage risks moving forward.
- Improve the contribution of SEF's sub-projects to the expected results of the facility.
- Clarify the different sources of CDB counterpart funding under the SEF
- Complement the SEF demand-driven approach with a more proactive and strategic approach.
- Speed up implementation of Component 2 on capacity building.
- Review and improve some M&E tools (SAPR and sub-project reporting specifically).
- Improve the dissemination of lessons learned, across projects and at the regional level; and,
- Request a 24-month no-cost extension for GEF funding in light of the extension already adopted for the Facility as a whole under the SEF-Expanded.

## 2. INTRODUCTION

### 2.1. MTR SCOPE AND METHODOLOGY

#### 2.1.1. OBJECTIVES OF THE MTR

This consultancy consists in conducting the Mid Term Review (MTR) of the Sustainable Energy Facility (SEF). Even though this MTR is meant to fulfill a specific M&E requirement from the Global Environment Facility (GEF) regarding in particular the performance of the GEF funding, there is also a programme level M&E requirement to perform an MTR, thus this MTR will cover all the SEF components given the fully blended nature of the programme, including funding from the Interamerican Development Bank (IDB), Caribbean Development Bank (CDB), Clean Technology Fund (CTF), and GEF.

The MTR analyses the 5 evaluation criteria of the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC), namely: (i) relevance, (ii) effectiveness, (iii) efficiency, (iv) impacts; and (v) sustainability of the program.

More specifically, as stated in the Terms of Reference (ToR), the MTR main goals are as follows:

- Provide a comprehensive summary of implementation progress, determine the extent to which the objectives (outputs, outcomes and impacts) as defined in the results framework have been met as of the date of the evaluation, and assess the likelihood of achieving them upon program completion.
- Assess the factors that have affected outcome achievement, e.g. program design, program linkages with other activities, extent and materialization of co-financing, and stakeholder involvement.
- Identify risks for program sustainability.
- Identify CDB's institutional strengths and weaknesses as the implementing agency of the program.
- Provide a few well-formulated lessons that are based on the program experience so far and applicable to the type of program at hand.
- Identify potential options for improving the program, which could include modification of activities, responsibilities of CDB staff, schedule of activities and budget allocations, among others.
- Update the GEF Mitigation Tracking Tool (TT) which allows the GEF to track progress made by GEF-financed programs toward global targets set out in the GEF results framework.
- Provide recommendations to improve the execution of the program and thus the likelihood of achieving its development objectives.

## 2.1.2. SCOPE

For each of the 5 evaluation criteria, the evaluation framework is organized around the following evaluation questions and sub-questions to properly respond to the ToRs, and the funding partners' requirements:

### RELEVANCE

Q1. To what extent is the SEF relevant to support Eastern Caribbean Countries (ECC) in their shift towards low emission development pathways?

SQ1.1. To what extent is the SEF congruent to the energy sector country priorities, GEF focal area strategy, mandates of the agencies, and other relevant initiatives?

SQ1.2. Was the SEF designed in a coherent manner to deliver expected outcomes?

SQ1.3. To what extent were stakeholders involved in the SEF's design?

### EFFECTIVENESS

Q2. To what extent is the SEF achieving its expected results as defined in the results framework?

SQ2.1. Is the project successfully delivering its outputs and achieving targets?

SQ2.2. What progress has the SEF made towards the achievement of expected outcomes?

SQ2.3. To what extent are stakeholders involved in program implementation?

### EFFICIENCY

Q3. How efficient are SEF's operations?

SQ3.1. To what extent are the outputs being achieved in a cost-effective manner?

SQ3.2. Are SEF's operations under IDB efficient in facilitating support to ECC?

SQ3.3. Are SEF-funded operations under the CDB being executed efficiently?

SQ3.4. Is the monitoring plan operational and effective to track results and progress towards objectives?

### IMPACT

Q4. What progress has the SEF made so far to contribute to the diversification of the energy mix in ECC countries?

SQ4.1. Does the current performance indicate probability in achieving the project's purpose?

SQ4.2. Has the program generated any unintended impacts?

## SUSTAINABILITY

Q5. What are the enabling conditions and or risks emerging regarding the sustainability of SEF-funded interventions?

SQ5.1. Has the project designed and implemented an appropriate exit strategy and measures to mitigate risks to sustainability?

SQ5.2. What factors are in place to enable or hinder the persistence of program outcomes?

The evaluation matrix is provided in Annex 1: Evaluation Matrix. In this matrix, each sub-evaluation question is broken down into a set of indicators for which data collection methods and sources of information have been defined. The matrix provides a framework that guided the whole review process and was used at all stages to collect, analyze, and triangulate collected data.

### 2.1.3. METHODOLOGY

#### Inception phase

After a kick-off call with the CDB team and a preliminary documentation review, a draft inception report was submitted on April 3<sup>rd</sup> to the CDB. All written comments received were addressed in a final version of the inception report shared on May 26<sup>th</sup> with the CDB.

#### Data collection and analysis phase

The collection of data to inform the evaluation matrix and thus answer the evaluation questions was done in two ways:

- In depth document review: following the validation of the Inception Report, the consultant reviewed in detail and analysed all relevant documents related to the program; and
- Remote interviews with key stakeholders: Given the international travel restrictions related to Covid-19, the review had to be fully conducted remotely, and interviews were conducted with stakeholders via videoconference or phone.

#### Analysis and Reporting Phase

Once all the information was collected, the consultant analysed the data in order to inform the indicators and answer the evaluation questions. The consultant cross-analysed and triangulated the quantitative and qualitative data assembled on the basis of the results of the interviews and documentary review.

The findings, conclusions and recommendations of the MTR were presented in a draft report. The consultant then reviewed the draft MTR report building on the written and oral comments and suggestions all received from CDB/IDB by September 16<sup>th</sup> and then prepared this final evaluation report and its executive summary.

## Limitations

During the Review process, the Review team faced the following limitations and challenges:

- The Covid-19 sanitary crisis prevented the consultant from carrying out the field visits initially planned. The purpose of these project sites visits was to conduct focus group discussions with beneficiaries and on-site observations. Such on-site visits are useful to get a clear understanding of the local context of the projects implemented, how they interact with local stakeholders, and how these stakeholders feel about the SEF interventions. However, given the high-level nature of the SEF program - and thus of this MTR - site visits are not a key element of the methodology, especially given the early stage of the implementation of the sub-projects on the ground.
- The documentation available for some of the sub-project was variable and incomplete for some projects.
- The consultant faced issues in getting a hold of some key stakeholders such as government representatives and was therefore not able to organize remote interviews with some of them, despite all efforts deployed by the team and by the CDB to elicit their participation.

## 2.2. PROGRAM OVERVIEW

### 2.2.1. SUSTAINABLE ENERGY FACILITY

The SEF was approved in 2015 by the CDB and the IDB.

The objective of the SEF is to contribute to the diversification of the energy matrix in the ECC by supporting the development of Renewable energy (RE) projects - with an emphasis on Geothermal energy (GE) and Energy efficiency (EE) projects - to reduce the region's dependence on liquid fossil fuels. More specifically, SEF aims to contribute to the reduction in the cost of power generation and electricity tariffs.

Ultimately, SEF was initially expected to result in a reduction in average electricity tariff for customers in the ECC from USD 0.33/kWh to USD 0.30/kWh, while contributing to a reduction in fossil fuel imports, as well as in CO2 emissions.

The program is organized around three main components:

- Component 1: Energy efficiency: consists in financing sub-loans and grants to ECC governments to promote EE measures.
- Component 2: Regulatory framework, institutional strengthening, and capacity building: resources are used to finance non-reimbursable technical assistance to the CDB, and to the ECC governments; and
- Component 3: Renewable energy: resources are provided to both ECC governments and Public Private Partnerships (PPP) to finance intermittent (wind and solar PV) and baseload (GE, hydro and waste to energy) projects.

According to the latest Semi-Annual Progress Report (SAPR) reviewed for this evaluation<sup>1</sup>, the SEF sub-projects that were under implementation in December 2019, and therefore included in this MTR, are presented in Table 1. Details on the financing for each sub-project is provided in Annex 5.

Table 1: Status of SEF portfolio implementation as of December 2019

Country/ Bank	Sub-projects		
	Comp. 1	Comp. 2	Comp. 3
A&B	Streetlight retrofit project <i>CDB Counterpart funded</i>		Implementation of solar system in selected schools and clinics (pre implementation) <i>GEF funded</i>
DOM	Government buildings <i>CDB Counterpart funded</i>		Replacement and upgrade of transmission line supported under SEF in wake of passage of Hurricane Maria. This will facilitate GE Development. (completed in 2018) <i>Funded by IDB loan</i>
GRE	Government buildings <i>CDB Counterpart funded</i>	TA provided to fund the ESIA (ongoing) and to provide institutional strengthening (two consultants to support the Government GE project management unit, a project coordinator, and a community liaison officer (CLO)) <i>GEF funded</i>	
SKN	Streetlight retrofit Government buildings <i>CDB Counterpart funded</i>		
SVG	Government buildings <i>CDB Counterpart funded</i>	TA provided on institutional strengthening (CLO) <i>GEF funded</i>  TA provided to develop the terms of reference required as part of the request for proposal for the transmission line development (completed) <i>CDB counterpart funded</i>	Exploratory drilling under implementation for GE project <i>CTF and CDB Counterpart funded (from EU and DFID)</i>

<sup>1</sup> CDB. Feb 2020. SEF Semi-Annual Progress Report – Period July 1 – December 31, 2019

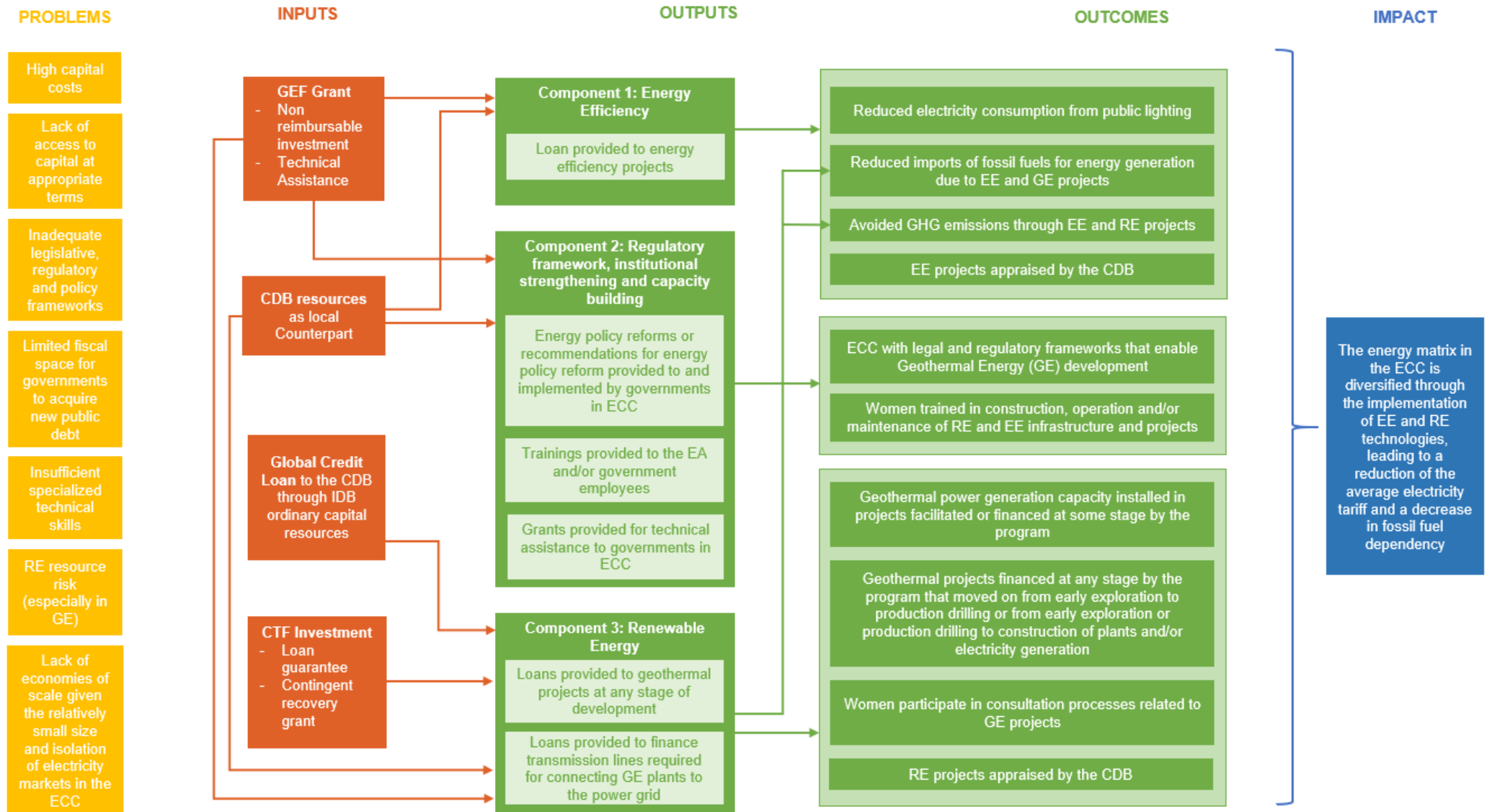
SLU		TA provided on institutional strengthening (training in regulation tools) <i>CDB Counterpart funded</i>	
CDB		2 consultants on contract providing capacity strengthening to CDB in the form of 'back-stopping support'. One specialized in drilling and one in transaction/financial aspects of GE development.  Regional training for regulators held to strengthen capacity for the writing of grant proposals <i>CDB counterpart funded</i>	

### 2.2.1. PROGRAMME THEORY OF CHANGE

Considering the logical framework presented in the IDB Loan Proposal, the consultant reconstructed the theory of change (ToC) of the SEF, which is presented in Figure 1.



Figure 1: SEF Preliminary Theory of Change



### 2.2.2. MAIN STAKEHOLDERS AND INSTITUTIONAL ARRANGEMENTS

The SEF is financed through a Global Credit Loan to the CDB, chargeable to IDB's Ordinary Capital Resources (OCR). In addition, the SEF includes resources from the CTF and the GEF for the financing of non-reimbursable investments and technical assistance. These resources - channeled through IDB – are provided to CDB and complemented with local counterpart resources provided by CDB. CDB makes use of different financial instruments - as appropriate for meeting each Borrowing Member Country's (BMC) needs to develop their sustainable energy potential. SEF eligible countries are the six independent ECC that are BMCs of CDB: Antigua and Barbuda (A&B), Dominica, Grenada, Saint Kitts and Nevis (SKN), Saint Vincent and the Grenadines (SVG), and Saint Lucia. They are presented in Figure 2 below that illustrates SEF's structure and funding by donor.

Figure 2: SEF funding by donor<sup>2</sup>

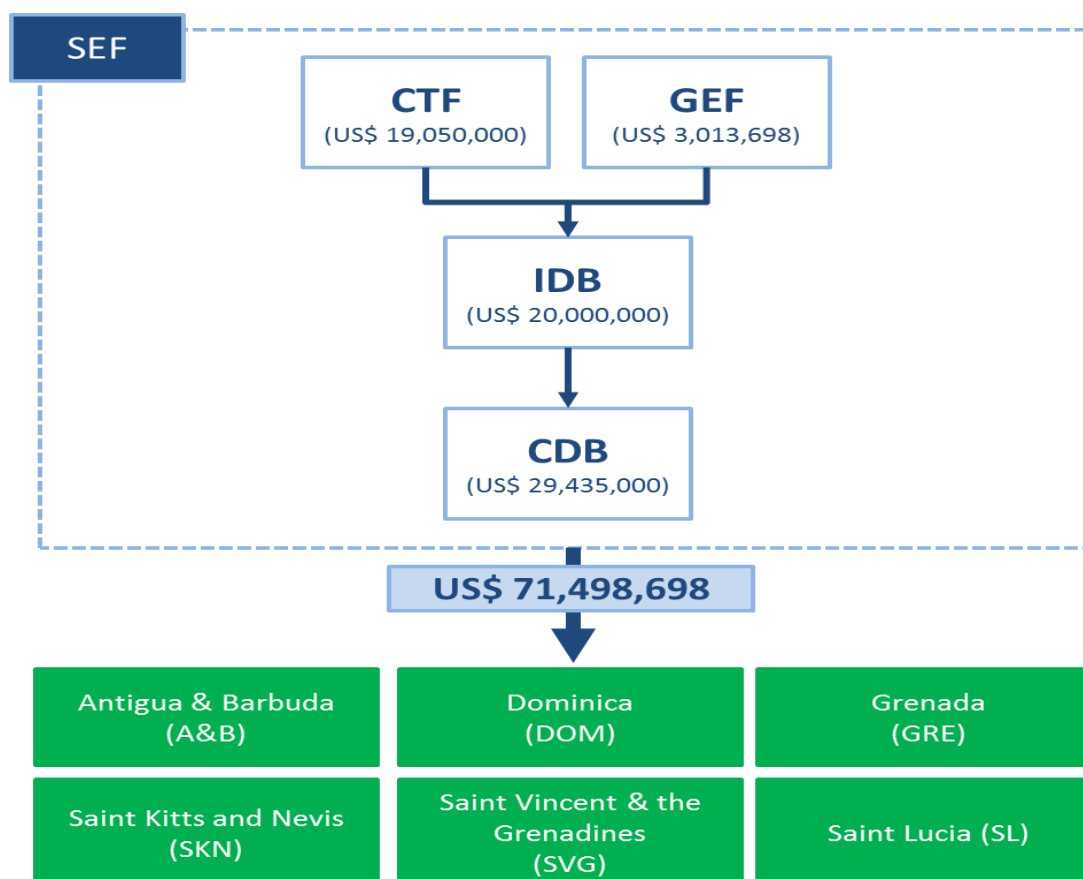


Table 2 presents the SEF financing plan, as originally presented in the IDB Loan proposal.

<sup>2</sup> Extract from CDB. April 2016. *Operating Manual for the Sustainable Energy Facility (SEF) for the Eastern Caribbean*

Table 2 : Cost of the program by source and component (USD)<sup>3</sup>

Component	Financing				TOTAL
	IDB	CTF	GEF	CDB	
Component 1			341,574	8,000,000	<b>8,341,574</b>
Component 2			2,117,042	11,200,000	<b>13.317.042</b>
Component 3	20,000,000	19,050,000	341,574	10,000,000	<b>49.391.574</b>
M&E				235,000	<b>235,000</b>
Project management and evaluation			213,508		<b>213,508</b>
<b>TOTAL</b>	<b>20,000,000</b>	<b>19,050,000</b>	<b>3,013,698</b>	<b>29,435,000</b>	<b>71,498,698</b>

It should be noted that in 2018, an expansion of the SEF was approved with Funds from the Green Climate Fund and REI which are not covered by the mid-term review.

SEF's institutional arrangements are as follows:

- IDB is an oversight donor that provides funding and is in charge of overseeing SEF's implementation by CDB. IDB also acts as the GEF and CTF implementing agency.
- The CTF and GEF are funding donors which do not oversee SEF implementation.
- CDB is providing funding to the SEF and is responsible for the implementation of the program through the Renewable Energy and Energy Efficiency Unit (REEEU).
- ECC governments, public utilities, and PPP are beneficiaries of the support and are in charge of executing SEF sub-projects.

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<sup>3</sup> IDB. SEF Loan proposal

### 3. MTR FINDINGS

#### 3.1. RELEVANCE

**Q1. To what extent is the SEF relevant to support ECC countries in their shift towards low emission development pathways?**

**SQ1.1. To what extent is the SEF congruent to the energy sector country priorities, GEF focal area strategy, mandates of the agencies, and other relevant initiatives?**

Alignment with ECC's energy sector strategies

Table 3 presents the mains objectives and priorities of the energy priorities for the 6 ECC, as stated in their national energy policies.

Table 3 : ECC energy sector priorities and objectives

Country	Energy sector priorities and objectives
A&B	The 2011 National Energy Policy (NEP) aims to “create a stable, efficient, and sustainable energy sector that fosters national economic and social development by establishing an enabling environment that exploits <b>indigenous energy resources</b> and <b>reduces the total dependence on fossil fuels</b> ”. It further states that: “All citizens and residents will have access to <b>affordable</b> efficient, socially responsible and reliable forms of energy”.
Dominica	The 2014 updated NEP sets the following key priorities <b>increasing the use of domestic energy sources</b> , increasing <b>energy efficiency</b> , increasing environmental sustainability, <b>reducing energy costs and tariffs</b> , and extending electricity coverage to all citizens. In addition, it puts a greater emphasis on the active promotion of <b>domestic renewable energy sources</b> including hydropower, <b>geothermal power</b> , <b>solar power</b> , wind power, waste-based energy, and biomass energy.
Grenada	The ultimate goal of Grenada's NEP is to ensure access and provide <b>affordable</b> , equitable, reliable, clean and <b>sustainable energy sources</b> and services. The NEP has the following 8 core principles: (i) ensuring <b>energy security</b> , (ii) achieving <b>energy independence</b> , (iii) maximising <b>energy efficiency</b> , (iv) promoting energy conservation, (v) pursuing environmental sustainability through “ <b>green energy</b> ”, (vi) guaranteeing sustainable resource exploitation, (vii) minimising energy costs and (viii) energy solidarity.
Saint Lucia	A key objective of the 2010 NEP is to create an enabling environment for the introduction of <b>indigenous renewable energy</b> to the national energy mix, thus achieving greater energy security and <b>independence</b> .
SKN	The 2011 NEP lays out a path toward a more <b>sustainable energy matrix</b> to achieve a sustainable energy sector where <b>reliable, renewable, clean and affordable energy</b> services are provided to all citizens. The government hopes to achieve this by following two key pillars: (i) increased <b>diversification</b> and (ii) the promotion of smarter, efficient, and innovative approaches.
SVG	The 2009 NEP aims to ensure <b>a clean, reliable, and affordable energy supply</b> and to strengthen the country's economy by <b>reducing its dependence on imported oil products</b> . The NEP plans to achieve these ends by reducing demand in the medium and long term, <b>improving efficiency</b> and conservation, and pursuing <b>indigenous energy resources</b> .

