

**South Africa: Renewable Energy Sector Development Project**

---

**South Africa: Renewable Energy Sector Development Project**

**Approach Paper: Methodology and Process**

Independent Evaluation Office  
April 2024

## Table of contents

<b>Abbreviations .....</b>	<b>ii</b>
<b>1 Introduction.....</b>	<b>1</b>
1.1 Background .....	1
1.2 Country context .....	1
1.3 Sectoral context .....	2
<b>2 The Project.....</b>	<b>4</b>
2.1 Background .....	4
2.2 Project objectives.....	4
2.3 Implementation arrangements.....	5
<b>3 Project evaluation.....</b>	<b>6</b>
3.1 Background .....	6
3.2 Evaluation objectives and scope.....	6
3.3 Evaluation methodology.....	6
3.4 Evaluation questions.....	9
3.5 Evaluation team and process.....	10
3.6 Evaluation timeline .....	12
<b>ANNEX 1: Evaluation criteria definition.....</b>	<b>13</b>
<b>ANNEX 2: Evaluation framework.....</b>	<b>14</b>
<b>ANNEX 3: Evaluation Report Outline .....</b>	<b>24</b>
<b>ANNEX 4: Project design and monitoring framework .....</b>	<b>25</b>
<b>ANNEX 5: Project risk analysis and mitigation measures .....</b>	<b>26</b>
<b>ANNEX 6: Tentative mission schedule .....</b>	<b>28</b>
<b>Bibliography and project documents reviewed .....</b>	<b>29</b>

## South Africa: Renewable Energy Sector Development Project

---

### Abbreviations

CSP	concentrated solar power
IDC	Industrial Development Corporation of South Africa
IRP	Integrated Resource Plan
DoE	Department of Energy
GHG	greenhouse gases
GW	gigawatt
IEO	Independent Evaluation Office
IPP	Independent Power Producers
MW	megawatt
NDC	nationally declared commitment
NDP	National Development Plan
PV	photovoltaic
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
SANEDI	South African National Energy Development Institute
SDG	Sustainable Development Goal
SET	Sectoral Emission Target
SP-IPPPP	Small Projects Independent Power Producer Procurement Programme
WACC	weighted average cost of capital

## South Africa: Renewable Energy Sector Development Project

---

### 1 Introduction

#### 1.1 Background

1. In line with the Evaluation Policy<sup>1</sup> and the Evaluation Strategy<sup>2</sup> of the New Development Bank (NDB), the Independent Evaluation Office (IEO) conducts project evaluations of a number of NDB-financed operations every year.
2. In general, the main objectives of independent project evaluations are to: (i) promote accountability by the independent assessment of results; (ii) generate lessons learned; and (iii) present recommendations for improving the quality of similar ongoing and future operations in the Republic of South Africa and other NDB member countries.
3. The Renewable Energy Sector Development Project in South Africa (implemented from 2020 to 2024) was selected by the NDB Board of Directors for a project evaluation in 2024. IEO plans to present the evaluation report, including the NDB Management Response, to the Board in June 2024.
4. This approach paper presents the overall design of this project evaluation, including the evaluation objectives, methodology, key evaluation questions, process and timeframe. The evaluation framework in annex 2 presents a summary of the evaluation criteria and the key questions that will be used in conducting this evaluation.

#### 1.2 Country context

5. In recent years, the South African economy has faced several challenges characterized by fluctuating GDP growth, high unemployment and an energy crisis. In the decade up to 2022, the average real GDP growth was approximately 1.0%, lower than the Sub-Saharan Africa average of 3.0%.<sup>3</sup> Economically, South Africa also contends with one of the world's highest unemployment rates at approximately 33%, with youth unemployment exceeding 50%. This has contributed to significant levels of inequality within the country.<sup>4</sup>
6. In response, in 2012 the Government launched the National Development Plan (NDP) 2030, aiming to reduce inequality, unemployment, and poverty, and establish a sustainable energy sector by 2030. In addition, the country's Economic Reconstruction and Recovery Plan focuses on reducing high unemployment rates, especially among youth, and promoting private and public employment opportunities.

---

<sup>1</sup> See: [https://www.ndb.int/wp-content/uploads/2022/11/IEO\\_Final-Evaluation-Policy-1.pdf](https://www.ndb.int/wp-content/uploads/2022/11/IEO_Final-Evaluation-Policy-1.pdf)

<sup>2</sup> See: <https://www.ndb.int/wp-content/uploads/2023/12/IEO-Evaluation-Strategy-2024-2026.pdf>

<sup>3</sup> Source from the World Bank: <https://www.worldbank.org/en/country/southafrica/overview>; the World Bank has pinpointed structural impediments including an inefficient logistics network and frequent power outages, known as load shedding, as critical barriers to growth.

<sup>4</sup> <https://www.worldbank.org/en/country/southafrica/overview>

## South Africa: Renewable Energy Sector Development Project

---

7. From 2024 to 2027, the South African economy is projected to experience modest growth, with an average annual expansion rate of 1.6%. Additionally, inflation is expected to decline, thereby enhancing purchasing power and encouraging consumer spending. Investment in energy production is also forecasted to increase, which could help alleviate some of the country's energy constraints.
8. However, persistent power cuts and the poor state of ports and rail freight continue to adversely affect businesses and exports. Furthermore, the cost of living remains high, exerting pressure on household budgets, and businesses are reluctant to invest, deterred by economic uncertainties and a lack of confidence.
9. The Government is prioritizing reforms within the energy and transportation sectors as critical levers for change, while simultaneously addressing a downturn in governmental efficacy. Success in these areas, coupled with fiscal discipline, could reduce borrowing costs, boost business confidence, and, ultimately, accelerate economic growth and job creation. Collaborative efforts between the public and private sectors to enhance infrastructure and education promise to drive productivity improvements. Moreover, South Africa's robust financial sector and rich natural resources lay a solid foundation for sustained success in established industries such as mining and finance. Simultaneously, there's burgeoning potential in the fields of information technology and renewable energy, indicating a bright future for diversified economic growth.

### 1.3 Sectoral context

10. South Africa is also one of the world's largest coal producers and uses coal as the main primary energy source for the economy. In 2022, coal dominated the South African energy mix, providing 80% of the total system load.<sup>5</sup> As one of the world's top 15 greenhouse gas (GHG) emitters,<sup>6</sup> South Africa is also one of the world's least energy-efficient nations.<sup>7</sup> The energy sector contributes nearly 80% of the country's GHG emissions, of which 50% are from electricity generation and liquid fuel production alone.<sup>8</sup> If unmanaged, South Africa's emission levels could grow rapidly by as much as four times by 2050.
11. In December 2009, under the United Nations Framework Convention on Climate Change (UNFCCC), South Africa committed to a reduction in greenhouse gas emissions from its emissions growth trajectory by 34% in 2020, and by 42% in 2025. Following on

---

<sup>5</sup> Source: Council for Scientific and Industrial Research (CSIR), Statistics on Power Generation in South Africa for the first half of 2022 (1 January 2022 to 30 June 2022).

