



PROJECT TERMINAL EVALUATION

“South Africa Wind Energy Project (SAWEP) Phase-II”

UNDP PIMS: 5256

GEF ID: 5341

GEF FOCAL AREA: CLIMATE CHANGE - MITIGATION

STRATEGIC PROGRAM OF GEF 5:

CCM3 PROMOTE INVESTMENT IN RENEWABLE ENERGY TECHNOLOGIES

IMPLEMENTING AGENCY: UNITED NATIONS DEVELOPMENT PROGRAMME
Executing Agency: DEPARTMENT OF MINERAL RESOURCES AND ENERGY, SOUTH AFRICA

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Evaluation conducted by Ashutosh Pandey (International Consultant)
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Disclaimer:

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ACRONYMS AND ABBREVIATIONS

ABP	Annual Budget Plan
AWP	Annual Work Plan
BBBEE	Broad Based Black Economic Empowerment
BST	Basic Safety Training
BTT	Basic Technical Training
BW	Bidding Window
CEO	Chief Executive Officer
CPD	Country Programme Document
CPUT	Cape Peninsula University of Technology
CSIR	Council for Scientific and Industrial Research
CSP	Concentrated Solar Power
DANIDA	Danish International Development Agency
DBSA	Development Bank of South Africa
DEA	Department of Environmental Affairs
DEDEAT	Department of Economic Development Environmental Affairs and Tourism
DHET	Department of Higher Education and Training
DoE	Department of Energy
DMRE	Department of Mineral Resources and Energy
DSI	Department of Science and Innovation
DTIC	Department of Trade, Industry and Competition
DTU	Technical University of Denmark
EME	Exempted Micro Enterprise
EA	Executing Agency
ED	Economic Development
EnD	Enterprise Development
ERA	Electricity Regulation Act
FIT	Feed-in Tariff
GEF	Global Environment Facility
GWh	Gigawatt hour
HCD	Human Capacity Development
IA	Implementing Agency
IRP	Integrated Resource Plan

IPP	Independent Power Producer
LCOE	Levelized Cost of Energy
M&E	Monitoring and Evaluation
M&V	Monitoring and Verification
MW	Megawatt
MWh	Megawatt hour
MTR	Mid-Term Review
NERSA	National Energy Regulator of South Africa
NQF	The South African National Qualifications Framework
NT	National Treasury
NSF	National Skills Fund
NWA	Numerical Wind Atlas
OWA	Observational Wind Atlas
PCU	Project Coordination Unit
PIMS	UNDP-GEF Project Information Management System
PIF	Project Identification Form
PIR	Project Implementation Report
PPA	Power Purchase Agreement
PSC	Project Steering Committee
PV	Photovoltaic
QCTO	Quality Council for Trades and Occupations
QPR	Quarterly Progress Report
QSE	Qualifying Small Enterprise
R&D	Research and Development
RCU	Regional Coordinating Unit
RE	Renewable Energy
REDZ	Renewable Energy Development Zone
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
RLA	Reimbursable Loan Agreement
SA	South Africa
SABS	South African Bureau of Standards
SAGEN	South Africa-German Energy Programme
SANEDI	South African National Energy Development Institute
SANS	South African National Standard

SAQA	South Africa Qualifications Authority
SARETEC	South African Renewable Energy Technology Centre
SAWEA	South African Wind Energy Association
SAWEP	South Africa Wind Energy Project
SAWS	South African Weather Service
SDG	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SED	Socio-economic Development
SETA	Sectoral Education Training Authority
SMME	Small Medium and Micro Enterprise
SSWT	Small Scale Wind Turbine
TOR	Terms of Reference
TREC	Tradable Renewable Energy Certificate
TVET	Technical and Vocational Education and Training
UCT	University of Cape Town
UNDP	United Nations Development Programme
USD	United States of America Dollar
WASA	Wind Atlas of South Africa
WESSA	Wildlife and Environment Society of South Africa
WTST	Wind Turbine Service Technician Training
ZAR	South African Rand

EXECUTIVE SUMMARY

Table 1: Project Summary Table

Project Title	South Africa Wind Energy Project (SAWEP)- Phase II		
GEF Project ID (PIMS#)	5341	PIF Approval	August 2012
UNDP Project ID (PIMS#)	5256	CEO Endorsement	7 May 2015
Country	South Africa	ProDoc Signature	18 December 2015
Region	Africa	Project Manager hired	August 2016
GEF Focal area	Climate change	Inception workshop	7 October 2017
Trust Fund	GEF-5	Mid-term review	October 2018
Modality	National Implementation (NIM)	Terminal evaluation	31 December 2021
Executing Agency / Implementing Partner	The Department of Mineral Resource and Energy (DMRE)/ UNDP	Project closure date	30 September 2021 ¹
Financial Information			
PDF/PPG	At approval (US\$M)	At PDF/PPG completion (US\$M)- 30 th September 2021	
GEF PDF/PPG grants for project preparation	3,554,250	2,899,867	
Co-financing for project preparation	35,667,936	32,447,111	
Project	At CEO Endorsement (US\$M)	At TE (US\$M)	
1- UNDP contribution (cash)	200,000	200,000	
2- Government	12,388,176	13,892,258	
3- Other multilateral	16,070,000	16,504,440	
4- Private Sector	7,009,760	1,850,413	
5- NGOs	-	-	
6- Total co-financing: [1+2+3+4+5]	35,667,936	32,447,111	
7- Total GEF Funding	3,554,250	2,899,867	

¹ Project was given 3 extensions, the last one ended on 30th September 2021

8- Total Project Funding [6+7]	39,222,186	35,346,978 ²
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Project Description

This UNDP-supported, GEF-financed project ‘South Africa Wind Energy Programme (SAWEP)-Phase II’ was approved on 24 April 2015 for the duration of four years till 31st December 2019. The project is nationally implemented by the DMRE in line with applicable agreements between the UNDP and the government of South Africa.

The project implementation started in the second half of 2016 due to the delayed hiring of the Project Manager. Based on the Mid-term Review (MTR) recommendations, the project duration was extended till 31st Dec 2020 which was further extended till 30th Sep 2021 due to delays caused by the Covid-19 pandemic situation in the country.

The total project budget is US\$ 39,222,186 of which US\$ 3,554,250 is the GEF Grant, and US\$ 35,667,936 was expected to be provided by the other stakeholder as co-financing.

The **objective** of SAWEP II is “to assist Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa’s IRP (2010) target of 3,320 MW of wind power online by 2018/2019”. The project was expected to achieve these through four major components including,

- Component 1. Monitoring and Evaluation of the implementation of local content requirements
- Component 2. Resource-mapping and wind corridor development support for policymakers
- Component 3: Support for the development of small-scale wind sector
- Component 4: Training and human capital development for the wind energy sector

Evaluation approach and methods

The objectives of the terminal evaluation as outlined in the ToR (Annex 1) are: a) to assess the achievement of project results, b) to draw lessons that can both improve the sustainability of benefits from this project, and c) to aid in the overall enhancement of UNDP programming in South Africa and beyond. The evaluation also aims to provide meaningful conclusions of the project covering the aspects of relevance, efficiency, effectiveness, sustainability, and impact of the project. The evaluation also identifies lessons learned from the project experience to benefit future undertakings and to propose improvements in ensuring the sustainability of the results.

The overall approach is based on the standard evaluation methods used for conducting project terminal evaluations of UNDP-supported, GEF-financed projects, which have been developed based on past experiences and learning (ToR in Annex 1). In line with UNDP Guidelines for the evaluation, the evaluators framed the assessment along the criteria of relevance, effectiveness, efficiency, sustainability, and impact.

Due to the prevailing Covid-19 and the socio-political situation in South Africa, the International Consultant was not able to make any site visits. During the inception meeting, it was decided that given the existing situation national consultant might also not be able to travel and meet key stakeholders, hence no national consultant was hired for TE. The terminal evaluation process was

² US \$ 443,121 budgeted between Oct 2021-March 2022 but not spent as on project closure date

conducted based on extensive desk research and online interviews of key informants (Annex 3 for list of persons interviewed).

The Evaluator used the feedback to objectively assess project performance and arrive at key findings and results. A set of evaluation questions covering each of these criteria were drafted, which were customized and adjusted as the evaluation progressed to align with the audience and the topics that were relevant or related to the interviewee's assigned tasks or assignment. The list of evaluation questions is provided as Annex 5 to this report.