As it can be seen in Table 3, all ECC countries are promoting in their national energy policies an increase in indigenous renewable energy sources, while aiming to reduce fossil fuels imports and ensure affordable energy for their citizens, which is line with the SEF's objectives. SEF design documents (IDB loan proposal and GEF CEO Endorsement) are indeed based

on an in-depth analysis of the energy sector in ECC, which include detailed energy dossiers per ECC.

In addition, SEF funding is demand-driven, meaning that BMC are the ones expected to come forward to the CDB to request funding, based on their own priorities and needs. This demand-driven approach contributed to the alignment between SEF-funded projects and the priorities of BMC.

The funding model of the SEF is also relevant to the needs of BMC as it lowers the upfront risk for geothermal investment to an acceptable level due to the level of concessionality offered by contingent grant resources as part of the facility (grants can be convertible to loan if exploratory drilling is successful).

Moreover, several interviewees confirmed the high relevance of the SEF's objectives for the ECC, at design stage and overtime even 5 years after the initial design of the SEF.

The objective of the SEF to contribute to the diversification of the energy matrix of the ECC in an effort to reduce the cost of power generation and electricity tariffs - by promoting the implementation of EE and RE technologies to reduce the region's dependency on liquid fossil fuels - is therefore fully in line with ECC's respective national strategies and priorities for the energy sector.

#### Alignment with GEF Strategic Priorities

The SEF was designed under the 5<sup>th</sup> replenishment of the GEF (GEF-5). The SEF's contributes to the following objectives of the GEF-5 climate change mitigation focal area strategy:

- Objective 1: promote the demonstration, deployment and transfer of innovative, low carbon technologies
- Objective 2 promote market transformation for EE in industry and the building sector
- Objective 3: promote investment in RE technologies
- Objective 6: support enabling activities and capacity building under the convention.

The SEF is therefore well-aligned with the GEF strategic priorities with regards to energy and climate change mitigation.

#### Alignment with IDB's mandate

The IDB's goal in the energy sector is to help increase the access of Latin American and the Caribbean (LAC) countries to efficient, sustainable, reliable, and affordable energy, in a diversified and secure manner. The Bank's Energy Sector Framework document is structured around the four following pillars:

- **Energy access:** coverage, quality, reliability, and **affordability** in the provision of energy services.
- **Energy sustainability:** EE, RE, climate change mitigation and adaptation, and reduction of environmental impacts in the long term.
- **Energy security** – energy infrastructure and regional energy integration for the provision of reliable services.

- **Energy governance – institutions, regulations, policies**, and information to foster the sector's long-term economic and financial sustainability.<sup>4</sup>

The SEF's objectives (reduction in electricity tariffs), and 3 components (EE, Technical Assistance, and RE) are therefore fully in line with IDB's mandate in the energy sector. Furthermore, as stated in paragraph 1.17 of the IDB loan proposal,

*In accordance with the Bank's guidelines for the classification and validation of operations eligible for the GCI-9 regional cooperation and integration, lending priority (...) each sub-loan contributes to the goals of: (i) supporting development in small and vulnerable countries; (ii) assisting borrowers in dealing with mitigation and adaptation to climate change, sustainable energy and environmental sustainability; and (iii) increasing regional cooperation and integration<sup>5</sup>*

#### Alignment with CDB's mandate

According to its Energy Sector Policy and Strategy<sup>6</sup>, the goal of the CDB for the BMC energy sector is the transformation of the energy sector to significantly increase energy security and sustainability, enabling economic growth. The CDB sets out three objectives to achieve this goal:

- To assist BMCs with the timely provision of adequate, affordable, reliable, sustainable, and clean energy services, to all segments of the society;
- To establish the energy sector as a dynamic economic sub-sector; advancing the development of a "green" economy, and supporting climate resilience; and
- To be a key regional energy sector development financier, to serve as a catalyst for attracting concessionary resources to the Region, and as an intermediary for financial and technical assistance resources for BMCs.

The CDB follows 5 main guiding principles to achieve these objectives: (i) emphasising energy security and access; (ii) prioritising RE and EE; (iii) promoting a holistic approach to energy sector transformation, (iv) promoting regional cooperation and integration, as well as cooperation amongst partners; and (v) ensuring compatibility of energy interventions with gender equality and social and environmental performance standards.

The CDB Energy sector policy and strategy also sets as areas of focus the promotion of EE, RE, energy infrastructure, and sector reform, good governance and capacity strengthening.

The SEF's objective and 3 components are therefore fully aligned with CDB's mandates and its energy strategy and priorities for BMCs. In addition, all SEF sub-projects have to show their alignment with CDB's policies and strategies in their design documents, as a requirement to be funded.

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<sup>4</sup> IDB. 2018. *Energy Sector Framework Document*

<sup>5</sup> IDB. 2015. *Loan Proposal*

<sup>6</sup> CDB. 2015. *Energy Sector Policy and Strategy*

### Complementarity with other initiatives

The IDB Loan Proposal Annex on donor coordination states that the “SEF will provide financing according to demand by beneficiaries, that is complementary to efforts currently undertaken by other donors aiming to create synergies among donors and facilitate coordination, which could make current programs more effective”<sup>7</sup>. The same document maps out the different stakeholders that were involved in sustainable energy and geothermal energy in the ECC at the time of SEF’s design. The main identified actors in sustainable energy were DFID Caribbean’s, the 11<sup>th</sup> European Development Fund, CARICOM, OLADE, the German International Cooperation (GIZ), the Organization of American States, the CDB and the Clinton Climate Initiative. In terms of geothermal specific support, the World Bank, the International Renewable Energy Agency (IRENA), the Government of New Zealand, UK DFID and the Regional Council of Guadeloupe had ongoing projects in the ECC at the time. The SEF design process therefore considered ongoing initiatives with a view to bring complementarity to the overall support provided to ECC countries. The fact that SEF-funding is demand-driven and can adapt to the needs of BMC also ensures that the funding provided is complementary to existing support.

Examples of complementarity between SEF funding and other initiatives can be seen in SEF sub-projects, for instance:

- The SEF sub-project on GE development in Grenada complements previous support from the New Zealand and Japanese international cooperation. Both donors were involved from 2014 to 2016 to do surface-based exploration, which led to the conceptual model of on the ground geothermal assessment. SEF support is therefore building on the results of these first exploratory phases led by New Zealand and Japan’s support. New Zealand continues to provide technical assistance to the government of Grenada, and interviews showed that there is a good coordination between the New Zealand technical assistance and the SEF project in Grenada.
- In Dominica, the World Bank is currently leading the support provided for GE development, and in particular exploratory drilling. SEF funding can be considered complementary to the World Bank support as it took the form of a rehabilitation and reconstruction loan to the utility company DOMLEC to restore a transmission line after the damages caused by hurricane Maria. Also, the possibility for the government of Dominica to seek SEF funding for additional exploratory work in the future was mentioned in an interview.

The perceptions of several interviewees converge around the niche of the SEF that is considered having a greater magnitude than other initiatives in the region as the facility is able to successfully leverage funding from a variety of sources through the CDB (from IDB, CTF, GEF, CTF, EU, UK, DFID, and more recently the GCF to name the main ones). Through this leveraging effect, most of the other players in the region interact with the CDB and therefore to some extent with the SEF.

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<sup>7</sup> IDB. SEF (RG-L1071) Donor coordination Annex.



Another particularity of the SEF is its ability to be demand-driven and adapt to the countries' needs and priorities. For instance, even though the main focus of the SEF is GE development, the facility was flexible enough to also include RE and EE, which for instance allowed to provide support to A&B where the geothermal potential is limited. This flexibility and adaptability also proved useful to bring complementary funding to ongoing initiatives (such as the transmission line in Dominica mentioned above for instance).

The financing package offered by the SEF is also considered as an added value. The fact that the SEF can mix technical assistance with loans and concessional grants provides flexibility to best adapt to BMC. In addition, the flexibility in SEF funding was considered particularly relevant to support PPP development in the case of SVG, allowing public and private involvement from the onset by de-risking the PPP scheme and providing an opportunity to BMC governments to improve their equity position. According to an interviewee, even though the SVG project could have gone ahead without the SEF (as private sector partners were already committed), the concessional grant element of SEF funding allowed to lower the expected power price from an originally expected 0.18 to 0.12-0.15 USD/kWh.

Overall, these examples show that the SEF has a satisfactory level of complementarity with other initiatives.

However, the multitude of actors in the region, and the blending of funding through the CDB and the SEF can bring confusion in the beneficiary countries/organisations on where the funding comes from. Several interviewees did not know what projects was considered as funded by the SEF, in particular when it came to SEF sub-projects funded by CDB counterparts. For instance, interviewees are more aware of funding from the Sustainable Energy for the Eastern Caribbean (SEEC) program than from the SEF, meaning that the SEF visibility could be improved. The line is also quite blurry for the beneficiaries of support between different CDB initiatives such as the SEF, the SEEC, the Geosmart initiative, which proved a challenge for the evaluators in precisely identifying the source of funding of different initiatives, as well as the scope of the different CDB programmes and facilities. The blending in funding sources can also create a risk of double counting achieved results. For instance, when a SEF-sub-project is funded by the SEEC as CDB counterpart funding, it is unclear whether the results achieved by this sub-project are attributed to the SEF or the SEEC. If the sub-project was to be carried out by the SEEC even if the SEF did not exist, it would be unfair to attribute these specific project results to the SEF as the project would have taken place even in the business as usual scenario without the SEF. In this sense, there is a need to clarify the different funding sources from the CDB counterpart funding, and ensure that there is no double counting in reporting.

### **SQ1.2. Was the SEF designed in a coherent manner to deliver expected outcomes?**

#### SEF's theory of change

The SEF design documents include a results matrix presenting for each expected result (outcome and output) corresponding indicators, baseline, target and source of verification.



Overall, the indicators proposed in the results framework are SMART<sup>8</sup> according to Results-Based Management (RBM) principles. The formulation of outcomes and outputs is also deemed satisfactory.

Nevertheless, some inconsistencies were noted between the results framework presented in the IDB loan proposal, and the one in the GEF CEO endorsement. The main differences relate to the outcome and output formulations. For instance:

- The IDB loan proposal includes an impact indicator, while the GEF's does not,
- Some outcomes for the IDB are presented as outputs in the GEF CEO Endorsement, namely:
  - EE projects appraised by the CDB
  - Women trained in construction, operation and/or maintenance of RE and EE infrastructure and projects
  - RE projects appraised by the CDB,
- The GEF CEO Endorsement includes 2 outputs on EE and RE pilot projects that are not mentioned in the IDB Loan Proposal, and
- The GEF CEO Endorsement includes an outcome and outputs related to the program's M&E, which is not the case for the IDB.

Given that the IDB results framework is the one used in the SEF SAPR, this MTR which is meant to evaluate the whole programme package therefore assessed the achievement of outcomes and outputs based on the IDB loan proposal, and not the GEF CEO Endorsement results framework. The rating of outcomes to be provided in the MTR report is based on the outcomes listed in the IDB loan proposal, while also taking into account any changes made to the results framework since inception.

The SEF design documents do not include a proper ToC, nor do they provide an analysis of the impact pathways from outputs to outcomes and impacts. Building on the logical framework of the programme, the consultant reconstructed the SEF's ToC, which is presented in Figure 1 above. Overall, the implicit pathways from outputs, outcomes and impacts from the results framework - made explicit in the reconstructed ToC - are relevant.

Nevertheless, an analysis of underlying assumptions is lacking from the SEF design documents. For instance, the following key assumptions could have been identified at the design stage:

- The expected reduction in tariff depends on stable fossil fuel prices with no significant drop;
- The targets in renewable energy generation and Greenhouse Gas (GHG) emission reduction depend on successful GE exploratory drillings that confirm the energy sources at the expected levels;
- The expected results are based on the assumption that no extreme weather events adversely affect the implementation;

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<sup>8</sup> SMART: Specific, Measurable, Achievable, Relevant and Timebound

- The expected results in energy savings depend on the fact ECC government can find funding sources and are willing to implement identified EE measure, etc.

The SEF design process could have therefore benefitted from the definition of a more robust ToC.

#### Coherence between SEF's overall objective and SEF's sub-projects

While the SEF sub-projects are coherent with the 3 SEF components (EE, capacity building and RE), a more precise look at the sub-projects targets (as detailed in the Effectiveness section below) shows that many sub-projects are at preliminary stages of EE, RE or even capacity building development, which are too early in the process to directly contribute to the expected results of the SEF. This can partly be explained by the pursuit by the SEF of a certain level of flexibility to best adapt to BMC needs, no matter at what stage they are. Nevertheless, it makes the targets of the SEF at the program level quite ambitious at this mid-term point of the program, which is discussed further in the section on Effectiveness below.

This resonates with an observation made by several interviewees, who while they recognize the catalytic role of the SEF on the geothermal agenda in the region, considered that the SEF approach could have been even more strategic with beneficiary countries, and that the facility was in need of a more proactive strategy to engage with each of the six countries to develop a tailored pathway to achieve broader objectives. These interviewees found that the SEF was too reactive and focused on funding pre-identified and already bankable projects. This can be explained by the lack of capacity in ECC to develop a clear vision and actionable plan to roll out sustainable energy development. It is a gap that the SEF has not addressed to date. Capacity issues turned out to be much greater an issue that was originally contemplated.

On the issue of the demand driven approach, it is worth noting that discussions held with CDB and IDB in the course of this evaluation pointed out that from their perspective, this approach was considered the only feasible option for supporting GE in BMCs at the time of SEF design given a number of issues and unknowns, namely :

- The nature of GE development
- The newness of the technology for the countries and the region
- The number of interlinked issues –more significant issues with major energy infrastructure project which involve significant government input in the context of short political cycles
- The lack of a PPP framework at the time; and,
- The size of GE projects compared to that which would attract attention of credible investors

The evaluator nevertheless assesses the coherence between the SEF's overall objective and the sub-projects as moderate given the demand-driven approach pursued by the CDB that would gain moving forward, in his professional judgment, from being coupled with a more proactive and strategic dimension.

### SQ1.3. To what extent were stakeholders involved in the SEF's design

#### Consideration of local needs into the SEF's design

At the program level, as previously mentioned, the SEF design documents are based on an in-depth analysis of the situation and needs of the energy sector in the 6 ECC. In addition, the facility follows an explicit demand-driven approach to best adapt to the BMC needs, no matter at what stage they are. IDB and CDB also require that all beneficiary countries develop multistakeholder engagement plans and consultations<sup>9</sup> The indicative pipeline of sub-projects was identified in 2015 through meetings between IDB, local governments, CDB and potential project sponsors in the 6 ECC<sup>10</sup>. It can therefore be considered that beneficiary needs were well considered in the design of the overall program.

At the sub-project level, national needs are also duly considered during the design as the governments, utilities or regulators are the one that come forward to the CDB with funding requests. In this regard, most of the sub-projects design documents made available to the consultant include a background section explaining the specific needs the project is intended to address. Nevertheless, discussions with Community Liaison Officers (CLO) in different countries showed that while the design of sub-projects were driven by the governments, communities in the project areas were not officially engaged for the selection of SEF sub-projects. They tend to be engaged later in the process, through preliminary assessments or consultations led by the CLO for instance, as described further in the effectiveness section.

#### Environmental and Social Safeguards

Both the IDB and the CDB<sup>11</sup> have policies and procedures on environmental and social safeguards with which projects must comply to be funded. These procedures are mainstreamed in the different processes of the banks and specific tools are used to screen projects that come to the banks.

Given SEF's focus on GE, the facility is classified as a high risk in the IDB Loan proposal, meaning a potential for significant environmental and social impacts. The SEF design document package includes an Environmental and social management report<sup>12</sup> that states the following: *"IDB and CDB have agreed that for Category A sub-projects and all Geothermal high risk sub-projects (Category A and B+), IDB will undertake due diligence alongside CDB's team throughout the project preparation, appraisal, and monitoring phases. The objective of this hand-in-hand due diligence is to help build environmental and social capacity in CDB's analysis of high risk geothermal projects, and ensure that project impacts are adequately mitigated according to the IFC Performance Standards and WB Environmental Health and Safety Guidelines"*. The due diligence is implemented at all stages of the CDB grant and loan approval cycles, as described in the SEF Environmental and social management report. For

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<sup>9</sup> CTF Program approval request

<sup>10</sup> IDB. 2015. *Cost Benefit Analysis of the Pipeline of Projects Potentially Funded by the Sustainable Energy Facility for the Eastern Caribbean*

<sup>11</sup> CDB. 2014. *Environmental and social review procedures*

<sup>12</sup> IDB. Sustainable Energy Facility For The Eastern Caribbean (RG-L1071). *Environmental and Social Management Report*.

instance, all grant requests must include an environmental and social analysis, and all loan requests must be supported by an Environmental and Social Impact Assessment (ESIA).

Table 4 shows the level of consideration of environmental and social safeguards in the design documentation of SEF sub-projects.

**Table 4: Consideration of environmental and social safeguards in SEF sub-projects design documents**

SEF projects	sub-	Consideration of Environmental and social safeguard in design documents
A&B Solar PV		The project has been assigned Category B, in accordance with CDB's Environmental and Social Review Procedures and is not expected to have any significant or irreversible environmental and social impacts, and those anticipated are likely to be mostly temporary. These impacts are easily mitigated using "best practice" methods and adequate implementation of environmental and social mitigation measures.
A&B streetlight retrofit		The Project is categorised "B" based on CDB's Environmental and Social Review Procedures, as it will result in a limited number of specific environmental and social impacts which can be effectively mitigated if they are planned and monitored for compliance
DOM buildings	Gov.	No dedicated section in grant approval document
DOM RRL – transmission line		The Project is not anticipated to have any significant adverse social and environmental impacts. The proposed construction works are expected to be confined primarily to existing locations and rights-of-way. However, in areas where landslides occurred the alignment of the T&D lines is expected to change. New locations will be informed by the findings of the planned geotechnical investigations
GE TA to CDB		N/A
Grenada ESIA + institutional strengthening		N/A
Grenada Buildings	Gov.	No dedicated section in grant approval document
SKN buildings	Gov.	No dedicated section in grant approval document
SKN Streetlight		The project is categorised "B" based on CDB's Environmental and Social Review Procedures, as it will result in a limited number of specific environmental impacts which are site specific and readily mitigated. An environmental and social management plan has been developed for the project
SL training regulators		N/A
SVG GE drilling project		In compliance with CDB's Environment and Social Review Procedures, the Project is categorised 'B' because of the limited number of specific adverse social and environmental impacts which may result from the proposed activities and which can be avoided or mitigated by adhering to national regulations and generally recognised performance standards, guidelines or design criteria. An ESIA and associated Environmental and Social Management Plan (ESMP), was prepared by independent consultants for the Project. An Environment and Social Action Plan (ESAP) has been developed, to ensure that any outstanding issues at the time of project approval, are addressed in a timely and appropriate manner.

SVG Gov. building	No dedicated section in grant approval document
SVG TA for ToR transmission line	N/A
Regional workshop on proposal writing	N/A

Except for some sub-projects where it is not applicable (technical assistance, capacity building or energy audit for government building sub-projects), most sub-project design documents made available to the consultant include a section on environmental and social safeguards that states the risk classification of the project, the main expected impacts and the measures to be put in place to minimize them. Environmental and social safeguards are therefore well considered at the sub-project level.

### Gender-related concerns

The CDB and IDB also have their respective policies on gender<sup>13</sup>. Gender consideration is therefore a requirement to access funding. In fact, all board approval documents for SEF sub-projects (when relevant<sup>14</sup>) include a gender market analysis, which is summarized in Table 5.

Table 5: Result of the gender analysis in SEF sub-projects

SEF sub-projects	Gender Marker score
A&B Solar PV	3 - MM: Marginally Mainstreamed: The project has the potential to contribute to gender equality
A&B Streetlight Retrofit	0.25 – NO: no contribution to gender equality, it is not reflected in the project, or appears as a formal reference only
DOM government buildings	0 – NO
DOM RRL – transmission line	1.5 – MM: Marginally mainstreamed; the project has limited potential to contribute to gender equality.
TA to CDB	N/A – NO
Grenada ESIA + institutional strengthening	N/A
Grenada Government Buildings	0 – NO
SKN government buildings	0 – NO
SKN Streetlight	0.25 – NO
SL training regulators	0 – NO
SVG GE drilling project	1.75 – MM: Marginally Mainstreamed: The Project has limited potential to contribute significantly to Gender Equality
SVG Government building	0 – NO
SVG TA for ToR transmission line	N/A

<sup>13</sup> IDB. 2010. *Operational Policy on Gender Equality in Development*, and CDB. 2008. *Gender Equality Policy and Operational Strategy*.

<sup>14</sup> For instance, a gender analysis was not applicable for some technical assistance projects.

Regional workshop on proposal writing	N/A
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Gender is therefore considered in the design of SEF sub-projects. However, excluding the non applicable projects, the results of the analysis show that 6 sub-projects are considered to have no contribution to gender equality, and only 3 sub-projects where it is marginally mainstreamed, meaning that the potential to contribute to gender equality is limited.

Gender issues are mostly considered through the participation of women in trainings and workshops. This can also be observed in the SEF results framework that only include 2 indicators on gender, which related to (i) the proportion of women trained, out of the total trainees, in construction, management and/or maintenance of SE infrastructure/projects; and (ii) the proportion of women who participate in consultation processes related to GE projects.

Overall, even though it is analysed at design stage for most projects, the contribution of SEF sub-projects to gender equality is limited, which is in part due to the nature of the projects themselves.

#### **Conclusion on Relevance:**

The relevance of the SEF to support ECC countries in their shift towards low emission development pathways is satisfactory.

## 3.2. EFFECTIVENESS

**Q2. To what extent is the SEF achieving its expected results as defined in the results framework?**

**SQ2.1. Is the project successfully delivering its outputs and achieving targets?**

### Beneficiary countries

So far, the SEF has benefitted all 6 ECC that were initially identified as SEF beneficiaries. Each country has received SEF support from 1 (Saint Lucia) to 4 sub-projects (SVG). Even though the number of sub-projects per country is quite varied, the overall representation of SEF's expected beneficiary countries is satisfactory to date.