<sup>6</sup> Source: United States Agency for International Development, and the Global GHG Emissions published by the World Resources Institute <https://www.wri.org/>

<sup>7</sup> From the website of South Africa National Electricity Efficiency Programme: <https://www.gov.za/about-government/national-electricity-efficiency-programme>

<sup>8</sup> The Integrated Resource Plan (IRP2019).

## South Africa: Renewable Energy Sector Development Project

---

this commitment, the National Climate Change Response White Paper (2011) outlined the target of reducing the country's annual GHG emissions to a range between 398 and 614 million metric tons of CO<sub>2</sub> equivalent by 2030. This commitment was translated into the Nationally Determined Contributions (NDCs) from South Africa to the Paris Agreement on Climate Change 2015. It advocates for South Africa's transition to an environmentally sustainable, climate change resilient and low-carbon economy, through use of renewable energy.

12. The choices for the country's energy sector have become more difficult given the country's heavy reliance on coal-fired power plants, which often experience breakdown due to lack of maintenance, causing frequent unplanned outages that reduce the amount of electricity available to the grid. Since 2007, South Africa has experienced multiple periods of load-shedding as the country's demand for electricity exceeds its ability to supply power. Despite having a technical reserve margin of more than 30%, South Africa experienced over 330 days of loadshedding in 2023. According to the South African Reserve Bank's Financial Stability Review, load shedding is expected to detract two percentage points from the country's overall economic growth in 2023.
13. Policymakers in South Africa have been mindful of the competing challenges and have sought to diversify the sources of power generation and reduce the emission levels. The NDP 2030 is the blueprint for infrastructure development. The NDP lays out a framework for future power generation in South Africa, while energy policies are driven primarily by the Department of Mineral Resources and Energy's (DMRE) Integrated Resource Plan (IRP) 2019.
14. The Government has also initiated Eskom's Just Energy Transition (JET) to progress the evolution for transition towards a cleaner and greener energy future. Eskom, the vertically integrated, state-owned power company, generates approximately 95% of electricity used in South Africa. About 45% of all end users in South Africa receive their power straight from the firm, with the remaining 55% being resold by redistributors (including municipalities). The Government has decided to unbundle the different services currently offered by Eskom and separate the generation, transmission, and distribution functions. This is expected to enable the separate companies to identify and focus on their specific needs independently, improve efficiency and reduce the cost to the consumer, and bring about greater transparency and accountability.

## South Africa: Renewable Energy Sector Development Project

---

### 2 The Project

#### 2.1 Background

15. The Renewable Energy Sector Development Project is designed to align with South Africa's national commitment to advance towards sustainable energy, aiming to reduce GHG emissions. The Industrial Development Corporation of South Africa Limited (IDC), a national financial intermediary in the country, plays a pivotal role in this shift, particularly in financing the energy sector and facilitating private sector participation.
16. The NDB Board approved the "Renewable Energy Sector Development Project" in South Africa on March 31, 2019, with IDC as the borrower and main executing agency. The proposed NDB financing was in the form of a two-step loan of up to ZAR 1.15 billion to IDC, which in turn will be on-lent to sub-projects identified by IDC in accordance with predetermined selection criteria.
17. The NDB loan would finance no more than 50% of the sub-projects' costs and the total expected investment should reach no less than ZAR 2.30 billion. NDB classified this project as a "non-sovereign operation" (NSO), and the loan was processed according to NDB's "Policy on Loans without Sovereign Guarantee to National Financial Intermediaries". The loan agreement was signed on 6 February 2020 and the project implementation period is 4 years from 2020 to 2024.
18. The proposed loan required that not less than five sub-projects should be financed by IDC. At project appraisal, IDC only presented the Redstone Solar Thermal Power Project (Redstone Sub-project), a 100 MW concentrated solar power (CSP) plant, as an anchor sub-project to be supported by the NDB loan. About ZAR 750 million (approx. 65% of the total loan amount) was expected to be allocated to this sub-project. In 2022, IDC proposed and selected the Scatec sub-project: Scatec 1, 2 and 3 are 150 MW solar PV + battery power projects which were awarded as part of the Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP).

#### 2.2 Project objectives

19. The key objectives of the proposed loan from NDB are to facilitate investments in renewable energy that can contribute to the improvement of South Africa's power generation mix, avoidance of CO<sub>2</sub> emissions, as well as increase the energy efficiency of the economy. This aligns with the Government's IRP 2019 and NDP 2030 goals of lowering GHG emissions.<sup>9</sup> The project is also expected to contribute to SDG 7 ("Ensure

---

<sup>9</sup> The National Development Plan 2030, is the main long-term policy framework of the South African government. It aims to implement the commitments in the National Climate Change Response White Paper 2011 (cut greenhouse gas emissions to a range of between 398 and 614 million metric tons of CO<sub>2</sub> by 2030)

## South Africa: Renewable Energy Sector Development Project

---

access to affordable, reliable, sustainable, and modern energy for all”), and to SDG 13 (“Take urgent action to combat climate change and its impacts”) as set by the United Nations General Assembly Resolution of September 25, 2015. Beyond that, the project is also expected to bring additionality in terms of crowding in private sector financing and increasing availability of long-term funds for the energy sector projects in South Africa.

20. The output of the project is at least 120 MW of new renewable energy generation capacity added through IDC lending and at least 5 sub-projects approved and funded by IDC that use the NDB loan. The project is anticipated to generate approximately 512.2 GWh from clean energy sources and avoid no less than 481,436 tons of CO<sub>2</sub> emissions annually, starting from 2024, when the sub-projects are expected to become fully operational.

### 2.3 Implementation arrangements

21. IDC will be responsible for identifying, selecting, appraising, financing, and monitoring sub-projects eligible for NDB funding. The selection of the sub-projects will be based on the selection criteria devised to allow NDB to determine that each of the sub-projects: (i) contribute to impact, outcomes and outputs as set in the project’s design and monitoring framework; (ii) has sufficient level of preparedness; and (iii) is in line with NDB’s policies on economic and financial analysis, project procurement, and environmental and social impact management. Before disbursement for every new sub-project, the IDC must submit documentation to NDB verifying the sub-project’s adherence to these criteria. Apart from this, sub-projects for which IDC’s sub-loan is above a certain threshold (the “Free Limit”<sup>10</sup>), will need approval of the NDB. NDB’s approval will also be needed for all sub-projects assessed as Category A with respect to an environmental and social impact (according to the NDB Environment and Social Framework [ESF]).
22. To ensure the additionality of NDB’s loan, the proportion of NDB’s financing is up to 50% of each sub-project’s cost. In accordance with the NDB Policy on Loans without Sovereign Guarantee to National Financial Intermediaries, on-lending terms and conditions of sub-projects were determined by IDC in accordance with its existing framework.

---

and advocates for South Africa’s transition to an environmentally sustainable, climate change resilient and low-carbon economy, through use of renewable energy.