Summary of Findings and Recommendations

Table 2: Evaluation Rating Table

1	Monitoring & Evaluation	Rating
	M&E design at entry	Satisfactory
	M&E plan implementation	Satisfactory
	Overall quality of M&E	Satisfactory
2	Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	
	Quality of UNDP Implementation/Oversight	Satisfactory
	Quality of Implementing Partner Execution	Satisfactory
	Overall quality of Implementation/Execution	Satisfactory
3	Assessment of Outcomes	
	Relevance	Relevant
	Effectiveness	Moderately Satisfactory
	Efficiency	Moderately Satisfactory
	Overall Project Outcome Rating	Moderately Satisfactory
4	Sustainability	
	Financial sustainability	Satisfactory
	Socio-political sustainability	Satisfactory
	Institutional framework and governance sustainability	Satisfactory
	Environmental sustainability	Satisfactory
	Overall Likelihood of Sustainability	Satisfactory

Key findings:

The project has made important contributions towards growth of wind energy sector in South Africa. There is a significant progress made in all components especially in geographical expansion of wind resources assessment, assessment & initiation of small-scale wind energy project potential, sponsorship support for students undergoing wind technology related training program. However, some of the outputs and outcomes remain work in progress at the project closure stage namely, implementation of small-scale wind energy demonstration projects. As per the Project Team, project operational closure date is 30th September 2021 and project financial closure date is 31st March 2021. The project has made necessary resources allocation for work in progress components, and it is expected that remaining activities will be completed by March 2022.

Relevance

- The project's objectives are fully aligned with the GEF, Government of South Africa, and UNDP strategic priorities.
- By focusing on efficient use of wind energy, the project aimed to reduce GHG emission and contribute towards global climate change mitigation goals.

Effectiveness & Efficiency

- As some of the outcomes are still work in progress, the project has been moderately satisfactory in achieving its primary objectives.

Partnership and Cooperation

- The project has developed successful partnerships with several stakeholders including government agencies, industry partners, and other initiatives funded by donor agencies.
- The project has received desired strategic and technical support from DMRE, the key executing agency.

Poverty and Gender

- The project was designed in a period when capturing broader development impacts (i.e., income generation, gender equality, and women empowerment, improved governance, livelihood benefits, etc.) were not mandatorily required to be included the project design and project result framework.
- The Project Document refers to these developmental issues, however these are not captured in the result framework (socioeconomic co-benefits and sex-disaggregated/gender-responsive indicators and targets).
- Except for one component, gender disaggregated information for performance indicators is not available in M&E reports.
- Despite lack of direct tracking of gender relevant indicators as a part of M&E reports, the project is expected to contribute to gender mainstreaming.

Sustainability

- The project has developed strong institutional and governance frameworks to support key interventions.
- No major risks to financial, socio-political, and environmental sustainability of the project results have been identified during the TE process.

Impact

- GHG emission reduction attributed to the project have been computed and found to be in line with targets set in the Project Document. In future, GHG emission reduction due to use of wind energy could be significant if sectoral development takes place as per current Government plans.

Recommendations

Table 3: TE Recommendations

Rec #	TE Recommendations	Entity Responsible	Time frame ³
1	A number of activities remain work in progress and effort is required to ensure that all planned interventions achieve desired outcome. It is recommended that DMRE provides project management and supervision support to all remaining activities till March 2022 and beyond (ideally 12 months of supervision support).	DMRE	Dec 2022
2	The project has witnessed learning in terms of initiation of small-scale wind energy projects implementation (from conceptualisation to procurement of services to implementation. These learnings can be documented and shared with other agencies/countries to implementation of similar projects.	DMRE	March 2022
3	Knowledge material developed for activities must be documented and handed over to relevant partners and agencies including Government Departments. These knowledge materials and learning from the project can also be shared with other regional or local programs in Africa.	DMRE	March 2022
4	Though project was identified as having low social and environmental risks, it may be important to assess these aspects for demonstration projects. These learning will be useful for future development of small-scale wind energy projects in the country.	DMRE	March 2022
5	Terminal Evaluation has been conducted at the time when many activities under component-3 are still work in progress. An update to TE report can be provided once all activities are successfully implemented. This update could be in form of supplementary report to the TE report.	UNDP CO	April 2022
6	The project has not actively tracked impact on gender, poverty alleviation aspects, and youth as a part of Result Framework. However, many of the activities conducted in this project have had important impact on gender empowerment, supporting youth, and promoting economic activities. These aspects can be documented.	DMRE/CSIR	April 2022

³ Some of the recommendation require workshops or consultations, and due to covid-19 restriction a firm timeline is not included.

1. Introduction

1.1 Purpose of the Evaluation

This document presents results of the Terminal Evaluation of the UNDP supported and GEF-financed project “*South Africa Wind Energy Project (SAWEP)-Phase II*”. As a standard requirement for all projects financed by GEF, this terminal evaluation has been initiated by the Lead Implementing Agency, in this case, United Nations Development Programme (UNDP) Country Office (CO) in South Africa. The evaluation was conducted in accordance with the GEF Monitoring and Evaluation Policy, the Guidelines for GEF Agencies in Conducting Terminal Evaluations, and the UNDP Evaluation Guidelines.

The objective of the evaluation is to provide the project partners, GEF, UNDP and the Government of South Africa with an independent assessment and comparison of planned vis-à-vis achieved outputs and outcomes, identify the causes and issues which contributed to the degree of achievement of the project targets, and draw lessons that can improve the sustainability of benefits from the project, as well as contribute to an overall enhancement of UNDP programming.

The evaluation has covered the criteria of relevance, effectiveness, efficiency, sustainability, and impact. The TE then assessed the key financial aspects of the project, including the extent of co-financing planned versus realized. It assessed the extent to which the project was successfully mainstreamed with other UNDP priorities, including improved governance, and gender. The Evaluators have also looked at the extent to which the project is achieving impacts or progressing towards the achievement of (intended or unintended) impacts.

The Terms of Reference for the Terminal Evaluation is included as Annex 1 to this report.

1.2 Scope & Methodology

The TE was conducted over a period of 20 days between 1st July 2021 and 30th November 2021 by an international consultant. The approach was determined by the terms of reference (Annex 1) which were closely followed. The draft report was revised after receipt of comments and finalised on 13/12/2021. The text has been revised to correct factual inaccuracies in the draft or to include additional information, while other comments have been reproduced in full and audit trail is provided in the Annex 8 with comments from reviewers and responses from the consultants.

The TE was undertaken in line and accordance with the “UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects”. In terms of scope, the TE covered all aspects of the development and implementation of the Project, from the preparation of the PIF up till and including the Terminal Evaluation Mission (with most interviews being held virtually) and included inputs to activities, to outputs, outcomes, and impacts. The rating scale applied in this project is consistent with the UNDP Guidance for Conducting Terminal Evaluations of UNDP supported, GEF-financed projects, and is summarized in the table-3.

Table 4: Rating scale

Ratings Scales		
Ratings for Outcomes, Effectiveness, Efficiency, M&E, I&E Execution	Sustainability ratings:	Relevance ratings
6: Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency 5: Satisfactory (S): There were only minor shortcomings 4: Moderately Satisfactory (MS): there were moderate shortcomings 3. Moderately Unsatisfactory (MU): the project had significant shortcomings 2. Unsatisfactory (U): there were major shortcomings in the achievement of project objectives in terms of relevance, effectiveness, or efficiency 1. Highly Unsatisfactory (HU): The project had severe shortcomings	4. Likely (L): negligible risks to sustainability 3. Moderately Likely (ML): moderate risks 2. Moderately Unlikely (MU): significant risks 1. Unlikely (U): severe risks	2. Relevant (R) 1.. Not relevant (NR) Impact Ratings: 3. Significant (S) 2. Minimal (M) 1. Negligible (N)
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A)		

The methodology considers UNDP evaluation guidance for conducting evaluation during Covid-19. Underlying this guidance is a principle of “do no harm”, and a consideration that the safety of staff, consultants, stakeholders, and communities is paramount and the primary concern of all when planning and implementing evaluations during the Covid-19 crisis.

The Evaluation used a combination of approaches to assess the achievements of the project from several perspectives and a mix of quantitative and qualitative methods of data collection and analysis. Due to Covid-19 related travel restrictions, terminal evaluation process relied on desk research and online key informant interviews. The evaluation process also considered inputs provided by UNDP CO M&E team as per their site visits. The evaluation was conducted in the following phases:

Preparatory phase: The first step in the evaluation was a desk review of the most important documents covering project design and implementation progress that provided the basic information regarding the activities carried out to attain the desired outcomes and outputs and the actual achievements. The review was followed by preparation of questions and discussion points aiming at gathering information from chosen respondents about attitudes, preferences and information linked to the performance indicators in the evaluation matrix. The list of documents reviewed is provided as Annex 4 to this report.

Evaluation Matrix: An evaluation matrix was constructed based on the evaluation scope presented in the TOR. The matrix is structured along the five GEF evaluation criteria for TEs and included principal evaluation questions. The matrix provided overall direction for the evaluation and was used as a basis for interviewing stakeholders and further review of the project implementation reports.

Apart from the evaluation questions on the relevance, efficiency, effectiveness, sustainability, and progress to impacts, the evaluation matrix also included evaluation questions on cross- cutting issues relating to the promotion of values from a human development perspective, namely questions on gender equality and on social inclusion. The Evaluation Matrix is provided as Annex 5 to this report.