Table 6 : Number of sub-projects per country

	EE sub-projects	Capacity building sub-projects	RE project sub-projects
A&B	1		1
DOM	1		2
GRE	1	2	
SKN	2		
SVG	1	2	1
SL		1	

### Implementation Status of SEF's sub-projects

Several sub-projects have been funded under the 3 components of the SEF so far. Table 7 summarizes the status of implementation of all funded sub-projects, based on what has been reported in the SEF SAPRs as of December 2019, and during interviews.

Table 7: SEF funded sub-projects' status of implementation<sup>15</sup>

Component	SEF-sub-projects	Status at mid-term
Component 1	1.1 A&B EE – Streetlight retrofit	Completed
	1.2 DOM EE – Government buildings	Completed
	1.3 GRE EE – Government buildings	Completed
	1.4 SKN – Streetlight retrofit	Implementation
	1.5 SL EE - Streetlights retrofit	Cancelled
	1.6 SVG EE - Government buildings	Implementation
	1.7 SKN - Government buildings	Completed
Component 2	2.1 A&B - Policy- based Loan (PBL)	Cancelled
	2.2 CDB - Capacity Building	Implementation
	2.3 SL – Training/ Capacity strengthening	Completed
	2.4 SVG - Training / Capacity strengthening	Implementation

<sup>15</sup> Compiled from SEF SAPR and adjusted according to interviews and documentation review.



	2.5 GRE - Training / Capacity strengthening	Implementation
	Regional capacity strengthening for regulators on grant writing	Completed
	2.6 SKN - Training / Capacity strengthening	Non-Started
	2.7 DOM - Training / Capacity strengthening	Non-Started
	2.8 A&B - Training / Capacity strengthening	Non-Started
	2.9 SL - Regulatory framework	Non-Started
	2.10 SVG - Regulatory framework	Non-Started
	2.11 GRE - Regulatory framework	Non-Started
	2.12 SKN - Regulatory framework	Non-Started
	2.13 DOM - Regulatory framework	Non-Started
	2.14 A&B – Regulatory Framework	Non-Started
Component 3	3.1 SL Exploratory drilling	Non-Started
	3.2 GRE - Slim-hole/Exploratory drilling	Non-Started
	3.3 GRE - Slim-hole/exploratory drilling	Non-Started
	3.4 GRE - Field development	Non-Started
	3.5 SVG - Exploratory drilling	Implementation
	3.6 SVG - Field development loan	Non-Started
	3.7 SKN (St Kitts) - Exploratory drilling	Non-Started
	3.8 SKN (St Kitts) - Field development loan	Non-Started
	3.9 DOM - Transmission line loan	Implementation
	3.10 A&B RE – RE/EE Investment Grant	Implementation
	3.11 SVG - Transmission line loan	Non-Started

To date, 6 sub-projects were funded under Component 1 (4 completed and 2 ongoing), 5 under Component 2, and 3 under Component 3. The number of approved projects appears quite limited compared to the total number of projects that were identified in the pipeline at SEF design.

For each of these sub-projects, a summary of the progress accomplished so far is presented in Table 8.



Table 8 : Progress accomplished as of December 2019 by SEF sub-projects

Project	Progress as of December 2019
<b>Comp. 1</b>	
A&B EE – Streetlight retrofit	The project was approved in July 2016. The installation of lights started in March 2018. In March 2020 the installation was completed and 13,612 lights had been installed. The initial target was of 14,365 lights, but it changed during the process as a result of other installations and delays. The initial project target was to reduce street lighting energy consumption by 4,900MWh/year in 2019. According to the completion report March 2020, total energy savings were estimated at 4,679,276 kWh/year. The project is completed.
DOM EE – Government buildings	Technical assistance has been provided for the conduct of energy audits in 14 government buildings in September-2019. The audits are completed, and the recommendations are being considered by the government for potential investment projects. The measures recommended by the energy audits are expected to save the 14 facilities 26% of their current electricity consumption. The project is completed.
GRE EE – Government buildings	Energy audits were completed in 2018 for 13 facilities. It is estimated that if the proposed measures were implemented, over 1.6 million kWh could be saved per year, representing 21% of the combined energy consumption of all facilities. The carbon dioxide savings could exceed 1,000 tCO <sub>2</sub> e per annum, and cost savings of USD1.7 million could be realized. The government of Grenada had prepared an investment project to be submitted to CDB to implement the measures recommended in the audit, but finally decided to not pursue the investment. The project is completed.
SKN – Streetlight retrofit	The Project aims to replace approximately 10,047 streetlamps and 1,024 flood lamps across both islands of St. Kitts and Nevis with high-efficient LED models. The project is expected to save 1,727 tCO <sub>2</sub> e/yr on Nevis and 1,879 tCO <sub>2</sub> e/yr on Saint Kitts from 2019. The installation of lighting started in 2019. The project is ongoing.
SKN – Government buildings	Energy audits have been completed for 35 facilities (out of the initially 37 identified) and reports have been submitted. All the recommended measures together would result in annual energy savings of 8,138,741 kWh (inclusive of PV Generation), annual cost savings of USD2,048,165, as well as annual emission reductions of 5,626 tCO <sub>2</sub> e. An investment package has been presented to the Government for decision. The project is completed.
SVG EE – Government buildings	Energy audits were completed in 2016 for 20 public buildings. A loan was then approved to implement the measures recommended by the energy audits. A project coordinator has been procured and engineering designs are being pursued. Implementation is underway, but progress is slow.
<b>Comp. 2</b>	
CDB – Capacity Building	The objective of this technical assistance is to strengthen the capacity of CDB and the targeted countries to make sound and timely decisions in relation to GE development, including through the exploratory test-drilling stage and development of GE plants. The CDB has contracted a Geothermal Advisor for drilling to provide back-stopping support to projects under implementation. The consultant is primarily providing review and analytical backstopping support to CDB's appraisal team for a potential GE project on Nevis Island.
GRE / Training	Technical assistance is being provided in the form of: - A consultant for the position of project coordinator - A consultant for the position of CLO

Capacity strengthening	- ESIA for test-drilling phase All consultants have been hired. The ESIA is still ongoing and has been delayed because its scope had to be expanded to a new well location (due to an engineering design change during the process), which required finding additional resources and put the ESIA on hold. The work is expected to resume in July 2020.
SL Training/ Capacity strengthening	- The National Utility Regulatory Commission (NURC) in Saint Lucia requested support for training. 4 NURC staff attended a training on energy Pricing and Benchmarking Infrastructure Operations at the Public Utility Research Center (PURC) from the University of Florida from July 29, 2019 to August 8, 2019. The project is completed.
SVG Training / Capacity strengthening	- Capacity strengthening is being provided in the form of: - a Community Liaison Officer (CLO) to the SVGCL; and - Technical Assistance (consultant) for the development of TORs for the transmission line to connect contemplated GE plant to the rest of the system.
Regional capacity strengthening	Regional training for regulators was held to strengthen capacity for writing of grant proposals. 26 representatives from the Organization of the Caribbean Utility Regulator (OOCUR) attended the training.
<b>Comp. 3</b>	
A&B RE – RE/EE Investment Grant	- The Government of A&B decided to pursue the implementation of solar systems in 13 selected schools and clinics. This GEF-financed project was approved in Dec. 2017 by CDB Board but there have been implementation delays. The design has been completed on 12 out of the 13 buildings, the last building still being under construction. Construction has not started yet. The equipment has been ordered and is waiting to clear customs following the COVID situation.
DOM Transmission line loan	- After the passage of hurricane Maria, some SEF loan resources were included as part of the CDB reconstruction and rehabilitation loan package to the utility company DOMLEC. These resources were used to pay back the replacement and upgrade of the transmission line, which will facilitate GE development later on. To date, the generation system is about 89% complete, the transmission and distribution system is about 95% complete and the customer service about 92%.
SVG Exploratory drilling	- An investment grant was approved by the CDB Board in May 2016. The drilling contract signed October 2018, the process was delayed because of protracted negotiation of the PPA. 3 exploratory full-sized wells were drilled in 2019. The results from the three wells are different. The first well (SVG-1) is incomplete due to the collapsing in the deepest part of the well, however the well has shown high temperature and some correlation with the second well (SVG-3). SVG-3 has shown high temperature with permeability, the well is productive but has limited flow capacity, the final outcome will not be clear until the flow test has been performed. The last well (SVG-2) is the deepest well and produced the highest temperature but failed to show permeability even after stimulation. Investigation is still ongoing.

### Contribution to date of subprojects to SEF's overall objective

Interviews showed that any project submitted to the SEF have to be fully aligned to the facility's overall objective to go through the screening process and get funding. All sub-projects should therefore contribute to the overall SEF's objective. However, an analysis of the results frameworks of SEF-funded projects (when available), shows that not all of them directly contribute to SEF's expected outputs and outcomes, let alone expected impact. For instance under Component 1, while the SEF is aiming for energy savings, reduction of fossil fuel imports and GHG emissions, 4 SEF sub-projects under this component (in Dominica, Grenada, SKN, and SVG) are focusing on energy audits of government buildings. While these audits are a key first step to electricity savings in the long term, they are not sufficient, and require follow-up investments to move towards the implementation of the EE measures recommended in the audits. While energy audits in SVG led to investments for the implementation of recommended measures, implementation has been slow to date.

Under its second Component, the SEF aims to support climate-resilient development of GE regulatory frameworks in BMC as well as capacity strengthening and institutional strengthening. Projects under this Component are providing funding for certain positions such as CLO or Project Coordinator for GE projects in Grenada or SVG to facilitate the coalescence of other actors within government around GE projects, as well as the creation of a geothermal project management unit within the Government of Grenada. The Project Coordinator has high-level responsibilities, including the formation of a geothermal development task-force to facilitate discussion on national policy and strategy. Projects also offer training (for instance for the CDB or for the National Utility Regulatory Commission (NURC) in Saint Lucia), but they do not provide a country level technical assistance at the strategic, policy or regulatory levels for the actual development of the GE sub-sector. In a nutshell, technical assistance under SEF so far tends to be seen as an ad-hoc complement to facilitate a specific sub-project investment as part of the demand driven approach adopted by the SEF, also taking into account efforts supported by other donors with respect to regulation and policy reforms, including the ECERA.

Under its third Component, the SEF aims for the development of GE capacity, while reducing GHG and fossil fuel imports. However, at this stage, only the SVG project is pursuing exploratory drilling, and is not yet at the stage of building plants and producing GE. The project in Grenada is at the stage of conducting an ESIA and therefore not yet at exploratory drilling, let alone production capacity.

### Progress to date towards the achievement of SEF's outputs

Table 9 summarizes the progress made to date regarding the expected outputs of the SEF per component. The formulation of outputs is based on the updated results matrix from the latest SAPR (July-Dec 2019), which differs slightly from the original results matrix presented in the IDB Loan proposal. In terms of targets, the MTR found some discrepancies between the Planned target presented in the SAPR and the initial targets from the IDB Loan proposal. These changes are explained in the SAPR (July-Dec 2016): during the kick-off workshop held in Barbados in June 2016, the indicative pipeline of SEF sub-projects was reviewed and a revised pipeline was agreed upon, resulting in adjustments in the SEF results framework and initial planned targets presented in the Loan proposal.

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Table 9: Progress towards achievement of SEF's expected outputs

*Legend: P = planned target as in original loan proposal; P(a) = Planned adjusted target; A = Actual target achieved to date*

Outputs	Unit of Measure	Targets <sup>16</sup>			Status at mid-term <sup>17</sup>	Justification	Progress at mid-term
		P	P(a)	A			
Component 1: Energy Efficiency							
Funding operations provided for EE projects.	Number of funding operations approved by CDB's Board	3	6	4	6	Based on the analysis presented above, the following operations have been funded under this component: - A&B EE – Streetlight retrofit - DOM EE – Government buildings - GRE EE – Government buildings - SKN – Streetlight retrofit - SKN - Government buildings - SVG EE - Government buildings  There are therefore 6 operations funded to date, and not 4 as mentioned in the latest SAPR.	Target achieved
Component 2: Reg. framework, inst. Strengthening and capacity building							
Studies to support energy policy reform, regulation and implementation of renewable energy and energy efficiency projects in the ECC.	Number of studies completed	3	3	3	0	The MTR did not find evidence in the review of the sub-projects of any studies funded specifically by SEF and supporting energy policy reform, regulation and implementation. Such work was apparently done mainly in parallel through TAPSEC and OECS Commission	Output significantly below target
Training and capacity building interventions for the EA, SPVs, and/or government employees.	Number of interventions completed	8	8	4	6	The MTR found that only 2 trainings were provided: - 1 training provided to 4 staff of the NURC (regulator) in Saint Lucia. - 1 regional training for capacity building in grant writing for the regulators - 1 Support for ESIA - 1 Institutional strengthening intervention for CLO position in SVG.	Output on track

<sup>16</sup> These targets (planned, planned adjusted, and actual) are the ones presented in the latest SAPR (July-Dec 2019).

<sup>17</sup> This status is the estimation of the consultant based on the findings of the MTR.

Outputs	Unit of Measure	Targets <sup>16</sup>			Status at mid-term <sup>17</sup>	Justification	Progress at mid-term
		P	P(a)	A			
						- 2 institutional strengthening interventions for PC and CLO positions in Grenada	
<b>Component 3: Intermittent RE and GE</b>							
Funding operations for GE projects.	Number of funding operations approved by CDB's Board	3	8	2	2	Based on the sub-project analysis above, the following GE operations have been funded so far: - DOM - Transmission line loan - SVG - Exploratory drilling	<b>Output significantly below adjusted target</b>
Grants provided to geothermal projects with resources from the Program for drilling or doing pre-feasibility studies.	Number of funding operations approved by CDB's Board		1		0	The MTR did not find evidence of such grant as of yet	<b>Output on track</b>
Contingent Recovery Grants (CRG) provided to geothermal projects with resources from the Program	Number of funding operations approved by CDB's Board		2	1	1	CRG was provided through the SVG - Exploratory drilling project	<b>Output on track</b>
Loans provided to geothermal projects at any stage of development with resources from the Program	Number of funding operations approved by CDB's Board		4		0	The MTR did not find evidence of such loan as of yet	<b>Output significantly below adjusted target</b>
Number of loans for transmission and distribution projects.	Number of loans approved by CDB's Board	1	2	1	1	The SEF has contributed to the reconstruction and rehabilitation loan to DOMLEC for transmission line after the passage of hurricane Maria	<b>Output on track</b>
Funding operations for intermittent RE projects.	Number of funding operations approved by CDB's Board	1	1	1	1	The SEF has funded the A&B RE – RE/EE Investment Grant for Solar.	<b>Target achieved</b>

The MTR found the status at mid-term for some outputs to be different from what is stated in the SAPR as actual targets. This is the case under Component 1, and 2, as shown in Table 9. Overall, Table 9 shows that the output under Component 1 has achieved its targets, outputs under Component 2 and Component 3 are overall below the targets, with some either on track or significantly below. The contribution of SEF sub-projects funded so far to the achievement of the facility's expected outputs varies across components: it has been highly satisfactory under Component 1, moderately unsatisfactory under Component 2 and satisfactory under Component 3.

#### Factors that affected the delivery of outputs

The documentation review and interviews conducted for this review shed light on a variety of factors that delayed the sub-projects and affected the delivery of outputs. These factors were of different nature:

- The SEF's demand-driven and rather reactive approach, considered at the time of the project design as the only viable approach by both CDB and IDB management (as explained in the Relevance section) is affecting the delivery of outputs as the facility relies on the ECC governments to come forward with project proposals. This CDB approach, coupled with the lack of capacities at the national level to develop and submit project proposals, can explain why there are less sub-projects in the pipeline than originally planned, which negatively impacts the delivery of outputs,
- Extreme weather events such as hurricane Maria in September 2017 affected the implementation of the sub-projects in Dominica in particular,
- Most sub-projects faced delays due to capacity constraints within the Governments, which affected the procurement processes and therefore project implementation,
- Some sub-projects had difficulties finding qualified expertise to conduct several activities,
- Some sub-projects faced technical issues (such as the collapse of a well in SVG, an engineering change in the exploratory well in Grenada, the disposal of old streetlights in A&B), which delayed the implementation of the projects,
- Negotiations around the PPP and Power Purchase Agreement (PPA) took longer than expected for the GE project in SVG, and
- The Covid-19 pandemic affected ongoing projects as it delayed the delivery of equipment, and the conduction of missions from international expert for instance.

Most of these factors are therefore external and outside the control of the CDB.

### **SQ2.2. What progress has the SEF made towards the achievement of expected outcomes**

#### Progress to date towards the achievement of SEF's outcomes

Table 10 gives an overview of the progress made to date in terms of Outcome achievement. As for Table 9 on outputs, the formulation of outcomes is based on the updated results matrix from the latest SAPR (July-Dec 2019).

Table 10: Progress towards achievement of SEF's expected Outcomes

*Legend: P = planned target as in original loan proposal; P(a) = Planned adjusted target; A = Actual target achieved to date*

Outcomes	Unit of Measure	Targets <sup>18</sup>			Status at mid-term <sup>19</sup>	Justification	Progress at mid-term
		P	P(a)	A			
Component 1: Energy Efficiency							
Electricity saved by EE applications, measures & programs.	GWh/year	66.5	65.4	3.5	4.7	The A&B streetlight retrofit project allowed to save 4.7 GWh/year. The monitoring documents from other EE sub-projects shared with the consultant do not give figures on electricity savings. However, the investment project in SVG on EE measures in government building should contribute once the measures are implemented	Limited
Reduction in imports of fossil fuels for electricity generation.	Thousand barrels of oil	107.5	110.3	4.9	N/A	The monitoring documents from EE sub-projects shared with the consultant do not give figures on the reduction of fossil fuel imports.	Limited
GHG emissions avoided due to EE projects.	ktCO2e/yr	50.4	51.9	2.3	1.5	The A&B streetlight retrofit project allowed to save 1.5 ktCO2e/yr. The monitoring documents from other EE sub-projects shared with the consultant do not give figures on GHG emission avoided. However, the investment project in SVG on EE measures in government buildings should contribute once the measures are implemented	Limited
Component 2: Reg. framework, inst. Strengthening and capacity building							
# countries that have GE legal and regulatory frameworks.	# countries	3	3	0	0	The MTR did not find evidence of SEF sub-projects contributing to the legal and regulatory framework in ECC.	Limited

<sup>18</sup> These targets (planned, planned adjusted, and actual) are the ones presented in the latest SAPR (July-Dec 2019).

<sup>19</sup> This status is the estimation of the consultant based on the findings of the MTR.



Outcomes	Unit of Measure	Targets <sup>18</sup>			Status at mid-term <sup>19</sup>	Justification	Progress at mid-term
		P	P(a)	A			
Women trained in the field of SE out of the total number of people trained using Program resources.	%	25	25	35	N/A	2 men and 2 women (50% of women) attended the training provided to NURC staff in Saint Lucia. Out of 26 participants, 19 women attended the regional training for regulators (73% women).	Target exceeded
<b>Component 3: Intermittent RE and GE</b>							
GHG emissions avoided due to RE projects.	ktCO2e/yr	1,240.9	1240.9	0	0	The early stage of implementation of the solar project in A&B (installation has not yet started) has not allowed yet any results in terms of GHG emissions reduction.	Limited
Reduction in imports of fossil fuels for electricity generation.	Thousand barrels of oil	2,648	2,648	0	0	No sub-project is yet at the stage of energy generation, there is therefore no results to date in terms of reduction in import of fossil fuel or MW of GE production.	Limited
MW of geothermal capacity.	MW	55	55	0	0		Limited
Number of GE projects financed that moved to the following stage of development.	Number of GE projects	4	4	0	0	The GE project in SVG is still at the exploratory stage and has not moved yet to the following stage of development	Limited
% of women who participate in consultations.	%	45	45	/	N/A	The monitoring documents shared with the consultant did not provide aggregated information of the percentage of women participating in consultations.	Limited



At the exception of the proportion of women trained, at mid-term, progress towards the achievements of outcomes is limited for all outcomes under all 3 Components, which can be expected given that the program is only at the mid-way point.

This is due to various factors, including:

- 4 EE sub-projects out of 6 focused on energy audits. Only 1 out of 4 audits led to an investment project in SVG to implement recommended measures, but implementation and therefore results are moving slow. The other energy audits have not contributed to achieving results in terms of energy savings, reduction in emission of fossil fuels and GHG emission avoided.
- Lack of appropriate monitoring data to inform some of the indicators. For instance, monitoring reports from sub-projects do not systematically report on the proportion of women that participated in trainings or consultations, which makes any aggregation at the SEF Program level difficult.
- Technical Assistance sub-projects under Component 2 have been following a demand-driven approach, based on requests from ECC Governments. This approach has mostly led to the financing of consultant positions (GE drilling advisor to the CDB, CLOs, project coordinator, ESIA consultant) but few trainings have been provided (only one in Saint Lucia and a regional one) which means that the sub-projects have not contributed directly to an improvement in the GE legal and regulatory frameworks of ECC.
- Early stage, slow pace, and limited success of GE sub-projects. Only one GE exploratory drilling sub-project has been funded so far (in SVG), which is still at exploratory stages and has not moved yet to the next stage. No GE has therefore been produced through SEF funded sub-projects yet.

#### Likelihood of achievement of outcomes

While the contribution of sub-projects to the achievement of SEF's outcome is limited to date, an analysis of the expected results of each sub-project is necessary to assess the likelihood of achievement of outcomes at program completion. This analysis must also be put within the context of the new financing mobilised as part of SEF-Expanded from both the GCF and the Government of Italy, as well as within the context the associated extended timeline for implementation of the programme until 2025.