<sup>10</sup> Set the threshold at the level of average loan size in IDC’s RE portfolio, which is approx. ZAR 750 million, and to set the threshold at this level (for reference, this is at approx. 2.6% of IDC’s loan portfolio of ZAR 28.6 billion and approx. 0.5% of IDC’s assets of ZAR 142 billion)



## South Africa: Renewable Energy Sector Development Project

---

23. IDC will monitor the implementation of the sub-projects and aggregate the results in project progress reports to be submitted to NDB annually. Additionally, within 12 months after the NDB loan amount has been fully drawn, the IDC will prepare a project completion report (PCR).

### 3 Project evaluation

#### 3.1 Background

24. This evaluation was included in the IEO's Work Programme for 2024, approved by the NDB Board in November 2023. This is the second project evaluation in South Africa to be conducted by IEO, following the recent completion in 2023 of the evaluation of the South Africa Greenhouse Gas Emission Reduction and Energy Sector Development Project. The evaluation was conducted within the overall framework of the NDB Evaluation Policy,<sup>11</sup> which was approved by the Board in August 2022, and the NDB Evaluation Strategy 2024-2026,<sup>12</sup> approved by the Board in November 2023.

#### 3.2 Evaluation objectives and scope

25. **Evaluation objectives.** The main objective of this evaluation is to assess the performance of the project towards achieving its objectives of facilitating investments in renewable energy that can contribute to South Africa's power generation mix and avoidance of CO<sub>2</sub> emissions. The evaluation is envisaged to derive lessons that can assist in the design and implementation of future NDB private sector operations, particularly similar investments in the renewable energy sector in South Africa and other NDB member countries. This report presents the key findings, conclusions and recommendations from the NDB loan extended to the project.

#### 3.3 Evaluation methodology

26. The core methodology of the evaluation entailed the use of internationally recognised evaluation criteria, as followed by the Evaluation Cooperation Group (ECG) of the MDBs and the Organisation for Economic Cooperation and Development (OECD). The criteria were deemed as appropriate to the South African context, the project and NDB.
27. **The project under review** is funded through a loan provided to the IDC, a national financial intermediary wholly owned by the Government of South Africa. The loan proceeds will be on-lent by IDC to renewable energy projects (sub-projects) in South Africa that contribute to the reduction in carbon dioxide emissions, improvement of the country's energy sector mix, as well as to the increase of energy efficiency of the economy.

---

<sup>11</sup> See [https://www.ndb.int/wp-content/uploads/2022/11/IEO\\_Final-Evaluation-Policy-1.pdf](https://www.ndb.int/wp-content/uploads/2022/11/IEO_Final-Evaluation-Policy-1.pdf)

<sup>12</sup> See <https://www.ndb.int/wp-content/uploads/2023/12/IEO-Evaluation-Strategy-2024-2026.pdf>

## South Africa: Renewable Energy Sector Development Project

---

28. IDC is a significant financing provider in the renewable energy sector in South Africa with current exposure of ZAR 14 billion (USD 1 billion) in 24 projects, and has plans to continue to support this sector. In line with its mandate, the IDC only funds the private sector (i.e. no direct funding to public sector entities such as state-owned enterprises and municipalities).
29. It is important to note that the development impact of both the overarching project and the individual sub-projects aligns with South Africa's national priorities of reducing CO<sub>2</sub> emissions and transitioning to sustainable energy. Therefore, the proposed evaluation framework will address perspectives at both dimensions.
30. Furthermore, given the unique structure of this initiative, where the IDC, a state-owned entity, exclusively funds private sector enterprises for sub-project implementation, the evaluation approach will be a balanced combination of internationally recognized evaluation methodologies, criteria, and processes for public sector and private sector operations, as adopted by the Evaluation Cooperation Group (of the MDBs). In particular:
- (a) **The evaluation analysis, at an overarching project level**, will address the internationally recognized evaluation criteria, namely: Relevance, Effectiveness, Efficiency, Sustainability, and Impact.<sup>13</sup> A composite score of the overall project achievement will be determined based on the ratings of the above five criteria.
  - (b) **The evaluation analysis, at the sub-project level**, would also cover some dimensions as applied in assessing initiatives in the private sector viz.: financial performance, economic sustainability, environmental and social performance. These would evaluate:<sup>14</sup>
    - The sub-project's financial performance and achievement of business objectives articulated at approval, including assessing the benefits and costs associated with the sub-project.
    - The sub-project's economic effects, including measuring the economic activities of sub-borrowers, the level of sub-project's economic viability and financial sustainability.
    - The sub-project's environmental and social performance, by considering the adequacy of borrower's environmental & social management systems (ESMS) in the implementation of the sub-project.
31. These specific dimensions would be integrated within the overall analysis based on the five evaluation criteria mentioned above.

---

<sup>13</sup> Please find the definition of the Evaluation Criteria in Annex 1.

<sup>14</sup> These dimensions draw from the ECG 'Good Practice Standards (GPS) for evaluation of Private sector Operations'.

## South Africa: Renewable Energy Sector Development Project

---

32. **Considering South Africa's socio-economic context**, the Government places increased emphasis on specific aspects during evaluations, as detailed in South Africa's National Evaluation Policy Framework 2019-2024 (DPME).<sup>15</sup> This framework underscores the critical importance of incorporating **transformative equity** and **climate and ecosystem health (CEH)** into evaluation processes. According to the draft DPME guidelines, transformative equity examines how an intervention's goals, planning, execution, and outcomes either address or fail to address systemic inequities, aiming to foster a more inclusive society. Meanwhile, CEH evaluation focuses on the consequences arising from how intervention activities interact with climate and ecosystems. It also provides insights on enhancing intervention strategies to positively impact CEH, thereby increasing the resilience of the intervention and its beneficiaries to climate change. These considerations have been integrated with the traditional OECD Development Assistance Committee (DAC) criteria – relevance, effectiveness, efficiency, impact, and sustainability – to ensure a comprehensive evaluation.
33. **Recognizing NDB's emphasis on country ownership**, the methodology assesses the project's alignment with South Africa's renewable energy goals and policies, ensuring support and integration with local needs and frameworks. Adopting a flexible approach, it addresses unique challenges in South Africa's renewable energy sector, focusing on local community impact and stakeholder engagement during planning and implementation, reflecting NDB's commitment to inclusive development.
34. In addition, the financial aspect of the project is scrutinised through the lens of NDB's principles of sustainable and responsible financing. It assesses both the project's immediate financial viability and its ability to attract further investment, especially from the private sector. Additionally, the project's potential as a scalable, replicable model for other NDB member countries is examined to gauge its broader impact.
35. These specific aspects would also be integrated within the overall analysis based on the five evaluation criteria mentioned above.
36. In conducting its analysis, as needed, IEO will utilise mixed methods of both quantitative and qualitative analysis. The use of triangulation techniques will validate the analysis, leading to the assignment of a performance rating for each criterion on a six-point scale (see table 1 below). Based on the assessment and ratings of the composite sets of criteria mentioned above, the evaluation will form a qualitative and holistic performance judgement of "overall project achievement".
37. Apart from determining the "overall project achievement", the evaluation will also assess and rate additional criteria. These are: (i) NDB and borrower performance (during

---

<sup>15</sup> See [here](#).