Stakeholder interviews: Due to Covid-19 related travel restrictions, International Consultant did not travel to South Africa. Online interviews were conducted with the key project stakeholders. The purpose of consultation was to verify the information from the project implementation reports, collect missing data, and learn about the opinions of stakeholders and project participants.

Assessment of Evidence: After the data collection phase, data analysis was conducted as the third and final phase of the evaluation through review of documents that were made available to the team by the project implementing partners as well as of other documents that the Evaluators obtained through web searches and contacts with relevant project stakeholders and beneficiaries. This process involved organizing and classifying the information collected, tabulation, summarization, and comparison of the results with other appropriate information to extract useful information that relates to the evaluation questions and fulfils the purposes of the evaluation.

The original result framework in the Project Document was revised in April 2020 following mid-term review recommendations. The revised project result framework, comprising 4 Components, has been used throughout as the basis for this evaluation and the TE has evaluated the Project's performance against these according to the current evaluation criteria provided to it by the GEF.

Triangulation of results, i.e., comparing information from different sources, such as documentation and interviews, or interviews on the same subject with different stakeholders, were used to corroborate or check the reliability of the collected information.

The TE has made efforts to provide verifiable and evidence-based information that are credible, reliable, and useful. The evaluators have followed a consultative, participatory, listening and learning approach in their work ensuring close engagement with the PMU and other project executors.

1.3 Constraints

At the time of TE process, a few of the important activities activities, namely installations of small wind projects at selected schools and at UB mini-grid, were not fully completed at the time and full information about the deliverables was not available during the data collection period. At the time of writing this TE report, these project were still under implementation and hence final results for these activities are not possible to be included in the TE report.

International Consultant's Evaluation mission was not possible due to Covid-19 travel restrictions. All stakeholder interviews were conducted online. Hence, the evaluation process relies entirely on document review and online stakeholder interviews. The interviews were conducted remotely and limited the ability of the evaluator to use direct observation at the stakeholder and beneficiary institutions for gathering additional information, triangulating previously obtained information, and getting a broader picture of the stakeholders' activities.

Due to the difficulties to arrange virtual meetings and limited time available for the data collection, it was not possible to interview a sample of ultimate beneficiaries (i.e. schools, the community for UB mini-grid project, students who obtained sponsorships) and get their assessment of the project achievements.

Given the long duration of project, many people in various organisations who were associated with the project earlier had left (possible reasons- retirement, job change to other organisation or role change

within the organisation) by the time stakeholder consultation process started. This resulted in limited understanding available through stakeholder consultation process about the project.

1.4 Structure of the Evaluation Report

The structure of the TE report follows the structure provided in the ToR of the assignment. This report consists of an executive summary, the report body, and annexes. The body of this report is structured around the following chapters: it starts with an introduction to the objectives, scope, and methodology of the terminal evaluation (Chapter One), description of the project context and a summary of project facts (such as start date, duration, the context in which the project started), its objectives and stakeholders (Chapter Two), key findings (Chapter Three), and the conclusions, recommendations, and lessons learned from the project (Chapter Four).

Annexes at the end of the report include the Terms of Reference (Annex 1), field visit details and list of organizations and people interviewed (Annex 2 and 3), evaluative questions and methodology (Annex 5 and 6), and documents reviewed (Annex 4).

1.5 Ethics

The TE team has held to the highest ethical standards for the assignment. The TE team also confirms that evaluation was conducted in accordance with the principles outlined in the United Nations Evaluation Group (UNEG) 'Ethical Guidelines for Evaluations'⁴.

⁴ <http://www.unevaluation.org/document/detail/100>

2 Project Description and Development Context

2.1 Project start and duration

The Project received GEF endorsement on 7th May 2015 for the duration of four years. The project started around 10 months post project approval due to the delayed hiring of the Project Manager. Project activities were officially launched in June 2016 with the recruitment of a project manager and post inception meeting.

Based on the MTR recommendations, the project had sought an extension. The project was extended for a period of one year from Dec 2019 to Dec 2020. However, due to Covid-19 and subsequent national lockdowns, the project had sought additional time for implementation. The project was finally closed on 30th September 2021, however certain activities will continue to be implemented till March 2022.

2.2 Development context

South Africa's National Development Plan (NDP) 2030 offers a long-term development plan for the country. It defines a desired destination where inequality and unemployment are reduced, and poverty is eliminated so that all South Africans can attain a decent standard of living. Electricity is one of the core elements of a decent standard of living. The NDP envisages that, by 2030, South Africa will have an energy sector that provides reliable and efficient energy service at competitive rates, that is socially equitable through expanded access to energy at affordable tariffs, and that is environmentally sustainable through reduced emissions and pollution.

The Integrated Resource Plan-2010 (IRP-2010) is a roadmap of South Africa's electricity generation sector from 2010 to 2030 and was first promulgated in March 2011. This plan incorporated government objectives such as affordable electricity, reduced greenhouse gas (GHG) emissions, reduced water consumption, diversified electricity generation sources, localisation, and regional development.

The IRP-2010, aimed that 18 Gigawatts (made up largely of Wind, Solar PV, and Concentrated Solar Power) will be added to the grid by 2030. Under the plan, the total wind capacity to be added by 2018-20 was targeted at 3,320 MW.

The Government of South Africa, Department of Mineral Resources and Energy (DMRE), and the National Energy Regulator of South Africa have developed policies and projects for the procurement and implementation of renewable energy. As part of the IRP 2010, the government launched Renewable Energy IPP Procurement Program – the REIPPPP. The REIPPPP is a competitive tender process that was designed to facilitate private sector investment into grid-connected renewable energy (RE) generation in South Africa.

To date, five bidding rounds have been launched for renewable energy projects under the REIPPPP. The current ongoing 5th round aims to procure power from 1.6 GW of wind energy and 1 GW from solar PV technology (final bids submitted in August 2021). Since the promulgation of IRP 2010, total 3466⁵ MW of wind energy has been installed in the country.

⁵ <http://redis.energy.gov.za/power-producers/>

A new IRP 2019 was developed within a context characterized by very fast changes in energy technologies, and uncertainty about the impact of the technological changes on the future energy provision system. The new IRP 2019 indicates the planned decommissioning of 11.5 gigawatts (GW) of old coal-fired power plant, and a major new-build comprising 14.6 GW of utility-scale wind, 6.0 GW of utility-scale solar photovoltaic (PV), and about 5 GW of distributed self-generation by electricity consumers, all complimented by 3 GW of gas- or diesel-fired power, and 2 GW of battery storage.

Renewable energy development is also a critical element in South Africa's climate change commitments under the Paris Agreement. South Africa published a draft of its updated NDC in March 2021, which would strengthen the country's target range for 2030. The country also intends to commit to a net zero CO₂ target ("net zero carbon emissions") by 2050. Second NDC is expected to be submitted in the year 2021⁶ and will be an update to its first NDC submitted in 2015.

Given a large wind energy-based power generation potential in South Africa, the development of the wind energy sector presents an opportunity to diversify the electricity mix, reduce GHG emissions to meet NDC goals, and provide local economic development opportunities.

To help develop the wind energy sector in South Africa, GEF-UNDP South Africa Wind Energy Programme (SAWEP)- Phase I was established in 2008. The first phase ran from 2008 to 2010 with the objective to install and operate the demonstration 5.2 MW Darling wind farm and prepare the development of 45 MW wind farms from Independent Power Producers (IPP). Supported by SAWEP Phase-1, a detailed Wind Atlas for South Africa (WASA) was developed. The Wind Atlas developed for South Africa provides a basis for the quantification of the potential that wind holds for power generation in the country. The total wind power potential of South Africa is estimated to be 67,000 MW.

2.3 Problems that the project sought to address

To further support wind energy sector in South Africa, the SAWEP Phase II was formulated by DMRE with support from UNDP during 2013-14 and approved by the GEF in the year 2015. The project document identified key barriers including,

- **Barrier 1: Challenges in the definition of, and progress towards, local content targets:** The REIPPPP has set a local content requirement, however due to lack of clarity on its definition and how to assess progress towards local content, were identified as major barriers which may impact additional capacity addition in the wind energy sector.
- **Barrier 2: Incomplete wind resource mapping and identification of all potential sites for harnessing wind energy:** Under WASA-1 project, maps for the Western Cape, as well as parts of Northern Cape and Eastern Cape provinces (collectively known as WASA I sites), were developed. A need was identified to expand the wind atlas to cover remaining areas of the Northern Cape, Eastern Cape, KwaZulu-Natal, and parts of Free State Provinces (collectively known as WASA II sites) to capture at least 80% of South Africa's wind resource-base.
- **Barrier 3: Lack of capacity in small-scale wind sector:** Small-scale wind energy sector was identified as high potential sector which was in early stage of development. Lack of capacity was identified as major barrier against development of small-scale wind sector in South Africa.

⁶ Source: Department of Environmental Affairs, South Africa

- **Barrier 4: Lack of adequate vocational training schemes targeted at the wind energy sector:** lack of local skills specially in manufacturing value chain, wind farm operations & maintenance were identified as a barrier against the development of wind energy sector.