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- **Component 1**

Table 11: SEF targets vs subproject targets for outcomes under Component 1

COMPONENT 1	Unit	SEF Planned adjusted target <sup>20</sup>	Planned sub-project targets							
Outcome indicators			A&B Streetlight	DOM Gov. Buildings	GRE Gov. Buildings	SKN Streetlight	SKN Gov. Buildings	SVG Gov. Buildings	TOTAL	% SEF Target
Electricity saved by EE applications, measures & programs.	GWh/year	65.4	4.7 <sup>21</sup>	0.80	1.61	5.25	0.07	1.01	13.44	21%
Reduction in imports of fossil fuels for electricity generation.	Thousands barrels of oil	110.3	7.15	N/A	N/A	8.72	N/A	N/A	15.87	14%
GHG emissions avoided due to EE projects.	ktCO2e/yr	51.9	1.5 <sup>22</sup>	0.41	1	3.61	0.05	N/A	6.57	13%

Under Component 1, the expected targets from the 2 Streetlight retrofit projects in A&B and SKN only contribute to a small portion of SEF's overall targets in terms of energy savings, reduction in imports of fossil fuels, and GHG emission avoided. The 4 energy audit sub-projects that have been or are being conducted all include energy efficiency measures that also have the potential to save electricity, reduce fossil imports and avoid GHG emissions. However, the implementation of these recommended energy efficiency measures will depend on the appetite of the Governments and availability of funds to implement them. Several interviewees suggested a limited appetite and therefore a moderate chance that these measures will be implemented given the political nature of the decision and the competing use of funds. Even if all measures from the energy audits were to be implemented, the contribution to the overall SEF target would be limited (see column % SEF target). **Expected outcomes under Component 1 therefore seem unlikely to be achieved by program completion if the scope of the sub-projects under this component and the investments for implementation of the energy audits are not increased under the SEF Expanded until 2025.**

<sup>20</sup> These targets are the ones presented in the latest SAPR (July-Dec 2019).

<sup>21</sup> The planned target was 4.9, the target achieved is 4.7 GWh/year

<sup>22</sup> The planned target was 3.2, the target achieved at project completion is 1.5 ktCO2e/yr

- **Component 2**

Table 12 : SEF targets vs subproject targets for outcomes under Component 2

COMPONENT 2	Unit	SEF Planned adjusted target <sup>23</sup>	Planned sub-project targets (planned)					
Outcome indicators			CDB	GRE	SL	SVG	Regional	TOTAL
# countries that have GE legal and regulatory frameworks.	# countries	3	N/A	0	0	0	N/A	0
Women trained in the field of SE out of the total number of people trained using Program resources.	%	25	N/A	N/A	50%	N/A	N/A	N/A

As previously mentioned, the sub-projects funded under Component 2 have not yet contributed to SEF's expected outcomes, partly because of the demand-driven approach followed. In addition, there is limited data to monitor the participation of women in trainings. It can nevertheless be noted that the latest SAPR (July-Dec 2019) mentions some interest in capacity building on regulatory framework from SVG, Grenada, SKN and A&B for the next reporting period. If such sub-projects were to move ahead, they could contribute to the expected outcome of an improve GE legal and regulatory framework in 3 countries. However, it remains to be seen if these will move ahead, **the likelihood of achievement of expected outcomes under Component 2 is therefore difficult to assess, but possible if a renewed focussed is put on this capacity buiding efforts in line with the SEF Expanded completion timeline.**

<sup>23</sup> These targets are the ones presented in the latest SAPR (July-Dec 2019).

- **Component 3**

Table 13: SEF targets vs subproject targets for outcomes under Component 3

COMPONENT 3	Unit	SEF Planned adjusted target <sup>24</sup>	Planned sub-project targets				
Outcome indicators			A&B Solar PV	DOM Transmission line	SVG exploratory drilling	TOTAL	% SEF Target
GHG emissions avoided due to RE projects.	ktCO2e/yr	1240.9	0.175	0.054	N/A	0.229	0.02%
Reduction in imports of fossil fuels for electricity generation.	Thousand barrels of oil	2,648	N/A	N/A	N/A	N/A	
MW of geothermal capacity.	MW	55	N/A	N/A	7.5 if exploratory drilling successful	7.5	14%
Number of GE projects financed that moved to the following stage of development.	Number of GE projects	4	N/A	N/A	N/A	N/A	
% of women who participate in consultations.	%	45	N/A	N/A	20	N/A	

The targets in terms of GHG emission avoided for the A&B solar PV and the DOM transmission line sub-projects represent an insignificant proportion of the SEF's overall target (0.02%). Given the exploratory stage of the only GE project funded by SEF at mid-term (in SVG), there is no target in terms of GHG emissions avoided or reduction in fossil fuel imports for the potential plant. The project board approval document mentions that success of the exploratory stage is being defined as geothermal resources proven in ample quantities and quality to support the construction and operation of at least 7.5 MW geothermal power plant. However, as mentioned in the assessment of the outputs, the results of the exploratory stage have not been as successful as expected. In this sense, it does not seem likely that a 7.5 geothermal power plant will be able to be built in the following stage of the process, which has been confirmed by several interviewees. Given the mixed success of this exploratory project in SVG, and the time required to conduct such project, the additional funds made available through GCF funding for SEF Expanded and the timeline for completion now extended to 2025 is welcome. **The SEF Expanded timeline and GCF resources makes it likely that Outcomes under Component 3 could be achieved at SEF completion if a more proactive approach to leverage further investment in GE is promoted.**

<sup>24</sup> These targets are the ones presented in the latest SAPR (July-Dec 2019).

### SQ2.3. To what extent are stakeholders involved in program implementation?

As the SEF follows a demand-driven approach to meet the needs of the ECC, government stakeholders are closely involved in the implementation of sub-projects. All the SEF sub-projects under Component 1 and 3 requires private contractors to do the work so the private sector is also closely involved in the implementation of the SEF. Regarding local stakeholders and communities, the SEF sub-projects under Component 1 on energy audits for public buildings and streetlight retrofitting projects are not conducive to their specific involvement given their limited environmental and social impacts. It can nonetheless be noted that the Streetlight project in A&B has an Environmental and Social Management Plan (ESMP). Some of the funding under Component 2 is used to fund activities related to GE projects that are focusing on stakeholder engagement such as the ESIA process in Grenada, or the CLO positions in Grenada and SVG. Stakeholders are therefore closely considered in these sub-projects.

The most significant social and environmental impacts are expected to come from sub-projects under Component 3, a more in-depth analysis of stakeholders' involvement for a sample of these sub-projects is therefore provided below to exemplify the process followed and the types of challenges faced.

- SVG GE exploratory drilling

#### *Tools in place*

Prior to the approval of the sub-project by the CDB, an ESIA had been conducted and mitigation actions were identified in an Environmental and Social Action Plan (ESAP). The Board approval document for the SVG exploratory drilling project also includes an Environmental and Social Management Plan (ESMP). One of the conditions for disbursement for the construction of exploratory wells was for the St. Vincent Geothermal Company Limited (SVGCL) to provide evidence that key actions from the ESAP, including stakeholder engagement, have been satisfied.

The project has a grievance mechanism in place. There were 10 grievances logged in under this project, 4 of them dealt with land acquisition by farmers (1 for economic and physical displacement, and 3 for economic displacement), and 6 grievances related to the movement of the rig (damage to properties). All 10 grievances have been resolved. The SVG GE project also had to put in place a Resettlement Action Plan (RAP) for people whose land was affected by the drilling. Although all resettlement cases have been resolved by provision of new land, 2 relocated farmers had still not received promised land lease from SVG authorities at the end of 2019.

The project is therefore responsive in terms of environmental and social safeguards.

#### *Stakeholder engagement activities*

The SVG GE project has a CLO dedicated to implementing stakeholder engagement activities, such as: logging and answering grievances, updating the stakeholder management plan (revised every quarter), organizing stakeholder consultations (with community groups, government agencies, NGOs, etc.), meeting with people on site when drilling takes place to

provide them updates, facilitating the resettlement process, participating in social audit process and contributing to M&E and risk management.

### *Consideration of stakeholders' feedback*

It was mentioned in interviews that not all stakeholder feedback goes through the grievance mechanism as many of them are resolved before then. For instance, there was a case of water overflow from the ponds rig side affecting the river flow and therefore some land from adjacent farmers. This was reported through the CLO and an investigation team came in to resolve the issue.

In other cases, some issues can escalate to a grievance, which was the case regarding the stakeholder disclosure process. A disclosure was planned after each well drilling, however, no disclosure was done when the first well collapsed and when the results of the third well did not seem conclusive. These delays in disclosure raised some concerns amongst the opposition party. This lack of proper communication created an opportunity for the dissemination of false information by third parties, which has now become a major public relation issue. The CLO position contract has been extended by a few months, which should give her the opportunity to do a disclosure series on the results of the exploratory drilling to properly resolve this communication gap.

### *Gender issues*

Gender has been taken into consideration through specific activities such as: conducting women-only meetings during community consultations, sex disaggregated reporting, employment for women at drilling site, transportation, and logistics arrangements at drilling site to ensure women workers' safety, etc.

No specific gender issues were reported for the GE project in SVG. Interviews showed that in SVG, Tri-Tri fishing is mostly practiced by women in the Rabacca River. They were therefore consulted by the CLO, but it was reported that the drilling operations has had no effects on the Tri-Tri yield during the 2019 season<sup>25</sup>.

An interviewee also considered that given the early stage of the project that is still looking at technical issues, it is difficult to bring gender issues more concretely into focus so far.

- Grenada geothermal development

### *Tools in place*

Grenada is currently receiving SEF support for the position of Project Coordinator, CLO, and the conduct of an ESIA for a potential GE exploratory project. The ESIA is still ongoing as the scope had to be extended and extra funding sought out after the engineering design changed in the process, leading to the relocation of a well pad.

Given the early stages of the project, no specific environmental and social safeguards tools are in place yet. They will be developed further along in the process, based on the results of

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the ESIA. It is expected that the CLO will produce gender responsive community profiles and develop a stakeholder engagement plan. The project coordinator is expected to develop and implement a communication and stakeholder engagement strategy to increase government and public awareness on the benefits and limitations of geothermal energy.

#### *Stakeholder engagement activities*

The ESIA process organized public consultation during the scoping stage. A number of stakeholder consultations (focus group, interviews, village meetings, public consultations, etc.) are planned throughout the process. It is also expected that the ESIA will be disclosed in public consultation upon completion.

So far, focus group discussion and community walk through have been organized with local communities to raise awareness of GE. Discussions were held with villagers, women, farmers, businesses, and estate workers. An interviewee mentioned that the next step would be to engage wider community group such as schools. To date, the project has facilitated eight formal group engagements with persons in the areas expected to be directly affected by the project's exploratory drilling phase. A total of 126 people attended the meetings, including 52 women and 74 men (41% women). In addition, two rounds of engagements were held with landowners (4 in Site C, 1 in Site F) and the management of Glenelg Natural Spring Water. Non formal engagements were held with small business where community members gather in the area<sup>26</sup>.

#### *Consideration of stakeholders' feedback*

During stakeholder consultation, several concerns were raised about the potential impacts of the drilling on earthquakes, land, water usage, local traffic. During the ESIA scoping consultations, a more specific concern was raised by a water bottling company located close to one of the potential drilling sites. In order to address this concern, an additional hydrogeological study had to be commissioned as part of the ESIA to ensure that the drilling would not affect the bottling company. This example shows a satisfactory consideration of stakeholders' feedback by the project.

- Dominica Transmission Line

Given that the majority of SEF funding was retroactive, a majority of the reconstruction had already been conducted before SEF funding came in. According to interviewees, stakeholders were involved during the rehabilitation work as the engineering consultant had to liaise with government agencies and local government. Interviewees also mentioned that landowners were also closely involved as some of the reconstruction work affected their land and required some rerouting of the line. No ESMP was available for the work conducted to date but is it expected that one will be developed for the remaining work which, according to interviewees, could also ensure that the reconstruction work already done had been responsive to gender and environmental issues.

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<sup>26</sup> Data shared by the CLO with the Review consultant.

**Conclusion on Effectiveness:**

While the progress made towards the achievement of outputs so far can be considered satisfactory, taking into consideration the challenges faced and delays incurred during this first phase of the programme, the project partners with the SEF Expanded, now are likely to achieve its expected outcomes by the revised completion date, if appropriate measures are taken to focus efforts moving forward.



### 3.3. EFFICIENCY

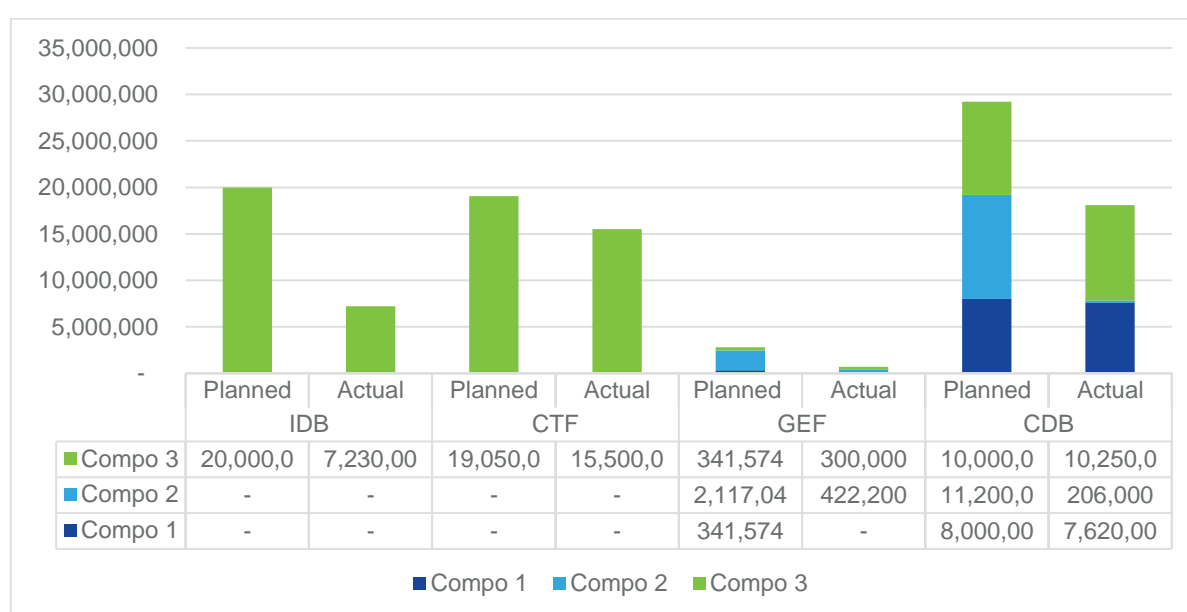
#### Q3. How efficient are SEF's operations?

##### SQ3.1. To what extent are the outputs being achieved in a cost-effective manner?

##### Expenditures per funding sources

Figure 3 shows the expenditures per Component and funding sources at the end of December 2019<sup>27</sup>, compared to the initially planned overall program budget presented in the IDB Loan Proposal.

Figure 3: Expenditures per Component and funding sources compared to planned budget, as presented in IDB Loan Proposal



On December 31, 2019, the total expenditure of SEF Program resources represented approximately 58% of SEF's total budget (USD 71.5 million)<sup>28</sup>.

This overall expenditure is comprised of the following:

- Expenditure of IDB resources are approximately at 36% of what was planned for the full duration of SEF. To date, IDB resources were used in the Dominica Rehabilitation and Reconstruction Loan for the reconstruction of the transmission line.
- Expenditures of CTF funding are approximately at 81%. To date, CTF funding was used for the SVG GE exploratory drilling project.
- Expenditures of GEF funding are approximately at 24%. GEF resources to date have been used for the following projects:
  - o A&B Solar PV project (Component 3);

<sup>27</sup> Based on expenditure figures provided in the SAPR July-December 2019.

<sup>28</sup> SAPR July – December 2019

- Grenada Institutional strengthening and ESIA technical assistance (Component 2);
  - SVG GE exploratory drilling project (Component 3);
  - SEF MTR (M&E).
- Expenditures of CDB counterpart funding are approximately at 61%.

The detail of expenditures per sub-projects and per funding source (except CDB counterpart funding) is provided in Table 14.

Table 14 : Expenditures per sub-project and funding sources (except CDB counterpart funding), as of June 26<sup>th</sup>, 2020<sup>29</sup>

Comp.	Sub-projects	IDB	CTF	GEF
Comp. 1	/	/	/	/
Comp. 2	Grenada – Inst. Strengthening	/	/	194,938.33
	Grenada – ESIA	/	/	183,122.50
Comp. 3	A&B Solar PV	/	/	244,868.70
	SVG GE drilling	/	15,500,000.00	105,779.95
	DOM RRL	7,218,524.17	/	/
M&E	SEF MTR	/	/	15,000.00
<b>TOTAL</b>		<b>7,218,524.17</b>	<b>15,500,000.00</b>	<b>743,709.48</b>

At mid-term, expenditures from CTF funding and CDB counterpart funding are above 50%, which shows a good expenditure rate. Expenditures from IDB and GEF resources are lower, at respectively 36 and 24%. These will have to be sped up in the second half of the SEF program.

#### Cofinancing as per the GEF

According to the CEO Endorsement, the GEF considers as cofinancing the funds provided by the IDB, CDB and CTF. The financing received from the IDB and CTF are already mentioned above, with rates of expenditures respectively at 36 and 81%. The rate of expenditure of CDB counterpart funding is of 61% of what was initially planned in the IDB loan proposal. This rate is very satisfactory at mid-term, and shows a good level of mobilization of expected cofinancing. Even though outside of the scope of this review, it can also be mentioned that additional funding from the Green Climate Fund (GCF) has been secured since SEF's inception. This demonstrates the strong ability of the IDB and CDB to leverage additional funding from a variety of sources and mobilized co-financing ratios have essentially tripled over what was originally planned, as shown in Table 15 below.

<sup>29</sup> CDB. 26.06.2020. *Grant Disbursement details CTF*, CDB. 26.06.2020. *Grant Disbursement details GEF*, CDB. 21.11.2019. *Loan Disbursement details IDB*.

Table 15 : GEF co-financing as of end of December 2019<sup>30</sup>

Sources of Co-financing	Name of Co-financer	Type of Co-financing	Amount Confirmed at CEO endorsement / approval USD	Investment Mobilized (if applicable) USD	Actual Amount Materialized at MTR (31 Dec 2019) USD
GEF Agency	IDB	Loan	20 000 000	20 000 000	7 230 000
Other multilateral Agency	CDB	Grant/loan	29 435 000	29 440 000	18 076 000
Other Multilateral Agency	CTF	Grant/loan	0	19 050 000	15 500 000
Other Multilateral Fund	GCF	Grant/Loan	0	80 000 000	
<b>TOTAL</b>			<b>49 435 000</b>	<b>148 490 000</b>	<b>40 806 000</b>

### Expenditures per Component

Table 15 shows the actual expenditures per Components at the end of December 2019, compared to the initially planned budget, as presented in the IDB Loan proposal.

Table 156: Planned budget vs actual expenditures per component, as of end of December 2019<sup>31</sup>

	Planned	Actual	%
<b>Compo 1</b>	8,341,574	7,620,000	91%
<b>Compo 2</b>	13,317,042	628,200	5%
<b>Compo 3</b>	49,391,574	33,280,000	67%

The rate of expenditures against initial budget under Component 1 is very high (91%), the rate of expenditure under Component 3 is high (67%), while the rate of expenditure under Component 2 is extremely low (5%).

As explained in the SAPR July-December 2016, the SEF budget was built according to an indicative pipeline of sub-projects identified at loan approval in October 2015, susceptible to change. The indicative allocation of SEF funds to the different sub projects was updated based on changes to the indicative pipeline that have occurred since the program was approved in

<sup>30</sup> Based on SAPR July-December 2019 and on information provided by CDB management

<sup>31</sup> Planned budget figures come from the IDB Loan Proposal.

October 2015. Such changes led to changes in the budget distribution across components. The updated financial targets, as presented in the output indicator financial targets in the SAPR July-December 2019 are presented in Table 16.

Table 16 : Updated budget vs actual expenditures per component, as of end of December 2019

	Planned	Updated 2016	Actual	%
<b>Compo 1</b>	8,341,574	13,000,000	7,620,000	59%
<b>Compo 2</b>	13,317,042	2,975,470	628,200	21%
<b>Compo 3</b>	49,391,574	55,074,721	33,280,000	60%

According to this updated budget, expenditures at mid-term are satisfactory and above 50% for Component 1 and 3. Expenditures under Component 2 are still low at only 21%, which is coherent with the limited and very targeted/projectized use made of technical assistance already depicted earlier in this report.

#### Expenditures per year

Figure 4 compares actual expenditures per year<sup>32</sup> (as of at the end of December 2019) compared to planned yearly budget, as presented in the SAPR July 2016-December 2016.

Figure 4 : Expenditure per year and component compared to planned yearly budget as in SAPR July-Dec 2016

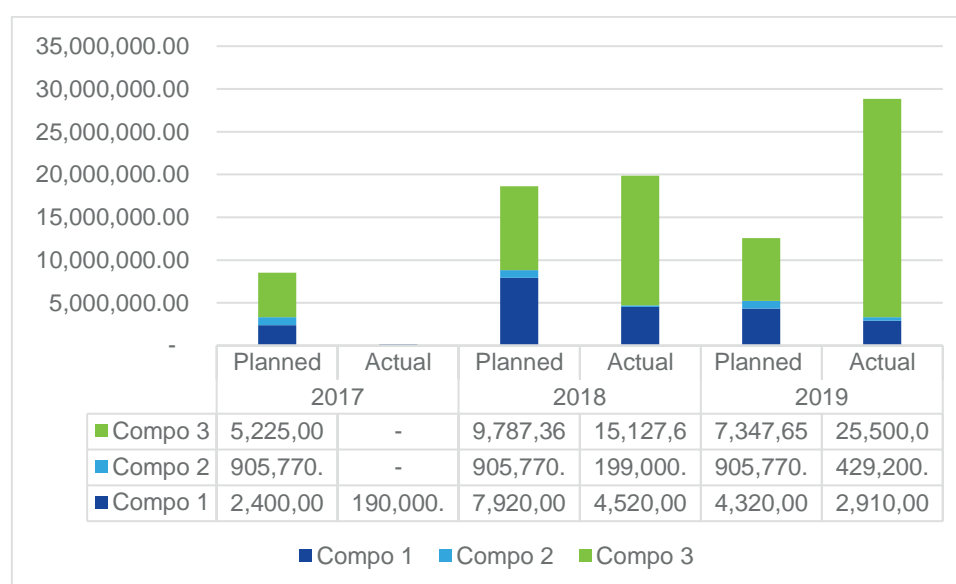


Figure 4 shows that expenditures were slow to pick up in 2017 with expenditures representing only 2% of the planned budget for that year. However, expenditures picked up in 2018 and reached 106% of the planned budget, and significantly increased in 2019, reaching 228% of the planned budget.