## South Africa: Renewable Energy Sector Development Project

project design and preparation, implementation, monitoring, and supervision, and assessing the quality of self-evaluation products); and (ii) NDB's additionality (see annex 1 for definitions).

**Table 1 - Rating scale**

#	Rating	Score descriptor
6	Highly Successful	Under the concerned criterion, the project achieved or surpassed all main targets, objectives, expectations, and results and could be considered as a model within its project typology.
5	Successful	Under the concerned criterion, the project achieved almost all (indicatively, over 80-95 per cent) of the main targets, objectives, expectations, and results.
4	Moderately Successful	Under the concerned criterion, the project achieved the majority (indicatively, 60 to 80 per cent) of the targets, objectives, expectations, and results. However, a significant part of this was not achieved.
3	Moderately Unsuccessful	Under the concerned criterion, the project did not achieve its main targets (indicatively, less than 60 per cent), objectives, expectations, and results.
2	Unsuccessful	Under the concerned criterion, the project achieved only a minority of its targets, objectives, expectations, and results.
1	Highly Unsuccessful	Under the concerned criterion, the project achieved almost none of its targets, objectives, expectations, and results.

### 3.4 Evaluation questions

38. The key questions that the evaluation will address are listed below. The Evaluation Framework in annex 2 details out the evaluation criteria and the full set of questions. The questions are:

- To what extent did the project align with and contribute to the objectives outlined in South Africa's IRP 2019 regarding the diversification of power generation sources, especially the integration of renewable energy? Additionally, how effectively did it support the NDP's vision for an environmentally sustainable, climate-resilient, low-carbon economy, while simultaneously advancing broader NDP objectives such as poverty reduction, decreasing inequality, and creating job opportunities?
- How effectively has the project realised its declared outputs and outcomes? Are there quantifiable metrics that demonstrate successful implementation?

## South Africa: Renewable Energy Sector Development Project

---

Furthermore, has the project made a significant contribution to the stability of the local power grid and enhanced energy access and security within the country?

- To what extent has the project contributed to stimulating private sector financing and increasing availability of long-term funds for the energy sector projects in South Africa?
- Did the project demonstrate efficiency in its implementation, including timely loan effectiveness and disbursement processes? How did its costs and financial management practices compare to benchmarks and expectations set at the project's outset? Additionally, were the allocated financial and physical resources sufficient to ensure the project's successful completion and alignment with its intended objectives?
- Are the operations and maintenance aspects of the project (and sub-projects) structured to ensure long-term sustainability?
- Is the design of the intervention inclusive, addressing societal inequities and the need for transformative equity?
- In what ways does the intervention interact with the natural environment? What natural resources does the intervention depend upon and what impacts do the intervention's activities have on CEH?

### 3.5 Evaluation team and process

39. The evaluation will be conducted under the overall leadership and oversight of Mr. Ashwani K. Muthoo, the Director General (DG) IEO. Ms. Nidhi Chaudhary, Evaluation Specialist, IEO will be the evaluation manager and she will be supported by a team of experts, including Ms. Maliha Hussein (Senior Development and Evaluation Expert) and Ms. Lungile Mashela (Energy Sector Expert), who will provide critical inputs throughout the evaluation process. IEO is also planning to invite in-country stakeholders as peer reviewers as part of the evaluation process. IEO will bear full responsibility for the contents and quality of the evaluation report and related outputs.
40. The evaluation will comprise the following phases.
  - (i) **Desk review.** IEO will conduct an initial literature review. The documents to be reviewed will include, inter-alia, the project design document, loan agreement and its amendments, the project progress reports, project performance assessment reports, and supervision reports, and any other relevant documents made available by NDB, the borrower, and the implementation agency. The team will also review policy documents and plans of the GoSA and the private sector on renewable energy, access to finance for the renewable energy sector and the trends in this regard in the country. Relevant experience of how other countries

## South Africa: Renewable Energy Sector Development Project

---

might have approached this sector will also be reviewed where relevant. This phase will be in preparation for the field work.

- (ii) **Approach paper.** Following the initial meetings with key partners and stakeholders, IEO will refine the draft evaluation approach paper. The revised approach paper will feature a final schedule for the upcoming main mission. The approach paper will be finalised and ready for review before the main mission at the end of March 2024, ensuring all key partners have the opportunity to provide their valuable comments and suggestions.
- (iii) **Main mission.** The main mission will be conducted from March 25-April 5 2024. The purpose of the main mission is to conduct visits to selected project sites, collect additional data and information and documents, and hold discussions with key informants. At the end of the mission, IEO will organise a wrap-up meeting with key stakeholders to share its initial observations.
- (iv) **Drafting of the evaluation report.** Building on the desk and field work, IEO will draft the main evaluation report (see annex 3 for draft table of contents). The draft will be shared with the National Treasury, IDC and other concerned in-country partners and NDB Management for comments. The report will be finalised considering the comments received. An audit trail will be produced illustrating how the comments received have been incorporated by IEO in the final report. Once the final report has been prepared by IEO, on that basis, the NDB Management will prepare a written Management Response to the independent evaluation, which will be included in the evaluation report once published. Additionally, the Department of Planning, Monitoring and Evaluation (DPME) in South Africa will serve as the official peer reviewer of the evaluation.
- (v) **NDB Management Response and Board discussion.** The evaluation report along with the Management Response will be considered by the NDB Board in June 2024. Further information will be provided on this process after consideration by the Board.
- (vi) **Knowledge sharing and outreach.** In line with the NDB Evaluation Policy and Evaluation Strategy 2024-2026, the final evaluation report inclusive of NDB Management Response will be published on the IEO webpages. Evaluation findings will also be shared through relevant social media and communication instruments. An “Evaluation Lens” will be prepared and disseminated to a wider audience. Finally, in cooperation with key stakeholders, IEO will organize a stakeholder’s seminar in Johannesburg to discuss and share the results and lessons from the evaluation.

## South Africa: Renewable Energy Sector Development Project

---

### 3.6 Evaluation timeline

41. The evaluation will be conducted from January to June 2024. The following table captures the specific deliverables, and a corresponding timeline.<sup>16</sup>

Deliverable	Timeline
Draft approach paper shared with key stakeholders	31 January, 2024
Comments received on draft approach paper	10 March, 2024
IEO finalises and shares approach paper based on comments received	15 March, 2024
Main evaluation mission to South Africa	25 March– 5 April, 2024
Draft evaluation report sent to key stakeholders and external peer reviewer for comments	April 17, 2024
Comments received on the draft final report	May 3, 2024
Final evaluation report sent to management for preparation of NDB Management Response	May 6, 2024
Send final evaluation report/management response sent to corporate secretary's department for transmission to the NDB Board	May 17, 2024
Presentation to the Board of Directors	June 4-6, 2024
Stakeholders' Seminar	June/July, 2024

---

<sup>16</sup> The timelines are provisional and will be adjusted once the dates of the Board of Directors in June are fixed by NDB.