De-risking Renewable Energy Investment (DREI) analysis was conducted by UNDP (March 2013) for the wind energy sector development in South Africa. As a part of the analysis, the impacts of local content requirements, wind resource mapping deficiencies and sectoral skills gaps were identified as some of the reasons evident in the large cost-of-capital (i.e., risk) increments associated with power market risk and connectivity risk, adding approximately 1.8 percentage points to the cost of equity and 1 percentage point to the cost of debt. Thus, the removal of these barriers is expected to lower risks in the wind energy market. DREI findings were included in the Project Document.

2.4 Immediate and development objectives of the Project

At the national level the project is expected to support development of wind energy generation which will lead to reduction in the imports of fossil fuels by the country, reduction in CO2 emissions, and socio-economic development of the country.

Table 5: Project Objectives, Indicators and Targets

Project Objective	Indicators	Targets
To assist Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa's IRP (2010) target of 3,320 MW of wind power online by 2018/2019	Generation from wind farms (GWh) - produced or contracted by Year 4 of project implementation.	1,367 GWh cumulative by end-2018.
	Number of individuals benefiting from wind-generated electricity by year 4 of project implementation	74,230 individuals will benefit annually from project-supported new wind-generated electricity
	Incremental tonnes of CO2 emissions reduction due to wind energy capacity contracted by Year 4.	Direct greenhouse gas reductions of 70,378 tCO2 cumulative by end-2018 (using a conservative 5% project causality factor).

The project is well aligned with: i) the National Development Plan 2030 enabling milestone- Produce sufficient energy to support industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit of power by about one-third; ii) the draft NDC 2021 to achieve net zero emissions by 2050 (and interim emission reduction goals); and iii) IPR 2019 stated goal of 14.6 GW of utility-scale wind, and other relevant national policy and legal frameworks.

2.5 Description of the project's Theory of Change

A project's theory of change provides a basis for the evaluation of the project resources, activities, and results. The terminal evaluation assesses the description of the project's theory of change including a description of the project's outputs, outcomes, intended long-term environmental impacts of the project, causal pathways for the long-term impacts as well as implicit and explicit assumptions.

The Project Document does not have an explicit Theory of Change. However, the project had a comprehensive result framework, with clear objectives, outcomes, outputs, and assumptions. Based

on the inception meeting, there were changes made in outcome 1 and outcome 4 to reflect changes in the baseline scenario at the project start. These changes were also incorporated in the revised result framework post MTR recommendations.

The Project Document also mentions De-risking Renewable Energy Investment (DREI) Analysis conducted for wind energy scale-up in South Africa. The theory of change underlying the DREI methodology is that one of the principal challenges for scaling up renewable energy in developing countries is to lower the financing costs that affect renewables' competitiveness against baseline technologies – i.e., primarily fossil fuels. As these higher financing costs reflect barriers and associated risks in the investment environment, the key entry point for policymakers to promote renewable energy is to address these risks and thereby lower the overall life-cycle costs of RES.

The analysis highlights that the impacts of local content requirements, wind resource mapping deficiencies and sectoral skills gaps are evident in the higher cost-of-capital (i.e., risk) increments associated with power market risk and connectivity risk, adding approximately 1.8 percentage points to the cost of equity and 1 percentage point to the cost of debt.

2.6 Expected results

The project was designed under four (4) components- 1) Monitoring and Evaluation of the implementation of local content requirements; 2) Resource-mapping and wind corridor development support for policymakers; 3) Support for the development of small-scale wind sector; and 4) Training and human capital development for the wind energy sector. The inception stage led to a revision in indicators of outcomes 1 and 4 as some of the activities planned in original project design were already been accomplished by the time SAWEF II project started.

Table 6: Project Results

<i>Component 1: Monitoring and verification of the implementation of local content requirements for wind energy procurement mechanisms</i>	
Mechanisms in place for objective, evidence-based assessment and verification of progress in implementing localisation initiatives, taking into account any correlations between local content requirements, investment metrics (e.g. generation capacity, financial returns, costs, prices, etc) and socio-economic development (e.g. employment creation).	1.1: Enhanced, technology-enabled capability among Government and industry stakeholders to monitor and verify implementation of local content requirements
	1.2: Enhanced capacity among Government wind industry stakeholders to objectively monitor and verify factors related to the success or failure of project sponsors to meet local content requirements and socio-economic development commitments
<i>Component 2: Resource-mapping and wind corridor development support for policy-makers</i>	
Expanded verified wind atlas (WASA) completed for additional provinces in support of future wind power project development and procurement mechanisms.	2.1: Verified Wind Atlas extended to the Northern Cape province
Strategic wind corridors/areas identified and formally approved for all WASA sites.	2.2: Preliminary and final WASA II data processed for use in definition of RE Development Zones (REDZs) in WASA II sites.
Fully capable policy- makers, regulators and local authorities efficiently dealing with grid connections at all WASA sites.	2.3 Enhanced capacity within Government to use wind atlas data for energy planning at policy and strategic levels.

Component 3: Support for the development of the small-scale wind sector	
Capacity developed among relevant stakeholders on technical, financial, regulatory and socio- economic aspects of small- scale wind projects.	3.1 Establishment of small-scale wind demonstration project
	3.2 Enhanced capacity of project sponsors to develop small-scale wind energy projects.
Component 4: Training and human capital development for the wind energy sector	
Enhanced local stakeholders' capacity to manage, operate and maintain wind farms in a given area based on best practice models developed in other countries	4.1 Increased number of Technical and Vocational Education and Training (TVET) colleges participating in wind energy vocational apprenticeship programme.
Enhanced skills of local stakeholders to manufacture and/or assemble wind energy components based on the Government of South Africa's localization strategy, taking into account international best practices	4.2 National Artisan Development (NAD) programme extended to include wind energy training.

2.7 Total resources

Following funding sources have been identified in the approved ProDoc.

Table 7: Planned Financing Sources

Financial Information	
Funding source	At CEO Endorsement (US\$M)
1- UNDP contribution (cash)	200,000
2- Government	12,388,176
3- Other multilateral/bi-laterals	16,070,000
4- Private Sector	7,000,760
5- NGOs	-
6- Total co-financing: [1+2+3+4+5]	35,667,936
7- Total GEF Funding	3,554,250
8- Total Project Funding [6+7]	39,222,186

2.8 Main Stakeholders

The project development process involved many stakeholders including the private sector, financial institutions, educational institutions, and non-government agencies. The Project Document contains a comprehensive analysis of the stakeholders and their respective roles and responsibilities. As per the project document, the following stakeholders were planned to be included in the implementation process.

Council for Scientific and Industrial Research (CSIR): The CSIR is one of the leading scientific and technology research, development, and implementation organisations in Africa. Constituted by an Act of Parliament in 1945 as a science council, the CSIR undertakes directed and multidisciplinary research, technological innovation as well as industrial and scientific development to improve the quality of life of the country's people. CSIR was a key partner for WASA project.

Chris Hani District Municipality (CHDM) in the Eastern Cape: The CHDM Schools Small- scale wind water pumping project is implemented in two rural schools within the district.

Dept of Mineral Resources and Energy (DMRE): DMRE, earlier known as Department of Energy (DoE) till year 2019, is the national department responsible for energy policy and strategy development, including the IRP and IEP. DMRE is the executing agency for SAWEP II project.

Department of Environment Affairs (DEA): The Department of Environmental Affairs DEA, now known as Department of Forestry, Fisheries and the Environment (DFFE), is the national department responsible for environmental, sustainable development and strategy development. DEA is the GEF Focal point for South Africa and member of the SAWEP 2 Project Steering Committee (PSC) and WASA 2 PSC.

Department of Higher Education and Training (DHET): DHET's University Branch focuses on the development of skills in wind energy through SARETEC, which is housed at the Cape Peninsula University of Technology (CPUT). SARETEC plays a critical part in the development of wind energy service technicians in preparation for their participation in wind farm operations and maintenance activities.

Department of Science and Technology (DST): The Department of Science and Technology (DST), now Department of Science and Innovation (DSI), is the national department responsible for science and technology policy, strategy development with a strong emphasis on human capital development. DST is a member of the SAWEP 2 PSC and WASA 2 PSC.

Department of Trade and Industry (DTI): DTI, now Department of Trade, Industry and Competition (the DTIC), develops industrial policies, strategies and action plans, legislation, and regulations. The National Skills Fund (NSF) is providing finance for the training of artisans in the wind-energy related manufacturing sector, in support of localisation.

Eskom: The national utility Eskom is responsible for generation, transmission, and distribution of electricity to industrial, mining, commercial, agricultural, and residential customers, and redistributors. Eskom is a single buyer of electricity produced by numerous IPPs and it oversees all grid operations, including the connection of new customers and provision of continuous service.

Global Environment Facility (GEF): The UNDP-GEF Regional Technical Advisor is a member of the SAWEP TAC.