<sup>32</sup> Based on SAPRs

Overall, at the end of December 2019, expenditures represented 123% of the planned budget for the years 2017, 2018 and 2019, as presented in the SAPR July – December 2016. Even though expenditures were slow to pick up, they therefore seem in line with and even exceeding budgetary plans at mid-term.

However, when looking at expenditures per component per year, they are not all aligned with budgetary plans. At the end of December 2019, expenditures for Component 1 represented 52%, expenditures under Component 2 represented 23%, and expenditures under Component 3 represented 182% of what was planned for the years 2017, 2018 and 2019, as presented in the SAPR July – December 2016. Expenditures under Component 3 were therefore much faster than initially expected, while expenditures under Component 1 and even more Component 2 were slower.

### Cost-effectiveness

#### *Investment components*

The implementation of outputs under Component 1 can be considered cost-effective at mid-term since the output target has been reached, with expenditures at 91%. However, as explained in the Effectiveness section, the achievement of the outcome is only likely under the SEF Expanded scenario with additional resources and efforts under this component and the timeline extension until 2025, given the low level of progress towards the achievement of outcome targets, which is reinforced by the fact that already 91% of the planned budget under the original SEF has been spent already.

The implementation of outputs under Component 3 has been moderately cost-effective given that the achievement of outputs is below the targets (either on track or significantly below) and while 67% of the planned original SEF budget for this component has been spent to date. As explained in the Effectiveness section, the outcomes are likely to be reached under a SEF Expanded scenario only given the low level of progress towards the achievement of outcome targets to date.

#### *Technical assistance component*

The implementation of Component 2 is significantly slower than expected. The achievement of outputs, as well as expenditures to date, are also either on track or significantly below the initial target and no clear plans were yet provided as to the future use of those resources until project end in view of those targets. It is therefore hard to assess the cost-effectiveness separately for this component, and in effect beside the point, as GEF rationale as the main source of support under Component 2 of SEF, is meant to bring about market change and emission reduction through the project investment scheme as a whole.

#### *Overall cost-effectiveness assessment*

In that respect, even though the general SEF's expenditures are on track at mid-term (representing 58% of the SEF budget at the end of December 2019), the cost-effectiveness of the whole SEF program at mid-term is moderately unsatisfactory under the original SEF budget given that progress towards the achievement of outcomes has been extremely limited to date.

From a GEF perspective, the GEF CEO endorsement measures the cost-effectiveness of the program through the ratio of GEF's cost of the program divided by the total direct emission reductions, which is equal to 0.30 USD/tCO<sub>2</sub>. However at mid-term, there is no evidence that those targets could have been achieved under the original SEF programme being evaluated here with its associated timeline, and the achievement of the targets in terms of avoided GHG emissions is only made likely (as explained in the effectiveness section) with an SEF Expanded, which of course affects the overall cost-effectiveness of the program.

Table 17 compares the emissions avoided to the budget spent to date, as well as the SEF target in emission reduction at program completion to the planned budget.

**Table 178 : GHG emission avoided compared to budget**

	Emissions avoided (tCO <sub>2</sub> )		Budget (USD)		USD/tCO <sub>2</sub> avoided	
	Emissions avoided at mid-term <sup>33</sup>	Planned adjusted EOP target <sup>34</sup>	GEF budget spent to date <sup>35</sup>	Initial planned GEF budget <sup>36</sup>	Actual USD/tCO <sub>2</sub>	Planned USD/tCO <sub>2</sub>
Comp. 1	1,500	51,900	0	341,574	N/A	6.58
Comp. 2	0	0	378,061	2,117,042	N/A	N/A
Comp. 3	0	1,240,900	350,649	341,574	N/A	0.28
<b>TOTAL/ average</b>	<b>1,500</b>	<b>1,292,800</b>	<b>728,709</b>	<b>2,800,190</b>	<b>N/A</b>	<b>2.2</b>

Given that no GEF budget has been spent to date under Component 1, and there are no reported avoided GHG emissions to date, it is not possible to calculate the ratio of GEF's cost of the program divided by the total direct emission reductions. However, if we compare the planned GEF budget for the whole SEF to the end of project targets in terms of GHG emissions (assuming that they could be reached, which is unlikely as previously explained), the cost of the CO<sub>2</sub> emissions avoided is at 2.2 USD/tCO<sub>2</sub>, which is much higher than the 0.30 USD/tCO<sub>2</sub> target set in the CEO Endorsement. Even if the adjusted targets were to be achieved upon SEF completion (by likely using additional GEF Expanded resources on top of that), the cost-effectiveness would therefore be moderately unsatisfactory from a GEF perspective when compared to targets.

#### Factors affecting efficiency

The overall efficiency of the SEF is influenced by various factors.

For instance, the broader context in the region and the capacities at the national level affected the efficiency of the facility. The procurement processes for national sub-projects are for instance handled by the governments, which has created some delays, which was mentioned in interviews for the GE projects in Grenada and SVG for contracting consultants. The passage

<sup>33</sup> See analysis on achievement of outcomes in effectiveness section

<sup>34</sup> SAPR July-Dec 2019

<sup>35</sup> See Table 14

<sup>36</sup> IDB Loan Proposal budget

of hurricanes such as Maria has also dramatically affected the countries, the implementation of the project, and their efficiency.

The fact that support for SEF sub-projects come in different packages from different sources of funding was considered by some interviewee as a factor reducing efficiency. For instance, in Grenada, additional funding had to be found to expand the scope of the ESIA, which created delays. It was also mentioned in interviews that if the project were to move to the exploratory stage, the total amount of funding for the drilling was not secured yet, which could create additional delays later on.

The inherent risk with GE related to the fact that exploratory drilling is not always successful can also impact the overall efficiency of the SEF as it would prevent the facility from achieving its results, let alone within the timeframe envisaged.

Furthermore, the piloting of PPPs under SEF, which is seen as one of its genuine niche and added value, as it allows flow of public financing into private sector, preserves concessionality and reduces the impact on public fiscal balances, has also proven a very time consuming exercise. For instance, in SVG, it was originally planned that the contract negotiations around the PPP would last 6 to 12 months while it took 24 months in total.

As was pointed out in interviews, CDB procurement procedures and internal processes can also take time, create delays and therefore be seen as affecting efficiency from the beneficiary perspective. It was for instance mentioned in interviews that the CDB requires printed hard copies of invoices, which causes delays and issues in paying the consultants. Tendering processes were also mentioned as cumbersome as they require a national committee (with a chairman, etc.) which can be difficult and tedious to set up at the country level given the limited availability of government staff, and is therefore often a source of delays. But overall, in the view of the evaluator, those requirements from the CDB are key to due process.

Two aspects were mentioned in interviews to potentially enhance efficiency: (i) building relationships with the government and the utilities, and ensuring their close engagement is considered key to move things forward faster; and (ii) improving regulatory aspects to facilitate the execution of RE projects.

Overall, the efficiency of the SEF is affected by a number of external factors outside of the control of the CDB, coupled with some CDB's internal procedures and processes.

### Financial reporting

In terms of financial reporting, the consultant was given access to:

- The 6-monthly SAPR that provide a project approval summary per funding source and component, project expenditure summary per funding source and component, expenditures per sub-projects and funding sources, and financial progress of output indicators.
- Disbursement request for IDB, CTF and GEF resources.
- Grant disbursement details from CTF and GEF and loan disbursement details for IDB resources.
- Auditor's report (FY2017 OCR, OSF and SDF).
- CDB statement of financial position.



All documents were deemed of satisfactory quality. The auditor's reports reviewed conclude that *"the accompanying financial statements present fairly, in all material respects, the financial position of the Fund [...] and its financial performance and its cash flows for the year then ended in accordance with the basis of accounting, [or] with International Financial Reporting Standards"*.<sup>37</sup>

The CDB is responsible for the financial management of the program and makes direct payment for ECC governments and utilities. The IDB cannot support ECC directly and is therefore channeling resources through the CDB. IDB supervises the financial management of the SEF. It was highlighted in interviews that IDB usually requires more detailed financial monitoring from executing agencies, which is not the case for the SEF. The IDB only review the financial audit, which is considered by a few informants as weak financial monitoring as the level of detail provided is limited. Several interviewees consider nevertheless that CDB's financial monitoring has been satisfactory so far.

Even though lacking some granularity, the overall financial reporting of the SEF is considered satisfactory.

### **SQ3.2. Are SEF's operations under IDB efficient in facilitating support to ECC?**

#### IDB's role and responsibilities

The IDB is responsible for overseeing the execution of the SEF, including the execution of the Monitoring and Evaluation (M&E) plan, and the use of funds provided by other donors. The IDB is also responsible for reporting to the other donors on the execution and results of the program. The CDB monitors and supervises operations based on their policies and procedures and provide IDB with the necessary information for IDB to monitor and evaluate the program as well as to comply with its reporting obligations to the CTF and GEF<sup>38</sup>.

According to SEF M&E plan, the IDB will use 4 instruments to monitor SEF's progress: SAPR, due diligence and annual supervision mission, field inspections, and CDB audited financial statements. SAPR and financial statements for 2017 and 2018 were shared with the consultant. However, the consultant did not receive documentation regarding due diligence and annual supervision mission, nor regarding field inspections.

According to the interviews conducted for the Review, the SEF does not have a steering committee but the CDB and IDB teams are in touch on a weekly basis.

Based on the exchange with IDB pointing out to its actions related to due diligence, annual supervision missions and inspections, the role played by IDB in its supervision and oversight of the program is considered aligned with what was initially planned.

#### Satisfaction of stakeholders

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<sup>37</sup> Auditor's report FY2017 OCR, OSF, SDF, and Auditor's report FY2018

<sup>38</sup> IDB. 2015. Sustainability Energy Facility for The Eastern Caribbean (RG-L1071). Monitoring and Evaluation Plan.



Interviews conducted for the review showed a high satisfaction from stakeholders on IDB's oversight and supervision. IDB is considered efficient in terms of negotiation process, leadership, support provided, etc. A high level of commitment from the IDB was also highlighted in interviews.

#### IDB's institutional strength and weaknesses

The perception coming out of interviews is that IDB is able to better understand the Caribbean than other multilateral donors. In addition, the fact that IDB cannot lend directly to the ECC (not member countries of the IDB) made the collaboration between CDB and IDB easier and complementary.

#### Risk identification and management process

For Category A sub-projects and all geothermal high-risk sub-projects (Category A and B+), IDB undertakes due diligence alongside CDB's team throughout the project preparation, appraisal, and monitoring phases. The objective of this hand-in-hand due diligence is to help build the CDB's capacity in assessing the environmental and social impacts of high risk GE projects, and ensure that project impacts are adequately mitigated according to the "IFC Environmental and Social Performance Standards and World Bank's Environmental, Health, and Safety Guidelines"<sup>39</sup>. The IDB has to give its no objection for the approval of all SEF sub-projects.

The SAPRs also include an updated risk matrix that track the risk, identify its level, type and impact, provide a mitigation measure and track the implementation status of the measure.

In this sense, the risk identification and management process are in compliance with recognized standards and therefore deemed of good quality.

### **SQ3.3. Are SEF-funded operations under the CDB being executed efficiently**

#### CDB's role and responsibilities and day to day management of the program

The CDB has a strong background to properly execute the SEF. The IDB Loan proposal mentions in that regard that *"the fiduciary risk of the SEF has been assessed as low mainly due to the adequacy of the CDB's organization structure and procedures for fiduciary management, its demonstrated capacity in the fiduciary management of projects, and the overall low risk of the CDB's operational performance"*. In addition, CDB financial management policies and procedures are consistent with those of the IDB and in accordance with the IDB's Financial Management Guidelines.

According to the SEF Operating Manual, CDB is the executing agency of the program and is responsible for providing funds to the SEF, mobilizing resources from other donors, and financing SEF sub-projects. The execution of the program includes the following:

- Providing strategic direction, coordination and support for the SEF,

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<sup>39</sup> CDB. 2016. Operating Manual for the SEF for the Eastern Caribbean.

- Approving the Operating Manual (with prior no-objection of the IDB), as a condition prior to the first disbursement by the donors. The Operating Manual establishes the rules and procedures for implementing the SEF, to ensure that the individual projects are completed successfully. It guides the execution of the SEF,
- Setting up the SEF,
- Facilitating receipt of funds disbursed by the IDB and, in turn, disbursing SEF funds to Sub-borrowers and Final Beneficiaries in accordance with agreed financial arrangements,
- Monitoring the SEF and following up on execution and results of Sub-project implementation,
- Updating the Operating Manual as necessary to facilitate a smooth execution of the SEF, and
- Directing and overseeing all activities required to execute the program<sup>40</sup>.

The documentation review as well as the interviews conducted for the MTR confirm that CDB's execution of the program is in line with what was originally planned.

A large number of interviewees appreciated the day-to-day management and administration of the program by CDB and considered that the execution was done as efficiently as possible and went smoothly.

#### Delays in implementation

Table 18 shows the timing of the project under implementation as of the end of December 2019, based on a compilation of data from the latest SAPR and interviews.

Table 189: Implementation delays in SEF sub-projects

Component	SEF-sub-projects	Timing
<b>Component 1</b>	A&B EE – Streetlight retrofit	Delayed
	DOM EE – Government buildings	Delayed
	GRE EE – Government buildings	Delayed
	SKN – Streetlight retrofit	Delayed
	SVG EE - Government buildings	Delayed
	SKN - Government buildings	Delayed
<b>Component 2</b>	CDB - Capacity Building	N/A
	SL – Training/ Capacity strengthening	On-schedule
	GRE - Training / Capacity strengthening	Delayed
	SVG - Training / Capacity strengthening	N/A
	Regional capacity strengthening	N/A
<b>Component 3</b>	A&B RE – RE/EE Investment Grant	Delayed
	DOM - Transmission line loan	N/A
	SVG - Exploratory drilling	Delayed

Except for 4 sub-projects where no information on timing is available, and 1 project on schedule, all the other sub-projects have experienced delays in their implementation.

<sup>40</sup> CDB. 2016. Operating Manual for the SEF for the Eastern Caribbean.

As mentioned in the Effectiveness section, many delays were experienced in the implementation of SEF sub-projects, some of them due to factors internal to the CDB, and other external.

The fact that the CDB and the IDB are overseeing the SEF sometimes duplicates internal processes and create delays. For instance, the fact that monitoring activities have two level (CDB and then IDB) have created some coordination issues and therefore led to delays in the submission of the reporting material. In addition, CDB and IDB's timelines are not necessarily aligned as CDB has to comply with internal processes that can require more time. However, it was mentioned in interviews that in case of emergency, the two banks coordinate very well and were able to be fast and efficient, and that overall, the two banks worked well together. Given the political leadership of the CDB in the SEF, the IDB has had to adapt to the culture and constraints faced by the CDB.

Despite lengthy internal processes that are considered typical for international organizations (bureaucratic, burdensome, and not always well-suited to the in-country realities according to some stakeholders) a number of delays are also caused by factors that are external to the CDB itself. It is worth mentioning for instance that part of the procurement processes for national sub-projects are handled directly by the ECC governments that are limited by significant capacity constraints. In addition, some challenges and delays can come with countries that are not following through planned investment projects, and with the fact that the SEF is demand-driven and therefore rely on the will of ECC to move forwards with the projects.

#### CDB's strengths and weaknesses as executing agency

The CDB presents a number of strengths and weaknesses as an executing agency.

The MTR found the following strengths:

- Ability of the CDB to maintain a good coordination and exchanges with ECC, beneficiaries, and other executing partners,
- The long-term engagement of the CDB in the region, and its knowledge and understanding of ECC realities and political context,
- The ability of the CDB to engage a variety of stakeholders in partnerships, which is facilitated by the fact that the CDB portfolio is wider than energy and includes other themes such as climate change, etc.,
- The ability of the CDB to provide guidance to executing partners when necessary (for instance for the introduction of the CLOs), and
- The ability of the CDB to be responsive and adapt to address unexpected challenges (i.e. hurricane, PPP negotiations, etc.).

Despite these strengths the CDB also composes with a few weaknesses such as:

- Lengthy internal procedures and processes,
- Limited capacity within the CDB energy unit. The unit only includes 3 people, that collaborate closely with an additional two project officer on energy in the project department. Overall, the CDB internal capacity is extremely tight in terms of RE, GE, PPP and associated risk management. According to some interviewees, this leads to a lack of ability to proactively engage with the countries to promote geothermal solutions, limiting the SEF to a responsive approach. This lack of capacity was recognized at the stage of

the IDB loan proposal that mentions the following “*PPP are relatively new in the Caribbean and both the CDB and country governments have a limited track record structuring and financing this type of projects and sub-loans. For this not to affect the execution and effectiveness of the SEF, the program will ensure through Component 2 the transfer of technical expertise to develop local competencies as well as the availability of specific training and advisory services as required by the CDB and the governments*”, and

- Limited appetite for investing in new technologies that are at early stages and have not been proven yet. Some stakeholders consider that the CDB could be more innovative on that front.

Even though the CDB presents a few weaknesses, it proved to have key strengths that make the bank well suited for the execution of the SEF, which is corroborated by the satisfaction of most of the stakeholders interviewed regarding CDB's execution of the SEF.

### **SQ3.4. Is the monitoring plan operational and effective to track results and progress towards objectives?**

#### Quality of M&E at design

As previously mentioned, the IDB loan proposal includes a results matrix with impact, outcome and output SMART indicators. For each indicator, the results matrix includes a baseline, a target and source of verification. The results matrix is therefore satisfactory and in compliance with the RBM principles.

The IDB loan proposal also includes in annex a dedicated M&E plan that established the framework, processes, and institutional arrangements that will be used to monitor and evaluate the program<sup>41</sup>. The plan states that the CDB will be responsible for reporting on the results of the program (based on information collected from ECC governments and private sponsors and on information from its own system) and for reporting progress and results to the IDB. The IDB on its side is responsible for overseeing the execution of the M&E plan for the whole program, including the funds provided by other donors. SEF monitoring is therefore done at the IDB and CDB level and no monitoring dedicated staff are in place in beneficiary countries. Within sub-projects, some monitoring and progress reporting tasks have typically rested with the sub-contractors (including the project coordinators and the CLOs for instance).

For each output and outcome indicators, the M&E plan provides a description, frequency of measurement and source of verification, as well as the expected annual costs. The evaluation plan also lists the assumptions that were used to determine the indicative projects' economic costs and benefits.

The quality of the M&E system of the SEF at design stage is therefore satisfactory, with evidence of an operational M&E plan.

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<sup>41</sup> IDB. 2015. *SEF for the Eastern Caribbean – Monitoring and Evaluation Plan*

### M&E plan and tools

The M&E plan details the activities to be undertaken and tools to be used to monitor and evaluate the program. In terms of monitoring, the IDB is expected to use the 4 following instruments: (i) SAPR, (ii) due diligence and annual supervision missions, (iii) field inspections and (iv) audited financial statements. In terms of evaluation, the IDB is expected to use the 5 following instruments: Baseline Values Study, GEF MTR and final evaluation, program Mid-Term Evaluation, Ex-post Cost Benefit Analysis (CBA), and Project Completion Report (PCR).

The consultant has had access to SAPR covering all the semesters under review, as well as to the financial statements. The consultant did not get access to due diligence and annual supervision mission reports, nor field inspections reports during the MTR. It was nonetheless mentioned in interviews that some of these activities were undertaken; 2 supervision missions from the IDB and 1 field inspection mission in SVG were mentioned in particular.

Regarding evaluation activities, based on the desk review and interviews, it can be confirmed that the planned Baseline Values study was conducted by the IDB at program inception. The present review will serve as the GEF MTR and the SEF mid-term evaluation, which will be in line with the M&E plan.

### Timeliness of M&E activities

The initial workplan according to which M&E activities should be undertaken is presented in Table 19.

Table 19: SEF M&E Workplan<sup>42</sup>

Activity	2015	2016		2017		2018		2019		2020		2021		2022		2023		2024		Res.
	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	
<b>Monitoring</b>																				
Semi-Annual Reports																				CDB
Field Inspections																				IDB CDB
Audited Financial Statements																				CDB
Assurance Reports																				CDB
Due Diligence and Annual Supervision Missions																				IDB
<b>Evaluation</b>																				
Baseline Values Study																				IDB
GEF MTR and terminal evaluation																				IDB
Mid-term Eval.																				CDB
Ex-post CBA																				CDB
PCR																				CDB

<sup>42</sup> Adapted from IDB. 2015. M&E plan

The SAPR and audited financial statement are generally in line with the workplan. However, some interviewees mentioned a few delays in the submission of the SAPR due to back and forth between the IDB and CDB.

As mentioned above, field inspection and due diligence and annual supervision missions did not occur as frequently as originally planned, which is partly due to the delays in sub-projects implementation. The detailed ToR on the content and requirements for the assurance reports have not been developed yet, and not such report has been submitted to date. The relevance of such reports is still under consideration by the IDB and the CDB.

In terms of evaluation activities, it can be noted that the GEF MTR has been significantly delayed as the contract for the present MTR was signed in March 2020 while it was originally scheduled for the second semester of 2017. The GEF terminal evaluation will also incur delays with respect to the initial workplan. However, it can be considered that the program mid-term evaluation has been conducted in advance of schedule, as it is covered by this MTR.

Even though a few M&E activities incurred some delays, given the broader delays encountered in overall implementation and disbursements in the first few years of operations, the overall timeliness of M&E activities seems appropriate.

#### M&E budget

The M&E budget, as included in the M&E plan, is presented in Table 20.