## South Africa: Renewable Energy Sector Development Project

### ANNEX 1: Evaluation criteria definition

CRITERIA	DEFINITION
<b>Relevance</b>	The assessment of relevance will examine the extent to which: (i) the objectives of the project are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies; (ii) the design of the project is consistent with the objectives; and (iii) the project design has been (re-) adapted to address changes in the context. Finally, under relevance, an assessment will also be made of the compatibility of the intervention with other interventions in a country, sector or institution.
<b>Effectiveness</b>	The extent to which the project achieved, or is expected to achieve, its objectives and results at the time of the evaluation, including any differential results across groups. The analysis of effectiveness involves taking account of the relative importance of the objectives or results.
<b>Efficiency</b>	Focuses on how well resources are used. In particular, the assessment of efficiency will examine the extent to which the project delivers, or is likely to deliver, results in an economic and timely manner.
<b>Impact</b>	The extent to which the project has generated, or is expected to generate, significant positive or negative, intended or unintended, higher-level effects.
<b>Sustainability</b>	Assesses whether project benefits will last or are expected to last after completion. More specifically, sustainability is about whether the net benefits of the project will continue or are likely to continue.
<b>NDB and borrower performance</b>	This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. The performance of each partner will be assessed on an individual basis with a view to the partner's expected role and responsibility in the project life cycle.
<b>NDB's additionality</b>	The rating of the NDB's additionality considers the organisation's value proposition in providing support to the project. It is based on the counterfactual assessment of how the project would have (or would not have) proceeded without NDB support. It should consider all factors relevant to the role and contribution of the NDB.



**South Africa: Renewable Energy Sector Development Project.**
**ANNEX 2: Evaluation framework**

Evaluation criteria	Evaluation Questions	Methods/ Sources
<u>Relevance</u>	<ul style="list-style-type: none"> <li>• How does the project align with the goals set forth in South Africa’s national Integrated Resource Plan (IRP) 2019 for the diversification of power generation sources, particularly in terms of incorporating renewable energy?</li> <li>• To what extent does the project align with and contribute to South Africa’s Climate Change Bill?</li> <li>• In what ways will the project contribute to achieving South Africa's greenhouse gas emission reduction targets as committed under the UNFCCC in 2009?</li> <li>• How will the project support South Africa in meeting its Nationally Determined Contributions to the Paris Agreement, specifically in reducing annual GHG emissions to between 398 and 614 million metric tons of CO<sub>2</sub> equivalent by 2030?</li> <li>• How well do the project objectives align with the National Development Plan (NDP) 2030 goals for an environmentally sustainable, climate-resilient, and low-carbon economy, while also addressing key macroeconomic indicators such as employment, inflation control, economic growth, poverty reduction, and inequality?</li> <li>• To what extent is the project aligned with, and will contribute to, NDB’s General Strategy 2022-2026?</li> <li>• To what extent does the project contribute to the United Nations' Sustainable Development Goals, specifically SDG 7 (Ensuring access to affordable, reliable, sustainable, and modern energy for all) and SDG 13 (Taking urgent action to combat climate change and its impacts)?</li> <li>• Was the project design and monitoring framework sound and to what extent are the performance indicators being monitored and reported?</li> </ul>	<ul style="list-style-type: none"> <li>• Stated policies and plans.</li> <li>• Interviews with government officials and borrower.</li> <li>• Review of project document to the Board.</li> <li>• Review of projects' initial power output estimations and actual monthly production.</li> <li>• Review of baseline and collected data.</li> <li>• NDB General Strategy for 2022–2026</li> <li>• Interviews with NDB staff and Management.</li> </ul>

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• How did the project design for the solar thermal power project, during its appraisal, address the specific energy challenges in South Africa, such as the electricity crisis, the need for sustainable energy sources and peak availability?</li> <li>• Given the importance of technological innovation and efficiency in renewable energy, how did the project design ensure adherence to best practices and quality standards in solar thermal power at the appraisal stage?</li> <li>• How did the project design, at appraisal, anticipate and plan for potential challenges or risks specific to solar thermal power projects, such as technological advancements, market dynamics, and environmental considerations?</li> <li>• Considering the impact of energy policies on different sectors of society, how did the project design incorporate feedback from a diverse range of stakeholders, including local communities, energy consumers, and industry experts, during the appraisal?</li> <li>• In light of South Africa's evolving energy landscape and regulatory environment, how adaptable was the project design, as evaluated during appraisal, to these changes, especially in terms of integrating new technologies and complying with regulatory updates?</li> </ul>	
<b><u>Effectiveness</u></b>	<ul style="list-style-type: none"> <li>• To what extent has the project achieved its stated objectives? Are there measurable outcomes that indicate successful implementation?</li> <li>• How effective has the project been in producing the expected amount of electricity?</li> <li>• Has the project effectively contributed to a reduction in carbon emissions as planned? Is there quantifiable data to support this?</li> <li>• Was the project executed within the budgeted cost? How does the cost compare with the benefits achieved, such as energy output and environmental impact?</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis of results data and energy mix.</li> <li>• Review of Sub-projects' initial power output estimations and actual monthly productions.</li> <li>• Discussions with Sub-project operators.</li> </ul>

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• How satisfied are the stakeholders, including the local community, government, and investors, with the project's outcomes?</li> <li>• Has the project effectively contributed to the stability of the local power grid and enhanced energy security in the country?</li> <li>• How effectively were the technologies and processes implemented? Have there been any operational challenges, and how were they addressed?</li> <li>• To what extent is the project in line with South Africa's environmental regulations and project social plans? Was land acquisition and resettlement minimal as anticipated at appraisal?</li> <li>• To what extent has the project contributed to stimulating private sector and financial sector investments in the renewable energy sector in South Africa?</li> </ul>	<ul style="list-style-type: none"> <li>• Perusal of relevant policy documents.</li> <li>• Interviews with government officials.</li> <li>• Physical inspections, review project implementation reports and interviews with relevant staff and stakeholders.</li> </ul>
<b>Efficiency</b> <i>(Include assessing the sub-project's financial performance and economic sustainability)</i>	<ul style="list-style-type: none"> <li>• Was the effectiveness of the loan achieved within the expected timelines as outlined in the appraisal, indicating a sound project readiness.</li> <li>• In light of the cancellation of the initially planned sub-projects under the Small Projects Independent Power Producer Procurement Programme (SP-IPPPP) and the subsequent integration of alternative sub-projects (Scatec), how adeptly were these transitions handled? Specifically, what extent of delay, in comparison to the completion timeline set at appraisal, was incurred as a result of these project adjustments?</li> <li>• To what extent did the Redstone CSP sub-project experience delays in reaching financial close, and how did these delays affect the overall project timeline?</li> <li>• How significantly did the legal delays associated with the Scatec sub-project (150 MW solar + battery power projects) impact its implementation timeline?</li> <li>• Were the project performance assessments and progress reports submitted in accordance with the timelines stipulated in the loan agreement?</li> </ul>	<ul style="list-style-type: none"> <li>• Physical inspections, review the project progress reports and interviews with relevant staff.</li> <li>• Review of relevant documents and discussions with NDB staff and IDC.</li> <li>• Onsite inspections and interviews with staff and local community members.</li> <li>• Review of financial documents, audit</li> </ul>