Northern Cape Provincial Government: The provincial departments responsible for environmental and development planning are in various stages in the development of provincial energy and sustainable development strategies and actions plans. These plans acknowledge the potential wind energy can play in addressing energy and sustainable development issues.

Private Developers: In the project design stage, it was acknowledged the role that the private sector could play in alleviating the electricity capacity need in the short and long term. The project activities under SAWEP-II were expected to make wind energy sector more attractive for private developers.

South African National Energy Development Institute (SANEDI): The main function of SANEDI which is a state-owned entity is to direct, monitor and conduct applied energy research and development, demonstration, and deployment as well to undertake specific measures to promote the uptake of Green Energy and Energy Efficiency in South Africa. SANEDI managed and coordinated WASA project. For SAWEF II project, SANEDI was to provide project management support for WASA component.

South African Weather Service (SAWS): The South African Weather Service (SAWS) is the national weather service of South Africa. SAWS was a key partner for WASA project.

South African Wind Energy Association (SAWEA): The South African Wind Energy Association is an industry led association in support of wind energy industry development in South Africa. SAWEA has a particular role in identifying wind energy development issues, lobby effective support and dissemination of information to its members and the public. SAWEA is a member of the SAWEF Technical Advisory Committee (SAWEF TAC).

South African Bureau of Standards (SABS): SABS is a statutory body established in terms of the Standards Act, 1945 and operates in terms of the latest edition of the Standards Act, 2008 as the national standards institution in South Africa.

Technical University of Denmark (DTU): DTU has been active for decades in wind energy assessment area, and has developed the WASP software, a microscale modelling tool for wind farm energy calculations, and the KAMM/WASP/WRF method, for the calculation of wind resources over large areas. DTU was a key partner for WASA project.

University of Cape Town, Climate Systems Analysis Group UCT (CSAG): CSAG is hosted in the Environmental and Geographical Science department at the University of Cape Town. CSAG works in Global Climate Model (GCM) applications, Global Climate Change, and South African climate processes. CSAG was a key partner for WASA project.

United Nations Development Programme (UNDP): The local UNDP Country Office is the Implementation Agency for the SAWEF Phase 2 and a member of the SAWEF 2 PSC and WASA 2 PSC.

3 Findings

3.1 Project Design/Formulation

3.1.1 Analysis of Project Framework: project logic and strategy, indicators

The project was well designed keeping in mind the relevant development plans and programs to promote wind energy in the country including the Integrated Resource Plan (IRP) and the REIPPPP. The objective of SAWEP II is “assisting the Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa’s IRP target of 3,320 MW of wind power online by 2018/2019”. Thus, the project directly contributes to achieving the IRP goals.

The Project Document includes a results framework with indicators to monitor the progress towards achieving outcomes that reflect the deliverables (outcomes/outputs). The project objectives and outcomes/outputs of the project were clear, predictable, and feasible within the implementation timeframe of the project. The Outcomes were predictable meaning that at the time of project design, the activities and the corresponding Outputs specified in the ‘Project Design’ were leading to the desired outcomes of the project. Though the result framework didn’t provide for interim targets, however Indicators were SMART (specific, measurable, attributable, relevant, and time-bound).

South Africa wind energy sector witnessed significant development during 2011-2016, during which REIPPPP was launched. These developments were considered during the inception phase of the project and revisions were made in activities under component 1 and component 4.

Component 1: As M&V system was already operational under the REIPPPP when the project started, the original activities under this component were no longer required. Based on stakeholder inputs and consultation, the key activity was revised to conduct a study on ‘Assessment and Analysis of the Impact of the REIPPPP on the South African Economic Development’. The objective of the study is to assess and to analyse the Economic Development element impact including the economic development bidding criteria of the REIPPPP and to make recommendations towards the achievement of optimal socio-economic benefits.

Component 4: By the time SAWEP II started, initiatives planned under this component were already under implementation with support from other donor agencies. It was therefore decided to carry out a study on the Status and Development of Wind Energy Training, Education, Skills and Human Capacity Development. Subsequently SAWEP project also provided sponsorships to students undergoing formal SAQA accredited Wind Turbine Service Technician (WTST) training.

The project result framework was revised post MTR recommendations to include appropriate changes in outputs and indicators. The evaluator found these revisions to the results framework were sound and made sense given the context of the project.

The project was designed in a period when capturing broader development impacts (i.e., income generation, gender equality, and women empowerment, improved governance, livelihood benefits, etc.) were not mandatorily required to be included the project design and project result framework. The Project Document refers to these developmental issues, however these are not captured in the result framework (socioeconomic co-benefits and sex-disaggregated/gender-responsive indicators and targets).

3.1.2 Assumptions and Risks

The Project Document contains an assessment of risks that could hinder project implementation (policy, regulatory, financial, market, technical) have been identified which might have impacted project performance. These risks were further qualified on the basis of possible impact and probability of occurrences (high, medium, low). Appropriate mitigation measures have also been identified against each of these risks. The risk log was regularly updated as part of the annual PIR.

As a standard practice of UNDP-implemented projects, the risk log based on the initial risk analysis should be regularly updated in UNDP enhanced project management platform (ATLAS) and new operational risks (if identified) added to the risk matrix. Risks rated as critical (i.e. when both impact and probability are high) and corresponding mitigation measures should be reported in the annual Project Implementation Reviews (PIRs). Based on review of available PIRs, risks were identified and listed with appropriate mitigation plans.

3.1.3 Lessons from other Relevant Projects incorporated into Project Design

As a successor to the SAWEP I project, the project was designed based on key lessons derived from the SAWEP I. The TE of the SAWEP I recommended that SAWEP II should focus on supporting the expansion/refinement of the wind atlas; wind turbine and components testing and certification capacity; on-going awareness and engagement between Government and industry participants; implementation of a Wind Industrial Strategy; and wind energy education and training. These findings formed key basis for the development of the SAWEP II project.

The project document mentions lessons being used from similar programs implemented globally. The Project development also highlights planned coordination with programs in the RE sector in South Africa as well as other countries.

3.1.4 Planned Stakeholder Participation

The project was formulated involving a wide spectrum of stakeholders (through a Project Preparatory Grant – PPG). This ensured that the perspectives of all relevant stakeholders informed the project design, and that it drew on lessons from similar projects. The project document lists many governmental, public and private sector agencies, and educational institutions as potential partners. Many of the critical activities are designed keeping in mind active participation and engagement of these partners. The detailed descriptions as provided in the project activity for the critical activities clearly outline roles to be played by these stakeholders.

The TE therefore finds that the project design was based on a clear analysis of stakeholder needs; that capacities of the executing institution and its counterparts were adequately considered; the partnership arrangements were identified properly at the project entry.

3.1.5 Replication approach

The overall project strategy of combining technical and capacity building support for the wind energy sector is potent enough to ensure replicability. The project document outlines activities to promote awareness and capacity building among key stakeholders. Wind resource assessment and modelling, smart wind energy demonstration projects, and capacity building activities were expected to facilitate the wide scale deployment of wind energy in South Africa.

3.1.6 UNDP Comparative Advantage

UNDP in South Africa is a key partner in supporting the country's vision of greater prosperity and improved lives. The overarching goal of the strategic partnership between the government of South Africa and UNDP is to advance South-Africa's strategic priorities towards a better South Africa, a better Africa and a better world. The current UNDP programmes in South Africa are centred around three project portfolios.

Portfolio 1. Inclusive, just and sustainable economic growth

Portfolio 2. Effective, efficient, and transformative governance

Portfolio 3. Climate resilience and sustainably managed natural resources.

UNDP comparative advantage lies in its experience in integrated policy in different national processes, policies and frameworks. UNDP's assistance in designing and implementing activities is consistent with both the GEF mandate and national sustainable development plans. UNDP at the global level has been involved in designing and implementing similar projects under this focal area. In energy sector, UNDP has been an important partner for DMRE in South Africa. UNDP South Africa country office has the adequate capacity to support the implementation of the SAWEP II with the needed support from the region as well as global UNDP/GEF offices. The project has benefited from UNDP experience from the project development phase to implementation.

3.1.7 Linkages between project and other interventions within the sector

This SAWEP II project document identifies several national and regional projects and other interventions within the sector and a potential mode to link with them for collaboration, information-sharing and lessons learnt. A few of these projects include:

- GEF-financed activities in the country, including the Standards and Labelling project implemented in conjunction with DMRE and UNDP; preparation of South Africa's Third National Communication (TNC) and Biennial Update Report (BUR) in collaboration with UNEP; and UNIDO's promotion of market-based adoption of integrated biogas technologies in small-medium and micro enterprises (SMMEs).
- The GIZ-sponsored project that focuses on addressing issues related to solar PV connections to municipal distribution systems, which forms part of the South Africa-German Energy Programme (SAGEN).
- The UNIDO-GEF project aimed at promoting biogas projects in SMMEs.
- The National Artisan Development (NAD) programme and the Competitive Supplier Development Programme (CSDP), which are led by state-owned entities including Transnet (rail transportation and ports) and Eskom (electricity generation).
- The monitoring function established in 2014 at the DMRE IPP Unit, which focuses on the implementation of approved projects that form part of the REIPPPP.