Table 201: M&E budget<sup>43</sup>

ACTIVITY	RESP	FUND	US\$
<b>Monitoring</b>			
Semi-Annual Reports	CDB	Prog.	0
Field Inspections	IDB & CDB	Prog.	120,000
Audited Financial Statements	CDB	Prog.	140,000
Assurance Reports	CDB	Prog.	195,000
Due Diligence and Annual Supervision Missions	IDB	Prog.	150,000
<b>Subtotal Monitoring</b>			<b>605,000</b>
<b>Evaluation</b>			
Baseline Values Study	IDB	IDB	10,000
Mid-term and terminal evaluation – GEF	IDB	GEF	70,000
Mid-term Eval.	CDB	IDB	40,000
Ex-post CBA	CDB	CDB	40,000
PCR	CDB	IDB	0
<b>Subtotal Evaluation</b>			<b>160,000</b>
<b>TOTAL M&amp;E</b>			<b>765,000</b>

<sup>43</sup> Adapted from IDB. 2015. M&E plan

The total M&E budget for SEF M&E is therefore USD 765,000, with USD 605,000 for monitoring activities, and USD 160,000 for evaluation activities. This represents around 1% of the total SEF budget (USD 71.5 million). Although for a typical cooperation project this would represent a rather low share of the overall budget to cover such a function, the evaluator judges that this is appropriate in the context of an M&E function for a program mainly made up of a few large infrastructure investments. Furthermore, these investment projects also benefit from embedded reporting functions feeding into the monitoring effort and not necessarily fully accounted for in the above budget. The exception to this overall assessment would relate to the budget set aside for the terminal evaluation, which may be underestimated, depending on the amount of sub-projects that will have to be considered in each of the 6 ECC at that later stage.

### Monitoring Reports

The main monitoring reports for the SEF are the SAPR. The SAPR are concise reports that comply with the IDB reporting requirements. They include sections on: sub-project implementation status, financial status, status of contractual clauses, a result matrix update with achieved results to date for each indicators, a risk matrix update, issue log, change log, lessons learned log, and a project implementation plan for the up-coming semester (including implementation schedule, disbursement projections and updated procurement plan).

Some minor inconsistencies were noted by the consultant in the SAPR. For instance, the sub-projects implementation status is not always up to date as some projects are noted as under implementation while they are completed<sup>44</sup>, and other as non started as they are under implementation<sup>45</sup>.

Regarding the SAPR result matrix update, the reporting on expected results (outputs and outcomes) is not always comprehensive and could be better justified. For instance, figures are provided for the electricity saved, the reduction in imports of fossil fuels or GHG emissions avoided, but there is no explanation on how these were measured nor calculated. This could however be improved soon as it was mentioned in interviews that a tool to better measure GHG emissions was under development.

It can also be noted that monitoring data on the two gender-related outcome indicators are not regularly collected. In the SAPR July-December 2019, only one out of two indicators had been tracked (once in 2018), and no data was available to date on the other one. In addition, no justification is provided to explain the figure provided for that indicator.

Although the reporting on achieved results could be improved in the SAPR, the reports can overall be considered of satisfactory quality.

Regarding SEF sub-projects, there is no uniform reporting template being used and the reporting varies between sub-projects. Interviews showed that sub-project executing partners can report on a weekly, monthly or quarterly basis, while some consultants only submits the deliverables expected in their contracts and no monitoring reports per se. In the evaluator's

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<sup>44</sup> It is the case for some EE projects in the SAPR July-December 2019

<sup>45</sup> The DOM RRL for the transmission line project for instance.



view, it would be easier to aggregate the results of the sub-projects at the SEF program level if they were all using the same reporting format, using the same methodology to measure some of their results.

### Lessons learned

All SAPRs include a lessons learned log. As of December 2019, the following lessons learned had been collected:

- Considerations for disaster risk mitigation and climate resilience in general, need to be given the highest priority in the planning and execution of GE projects. Climate vulnerability should be done for energy sector, and specific projects.
- Institutional assessment of implementation capacity must be improved and identified deficits addressed in the project design.
- Appropriate regulatory framework for development of GE is critical to reduce the number and level of considerations that need to be incorporated into the various contracts between government and developer.
- Greater effort needed to engage stakeholders across government ministries and agencies in relation to their roles in the execution of GE project-related activities. Also, the need to re-emphasise the potential benefits to country, so that the priority focus of the development can be kept foremost in minds and reflected in planning of the various ministries.
- Having a champion at the level of the political directorate is critical for timely advance of the GE project. Positive examples observed from the experiences of SVG and DOM.
- The matter of capacity constraints in the SEF participating countries is more significant a factor impacting implementation than was originally estimated<sup>46</sup>.

While the log includes a recommendation for each lesson learned, it would be interesting to add a short update in each SAPR on what has been done to date to implement this recommendation and to act on the lesson. This would ensure that each lesson learned is acted upon and fed back into the implementation of the program.

Outside of the SAPR, a few interviewees mentioned ad hoc events where lessons were shared. For instance, an interviewee mentioned that the issue of streetlight disposal that occurred in A&B was now considered for SVG. Meetings were also facilitated between the SVG and the Grenada teams on exploratory drilling. However, there is no systematic way of sharing and disseminating lessons learned at the regional level, between countries and other donors. There is also no system in place to systematically collect lessons learned at the sub-project level to share them at the program level.

### Adaptive Management

All SAPRs include a change log that identify changes that happened in the countries, date of approval of the change by CDB and IDB, and comments on the follow-up of the changes. Several of these changes suggest that the SEF has a good level of flexibility and ability to adapt to national circumstances. For instance, the SEF was able to fund a solar PV project in

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<sup>46</sup> CDB. 2019. SAPR July-December 2019



A&B after the government indicated that it wished to use its GEF allocation for installation of solar PV systems to serve dual objective of RE energy supply, and also to increase disaster resilience. Another example lies in the project on energy audit for public buildings in Dominica which was rescheduled due to the passage of hurricane Maria. The SEF provided resources for the rehabilitation of the transmission line to facilitate reconstruction after the cyclone.

**Conclusion on Efficiency:**

SEF's operation can be considered moderately efficient, with a few avenues for improvements. Cost-effectiveness is assessed as moderately unsatisfactory at this stage.

### 3.4. IMPACT

**Q4. What progress has the SEF made so far to contribute to the diversification of the energy mix in ECC countries?**

**SQ4.1. Does the current performance indicate probability in achieving the project's purpose?**

The objective of the Programme is to contribute to the diversification of the energy matrix in the ECC in an effort to reduce the cost of power generation and electricity tariffs by promoting the implementation of EE and RE technologies to reduce the region's dependency on liquid fossil fuels.

According to the updated result matrix<sup>47</sup>, the SEF has the following two impact indicators and associated targets:

Table 212: SEF impact indicators

Indicator	Unit of Measure	Baseline (2015)	EOP Target
Average electricity tariff for customers in ECC.	USD/KWh	0.33	0.30
Regional penetration of indigenous renewable energy sources for power generation within the ECC.	%	10	30

Table 22 shows the residential tariffs and penetration of RE sources in the ECC in 2018.

Table 223 : 2018 tariffs and penetration of RE sources in the energy mix of ECC<sup>48</sup>

2018	Unit	A&B	DOM	GRE	SL	SKN	SVG
Residential Tariffs	USD/kWh	N/A	0.22-0.25	0.33	0.28	0.23-0.50	0.19
Penetration of RE sources	(% installed capacity)	11%	26%	5.38%	4%	6.7%	17.28%

While the residential tariffs are more or less in line with the SEF end of project target (except for Grenada and SKN), the penetration of RE sources in the energy mix of ECC countries is still significantly below the 30% SEF target.

However, the SEF is not the only actor influencing these metrics and as it is shown in the Effectiveness section, there is no evidence yet that the SEF contributed to these results. Given that this review is conducted at mid-term, it is considered normal that no impacts are tangible at this stage.

As the analysis of SEF's effectiveness concluded that outcomes are unlikely to be achieved at SEF's completion, it is highly likely that this will affect the ability of the facility to generate its intended impact. The achievement of SEF's objective upon completion therefore appears

<sup>47</sup> As presented in the SAPR July-Dec 2019

<sup>48</sup> CCREEE 2018 Energy Report Cards per Country [available at <https://ccreee.org/publications>]

unlikely at this stage, especially when it comes to the penetration of indigenous RE sources for power generation.

The end of project target was set based on an assumption of an oil barrel price at USD 70. However, oil prices have significantly dropped since then, which makes the target regarding the decrease in electricity tariffs due to alternative energy sources even more unlikely to be reached.

The target regarding the increased in regional penetration of indigenous renewable energy sources assumed that the exploratory drilling phases to be funded by the SEF will be successful. However, the results of the only exploratory drilling undertaken so far under the SEF, in SVG, has shown mixed results and has not been as successful as expected. This is also likely to affect to achievement of the target.

**The performance of the SEF so far therefore does not indicate a strong probability that the facility will generate its expected impacts. As such, an extension of the SEF programme and additional resources were agreed and mobilised by programme partners, to increase this likelihood**

#### SQ4.2. Has the program generated any unintended impacts?

Even though it is expected that no impacts are tangible at mid-term, few positive unexpected impacts have emerged from the implementation of SEF sub-projects:

- **Increased awareness and engagement towards GE.** The SEF engaged ECC regarding GE, raised their awareness on this energy source and its potential in the region, and provided a platform to discuss GE in the countries in a tangible way.
- **Encouraged discussion on the integration of energy sources at the national level.** According to an interviewee, the SEF forced ECC to start looking at the integration of their energy sources and develop integrated resources plans.
- **The SEF ensured the commitment of other partners.** For instance, an interview highlighted the fact that New Zealand's support in SVG was stepped up because of SEF's support in the country. The CDB was also able to bring together different sources of funding under the SEF.
- **Reputational benefit for the CDB.** The SEF generated positive reputational benefits for the CDB that is a small player in the sector but considered as serious and reliable. The SEF even won the top prize for Best Financing Programme at the Geothermal Congress for Latin America and the Caribbean (GEOLAC) Industry Awards in 2017. The SEF was awarded for its work advancing geothermal energy development in the Caribbean and was specifically recognized for its funding model combining grant, contingently recoverable grant, and concessional loans from various sources<sup>49</sup>.

<sup>49</sup> <https://www.caribank.org/newsroom/news-and-events/cdb-wins-top-industry-award-driving-geothermal-energy-development-region>

- **Sustainable development benefits for local populations.** The implementation of some of the sub-projects had positive impacts on the local populations. For instance, the restoration of the Dominica transmission line allowed to reconnect communities to the grid faster. They could have remained without power if support would not have been provided. The replacing of streetlights also has positive environmental impacts as it reduces energy consumption. The ESIA processes have also allowed to raise awareness amongst communities, and even to build capacity as some of the sub-thematic studies conducted could be done by local people.

In terms of unintended negative impacts, a couple examples arose from the review.

- The SEF, focusing on GE, contributed to the debate opposing solar and GE. While these two sources of energy should be considered as complementary and not competing. According to some interviewees, some proponents of solar felt threatened by the promotion of GE.
- Another ad hoc unintended impact reported through the SVG GE project is the use as a recreational area of the dam constructed to ensure adequate supply of water for drilling works. The situation raised concerns in terms of potential accidents and adverse environmental impacts as the dam is on the boundary of a forest that is home to an endemic parrot species. A meeting was held in October 2019 to discuss the responsibility of the dam pond and surrounding area. The consensus of the meeting was that the responsibility of the pond area should be with the National Parks and Forestry department because of the dam location in the forest<sup>50</sup>.

**The SEF has therefore generated a few positive unintended impacts, and no major adverse unintended impacts were brought to light by the MTR.**

#### **Conclusion on Impacts:**

At mid-term, the SEF has not tangibly contributed yet to the diversification the energy matrix in ECC countries.

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<sup>50</sup> SVGCL. Oct-Dec 2019. M&E report.

### 3.5. SUSTAINABILITY

**Q5. What are the enabling conditions and or risks emerging regarding the sustainability of SEF-funded interventions?**

**SQ5.1. Has the project designed and implemented an appropriate exit strategy and measures to mitigate risks to sustainability?**

#### Management of risks to sustainability

The SEF's design was based on the result of a CBA, conducted in September 2015<sup>51</sup>. The CBA estimated that the SEF would generate an aggregate Present Value of USD 164 million and an internal rate of return of 16% over a forty-year period for the geothermal projects and twenty-year period for the energy efficiency projects. The aggregate Present Value is composed of USD 161 million from five geothermal projects and USD 3 million from two street lighting projects. The benefits of the program were expected to stem from savings on electricity bills from street lighting, the monetary value of avoided GHG related to the displaced electricity from diesel based generation, and the reduced cost of electricity generated from geothermal power<sup>52</sup>. The CBA was developed for each sub-project identified in the SEF indicative project pipeline at design stage. The study showed that all the indicative sub-projects were economically viable, with an economic internal rate of return greater than 12%. The SEF was therefore designed on a sound economic analysis.

In addition, a number of risks were identified in the SEF design documents - including a set of macroeconomic, financial sustainability and development risks – with means of mitigation for each of them. For instance, the risk of “Decreased commitment from potential beneficiaries to promote Sustainable Energy due to recent decrease in oil prices” was identified at design stage and classified as low<sup>53</sup>, and the associated mitigation measure was to provide concessionary financing to enhance the viability of GE projects. Another risk example is the adverse environmental and social impacts related to GE project. To mitigate this risk, an Environmental and Social Management Report (ESMR) was done at program inception, and each sub-project was expected to conduct an ESIA that follows IFC guidelines. All identified risks and associated mitigation measures are then tracked in an updated risk matrix provided in each SAPR. The SEF therefore has a system in place to manage risks to sustainability.

#### Exit Strategy

The SEF does not have an exit strategy that is explicitly stated in its design documents. However, the SEF is not a standalone program and is embedded in the broader CDB strategy. The SEF was conceived as a tool to implement CDB's Energy Sector Policy and Strategy published in 2015. As the CDB is a permanent development institution in the region, its support to sustainable energy will continue in the long term, even after SEF completion. In this sense, any gap that is identified through the implementation of the SEF could be addressed later on

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<sup>51</sup> IDB. 2015. Cost Benefit Analysis of the Pipeline of Projects Potentially Funded by the Sustainable Energy Facility for the Eastern Caribbean

<sup>52</sup> IDB Loan Proposal

<sup>53</sup> GEF CEO Endorsement

from other CDB resources. The SEF is therefore embedded in a longer-term support from the CDB for sustainable energy in the ECC, which is likely to make the program's legacy sustainable, at the condition that the CDB has the capacity and resources to take it up.

## **SQ5.2. What factors are in place to enable or hinder the persistence of program outcomes?**

### Capacities in place

#### *At the national level*

As mentioned in the impact section above, the SEF contributed to raising awareness amongst ECC on GE and its potential in the region. The fact that government better understand this energy source is likely to be sustained in the long term, but it could be affected by the fact that the SEF has not managed to build a success story around one of the GE sub-project as of yet. This lack of success could impede the interest of ECC regarding GE in a context of tight resource allocation at the country level. In addition, even if the SEF has contributed to raising the interest of ECC government regarding EE and GE, the decision to move towards the implementation of EE measures for instance is still conditioned by national political priorities in a changing political landscape, the competing use of fund and changes in market conditions. This is therefore a key area that requires continued strategic support and engagement from the CDB in order to accompany governments in this evolving landscape.

Moreover, notwithstanding the responsive character of the SEF as a whole, the piece meal/highly projectized approach followed so far in terms of capacity building (for instance training 4 staff in Saint Lucia NURC) does not ensure that the people that benefitted from the training will remain within the organization nor feedback the knowledge in the organization. A more balanced approach to technical assistance, involving a more comprehensive and strategic approach is required to ensure sustainable capacity development for national experts and decision makers managing or supervising EE and RE projects, and to ensure the development of institutional tools and systems in support of RE and EE market development that will outlive individuals and election cycles in such organizations. There are still significant capacity gaps for ECC to develop legally, financially, and technically-sound sustainable energy project portfolios that fit into broader strategic sectoral action plans for RE and EE, including associated legal and regulatory frameworks, and coupled with proper resource allocation.

Indeed, strengthening such a strategic and comprehensive approach to accompany sector transformation in ECC is key to facilitate the development of sustainable energy in the long term. However, so far SEF's support has been limited in that regard.

#### *At the CDB level*

As mentioned in the Impact section above, the SEF helped the CDB rise as a serious and recognized actor in the sustainable energy sector in the region. The facility has contributed to build some internal capacity on GE, and PPP development for instance. In addition, the variety of financial instruments made available by the SEF were considered extremely relevant for the sector and the region. The fact that the SEF funding model might be replicated by the IDB

and CDB in the construction sector as well as in GE in other Latin American countries shows the success of the model, and its potential for replication.

However, CDB's capacities remain too limited to ensure the achievement and sustainability of SEF's longer-term results.

The CDB does not have a department dedicated to strategic investment pipeline development, which has had effects on the implementation of the SEF. While the demand-driven and reactive approach of the SEF has proven to be useful to meet the needs of ECC, it is reaching its limits given the limited results achieved at mid-term, as highlighted in the Effectiveness section. The pipeline of sub-projects so far has been developed based on ECC needs and demand, also building on initiatives and investment projects that had already been initiated before the SEF, but it has not been strategic enough to allow the SEF to achieve its expected longer term results. At this stage, there is no clear strategy that shows how the updated project pipeline<sup>54</sup> will contribute to achieving SEF's expected results, and whether the projected investments and results of the pipeline are realistic under the remaining current timeline under the facility. Given the delays already incurred for all on-going and completed sub-projects at mid-term, it is likely that the updated pipeline is rather ambitious.

The CDB therefore needs additional support to strengthen its capacities to shift to a proactive approach and build a more strategic pathway through a pipeline of sub-projects that act as building blocks, in coordination with national governments, to achieve expected SEF results and targets and ensure their sustainability in the long term.

### Socio-economic Context

While the appetite for GE was particularly high in 2015-2016 in the ECC, two trends are affecting this interest today in a fast changing and competitive environment in the ECC: the decrease in price of fossil fuel, and the decrease in the price of battery technologies and related solar PV. In that context, it is becoming more challenging to maintain a high interest in GE, which can appear more risky and less competitive in the short-term compare to these other alternatives, especially given that the SEF can not demonstrate to date a successful story on GE. This may act as a dissuading factor in the short term for some governments to invest in GE. In addition, the scale for GE sources in ECC is inherently limited as the countries are small Islands, which can also affect overall GE competitiveness, especially in a context of lower or diminishing prices for alternatives.

Given this fast changing and competitive market in the ECC in electricity generation, SEF's scope at mid point may be too narrow to attract all the interest and build the momentum that could be warranted on GE economically competitive uses in the region. Indeed, a broader scope for the SEF, including for instance investments in nonelectric GE application of smaller scale that are less risky but competitive, could be relevant as alternative use in the power equation

A decreasing interest in GE from the ECC governments would affect the overall sustainability of the SEF. This is therefore a key challenge that requires continuous and long-term

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<sup>54</sup> As presented in Annex of the SAPR July-December 2019



engagement with ECC governments to demonstrate GE potential and benefits, and rekindle their interest for the longer term.

### Transformational market changes

At this stage, and given the limited higher level results achieved at mid-term, there is no evidence that the SEF contributed to transformational market changes in the region. Introducing long term transformational change in the market requires a continuous engagement and strategic support to the ECC. Such support requires a long-term vision, and therefore a significant amount of time, especially in the Eastern Caribbean context with a lack of capacity at different levels, and given the often stop-start nature of the economies prone to natural disasters and/or disruption (such as the hurricane Maria, or of course presently, the global COVID-19 pandemic which is hitting the Caribbean acutely in various ways). In this sense, and in light of the delays incurred during the first half of the SEF, the original SEF 8-year timeline is likely to be too short to nurture the tangible market changes originally sought.

### Leveraging effect

As previously mentioned, the SEF has been able to leverage funding from a variety of sources, which enabled an attractive financial package for the sustainable energy sector in the ECC. In addition, even though it is out of the scope of this MTR, it can be highlighted that additional GCF funding<sup>55</sup> was secured through the SEF in 2016. This GCF project will bring an additional USD 80 million to the SEF, including USD 60 million in senior loans, USD 16 million in reimbursable grants, and USD 4 millions in grants. This shows that the SEF has had a good leveraging effect in terms of attracting investment in RE and EE in the targeted countries.

In this context, it is even more relevant for the SEF to build a strategic proactive approach to ensure that all the SEF funding will be spent towards the achievements of the broader objectives of the facility.

### **Conclusion on Sustainability:**

At mid-term, the sustainability of SEF's results is moderately unlikely, but the facility has the potential to introduce key changes to ensure that key building blocks are in place at program completion to further pave the way towards a longer-term transformation of the energy market in the ECC countries, especially considering the SEF-Expanded phase.

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<sup>55</sup> GCF. 2016. FP020 : Sustainable Energy Facility for the Eastern Caribbean - Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines | InterAmerican Development Bank (IDB) | Decision B.14/17



## 4. CONCLUSIONS

### **Conclusion on Relevance: To what extent is the SEF relevant to support ECC countries in their shift towards low emission development pathways?**

The SEF is congruent to the energy sector priorities in the ECC, as well as with the GEF priorities and the mandates of the CDB and IDB. The SEF also shows a good level of complementarity with other initiatives that are ongoing in the region, but the blending of multiple funding sources through the SEF sometimes creates a confusion on who is funding what, which negatively affects the visibility of the SEF, and can lead to double counting of the results of CDB-funded initiatives.

The SEF design process could have benefitted from the definition of a more robust theory of change identifying more clearly impact pathways and underlying assumptions and risks to be managed to achieve the overall objective of the facility. The coherence between the SEF's overall objective and the sub-projects is moderate, which can be explained by the demand-driven approach pursued by the CDB which would gain from the perspective of the evaluator to be complemented by a more proactive and strategic approach to help ensure programme result achievement.

At the program level, the SEF design process duly considered national needs. At the sub-project level, governments needs were also well considered during the design. Environmental and Social Safeguards are fully integrated in the IDB and CDB procedures and are therefore mainstreamed, and duly considered by SEF sub-projects. While gender consideration is also a requirement from the banks and therefore considered in SEF sub-projects, the contribution of SEF sub-projects to gender equality is limited, which is in part due to the nature of the project themselves.

**Overall, the relevance of the SEF to support ECC countries in their shift towards low emission development pathways is satisfactory.**

### **Conclusion on Effectiveness: To what extent is the SEF achieving its expected results as defined in the results framework?**

A total of 14 sub-projects have been funded by the SEF to date (6 under Component 1, 5 under Component 2, and 3 under Component 3) across the 6 expected beneficiary countries. The contribution of sub-projects to the achievement of SEF expected outputs varies across components: it is highly satisfactory under Component 1, moderately unsatisfactory under Component 2 and satisfactory under Component 3. Overall, the output under Component 1 has been achieved, outputs under Component 2 and Component 3 are below the targets, with some either on track or significantly below. The delivery of outputs has been affected by a variety of internal factors as well as external ones such as extreme weather events, capacity constraints, technical issues, or Covid-19.