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• Did the project consistently meet the loan and financial covenants as set out in the loan agreements and the appraisal document?</li> <li>• How did the actual project progress, in terms of construction, procurement, operations and management activities, compare with the planned targets? Were there lessons learned to enhance future management efficiency and quality?</li> <li>• How effectively did the project’s procurement and contracting arrangements facilitate project delivery? Were they compliant with both the government and NDB’s procurement policies?</li> <li>• Was the loan amount disbursed according to the planned schedule, and how were cost revisions, including any overruns, managed throughout the project?</li> <li>• Were the consultants and project staff utilised effectively within the original contract amounts and responsibilities? How did their performance impact the overall project efficiency?</li> <li>• How did the project adapt to external challenges such as COVID-19 constraints, nationwide riots, and community protests, especially in terms of construction period and logistics? Were there effective contingency plans for such unprecedented events?</li> <li>• Were there any necessary amendments to the loan agreements due to project changes or challenges, and if so, how efficiently were these amendments executed? Particularly, was the time taken to adapt these changes in the loan agreement reasonable or excessively prolonged in response to the identified challenges?</li> <li>• Do the project’s (and sub-project’s) financial performance and internal rate of return compare favourably with initial projections at the time of appraisal?</li> <li>• Was the Sub-project’s procurement and contracting procedures and arrangements compliant with applicable government prescribed standards for the REIPPPP pipeline?</li> <li>• Was the borrower objective and transparent in its application of sub-project selection criteria?</li> </ul>	<p>reports.</p> <ul style="list-style-type: none"> <li>• Review of project performance assessment reports.</li> <li>• Review of loan agreement and its amendments.</li> <li>• Interviews with IDC on procurement activities.</li> <li>• Comparative economic and financial data, assessment of processes and discussions with appropriate staff from NDB, IDC and sub-borrowers.</li> </ul>

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
<p><b><u>Sustainability</u></b> (Include assessing the Sub-project's economic sustainability, environmental and social performance)</p>	<ul style="list-style-type: none"> <li>• Are the operations and maintenance aspects of the project (and sub-projects) structured to ensure long-term sustainability? Are there effective monitoring systems in place, staffed by an experienced team, with sufficient quality checks to maintain high standards of operation?</li> <li>• How does the project (and sub-projects) address social aspects like community engagement, local job creation, and social inclusivity?</li> <li>• What mechanisms are in place to ensure the project's (and sub-project's) benefits are distributed equitably among different community groups, including marginalised or vulnerable populations?</li> <li>• How adaptable is the project (and sub-projects) to future technological advancements and changes in the renewable energy sector?</li> <li>• What strategies are in place to ensure the project (and sub-projects) remains viable and relevant in the face of future environmental, social, and economic changes?</li> <li>• Does the financial internal rate of return (FIRR) of the project and its sub-projects exceed the weighted average cost of capital (WACC), indicating financial sustainability?</li> <li>• Did the project (and sub-projects) lead to any resettlement issues, and were they managed appropriately?</li> <li>• Were land and water used by the project (and sub-projects) within acceptable and sustainable limits?</li> <li>• To what extent does the project (and sub-projects) rely on government subsidies or financial support, and how would the withdrawal of such support affect the project's (and sub-project's) sustainability?</li> <li>• Had all sub-projects entered power purchase agreements (PPAs) with Eskom, and had they received payments from Eskom timely?</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion with IDC staff, Subproject operators, DMRE.</li> <li>• Discussion with social protection experts.</li> <li>• Discussion with energy sector and E&amp;S Environmental and Social (E&amp;S) experts.</li> <li>• Review of project design reports and projections.</li> <li>• Cost benefit analysis, financial internal rate of return and WACC review, if available.</li> <li>• Discussions with IDC, Eskom, Subproject developers, and local communities members.</li> <li>• Review of NDB E&amp;S procedures. Discussions with E&amp;S staff and consultants.</li> </ul>

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• What type of systemic changes were facilitated by the project and what is likely to be their contribution to the overall sustainability of the renewable energy sector and the financing available for its growth?</li> <li>• Have all sub-projects (financed by this Project) achieved the targeted EIRR and FIRR above the sub-project's WACC?</li> <li>• Has the project contributed to the sustainability of benefits, especially for end beneficiaries in terms of access to energy and improved livelihoods and incomes?</li> <li>• To what extent were the sub-projects compliant with the government's environmental and social safeguard regulations? Were consultations held in line with country regulations?</li> <li>• For the sub-projects, were land acquisition and resettlement activities in compliance with government policies, rules, and regulations?</li> <li>• What is the capacity of the borrower and sub-borrowers to monitor compliance with Environmental and Social (E&amp;S) plans and applicable regulations?</li> <li>• Were mitigation and compensation for E&amp;S impacts from sub-projects handled in line with the IDC and NDB's processes?</li> </ul>	
<b><u>Impact</u></b>	<ul style="list-style-type: none"> <li>• To what degree has the project diversified and strengthened the power generation mix in South Africa?</li> <li>• How effectively did the project contribute to the reduction of national carbon emissions in line with South Africa's NDC (Nationally Determined Contribution) targets for greenhouse gas emissions by 2030, as anticipated during the project's appraisal phase?</li> </ul>	<ul style="list-style-type: none"> <li>• Review of baseline and collected data.</li> <li>• Interview with DMRE, SANEDI, and other government officials.</li> </ul>

## South Africa: Renewable Energy Sector Development Project.

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• In what ways and to what extent did the project advance the goals of Sustainable Development Goal (SDG) 7 (Affordable and Clean Energy) and SDG 13 (Climate Action)?</li> <li>• What were the intended and unintended socio-economic impacts of the project, particularly in terms of employment, poverty reduction, and addressing inequality in the region?</li> <li>• How significant was the project's contribution towards alleviating the energy crisis in South Africa? To what extent did the project succeed in generating green electricity and promoting sustainable energy sources?</li> <li>• How has the project improved energy access, particularly for underserved or remote communities?</li> <li>• Is there a social inclusion plan that outlines the expected equity benefits for communities along with accountability, transparency and inclusion throughout the evaluation process?</li> <li>• To what extent has the participation or collaboration between stakeholders demonstrated objectives of transformative equity/principles of inclusion, representativeness, and respect?</li> <li>• To what extent are the emerging short- and medium-term outcomes pointing to systemic changes in equity?</li> <li>• What are the potential impacts of decommissioning the project in the future, and what preventive measures are in place to mitigate any possible adverse effects?</li> <li>• Did the project meet all safeguard requirements, and were any new issues identified or unresolved issues left after project completion?</li> <li>• How did the project contribute to capacity building and knowledge transfer within the renewable energy sector in South Africa?</li> <li>• What role did the project play in enhancing access to finance for the energy sector?</li> <li>• What role did the project play in fostering innovation and advancing technology in the renewable energy sector?</li> </ul>	<ul style="list-style-type: none"> <li>• Scrutiny of other renewable energy projects in the area or under the REIPPPP pipeline.</li> <li>• Interview with social protection experts.</li> <li>• Interview with energy experts.</li> <li>• Review of NDB E&amp;S policy. Interview with E&amp;S sector experts.</li> </ul>