3.1.8 Gender responsiveness of project design

The project was designed in a period when capturing broader development impacts (i.e., income generation, gender equality, and women empowerment, improved governance, livelihood benefits, etc.) were not mandatorily required to be included in the project design and project result framework.

The ProDoc refers to these developmental issues, however these are not captured in the result framework (socioeconomic co-benefits and sex-disaggregated/gender-responsive indicators and targets).

A gender analysis and training study was conducted during September 2018 which recommended updating of Result Framework to include gender disaggregated performance indicators. However, except for component 4: Training and human capital development for the wind energy sector, gender disaggregated indicators are not included or tracked in any M&E reports. Gender disaggregated indicator for students supported under the component 4 was tracked in PIRs.

3.1.9 Social and Environmental Safeguards

A Social and Environment Screening was conducted, and a summary was included in the Project Document that characterises the project as Category 1 (no further action needed). The Project commits to ensure full compliance with the relevant regulatory standards already established for the wind sector for each of its activities. In line with the social and environment screening, the TE considers assessment and safeguards as appropriately included in the project design.

3.1.10 Management arrangement

The project is nationally implemented (NIM) by the DMRE in line with applicable agreements between UNDP and the Government of South Africa, providing direct day-to-day oversight of the project. UNDP Country Office (CO) provided procurement, monitoring, evaluation & reporting, and financial management.

High level guidance and oversight to the project was provided by the Project Steering Committee (PSC) which was chaired by the DMRE. The PSC consisted of representatives from the UNDP CO, DTIC, DHET, DSI, DFFE and SANEDI. The PSC membership reflects the involvement of the various government entities in the Components of the SAWEP II. For example, under Component 1, DTI, DST and DoE play a leadership role, noting the Component's focus on the DoE-administered REIPPPP as a driver for localisation, which is, in turn, championed by DTI and DST from industrial policy and technology development perspectives, respectively. SANEDI provided leadership in respect of Component 2 – wind resource-mapping, while DoE and DTI lead Component 3, which focuses on the small-scale wind energy sector. DHET plays a leadership role in respect of Component 4, which focuses on training and human-capital development.

The project envisaged establishing a Program Coordination Unit (PCU) to be hosted within the DMRE, to execute the project. The PCU was proposed to be composed of a full-time Project Manager (to be hired locally), a wind energy specialist for all the project components. Project Manager's prime responsibility was to ensure that the project produces the outputs specified in the project document, to the required standard of quality and within specified time and cost constraints. The PCU was envisaged to produce Annual Work and Budget Plans (AWPs & ABPs) to be approved by a Project Steering Committee (PSC) at the beginning of each year. The PCU also was expected to produce quarterly (QPRs) and annual progress reports (PIRs to the PSC, or any other reports at the request of the PSC).

The UNDP CO oversaw the management of the overall project budget and was responsible for monitoring project implementation, timely reporting of the progress to the UNDP Regional Support Centre in Addis Ababa and the GEF, as well as organising mandatory and possible complementary reviews, financial audits and evaluations on an as-needed basis.

The TE finds that the design of management arrangement was appropriate. However, the PCU had no expertise over procurement and financial management, thus majority of project decisions required coordination with multiple agencies including support from UNDP CO (procurement, financial management etc.).

3.2 Project Implementation

3.2.1 Adaptive management

Adaptive management means an intentional approach to making decisions and adjustments in response to new information and changes in context.

By the time project implementation started, some of the activities under components 1 and 4 were already outdated. With the setting up the RE IPPPP office, M&V system was already in place (component 1). Many activities planned under the component 4 were already in progress with GIZ and Danish support. Delay in REIPPPP bidding programme, reluctance of Eskom to sign power purchase agreements (PPAs) of REIPPPs 4th Bidding Window, and postponement of future bidding windows also created uncertainties for activities under component 4 as future uptake of trained workforce was expected to be low in view of lower wind industry growth.

This necessitated review of outcomes/outcomes and activities at the inception phase. Mainly component 1 and component 4 were revised to include relevant activities in view of existing situation. Review of component 3 pointed to a need for several pilot projects to successfully demonstrate use of small wind in different business cases. Small wind is also an area not depended on REIPPPP. This also led to reallocation of budgets to component 3 as well as expansion of activities under this component. Several new activities were planned under component 3 to achieve key outcome. These activities included pilot projects to demonstrate small wind energy projects, Feasibility study to determine market potential and viability to establish a wind turbine refurbishment industry in South Africa, and 'Green' tariff pilot study with small scale wind turbines.

MTR was conducted in 2019 and it pointed out key recommendations to help project achieve its stated objectives.

<i>MTR recommendations</i>	<i>Management response to MTR recommendations</i>	<i>TE comments</i>
Project to be extended to provide for implementation time for component 2, 3, and 4	Project extension was sought for extension till 31 st Dec 2020. This was further extended to 30 th Sep 2021 in view of covid-19 related effects on project implementation.	Delayed start and covid-19 pandemic affected implementation of certain important activities.
The Project Results Framework to be updated to reflect the many changes that occurred before and after SAWEP II project inception and to (re-) define realistic end-of-project target values.	Project Results Framework to be updated.	Appropriate changes made to the Project Results Framework.
By mid-2020, the RCU should make a 'post-SAWEP' action plan that reflect on	Plan developed to reflect on sustainability of key components.	Suitable plans have been developed as per MTR recommendations.

sustainability aspects of component 2, 3 and 4		
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The project has witnessed delays in implementation of demonstration projects under component 3. At the time of writing TE report, both UB mini-grid project (small scale wind project component) and small wind water pumping project in 2 schools were not operational. UB mini-grid project didn't receive appropriate bids for Engineering, procurement, and commissioning (EPC) even after 3 procurement cycles. Apart from unsuccessful procurements, covid-19 pandemic also played a role in project delays. In the hindsight, procurement process and the late approval, release of remaining funds at the 2nd extension could have been handled better as despite several extensions project could not achieve operational stage at project closure.

In summary, the project's adaptive management actions can be rated as satisfactory especially in adjusting the implementation to changed circumstances at the inception phase, during project implementation phase, and to impacts due to covid-19 pandemic. Throughout the implementation of the Project, adaptive management interventions were required to correct shortages in project design and to react on new developments during project implementation. These measures of adaptive management were helpful in improving the performance of the Project.

3.2.2 Actual stakeholder participation and partnership arrangements

The PSC meetings provided a platform for all relevant stakeholders in the wind power sector to meet, discuss relevant topics on regulatory, technical, organizational, or financial issues and look for joint solutions. The project established several successful partnerships which were important during implementation. These important linkages will help in sustainability of many of the activities under the SAWEP II project.

The project established partnerships with the WASA project stakeholders (i.e., SANEDI, CSIR, UCT, SAWS, DTU Wind Energy) of Component 2 and with various local stakeholders of Eastern Cape (Component 3) as well with various government entities (e.g., DEDEAT) and development partners (Germany). Through Component 4, the Project realizes communications with a wider audience by supporting wind power events (WindAc, Windaba) and supporting the participation of students to participate in training and capacity building activities in cooperation with SARETEC and SAWEA.

Having the same team in place in the various phases of WASA and SAWEP has further contributed to skills and knowledge transfer from the Technical University of Denmark Wind Energy Group (DTU Wind Energy) and the institutionalization of WASA at South African public entities, such as the Council Scientific Industrial Research (CSIR), South African Weather Service (SAWS) and the University of Cape Town (UCT).

The public at large is informed through the websites www.wasaproject.info and <http://sawep.co.za>. Litha Communications (see <http://lithacommunications.co.za>) was appointed in Feb 2019 as the SAWEP II 'Communications Management and Event Organiser'.

3.2.3 Project finance and co-finance

As per the project document, the total project cost is US\$39,222,186 which includes US\$3,554,250 GEF Grant and US\$35,667,936 co-financing. Co-financing was well planned and clearly mentioned in the project document.

Overall project was able to utilise 81.5% of its budget planned from GEF grant by the time of project operational closure date of 30th September 2021. Additional US\$ 443,121 (12.6% of total GEF grant) has been budgeted and allocated to complete pending activities under component 3 and 4.