At mid-term, progress towards the achievements of outcomes is limited for all outcomes under all 3 Components. An analysis of expected targets from current and potential future sub-projects under the original SEF timeline and budget showed that outcomes would have been

unlikely to be achieved by program completion under Component 1 and 3 while the likelihood of achievement of expected outcomes under Component 2 is difficult to assess given the SEF's demand-driven approach.

In terms of stakeholders' involvement, sub-projects under Component 1 (energy audits and streetlight retrofit), are less conducive to high stakeholder engagement given their limited expected negative impacts. Some activities funded under Component 2 are focused on engaging stakeholders (ESIA and CLO positions), and therefore ensure good engagement. The overall involvement of stakeholders in sub-projects under Component 3 is considered satisfactory as the required tools are in place and proved useful in most cases to address challenges that came up during implementation.

**Overall, taking into consideration the challenges faced and delays incurred during this first phase of the programme, the project partners with the SEF Expanded, are likely to achieve the SEF expected outcomes by the revised completion date, if appropriate measures are taken to focus efforts moving forward.** This conclusion is in line with the disjunction noted in the relevance section of this report between outputs identified and outcomes sought in the logic model.

### **Conclusion on Efficiency: How efficient are SEF's operations?**

On December 31, 2019, the total expenditure of SEF Program resources represented approximately 58% of SEF's total budget (USD 71.5 million)<sup>56</sup>. In terms of funding sources, expenditures from CTF funding and CDB counterpart funding are above 50% while expenditures from IDB and GEF resources are lower, at respectively 36 and 24%. These will have to be sped up in the second half of the SEF program. In terms of Components, the rate of expenditures against initial budget under Component 1 is very high (91%), the rate of expenditure under Component 3 is high standing at 67% at mid-term, while the rate of expenditure under Component 2 is extremely low (5%). In terms of yearly expenditures, even though they were slow to pick up in 2017, they are in line with and even exceeding budgetary plans at mid-term. Expenditures under Component 3 were much faster than initially expected, while expenditures under Component 1 and even more so under Component 2 were slower. **Even though overall SEF's expenditures are on track (representing 58% of the SEF budget), the cost-effectiveness at mid-term is moderately unsatisfactory given that progress towards the achievement of outcomes has been extremely limited to date.**

Regarding the role played by the implementing (IDB) and executing (CDB) agencies, IDB's supervision and oversight of the program is considered aligned with what was initially planned, with a high satisfaction from stakeholders. CDB's execution of the program is in line with what was originally planned. Even though the CDB presents a few internal weaknesses which are discussed in the efficiency section, the Bank proved to have key strengths that make it well suited for the execution of the SEF, which is corroborated by the satisfaction of most of the stakeholders interviewed.

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<sup>56</sup> SAPR July – December 2019

The quality of the M&E system of the SEF at design stage is satisfactory, and though a few M&E activities incurred some delays, the overall timeliness of and budget allocation for M&E activities seems appropriate. Although the reporting on achieved results could be improved in the SAPR, the reports can overall be considered of satisfactory quality. However, the SEF M&E is lacking a standardized reporting template being used at the sub-project level, as well as a more systematic way of collecting lessons learned at the sub-project level to aggregate them at the program level and then track ways in which they were addressed. There is also room for improvement in terms of dissemination of lessons learned at the regional level, between countries and with other donors.

**Overall SEF's operation can be considered moderately efficient, with a few avenues for improvements. Cost-effectiveness is assessed as moderately unsatisfactory at this stage.**

### **Conclusion on Impacts: What progress has the SEF made so far to contribute to the diversification of the energy mix in ECC countries?**

The performance of the SEF so far does not indicate a strong probability that the facility will generate its expected impacts in terms of (i) reduction of the average electricity tariff for customers in ECC from 0.33 to USD 0.30 USD/kWh, and (ii) increase in the regional penetration of indigenous renewable energy sources for power generation within the ECC from 10 to 30%. As such, an extension of the SEF programme and additional resources were agreed and mobilised by programme partners under the SEF Expanded, to increase this likelihood.

The MTR brought to light a few positive unintended impacts generated by the SEF in terms of awareness and engagement towards GE in ECC, integration of energy sources at the national level, commitment of other partners in the regions, reputational benefit for the CDB, and sustainable development benefits for local populations. No major adverse unintended impacts were revealed at this stage by the MTR.

**At mid-term, the SEF has therefore not tangibly contributed to the diversification the energy mix in ECC countries.**

### **Conclusion on Sustainability: What are the enabling conditions and or risks emerging regarding the sustainability of SEF-funded interventions?**

The SEF was designed on a sound economic analysis and has a system in place to manage risks to sustainability. Even though the facility does not have an explicit exit strategy, the fact that it is embedded in the longer-term support from the CDB for sustainable energy in the ECC, is likely to make the SEF's legacy sustainable, at the condition that the CDB has the capacity and resources to take up the challenge beyond the facility and uses the remaining years under the SEF to put in place the key building blocks to further pave the way towards market transformation in the ECC countries.

That being said, gaps in capacities at the CDB remain to be addressed to ensure the achievement of SEF's longer-term results and their sustainability. In particular, the CDB needs additional support to shift to a proactive approach and build a more strategic pipeline of sub-projects with ECC countries on RE and EE to allow for this broader market change dynamics to take roots, with a particular focus on the market for GE of course.

Conversely, strategic, continuous and long-term support is required at the national level to help governments develop legally, financially, and technically-sound sustainable energy projects; strengthen the regulatory framework; maintain ECC's interest in GE, and introduce transformational changes in their national energy markets; all of which are key for the sustainability of SEF's results.

The SEF's leveraging effect has been good, as an additional USD 80 million from the GCF has been secured, which makes the need for a more strategic and proactive approach at the facility level even more crucial to ensure optimal use of those resources to bring impacts at scale.

**At mid-term, the sustainability of SEF's results is moderately unlikely, but the facility has the potential to introduce key changes to ensure that key building blocks are in place at program completion to further pave the way towards a longer-term transformation of the energy market in the ECC countries, especially considering the SEF-Expanded phase.**

## 5. LESSONS LEARNED

The following key lessons complement the lessons noted by the CDB in its own Semi-Annual Progress Reports and already summarized in section 3.3 of this MTR. They are drawn from this MTR to inform both the future of the SEF or other similar programmes moving forward.

- The development of a robust theory of change from the outset of the programme design stage can be a useful tool to help ensure internal coherence and make explicit the assumptions underpinning a regional programme such as SEF, building on numerous sub-projects and different components;
- In a complex and moving context such as the ECC, it is critical to consider all sources of funding and support at the design stage to ensure maximum programme synergy and complementarity. A demand-driven approach such as the one promoted under SEF can give added flexibility to adapt to this changing context;
- While such a valuable demand-driven approach is critical to ensure alignment with country evolving priorities and needs, when trying to catalyse market transformation through a large-scale programme, it can gain from being coupled with a proactive and strategic approach;
- The PPP model promoted through the SEF and the flexibility of the overall financing package provided under the SEF (combining under one programme grants, concessional loan and TA) has been instrumental in attracting interest and commitments from government and private sector partners in the context of the ECC, helping de-risk the PPP scheme for all and improve the equity positions of the national governments in the investment process;
- The knowledge, presence and networks of CDB with the actors working in the region, coupled with IDB's expertise in GE through the SEF partnership, was instrumental to the programme's credibility and interest in the region, as well as its ability to successfully leverage resources from various sources of funding internationally;
- For gender mainstreaming to be truly transformational in programmes such as SEF, it must go beyond the monitoring of sex-disaggregated data for participation to trainings;
- While energy audits are a key first step to electricity savings in the long term, they are not sufficient, and require properly planned follow-up investments to move towards the implementation of the EE measures recommended in the audits, leading to electricity savings and emission reductions;
- Bringing market transformation for GE and RE is a long-term proposition that requires adequate capacity building to start with and longer timeframes;
- As part of a more proactive approach, due attention is needed in an investment-focussed programme such as SEF, to provide long term and continuous country level technical assistance at the strategic, policy, regulatory and project pipeline development levels to properly assist in the actual development of the GE sub-sector

and complement its demand-driven nature, especially in the context of a regional fast changing and low capacity environment;

- Given the risks involved in the GE project exploration phase, pursuing more than one potential flagship operation simultaneously to create interest can be a critical risk mitigation strategy.
- Market transformation in GE is a complex proposition, which can also be affected by the political, market, economic and environmental context, as well as by the scale of the geothermal resources available. In that context various application of geothermal potential at this smaller scale that can make economic sense and are sometimes less politically sensitive can be part of a strategy to improve the odds of market uptake in the longer term;
- Without prejudice to the high relevance of a GE market transformation intervention, overall efficiency and cost-effectiveness of a programme such as SEF can be affected negatively by the fast evolving context in a region such as ECC including: the limited capacities at the national level in BMCs and within the executing agency, the multiple levels of supervision and regulatory systems involved, the challenges with piloting and negotiating a new financing scheme in a multi-stakeholder context, and the inherent risks associated with GE in the exploratory drilling phase. This can indeed translate into the need to devote more funding and time to achieve a given objective;
- Sustainability of efforts in ECC to bring about market transformation for GE can benefit from the attributes of the IDB-CDB partnership in terms of a long term presence in the region, support to a sustainable energy institutional mission, and the ability and complementarity of the partners to catalyze and sustain interest and associated financing and investment towards such a transformation process through and beyond SEF.

## 6. GEF RATING TABLE

CRITERIA	SCORE
<b>Outcome Rating</b>	
<b>Relevance</b>	<b>S</b>
Were the project outcomes congruent with the GEF focal areas/operational program strategies, country priorities, and mandates of the Agencies?	S
Was the project design appropriate for delivering the expected outcomes?	MS
<b>Effectiveness</b>	
The extent to which the project's actual outcomes commensurate with the expected outcomes?	MU
<b>Efficiency</b>	
Was the project cost-effective? How does the project cost/time versus output/outcomes equation compare to that of similar projects?	MU
<b>Sustainability Rating</b>	
The sustainability will be assessed taking into account the risks related to financial, sociopolitical, institutional, and environmental sustainability of project outcomes. The evaluator may also take other risks into account that may affect sustainability	MU
<b>Project M&amp;E Ratings</b>	
M&E Design	S
M&E Implementation	MS
<b>Implementation and Execution Rating</b>	
<b>Quality of implementation</b>	
Pertains to the role and responsibilities discharged by the GEF Agencies that have direct access to GEF resources.	S
<b>Quality of Execution</b>	
Pertains to the roles and responsibilities discharged by the country or regional counterparts that received GEF funds from the GEF Agencies and executed the funded activities on ground	S

### **Legend:**

#### **Outcomes ratings**

- Highly satisfactory (HS) – Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings.
- Satisfactory (S) – Level of outcomes achieved were as expected and/or there were no or minor shortcomings.
- Moderately Satisfactory (MS) – Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.
- Moderately Unsatisfactory (MU) – Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings.
- Unsatisfactory (U) – Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.



- Highly Unsatisfactory (HU) – Only a negligible level of outcomes achieved and/or there were severe shortcomings.
- Unable to Assess (UA) – The available information does not allow an assessment of the level of outcome achievements.

#### Sustainability Ratings

- Likely (L) – There is little or no risks to sustainability.
- Moderately Likely (ML) – There are moderate risks to sustainability.
- Moderately Unlikely (MU) – There are significant risks to sustainability.
- Unlikely (U) – There are severe risks to sustainability.
- Unable to Assess (UA) – Unable to assess the expected incidence and magnitude of risks to sustainability.

#### M&E Ratings

- Highly satisfactory (HS) – There were no shortcomings and quality of M&E design /implementation exceeded expectations.
- Satisfactory (S) – There were no or minor shortcomings and quality of M&E design/implementation meets expectations.
- Moderately Satisfactory (MS) – There were some shortcomings and quality of M&E design/implementation more or less meets expectations.
- Moderately Unsatisfactory (MU) – There were significant shortcomings and quality of M&E design/implementation somewhat lower than expected.
- Unsatisfactory (U) – There were major shortcomings and quality of M&E design/implementation substantially lower than expected.
- Highly Unsatisfactory (HU) – There were severe shortcomings in M&E design/implementation.
- Unable to Assess (UA) – The available information does not allow an assessment of the quality of M&E design/implementation.

#### Implementation and Execution Ratings

- Highly satisfactory (HS) – There were no shortcomings and quality of implementation/execution exceeded expectations.
- Satisfactory (S) – There were no or minor shortcomings and quality of implementation/execution meets expectations.
- Moderately Satisfactory (MS) – There were some shortcomings and quality of implementation/execution more or less meets expectations.
- Moderately Unsatisfactory (MU) – There were significant shortcomings and quality of implementation/execution somewhat lower than expected.
- Unsatisfactory (U) – There were major shortcomings and quality of implementation/execution substantially lower than expected.
- Highly Unsatisfactory (HU) – There were severe shortcomings in the quality of implementation/execution.
- Unable to Assess (UA) – The available information does not allow an assessment of the quality of implementation/execution.

## 7. RECOMMENDATIONS

- **Recommendation 1: Adjust the scope to better manage risks.** In view of the changing energy market in the region and the typically long lead time to implement GE projects in ECC, the SEF would have gained in retrospect from a more sturdy risk identification and management approach in its design which could have included a dedicated engagement process with country leadership on GE development. A broader scope under the SEF Expanded may also warrant revisiting the strategic approach of the SEF to the development of the geothermal sub-sector, to better tailor it to the specific market realities of ECC countries, perhaps going beyond GE electricity power generation as the single entry point in that market change and showcasing process.
- **Recommendation 2: Improve the contribution of SEF's sub-projects to the expected results of the facility.** The CDB could ensure that some of the SEF results indicators are reflected in the sub-projects results framework to ensure that they directly contribute to the overall SEF's expected results and objectives.
- **Recommendation 3: Clarify the different sources of CDB counterpart funding under the SEF** in order to increase the visibility of the SEF and to avoid any potential for double counting of results from CDB-funded initiatives.
- **Recommendation 4: Adopt a more proactive and strategic approach.** The CDB could consider adopting a more proactive and strategic approach in each of the 6 beneficiary countries to complement its demand-driven model. While keeping a tailored approach to each country to not lose flexibility and adaptability, the CDB could indeed support countries in defining more strategic sets of projects that would ensure the achievement of SEF's expected results, and contribute at a greater scale to energy market change in line with national priorities and goals, as well as to the SEF's overall objective.  
Regarding GEF grant funding more specifically, in light of the remaining significant gaps in capacity at the national and CDB level, it is recommended to allocate the remaining GEF grant to more strategic and comprehensive technical assistance. This could for instance focus on building capacity at the CDB to develop more robust and strategic investment pathways and associated project pipelines that would directly contribute to result achievement. This could also include exploring the opportunity to expand support to non-electricity GE related investment projects. Support to strengthen the regulatory framework in ECC would be particularly relevant as well. Such technical assistance would have the potential to build long-term capacity of systems and institutions in the countries, beyond the individual level, and therefore contribute to the sustainability of SEF's results.
- **Recommendation 5: Speeding up the implementation of Component 2.** Expenditures and results achieved to date under Component 2 are below mid-term targets. It is therefore recommended to develop for each country a capacity building and proactive engagement strategy with a concrete action plan to roll out activities for the second half of the SEF program, with a view to engage countries on the strategic

development of their RE and EE potential. This is key as the limited capacities within ECC governments, but also within the CDB, was identified as one of the key challenges for the development of RE, and in particular GE potential in the region.

- **Recommendation 6: Review and improve some M&E tools.**

- ✓ *SAPR*: A few elements could be added to the SAPR to make them more comprehensive:

- A justification/ comment column could be added on the result matrix updated to better justify the reported results to date. The methodology used for the measurements of the results from the sub-projects could also be made explicit.
- Improve the collection of gender disaggregated monitoring data at the subproject and SEF levels.
- A management response explaining how the recommendations coming from collected lessons learned were considered and acted upon would be useful to track how lessons are fed back into the execution of the program.

- ✓ *Sub-projects reporting*: Given that reporting at the subproject level is quite varied, it is recommended to develop a standardized reporting template to be used by all sub-project. This would ensure a more systematic tracking of SEF's indicators, and would make the aggregation of results at the program level easier and more comprehensive.

- **Recommendation 7: Improve the dissemination of lessons learned, across projects and at the regional level.** The SEF would benefit from having a more systematic way of collecting lessons learned at the subproject level to bring them up to the program level and share them across countries. This could be part of the standardized reporting template to be used by the sub-projects. In addition, the program could reflect on how to better and more systematically disseminate SEF's lessons learned with key players in the region.

- **Recommendation 8: Request an extension for GEF funding in light of the extension already adopted for the Facility as a whole under the SEF-Expanded.** Given the energy sector, and the context in the Eastern Caribbean, investments in GE requires a significant amount of time to achieve results. In this sense, and considering the delays incurred in the first half of the SEF, it is recommended to request a 24-months no-cost extension for the GEF funding, so that it can truly build with the countries, on the outcomes of this proposed GEF strategic technical assistance in the medium term, including through its potential leveraging effect on the recently committed GCF support.

## 8. ANNEXES

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## ANNEX 1. EVALUATION MATRIX

Evaluation Questions and sub-questions	Indicators	Data collection method	Information Source
<b>RELEVANCE</b>			
<b>Q1. To what extent is the SEF relevant to support ECC countries in their shift towards low emission development pathways?</b>			
SQ1.1. To what extent is the SEF congruent to the energy sector country priorities, GEF focal area strategy, mandates of the agencies, and other relevant initiatives?	I1.1.1Level of alignment between the program and ECC priorities for the energy sector	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documents</li> <li>National strategies, plans, etc.</li> <li>ECC governments</li> </ul>
	I1.1.2Level of alignment between the program and local needs and priorities	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Energy sector documents</li> <li>Local stakeholders (country focal points, government representatives, regional associations, private sector representatives)</li> </ul>
	I1.1.3Level of alignment between the program and GEF strategic priorities	<ul style="list-style-type: none"> <li>Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documents</li> <li>GEF strategic documents</li> </ul>
	I1.1.4Level of alignment between the program and IDB's mandate	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documents</li> <li>IDB strategic documents</li> <li>IDB</li> </ul>
	I1.1.5Level of alignment between the program and CDB's mandate	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documents</li> <li>CDB strategic documents</li> <li>CDB</li> </ul>
	I1.1.6Level of complementarity between the SEF and other relevant initiatives in the ECC	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Documentation from other key initiatives</li> <li>IDB, CDB</li> <li>Key actors active in the ECC in the energy sector</li> </ul>
SQ1.2. Was the SEF designed in a coherent manner to deliver expected outcomes?	I1.2.1Quality of the SEF theory of change	<ul style="list-style-type: none"> <li>Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documents</li> </ul>
	I1.2.2Level of alignment of SEF sub-projects objectives and logical framework with the overall SEF's objectives	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documents</li> <li>Sub-projects design documents</li> <li>Sub-project executing partners</li> <li>CDB</li> </ul>
	I1.2.3Nature and extent of changes in country, sector or operational context that affected the relevance of the SEF since its design	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>IDB</li> <li>CDB</li> <li>Local stakeholders</li> </ul>

SQ1.3. To what extent were stakeholders involved in the SEF's design	I1.3.1 Level of consideration of beneficiaries needs in the SEF design	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> </ul>
	I1.3.2 Number and type of stakeholders involved in program design with gender disaggregated data if possible	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> </ul>
	I1.3.3 Quality of environmental and social safeguards integrated in the Program	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> </ul>
	I1.3.4 Level of consideration of gender-related concerns in program design	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> </ul>
<b>EFFECTIVENESS</b>			
<b>Q2. To what extent is the SEF achieving its expected results as defined in the results framework?</b>			
SQ2.1. Is the project successfully delivering its outputs and achieving targets?	I2.1.1 Level of achievements of outputs under Component 1 (Energy efficiency): <ul style="list-style-type: none"> <li>- Number and amount of loans provided to energy efficiency projects</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• Sub-project design documents</li> <li>• CDB</li> <li>• Sub-project executing partners</li> <li>• Local stakeholders</li> </ul>
	I2.1.2 Level of achievements of outputs under Component 2 (Regulatory framework, institutional strengthening and capacity building): <ul style="list-style-type: none"> <li>- Number of countries that benefitted from policy reform or recommendation and type of energy policy reforms or recommendations provided and implemented</li> <li>- Number and type of training provided to the CDB and/or government employees, and number of participants</li> <li>- Number of ECC receiving TA grants, and grant amount</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF monitoring reports</li> <li>• Training reports and list of participants</li> <li>• CDB</li> <li>• ECC governments</li> <li>• Technical assistance executing partner</li> </ul>
	I2.1.3 Level of achievements of outputs under Component 3 (Renewable Energy): <ul style="list-style-type: none"> <li>- Number and amount of loans provided to geothermal projects at any stage of development</li> <li>- Number and amount of loans provided to finance transmission lines required for connecting GE plants to the power grid</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• Sub-projects design documents</li> <li>• CDB</li> <li>• Sub-project executing partners</li> <li>• Local stakeholders</li> </ul>
	I2.1.4 Type and extent of factors that affected delivery of outputs	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• CDB</li> <li>• Sub-project executing partners</li> <li>• ECC targeted government agencies</li> </ul>