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• Has the project influenced policy decisions or led to changes in regulatory frameworks within the renewable energy sector?</li> <li>• How has the project influenced local economic development, particularly in terms of job creation and skills development in the renewable energy sector?</li> <li>• To what extent has the project attracted additional investments in the renewable energy sector within South Africa?</li> <li>• Considering the water usage in solar energy projects, how has the project managed water resources, and what has been its impact on local water availability?</li> <li>• How has the project navigated land use and spatial planning challenges?</li> <li>• Are the objectives of the intervention likely to have a positive or negative effect on climate and ecosystems health (CEH) and how vulnerable is the intervention to CEH effects, now and in the future?</li> <li>• Are CEH considerations reflected in the implementation of the intervention?</li> <li>• What alternatives need to be considered in the design and implementation of the intervention that are more CEH-friendly and resilient?</li> <li>• What challenges and solutions have emerged in integrating solar energy into the national grid, including energy storage and balancing?</li> </ul>	
<b><u>NDB and Borrower performance</u></b>	<ul style="list-style-type: none"> <li>• Was the loan disbursed in a timely manner following the loan agreement between the borrower and the NDB?</li> <li>• How proactive and diligent was NDB and the borrower in facilitating and approving loan amendments?</li> <li>• Were loan amendments executed promptly in response to the changes that necessitated them?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with NDB staff and IDC officials.</li> <li>• Review of results framework, progress reports, and effectiveness of KPIs.</li> <li>• Review all related project documents.</li> </ul>



**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• Did NDB put in place a knowledge management and learning plan to document and share lessons learned, and has this been implemented?</li> <li>• Did NDB and the borrower effectively ensure compliance with the loan covenants?</li> <li>• How comprehensive was the loan agreement in detailing outputs, outcomes, and the agreed loan amount?</li> <li>• What was the quality of the project design document submitted to the Board? Was the preparation process participatory and did it align with the Loan Agreement?</li> <li>• How robust is the Design and Monitoring Framework in the project design document?</li> <li>• Did the NDB conduct regular project review and supervision missions to monitor the progress of the project and its sub-projects?</li> <li>• Did the NDB adhere to the standard template for project progress reports?</li> <li>• What was the quality of the project progress reports provided by the NDB?</li> <li>• After initially presenting only one sub-project to the NDB, were subsequent sub-projects adequately selected and aligned with the criteria by the borrower?</li> <li>• Did the borrower ensure compliance with the NDB's procurement policy?</li> <li>• Was the borrower cooperative in facilitating site visits and meetings during NDB missions?</li> <li>• Did both the NDB and the borrower ensure that the project and its sub-projects complied with South Africa's Environmental &amp; Social (E&amp;S) standards, in line with NDB's Environmental &amp; Social Framework?</li> <li>• Did the borrower maintain an effective monitoring and evaluation system to track project progress?</li> <li>• Was the operations and maintenance team adequately skilled and effective?</li> <li>• Throughout the project, did the borrower consult with energy sector authorities to integrate technological advancements?</li> </ul>	

**South Africa: Renewable Energy Sector Development Project.**

Evaluation criteria	Evaluation Questions	Methods/ Sources
	<ul style="list-style-type: none"> <li>• Were progress and assessment reports by the borrower completed and submitted on schedule?</li> <li>• What was the quality of the progress reports submitted by the borrower?</li> </ul>	
<b><u>NDB's Additionality</u></b>	<ul style="list-style-type: none"> <li>• What was NDB's financial additionality overall?</li> <li>• Would IDC have been able to mobilise sufficient financing for the project without NDB involvement?</li> <li>• Was NDB catalytic in mobilising funding and facilitating private sector investment into grid connected renewable energy generation, or was it merely helping complete the financing package?</li> <li>• Was NDB engagement important to reduce risks or to provide comfort to other investors and lenders?</li> <li>• What was NDB's non-financial additionality overall?</li> <li>• Was NDB participation important to the allocation of risk and responsibilities between IDC and the sub-borrowers?</li> <li>• Did NDB's knowledge and expertise strengthen project design and IDC's functioning and capacity building?</li> </ul>	<ul style="list-style-type: none"> <li>• Perusal of relevant policy documents, and scrutiny of other renewable energy projects in the area or under the REIPPPP pipeline.</li> <li>• Review of renewable energy projects in the same provinces or under the REIPPPP pipeline.</li> <li>• Discussion with the project design team and stakeholders.</li> <li>• Review of project documents and interviews.</li> </ul>

## South Africa: Renewable Energy Sector Development Project

---

### ANNEX 3: Evaluation report outline

<b>Acknowledgement</b>	<b>1 page</b>
<b>Preface by DG IEO</b>	<b>1 page</b>
<b>List of Acronyms</b>	<b>1 page</b>
<b>Executive Summary</b>	<b>3-4 pages</b>
<b>Management Response</b>	<b>2-3 pages</b>
<b>Background</b>	
● Country Context	2 pages
● Sector, project, and local Context	2 pages
● Government/ local initiatives for climate change	1 page
<b>Project Background</b>	
● Project objectives	1/2 page
● Project design and components	1 page
● Implementation arrangements	2 pages
● Amendments to the loan agreement	1 page
<b>Evaluation objectives, methodology and process</b>	
● Objectives	1/2 page
● Methodology, questions, and rating system	2-3 pages
● Limitations	1 page
● Evaluation process	1 page
<b>Evaluation findings</b>	<b>10 pages</b>
● Relevance	
● Effectiveness	
● Efficiency	
● Impact	
● Sustainability	
● Overall project achievement	
<b>Other assessment criteria</b>	<b>3-4 pages</b>
● NDB and borrower performance	
● NDB Additionality	
<b>Conclusions and recommendations</b>	
● Conclusions	2 pages
● Recommendations	1-2 pages
<b>Annexes</b>	

## South Africa: Renewable Energy Sector Development Project

### ANNEX 4: Project design and monitoring framework

**Impact:** Investment in sustainable infrastructure in South Africa that will contribute to the power generation mix and reduction in carbon dioxide emission (in line with South Africa’s National Climate Change Policy Response White Paper to cut greenhouse gas emissions to a range of between 398 and 614 million metric tons of CO<sup>2</sup> by 2030). The baseline figure (2016) of net GHG emissions is 575 million tons of CO<sub>2eq</sub>. This project is also expected to contribute to SDG 7 (“Ensure access to affordable, reliable, sustainable, and modern energy for all”), and to SDG 13 (“Take urgent action to combat climate change and its impacts”) as set by the United Nations General Assembly Resolution of September 25, 2015.