Table 8: Project financial budget and actual utilization

Project components	Budget approved (US\$)	Disbursed in US \$							
		2016	2017	2018	2019	2020	2021	Oct 2021 to 31 March 2022	Total
Component 1	208 386.00		25 235.36	41 292.88	-899.67	8 057.32	34 370.29		108 056.18
Component 2	1 748 769.00		177 738.53	505 524.76	310 943.80	389 876.22	203 591.85		1 587 675.16
Component 3	197 114.00		55 263.45	64 821.40	150 984.79	80 287.15	139 436.23	301 527.93	792 320.95
Component 4	738 214.00	2 397.23	37 044.30	58 747.71	139 322.24	123 057.87	256 112.55	121 058.60	737 740.50
Project Management	169 250.00	16 834.82	12 864.37	40 440.35	-12 306.85	7 918.75	4 242.52	7 200.00	77 193.96
Project Coordination Unit	492 517.00						26 667.00	13 334.00	40 001.00
Total	3 554 250.00	19 232.05	308 146.01	710 827.10	588 044.31	609 197.31	664 420.44	443 120.53	3 342 987.75
Total Funded by GEF (US \$)	3 342 987.75								

Notes

The Project Coordination Unit (PCU) expenditure that covers the Project Manager (PM) and contribution to the UNDP Procurement Associate (PA) salaries are spread across, included with Comp 1 to 4 disbursements* and for PM (SANEDI reimbursement) up to 31 March 2021. Therefore, no Project Coordination Unit Disbursements indicated for 2016 to 2020. From 1 April 2021 the PM has a contracted with UNDP for USD4,444 per month. E.g. USD26,667 (2021) and USD13,334 (Oct 2021 to 31 March 2022) are the PM, UNDP contract payments for Apr to June 2021, July to Sept 2021 and Oct to Dec 2021 respectively.

*The total Project Coordination expenditure that is spread across, included with Comp 1 to 4 Disbursements comprise of:

SANEDI UNDP RLA 1 Aug 2016 to 31 July 2020 R2,251,287 USD166,762

SANEDI reimburse 1 Aug 2020 to 31 March 2021 R375,215 USD27,794

PA salary contribution Dec 2018 to 30 Sept 2021 (34 x R39,000/month) R1,326,000 USD98,222

Total R3,952,502 USD292,778

Table 9: Co-financing

Source of co-financing	Amount confirmed at CEO endorsement (US\$)	The actual contribution	Actual % of expected amount
Dept Mineral Resources and Energy	2,229,814	2,229,814	100%
Dept of Trade, Industry and Competition (Government of South Africa)	100,332	100,332	100%
Dept of Science and Innovation (Government of South Africa)	621,118	1,730,257	278%
Dept of Higher Education and Training (Government of South Africa)	9, 316,770	9, 316,770	100%
Dept Environment Forestry and Fisheries (Government of South Africa)	120,142	515,085	428%
GIZ	13,910,000	14,344,440 (1.0867 USD = 1 EUR)	103%
DANIDA	2,160,000	2,160,000	100%
South African Wind Energy Association (SAWEA)	1,508,429	1,850,413	123%
SA-based wind turbine manufacturer (Adventure Power)	5,501,331	Looking for a buyer	-
UNDP	200,000	200,000	100%
Total co-financing	35,667,936	32,447,111	91%

Dollar, Rand exchange rate gain: SAWEP 3 implementation started at USD/Rand = 13.5 Aug 2016, by March 2020 it was 16. This resulted in estimated gain of Rand 5.3 million. and increasing with estimated USD/R gain R5.3 mill. Additional projects under component 3 were identified to utilized unabsorbed gains.

3.2.4 Monitoring and Evaluation: Design at Entry and Implementation (*), overall assessment of M&E (*)

Design at Entry:

The project document provides a detailed description of M&E activities, responsibilities, timeframe, and budget. A total USD\$ 130,172 was budgeted for M&E activities.

The Project document clearly lays out the monitoring and evaluation framework whereby several tools are provided for as per GEF guidelines which includes (Inception report, Quarterly Reports, Project Implementation Reports (PIR), M&E, and periodic site visits). At the design stage, the MTR and Final Terminal evaluations were provided for in addition to internal monitoring mechanisms. The PCU, with the support of relevant stakeholders, was responsible for implementing the M&E activities outlined herein. In addition, the UNDP country office was also supposed to conduct supervisory monitoring to verify the reported progress in the reports.

The Project Document was developed in 2013-14 when mid-term targets and gender disaggregated information were not required to be included in the result framework.

The project design has a standard M&E framework with all required elements and has adequate provision for budget. The Monitoring & Evaluation design at entry is rated Satisfactory.

M&E Implementation:

The project has tried to follow most of the M&E activities as planned in the project document including inception report, Quarterly Reports, PIR, and M&E. Project progress was also discussed during the regular PSC meetings. Annual monitoring activities were identified as per the Annual Work Plans (AWP) along with budget allocation for monitoring missions. The M&E reports were able to capture actual project performance along with issues which may have affected the delivery of key outputs.

2016-2020 PIRs provide details of the project in terms of each component/outcome/output and activities. PIRs also include rating and assessments done by the Project Manager, UNDP CO, and UNDP Regional Technical Advisor (RTA). These give a very clear understanding on the progress of project implementation and development towards the various targets.

By considering all the above, the rating for the implementation of the project's monitoring and evaluation is considered as Satisfactory (S). Overall, the M&E system is rated as Satisfactory (S).

Monitoring & Evaluation (M&E)	Rating
M&E design at entry	S
M&E plan implementation	S
Overall quality of M&E	S

3.2.5 UNDP implementation/oversight (*), Implementing Partner execution (*) and overall assessment of implementation/oversight and execution (*)

Project was implemented following National Implementation Modality (NIM) to ensure broad stakeholder participation and to create both a high flexibility and an enabling environment for innovation. Project was executed by the national Implementing Partner DMRE in close coordination with other national stakeholders and UNDP CO. Direct day-to-day oversight of the project was the responsibility of DMRE. The PCU was formed to coordinate and manage project activities.

The PSC was envisaged to be responsible for making management decisions on a consensus basis for the project when guidance is required by the Project Manager, including approval of project revisions. PSC was envisaged to perform project assurance reviews; project monitoring and evaluation by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning and also approve any essential deviations from the original plans.

The UNDP CO was responsible to will maintain the oversight and management of the overall project budget. It was responsible for monitoring project implementation, timely reporting of the progress to the UNDP Regional Support Centre in Addis Ababa and the GEF, as well as organising mandatory and possible complementary reviews, financial audits and evaluations on an as-needed basis. Furthermore, it was expected to support coordination and networking with other related initiatives and institutions in the country. UNDP CO also provided procurement services for component 2 and 3.

MTR and stakeholder consultation points to some weakness observed in procurement of services 3 for activities pertaining to small scale wind demonstration.

Document review, stakeholder consultations and MTR points to strong strategic ownership by DMRE and SANEDI. PSC meetings were held regularly, workplan approvals were provided timely, effective progress reviews took place, and the required technical support from various stakeholders were made available. The PSC provided a platform for discussion and discourse and with high ranking representatives being present at the meeting, the decisions taken by the SC had a guiding effect for the development of wind power in South Africa.

The rating of the Implementing Partner for implementation/execution is Satisfactory (S), the rating for UNDP is Satisfactory (S). Overall quality of Implementation/Execution is rated as Satisfactory (S).

UNDP implementation/Oversight & Implementing Partner Execution	Rating
Quality of UNDP Implementation/Oversight	S
Quality of Implementing Partner Execution	S
Overall quality of Implementation/Oversight and Execution	S

3.2.6 Social and Environmental Standards

A Social and Environment Screening was conducted, and a summary was included in the Project Document that characterises the project as Category 1 (no further action needed). The Project

commits to ensure full compliance with the relevant regulatory standards already established for the wind sector for each of its activities. In line with the social and environment screening.

The project environmental and social screening was done a long time ago based on old template. The report provides important inputs in terms of how the project will follow the existing safeguard policies of the Government (as part of the REIPPPP). The project is considered as low risk category with no need for further follow-ups. Since the original screening, the safeguard policies of UNDP have been revised, however project did not conduct another screening exercise. This was also one of the recommendations given by UNDP RTA. No additional screening was conducted during the project.

3.3 Project Results and Impacts

According to the UNDP/GEF evaluation guidelines, the achievements of expected results were evaluated in terms of attainment of the overall objective as well as identified outcomes and outputs. For this, the performance by components is analysed by looking at (i) general progress towards the established baseline level of the indicators; (ii) actual values of indicators by the end of the EEPUC Project vs. designed ones; (iii) evidence of relevance, effectiveness, and efficiency of the results as well as how this evidence was documented.

3.3.1 Progress Towards Objective and Expected Outcomes

The assessment of progress is based on data provided in the annual reports, technical reports reviewed, the findings and observations of the TE study, and interviews with the project stakeholders. For assessment of final achievements, TE report uses the SAWEP II Closure Report October 2021 as the main information source.

The project objective indicators have met the original targets and with outcomes 1 (already achieved), 2 (already achieved), it is outcome 3 and 4 (partially complete) that has not been fully achieved in terms of the original targets. The summary of an evaluation of attainment of objective and components of the Project are presented in Table 10. Summary of results for each outcome/output is provided as Annex-6.