	I2.1.5Level of contribution of SEF sub-projects to the achievement of SEF's outputs	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• CDB</li> <li>• Sub-project executing partners</li> <li>• ECC targeted government agencies</li> </ul>
SQ2.2. What progress has the SEF made towards the achievement of expected outcomes	I2.2.1Type and extent of progress made towards the achievement of program outcomes under Component 1: <ul style="list-style-type: none"> <li>- Amount of electricity saved by EE applications, measures and programs</li> <li>- Extent of reduction in fossil fuel imports for energy generation due to EE projects</li> <li>- Amount of GHG emission avoided through EE projects</li> <li>- Number and quality of EE projects appraised by the CDB</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• CDB estimation on efficiency levels and number of retrofitted lamps based on information from governments and utilities</li> <li>• IDB estimation on GHG emission avoided and fossil fuel import reduction</li> <li>• IDB</li> <li>• CDB</li> <li>• Sub-project executing partners</li> <li>• Local stakeholders</li> </ul>
	I2.2.2Type and extent of progress made towards the achievement of program outcomes under Component 2: <ul style="list-style-type: none"> <li>- Evidence of contribution to changes in policy/ legal/regulatory framework (capacities, governance, etc.) in ECC</li> <li>- % of women trained in construction, operation and/or maintenance of RE and EE infrastructure projects</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Newly approved policies, laws and regulations in targeted countries</li> <li>• SEF monitoring reports</li> <li>• CDB</li> <li>• ECC governments</li> <li>• Technical assistance executing partners</li> </ul>
	I2.2.3Type and extent of progress made towards the achievement of program outcomes under Component 3: <ul style="list-style-type: none"> <li>- Extent of reduction in fossil fuel imports for energy generation due to GE projects</li> <li>- Amount of GHG emission avoided through RE projects</li> <li>- MW of geothermal capacity installed</li> <li>- Number of GE projects that moved to the following stage of development</li> <li>- % of women that participated in consultation processes related to GE projects</li> <li>- Number and quality of RE projects appraised by the CDB</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• Sub-projects design documents</li> <li>• CDB estimation on efficiency levels and number of retrofitted lamps based on information from governments and utilities</li> <li>• IDB estimation on GHG emission avoided and fossil fuel import reduction</li> <li>• IDB</li> <li>• CDB</li> <li>• Sub-project executing partners</li> <li>• Local stakeholders</li> </ul>
	I2.2.4Type and extent of factors that affected delivery of outcomes	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• IDB</li> <li>• CDB</li> <li>• ECC governments</li> <li>• Sub-project executing partners</li> </ul>
	I2.2.5Likelihood of achievement of outcomes by program completion?	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> </ul>



			<ul style="list-style-type: none"> <li>• CDB</li> <li>• ECC governments</li> </ul>
	I2.2.6 Number of beneficiary countries reached by the program vs initial plan within the expected time frame	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• SEF and sub-projects design documents</li> </ul>
SQ2.3. To what extent are stakeholders involved in program implementation?	I2.3.1 Number and type of stakeholder engagement activities with participation from a representative range of stakeholder groups (civil society, private sector, indigenous population, etc.)	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects design documents</li> <li>• SEF and sub-projects monitoring reports</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects implementing partners</li> </ul>
	I2.3.2 Extent and quality of interaction/ exchange between project implementers and local partners	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders, including ECC governments</li> <li>• Sub-projects implementing partners</li> </ul>
	I2.3.3 Evidence that issues and feedback provided by stakeholders were taken into consideration in project implementation	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Supervision meeting minutes</li> <li>• Monitoring reports</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects implementing partners</li> </ul>
	I2.3.4 Degree of application of environmental and social safeguard during program implementation	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects implementing partners</li> </ul>
	I2.3.5 Number of women that benefitted from SEF intervention vs initial targets	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> </ul>
<b>EFFICIENCY</b>			
<b>Q3. How efficient are SEF's operations?</b>			
SQ3.1. To what extent are the outputs being achieved in a cost-effective manner?	I3.1.1 Budget execution per year, component and output, against total budget	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• Financial reports</li> </ul>
	I3.1.2 Disbursements and project expenditures in line with expected budgetary plans	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• Financial reports</li> </ul>
	I3.1.3 Timeliness of output delivery against workplan	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF and sub-projects monitoring reports</li> <li>• CDB</li> <li>• Sub-project executing partners</li> </ul>
	I3.1.4 Level of mobilization of expected cofinancing	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• Financial reports</li> </ul>
	I3.1.5 Number and nature of measures implemented to enhance cost- and time- effectiveness	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• CDB</li> </ul>

			<ul style="list-style-type: none"> <li>• Sub-projects executing partners</li> </ul>
	I3.1.6Likelihood and effect of factors likely to enhance or hinder efficiency	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> <li>• CDB</li> <li>• Sub-projects executing partners</li> </ul>
	I3.1.7Quality of financial reporting/auditing materials	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Financial reports</li> <li>• IDB</li> <li>• CDB</li> <li>• Sub-projects executing partners</li> </ul>
SQ3.2. Are SEF's operations under IDB efficient in facilitating support to ECC?	I3.2.1Quality, cost and timeliness of the project design process under IDB responsibility (project's identification, concept preparation, appraisal, preparation of detailed proposal, approval and start-up)	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> </ul>
	I3.2.2Level of alignment between IDB's planned role and responsibility and the oversight and supervision provided	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> <li>• GEF requirements</li> <li>• Supervision meeting minutes</li> <li>• CDB</li> </ul>
	I3.2.3Satisfaction of stakeholders regarding IDB's oversight and supervision	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I3.2.4IDB perceived institutional strength and weaknesses as implementing agency	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I3.2.5Quality of risk identification and management processes	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documentation</li> <li>• Monitoring reports</li> <li>• Supervision meeting minutes</li> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
SQ3.3. Are SEF-funded operations under the CDB being executed efficiently	I3.3.1Quality of the day to day management and administration of the program	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> <li>• CDB</li> </ul>
	I3.3.2Evidence of use of financially sound practices for project execution and management	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Financial reports</li> <li>• IDB</li> <li>• CDB</li> <li>• ECC governments</li> </ul>

			<ul style="list-style-type: none"> <li>• Sub-projects executing partners</li> </ul>
	I3.3.3Level of alignment between CDB's planned responsibility and the role effectively played in program execution	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interview</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> <li>• GEF requirements</li> <li>• Supervision meeting minutes</li> <li>• IDB</li> <li>• ECC governments</li> <li>• Sub-projects executing partners</li> </ul>
	I3.3.4Quality and timeliness of procurement and contracting processes	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• Supervision meeting minutes</li> <li>• IDB</li> <li>• CDB</li> <li>• ECC governments</li> <li>• Sub-projects executing partners</li> </ul>
	I3.3.5Nature and total delays (in months) generated by implementation bottlenecks	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• Supervision meeting minutes</li> <li>• IDB</li> <li>• CDB</li> <li>• ECC governments</li> <li>• Sub-projects executing partners</li> </ul>
	I3.3.6CDB perceived institutional strength and weaknesses as executing agency	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
SQ3.4. Is the monitoring plan operational and effective to track results and progress towards objectives?	I3.4.1Evidence of an operational monitoring plan	<ul style="list-style-type: none"> <li>• Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design document</li> <li>• Monitoring reports</li> </ul>
	I3.4.2Quality of the M&E system at design stage (indicators, baseline study, M&E plan, budget, etc.)	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> <li>• IDB</li> <li>• CDB</li> </ul>
	I3.4.3Level of use of the monitoring plan and associated tools	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I3.4.4Timeliness of monitoring activities, and (if any) evidence of external factors affecting them	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interview</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• CDB</li> <li>• Sub-projects executing partners</li> </ul>

	I3.4.5Evidence of collection of monitoring data (including data to inform the GEF TT, and gender-disaggregated data)	<ul style="list-style-type: none"> <li>Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> </ul>
	I3.4.6Coherence between types of reported results and actual activities and outputs on the ground	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>CDB</li> <li>Sub-projects executing partners</li> <li>Local stakeholders</li> </ul>
	I3.4.7Collection of lessons learned and good practices on project activities and dissemination to relevant stakeholders	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>IDB</li> <li>CDB</li> <li>Sub-projects executing partners</li> </ul>
	I3.4.8Presence of M&E staff within the project team or M&E expert hired to track and analyses progresses	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documentation</li> <li>CDB</li> <li>Sub-projects executing partners</li> </ul>
	I3.4.9Quality of monitoring reports	<ul style="list-style-type: none"> <li>Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> </ul>
	I3.4.10 Evidence of management response and/or changes in program strategy as a follow up to monitoring reports	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Supervision meeting minutes</li> <li>IDB</li> <li>CDB</li> <li>Sub-projects executing partners</li> </ul>
	I3.4.11 Adequacy of resources allocated to program M&E	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>SEF design documentation</li> <li>CDB</li> <li>Sub-projects executing partners</li> </ul>
<b>IMPACT</b>			
<b>Q4. What progress has the SEF made so far to contribute to the diversification of the energy mix in ECC countries?</b>			
SQ4.1. Does the current performance indicate probability in achieving the project's purpose?	I4.1.1Regional penetration of indigenous renewable energy sources for power generation within the ECC	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>National data on energy matrix</li> <li>IDB</li> <li>CDB</li> <li>Local stakeholders</li> <li>Sub-projects executing partners</li> </ul>
	I4.1.2Evolution of the average electricity tariff in ECC since program inception)	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>National data on electricity tariffs</li> <li>IDB</li> <li>CDB</li> <li>ECC governments and utilities</li> </ul>

	I4.1.3Extent to which SEF contributed to progress towards long term impacts (change in the energy matrix and reduction of electricity tariffs)	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• IDB and CDB analysis and estimations of SEF's contribution</li> <li>• IDB</li> <li>• CDB</li> <li>• Key actors active in the ECC in the energy sector</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I4.1.4Level of validity of key assumptions of the program's theory of change in terms of achieving the expected impact	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• SEF design documents</li> <li>• IDB</li> <li>• CDB</li> <li>• Key actors active in the ECC in the energy sector</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I4.1.5Likelihood of achieving SEF's objective upon completion	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• IDB</li> <li>• CDB</li> <li>• Key actors active in the ECC in the energy sector</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I4.1.6Evidence on environmental stress reduction	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• IDB</li> <li>• CDB</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
SQ4.2. Has the program generated any unintended impacts?	I4.2.1Unintended positive impacts generated by the project	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• IDB</li> <li>• CDB</li> <li>• Key actors active in the ECC in the energy sector</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>
	I4.2.2Nature and likelihood of adverse environmental, social and economic effects from the program	<ul style="list-style-type: none"> <li>• Documentation review</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring reports</li> <li>• IDB</li> <li>• CDB</li> <li>• Key actors active in the ECC in the energy sector</li> <li>• Local stakeholders</li> <li>• Sub-projects executing partners</li> </ul>

SUSTAINABILITY			
Q5. What are the enabling conditions and or risks emerging regarding the sustainability of SEF-funded interventions?			
SQ5.1. Has the project designed and implemented an appropriate exit strategy and measures to mitigate risks to sustainability?	I5.1.1Existence and quality of a plan to manage financial, socio-economic, institutional, governance and environmental risks	<ul style="list-style-type: none"> <li>Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>SEF planning documents</li> </ul>
	I5.1.2Existence and quality of exit strategy	<ul style="list-style-type: none"> <li>Documentation review</li> </ul>	<ul style="list-style-type: none"> <li>SEF planning documents</li> </ul>
SQ5.2. What factors are in place to enable or hinder the persistence of program outcomes?	I5.2.1Number and type of organizational arrangements that support or hinder the continuation of project activities or results (private or public sector)	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>CDB</li> <li>Local stakeholders</li> <li>Sub-projects executing partners</li> </ul>
	I5.2.2Type of political, economic and social conditions affecting the sustainability of program results	<ul style="list-style-type: none"> <li>Documentation review</li> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring reports</li> <li>IDB</li> <li>CDB</li> <li>Key actors active in the ECC in the energy sector</li> <li>Local stakeholders</li> <li>Sub-projects executing partners</li> </ul>
	I5.2.3Evidence of replication, scaling up and/or market change for RE and EE since program inception	<ul style="list-style-type: none"> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>CDB</li> <li>Key actors active in the ECC in the energy sector</li> <li>Local stakeholders</li> <li>Sub-projects executing partners</li> <li>Key actors active in the ECC in the energy sector</li> </ul>
	I5.2.4SEF leveraging effect/ Evidence of increased interest in investments in RE and EE in the targeted countries following SEF's intervention	<ul style="list-style-type: none"> <li>Interviews</li> </ul>	<ul style="list-style-type: none"> <li>CDB</li> <li>Key actors active in the ECC in the energy sector</li> <li>Local stakeholders</li> <li>Sub-projects executing partners</li> <li>Key actors active in the ECC in the energy sector</li> </ul>

## ANNEX 2. LIST OF PEOPLE INTERVIEWED

Stakeholder	Institution	Role
<b>SEF Programme Management</b>		
Christopher Straughn	CDB	Sustainable Energy Analyst
Joseph Williams	CDB	Head (Ag.) Renewable Energy/Energy Efficiency Unit
Christiaan Gischler	IDB	Lead Energy Specialist
Rochelle Franklin	IDB	Operations Snr. Associate at Inter-American Development Bank
Vinicio Rodriguez	IDB	Fiduciary Senior Specialist - Financial Management Barbados Country Office
Javier Garcia Fernandez	IDB	Infrastructure and Energy Sector - IDB
<b>Regional Organisations</b>		
Dr. Devon Gardener	CARICOM	Program Manager, Energy
Judith Ephraim	OECS	Programme Coordinator, Sustainable Energy Unit
<b>Key Actors</b>		
Kyle Farnum	EU	Programme Manager - Energy
Simon Zellner	GIZ	Programme Leader
Ingrid Lavine	DFID	Senior Programme Officer
<b>Sub-Projects</b>		
St. Vincent government buildings		
Leighton Waterman	CDB	Sustainable Energy Specialist
SVG GE Drilling Project & Institutional strengthening TA		
Ken Aldonza	CDB	Operations Officer, Energy
Aldean Williams	SVGCL (consultant)	Community Liaison Officer
Trent Philipp		Executive Director
Grenada government buildings		
Leighton Waterman	CDB	Sustainable Energy Specialist
Grenada Geothermal Development Project (ESIA & Institutional strengthening Tas)		
Herbert Samuel	GOCR (Consultant)	Project coordinator
Wendy Frederick	GOCR (Consultant)	Community Liaison Officer
Andrew Day	Mott Macdonald	Consultant Firm



A&B Streetlight retrofit		
Leighton Waterman	CDB	Sustainable Energy Specialist
Amb Brian Challenger	Government of A&B	Advisor on Energy to the Minister
A&B Solar PV Project		
Lano Fonua	CDB	Operations Officer, Energy
Dominica government buildings		
Leighton Waterman	CDB	Sustainable Energy Specialist
Mr Michael FADELLE	Government of DOM	Project coordinator
Dominica transmission line upgrade loan		
Ken Aldonza	CDB	Operations Officer, Energy
Dave Stamp	DOMLEC	Generation Manager - Project Coordinator
Bertilia Mackenzie	DOMLEC	General Manager
St. Kitts		
Leighton Waterman	CDB	Sustainable Energy Specialist
St. Lucia training for regulators		
Christopher Straughn	CDB	Sustainable Energy Analyst
Alison Jean	National Utilities Regulatory Commission	CEO
CDB Capacity Strengthening (Geothermal Technical Advisor)		
Christopher Straughn	CDB	Sustainable Energy Analyst
Nils Jansen	K&M Advisors	GE transaction/finance specialist

## ANNEX 3. GEF MITIGATION TRACKING TOOL AT MID- TERM



GEF Mitigation  
TrackingTool\_RG-G1

## ANNEX 4. REVIEWED DOCUMENTATION

### **SEF Design Documents**

- GEF CEO Endorsement
- GEF Mitigation tracking tool
- CTF Project document
- IDB Loan proposal, and annexes:
  - IDB. 2015. Cost Benefit Analysis of the Pipeline of Projects Potentially Funded by the Sustainable Energy Facility for the Eastern Caribbean (CBA)
  - Donor coordination Annex
  - Environmental and Social Management Report (ESMR)
  - Gender Annex
  - Monitoring and Evaluation Plan
  - Operating Manual for the SEF (Revised 19 April 2016)
  - Regional integration
  - Safeguard policy filter
  - Challenges and opportunities for the energy sector in the eastern Caribbean: strategy for developing geothermal potential through PPP (Dec 2015).
  - Energy Dossiers for A&B, Dominica, Grenada, Santa Lucia, SKN, SVG.

### **SEF monitoring reports**

- SAPR (from July 2016 to December 2019)
- Audit reports:
  - Auditor's report 2017 (OCR, OSF, SDF)
  - CDB Statement of interim financial position (unaudited) for the nine months ended September 30, 2018 et 2019.
  - Auditor's report FY2018 OCR
- Project Expenditures documents
  - Grant Disbursement details CTF (June 26, 2020)
  - Grant Disbursement details GEF (June 26, 2020)
  - Loan Disbursement details IDB (November 21, 2019)
- Disbursement requests
  - IDB Loan
  - CTF
  - GEF

### **IDB, CDB and GEF institutional documents**

- CDB Annual Report 2018
- CDB Energy Sector Policy and Strategy (2015)
- CDB Gender and Policy Strategy (2008)
- CDB Environmental and Social Review Procedures (2014)

- IDB Implementation Guidelines for the Operational Policy on Gender Equality in Development (2013)
- IDB Energy Sector Framework Document (2018)
- IDB Operational Policy on Gender Equality in Development (2010)
- GEF 5 Focal Area Strategies

### **Sub-projects Documentation**

#### *A&B Solar PV*

- Concept note
- Letter of No objection
- Tender document for PV installation
- Appraisal Report

#### *DOM RRL Loan – Transmission Line*

- Project Coordinator quarterly Reports (Oct 2018 – Sept 2019)
- Back to office report May 2019
- Project briefs (Jan-June 2019 and July- Dec 2019)
- Board Approval document

#### *Grenada Geothermal Development project (ESIA & Institutional strengthening TA)*

- ESIA
  - Report & Recommendation On Contract Award (December 2018)
  - Grenada Geothermal ESIA Lump sum contract
  - Attach II Letter of request ESIA Grenada
  - Draft ToR - ESIA
  - Letter of no objection ESIA
  - GA 57 – GRN ESIA Grant agreement July 10, 2017
  - Geothermal ESIA scoping NTS
  - Grenada ESIA scoping report (July 2019)
- Institutional Strengthening
  - Claim request file
  - No objection letter CLO
  - Contract CLO
  - CLO ToR
  - Grant agreement institutional strengthening
  - Contract PC
  - Contract addendum PC
  - 3 No objection requests related to PC contractualization
  - Request for assistance
  - ToR project manager

#### *SVG Drilling project*

- Memo 17.08.2019
- 3 Drilling contract cash flow 2020 01 01 and 12.02.2020

- Memo 2020 01 10
- Memo 2020 02 10
- Memo 2020 03 23
- Board approval document
- BTOR Oct 2019
- CLO RAP update
- Message from Shurman Matthew
- M&E report Q3 and Q4 2019
- SEP (stakeholder engagement plan) update Q2, Q3 and Q4 2019
- Project Status Monthly reports (excel) Jan-Apr, May-Aug, Sept-Dec 2019
- TRI TRI Fisherfolk meeting 8.15.19

#### *A&B Streetlight*

- Board Approval Document
- Monthly Progress reports (March 2017- Sept 2018)
- Final Completion report

#### *DOM Government Building*

- Board Approval Document
- Contracts
  - No objection award
  - No objection contract agreement
  - Contract with Energy dynamics LTD (the consultant)
- Invoices and payment request
- Energy Dynamics inception report
- Detailed energy audit report per building
- Summary energy audit report
- Final report Dominica building audit review

#### *Geothermal Technical Advisor to CDB*

- Board approval document
- Contract and payment documents
- Inception Report

#### *Grenada Government Buildings*

- Board approval document
- Waiver request
- Contract/Invoice
- Grant agreement
- Detailed energy audit reports per building
- Summary report

#### *St Kitts and Nevis Government Buildings*

- Recommendation and approval of TA CDB

- Contracts
- Grant agreement
- Detailed energy audit report per facility
- Final summary report

#### *St Kitts and Nevis Streetlight*

- SKN Streelight project Brief
- Contract award notice, signed contract
- Sub-contract agreement
- Project Brief PDF
- Environmental and Social Management Plan (ESMP)

#### *Saint Lucia Regulator trainings*

- Board approval document
- Payment documents
- Training report

#### *SVG Government Buildings*

- Board approval document
- Contract
- Grant agreement
- Detailed energy audit report per facility
- Press release

#### *SVG Technical Assistance*

- Contract
- Invoice and Payment memo

## ANNEX 5. FINANCING BY SUB-PROJECT

Sub-project Name	Approval date	Cumulative approved amount as at the End of the Reporting Period			
		(December 31, 2019)			
		IDB (OC)	CTF	GEF	CDB
<b>COMPONENT I: EE</b>	-				
A&B Street Lighting	Jul-16				6.99
SKN – Street Lighting	Dec 2016				5.792
GRE – EA TA (SEEC) & BCS	Mar-16				0.139
SKN - EA TA (SEEC)	Aug-17				0.075
DOM - EA (SEEC)	Dec-18				0.127
SVG - EA & BCS	Dec-15				0.072
SVG – EE/RE Invest (SEEC)	May-17				5.175
<b>COMPONENT II: Regulatory, Capacity</b>					
SVG - Capacity Strengthening – CLO and TORs for Trans line	May 2016			0.161	
GRE - Capacity Strengthening – CLO, PC-GE	17-Mar			0.231	
SKN Legal Advisor (SEEC) + GONZ	18-Aug				0.25
SKN - ESIA TA (CSESC)	Oct-17				0.325
GRE - Cap strengthening - Consultancy - ESIA	17-May			0.339	
Capacity strengthening Regional W/S - Planners	May-17				0.05
Capacity Strengthening - CEM Certification	May 2018				0.032
Capacity strengthening Regional W/S GE	Dec-18				0.046
Capacity Strengthening CDB	18-Dec				0.35
<b>COMPONENT III: RE</b>					
Antigua and Barbuda - RE	Dec-17			1.08	
DOM - Transmission Line	Mar-18	8.016			
SVG- Geothermal Drilling Project – St. Vincent And The Grenadines	Oct-18		6	0.43	5.21
SVG- Geothermal Drilling Project – St. Vincent And The Grenadines	May-16		9.5		5.658
<b>A. SUBTOTAL BY SOURCE</b>		<b>8.016</b>	<b>15.5</b>	<b>2.241</b>	<b>30.3</b>
<b>B. TOTAL IDB</b>		<b>25.757</b>			
<b>C. TOTAL IDB &amp; CDB</b>		<b>56.05</b>			

Source: SEF Project Approval table





# Baastel

30 Years Promoting  
Sustainable Development

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