Design Summary	Performance Targets /Indicators	Reporting Mechanism
<p><b>Outcome</b></p> <ol style="list-style-type: none"> <li>Increased energy generated from renewable energy sources.</li> <li>Reduction in CO<sub>2</sub> emissions.</li> </ol>	<p>By 2024,</p> <ol style="list-style-type: none"> <li>At least 512.2 GWh/annum of energy generated from renewable sources.</li> <li>Avoided 481,436 tons of carbon dioxide gas emissions annually</li> </ol>	Project progress reports
<p><b>Output</b></p> <ol style="list-style-type: none"> <li>Construction of new renewable energy power plants</li> <li>Increased generation capacity from renewable energy sources</li> </ol>	<p>By December 2024</p> <ol style="list-style-type: none"> <li>At least 5 sub-projects approved and funded by IDC that use NDB loans. Sub-projects to include the Redstone Solar Thermal Power Project and 1 biomass project</li> <li>At least 120 MW of new renewable energy generation capacity added through IDC lending.</li> </ol>	Project progress reports
<b>Key activities with milestones</b>		<b>Inputs</b>
<ol style="list-style-type: none"> <li>NDB and IDC signs the loan agreement.</li> <li>IDC sources and appraises sub-projects starting from 2019 and ongoing until 2024.</li> <li>IDC administers the sub-loans and monitors the implementation of the sub-projects.</li> </ol>		Financing: ZAR Million NDB: 1,150 Other Sources (Loans, Equity: 10,700)

## South Africa: Renewable Energy Sector Development Project

### ANNEX 5: Project risk analysis and mitigation measures

#	Risks	Mitigation Measures
1.	Sector risk (medium)	Eskom is the off taker for the Project and other renewable energy projects under the REIPPPP, where the IDC has an exposure of about ZAR 14 billion. Eskom's potential financial difficulties may affect its ability to honour these PPAs. Renewable energy projects under the REIPPPP are underpinned by an Implementation Agreement under which GoSA guarantees the obligations of Eskom under the PPAs thereby mitigating the payment risk.
2.	Credit risk (low)	IDC has a good financial standing and sound financial management.
3.	Implementation risk (medium)	While the financial close for the anchor sub-project (Redstone) is targeted for April 30, 2019, a potential funding gap could lead to a delay in achieving the same. Financing plan for the Small Projects Independent Power Producer Procurement Programme (SP-IPPPP) projects is also yet to be firmed up and, therefore, there is limited visibility on the financial close date for the same. A bulk of sub-projects are expected to be implemented by private companies, which makes the sub-projects difficult to coordinate. Risk is partially mitigated by IDC having lender technical advisors, who monitor project implementation.
4.	Financial management risk (low)	IDC has a sound financial management system and a due level of transparency and supervision.
5.	Sub-project credit risk (medium to high)	Most of sub-projects are financed on a non-recourse project finance basis. <sup>17</sup> The projections for the cash flows of the sub-projects are conservative (using P90 case), and they are structured with performance and construction delay guarantees to minimise risk.
6.	Procurement (low)	The sub-project entities to be supported through the NDB loan are expected to be private companies hence procurement for these projects does not bear risks associated with public procurement and public finances.
7.	Environment, social & reputational risk	The projects to be funded using the NDB facility are within the renewable energy sector, so likely to be Category B. Support for any category A projects will require prior approval from NDB.

<sup>17</sup> Non-recourse finance is a type of commercial lending that entitles the lender to repayment only from the profits of the project the loan is funding and not from any other assets of the borrower.

## South Africa: Renewable Energy Sector Development Project

#	Risks	Mitigation Measures
	(medium)	<p>The Redstone Sub-project may result in social risks and tensions with local communities during construction, related to influx of non-local labourers and competition with the locals for employment and economic benefits. This risk will be managed through country system and project specific management programs, including socioeconomic development programs targeting to promote local employment and procurement. Other sub-projects are likely to have similar risks on a smaller-scale.</p>

## South Africa: Renewable Energy Sector Development Project

### ANNEX 6: Tentative mission schedule

Date	Weekday	City	Purpose
25th March, 2024	Monday	Postmasburg (Northern Cape Province)	(1) Site visit to Redstone Solar Thermal Power Sub-project, (2) meeting with the project manager, HSE manager, and local community members, (3) meeting with Independent Development Corporation (IDC) of South Africa
26th March, 2024	Tuesday	Pretoria, Sandton	Meeting with (1) National Energy Regulator of South Africa (NERSA), (2) Department of Mineral Resources and Energy (DMRE), (3) Independent power producer procurement programme (IPPP) office, (4) NDB Africa Regional Centre staff
27th March, 2024	Wednesday	Pretoria, Sandton	Meeting with (1) South African Monitoring and Evaluation Association (SAMEA), (2) International Finance Corporation (IFC)
28 <sup>th</sup> March, 2024	Thursday	Centurion, Pretoria	Meeting with the (1) African Development Bank (AfDB), (2) National Treasury
2nd April, 2024	Tuesday	Sandton	(1) Meeting with the Eskom
3rd April, 2024	Wednesday	Sandton	(1) Meeting with South African National Energy Development Institute (SANEDI)
4th April, 2024	Thursday	Postmasburg (Northern Cape Province)	(1) Site visit to Scatec Solar and Battery Power Sub-project, (2) meeting with the field engineer, technical manager, HSE manager, O&M manager, VP financial asset manager
5th April, 2024	Friday	Pretoria	(1) Meeting with the Department of Planning, Monitoring and Evaluation (DPME)
11 <sup>th</sup> April, 2024	Thursday	Remote	Presentation of the preliminary findings of the evaluation mission to IDC and NDB ARC teams

## South Africa: Renewable Energy Sector Development Project

---

### Bibliography and project documents reviewed

#### Section A - NDB's Policies, Guidelines and General Strategies

- New Development Bank Policy on Partnerships with National Development Banks, December 2015
- New Development Bank Policy on Loans without Sovereign Guarantee to National Financial Intermediaries, January 2016
- New Development Bank Environment and Social Framework, March 2016
- NDB Project Implementation Guidelines, April 2018
- New Development Bank General Strategy for 2022-2026: Scaling Up Development Finance for a Sustainable Future, May 2019
- New Development Bank General Strategy for 2022 – 2026, July 2022
- New Development Bank Evaluation Policy - August 2022
- New Development Bank Evaluation Strategy 2024-2026, November 2023

#### Section B - Project Documents

- Project Document to the Board (PDB) for the Renewable Energy Sector Development Project, March 2019
- Approved Project Summary of Loan to the IDC (19ZA03)
- NDB-IDC Loan Agreement, February 2020
- First Amendment to the Loan Agreement, February 2021
- Second Amendment to the Loan Agreement, October 2021
- NDB Project Progress Report, October 2020
- NDB Project Progress Report, November 2021
- NDB Project Progress Report, October 2022
- NDB Project Progress Report, October 2023
- IDC Project Performance Assessment, November 2021
- IDC Project Performance Assessment, October 2022
- IDC Project Performance Assessment, September 2023
- Note IDC waiver cleared RMD and Legal, September 2022
- Redstone LTA Technical CM Report 7 Q1 2023, May 2023
- EHS IBIS\_BII\_Scatec Kenhardt Solar PV ES Monitoring Report, July 2023
- Redstone Monitoring Report: Jan23-Jun23, August 2023
- DPME Evaluation Guideline 2.2.24. Equity Guidelines, December 2022
- DPME Evaluation Guideline 2.2.25. CEH guideline, December 2022