Colour Coding
Green: completed, indicator shows successful achievement
Yellow: partial completed
Red: indicator shows poor achievement

Table 10: Matrix for rating the achievements of outcomes

Project Component/ outcome	Project Results Framework Target	Revised Scope ⁷	MTR Observation	Covid 19 Impact	Main outputs achieved by 30 Sept 2021	Status	TE Observation
Project Objective: To assist the Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa's Integrated Resource Plan target of 3,320 MW of wind power generation online by 2018/19	1: 1,367 GWh cumulative by end-2018. 2: 74,230 individuals will benefit annually from project-supported new wind-generated 3: Direct greenhouse gas reductions of 70,378	Scope not revised	-	Targets were set for period prior to covid-19 impact in year 2020, so no impact	Dec 2020, 3,466 MW capacity with 31,200 GWh cumulative power generation by Dec 2020 (Dept of Energy (DoE): Production and Operating Capacity http://redis.energy.gov.za/power-production) 225,867 individuals [3,466 MW operational by Dec 2020 @ 26% capacity factor and average electricity consumption/person/year 4,604kWh] 31,200 GWh produced at 1.03 tCO2/MWh gives		As per Government data on wind energy capacity and power generation, as of December 2020 total 3,466 MW onshore wind power generation capacity exist in the country. Total 31,200 GWh of electricity has been generated since 2013 till Dec 2020 using wind energy. The project has achieved broad objectives as outlined in the Project Document.

⁷ Original scope to be found in the project Document.

	tCO2 cumulative by end-2018 (using a conservative 5% project causality factor).				cumulative by Dec 2020 32,136,000 tCO2		
1. Monitoring and Evaluation of the implementation of local content requirements	<p>1.1 Enhanced capacity of DoE IPPP Office to strengthen M&V system</p> <p>1.2 Quarterly reports since 2015 on REIPPP progress in RE, including wind, localisation and socio-economic development (SED) published.</p>	Original activities were already implemented prior to project start, and hence scope of work was changed to include a study <i>'Assessment and Analysis of the Impact of REIPPPP on the South African Economic Development'</i>	<p>Indicators were already met at project Inception as a M&V system was already functioning at the DoE-IPP project. There has been little need for SAWEP II support</p> <p>Status: indicator should be reformulated</p>	The component was not affected by COVID-19 as the study was already completed by July 2018 and there were no further activities under Component 1.	<p>1.1 The study report was completed by July 2018.</p> <p>1.2 DoE IPP Office quarterly reports since 2015, including quarterly provincial reports</p>		<p>Activities under this component were redundant by the time project initiated.</p> <p>Study conducted under this component was appropriate and was found to be relevant and useful by key stakeholders.</p>

Component 2: Resource-mapping and wind corridor development support for policymakers						
Expanded verified wind atlas (WASA) completed for additional provinces in support of future wind power project development and procurement mechanisms.	2.1 Four masts and related equipment installed in the Northern Cape in WASA 3 bringing total WASA masts to 19	Scope not revised	At project inception WASA-2 was already being implemented and WASA has evolved into WASA 3 with a total of 18 measuring masts and development of wind resource map for the whole of South Africa	Working from home delayed the completion of desktop activities with final reports submitted by March 2021. Onsite trainings and knowledge transfer was not possible due to travel restrictions, virtual training were conducted.	4 wind masts under WASA 3 are in operation since Nov 2018 with equipment and data acquisition to MEASNET guidelines and IEC 61400 standards. There are total 19 wind masts operational currently under 3 phases of WASA)	The project has achieved outcomes/outputs under this component. WASA now covers 3 more provinces than initially envisaged.
Strategic wind corridors/are as identified and formally approved for all WASA sites.	2.2. WASA data processed to produce high-resolution wind resource map covering the whole nation 2.3 Enhanced capacity within Government to use wind atlas data for energy	Scope not revised	Status: indicator needs to be updated accordingly		Apart from covering all of South Africa inland area, the WASA 3 generalised wind climates and resource maps also cover 200 nautical miles offshore (the exclusive economic zone) that is expected to increase interest to investigate the offshore wind potential. The WASA 3 final reports are available on the WASA 3 download site http://wasadata.csir.co.za/wasa1/WASAData	

	planning at policy and strategic level				<p>WASA forms the basis for the identification of areas for the Strategic Environmental Assessment for wind and solar energy (SEA, Phase 1 (2015) and 2 (2019)) of the DFFE and in support of the IRP 2019 (Oct 2019) with 14.4 GW new wind development by 2030: <i>“The Wind Atlas developed for South Africa provides a basis for the quantification of the potential that wind holds for power generation elsewhere in the country, over and above the prevalence of the wind resource around the coastal areas.”</i></p>		
Component 3: Support for the development of the small-scale wind sector							
Capacity developed among relevant stakeholders on technical, financial, regulatory and socio-economic	3.1 Establishment of small-scale wind demonstration projects (electric, water pumping): at-least 2	Scope revised. Initial feasibility report recommended expanded scope under this component. The component was thus revised to include	Most of the activities are work in progress at the MTR stage.	Covid-19 delayed project implementation as site work was not allowed during lockdown, also procurement activities were	<p>UB Mini-grid project: expected to be commissioned by Dec 2021</p> <p>UB Mini-grid M&E: contract awarded, work to initiate once project is commissioned and operational</p>		Many of the activities are still work in progress. Until demonstration projects are successfully implemented and are operational for sufficient amount of time, it would be difficult to derive learning from these projects.

aspects of small-scale wind projects.	3.2 Publicly available M&E Report on demonstration on small-scale wind farm project.	demonstration projects (small wind energy project as a part of mini-grid project and wind based water pumping projects in government institutions including schools). Other additions in the scope included <i>"Feasibility study to determine market potential and viability to establish a wind turbine refurbishment industry in South Africa"</i>		also impacted during lockdown period.	Schools Small Scale Wind (electric) water pumping projects: contract awarded, expected to be commissioned by Dec 2021 <i>"Macroeconomic, Market intelligence and Policy Analysis study to determine potential markets for refurbished wind turbines in key Sub-Saharan countries/regions"</i> Draft report was prepared and discussed with key stakeholders		The project has put in place processes and necessary resources allocation at the time of project closure to see conclusion of these projects, however there is underachievement under this component.
Component 4: Training and human capital development for the wind energy sector							
Enhanced local stakeholders' capacity to manage, operate and maintain wind	4.1 Number of Tertiary institutions e.g. TVETs = maximum 5.	By the project started, a number of technical institutions had started providing wind energy sector related technical	Due to progress already taken place at the time of project start, the component	Due to Covid-19 most of the technical institutions were closed during 2020-21 or offered	24 students (9 female students) were sponsored by the project to undergo WTSR training at SARTEC. In process:		The component was appropriately restructured based on initial conditions. The work under this component has also been impacted by lesser demand for technical resources in

<p>farms in a given area based on best practice models developed in other countries.</p>	<p>4.2 Number of WTST students supported and graduated 24 (30% female)</p> <p>4.3 Number of graduate and post graduate students wind energy training sponsorships (60)</p>	<p>training with funding from other donor agencies.</p> <p>One such institution is SARETEC which provides a five-month full-time Wind Turbine Service Technician (WTST) training with 2 months of work placement, as well as short technical courses.</p> <p>In view of these changes, scope under this component was revised to support/sponsor students for such programs.</p>	<p>was reoriented to focus on financial support for students, workplace placement and support, and financial support for WindAc (SARETEC-organised) and Windaba (SAWEA-organised) events (2016, 2017, and 2018)</p>	<p>virtual classes. The students were originally supposed to graduate by June/August 2020. However due to Covid-19, graduation was delayed till Nov 2020/Feb 2021.</p>	<p>UNDP and the DTU have signed a contract on 30 September 2021 for 28 qualifying South Africans, targeting lecturers at SA tertiary institutions that are currently teaching wind energy related course(s), to undergo the DTU WASP 8 week online wind resource assessment course that will enable them to implement/incorporate WASP wind resource assessment with WASA data thereby enhancing the respective wind courses at these tertiary institutions for the students to benefit from.</p> <p>SARETEC agreed to support the SAWEA WindAc 2021 (5,6 and 7 Oct 2021) through and amendment 2 to the UNDP CPUT (SARETEC) LoA that was signed by the end of September 2021.</p>		<p>the industry. However systems and processes evolved for wind energy technical training programs are helpful for any future demand expansion in South Africa.</p> <p>Sponsorships for students (including women) along with support for awareness programs under this component are useful building local capabilities and thus supporting wind energy sector development in South Africa.</p> <p>It may be noted that the most of the trained students were provided employment by OEMs subsequent to training program completion.</p>
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As per the Project Closure Report (October 2021), following activities are still work in progress:

Table 11: Pending activities at the time of project closure

Activities
<p>Component 2:</p> <ul style="list-style-type: none"> • The WASA 3 Final Virtual Wind Seminar to take place on 4 Oct 2021 and design and printing of the WASA 3 book to be completed by Oct, November 2021.
<p>Component 3:</p> <ul style="list-style-type: none"> • Development of M&E system for the UB mini-grid project is currently work in progress. The M&E system is expected to be in place by 31 Dec 2021. • Implementation of UB mini-grid project: The project is expected to be operational by December 2021 and a formal community handover is expected by March 2022. • Chris Hani District Municipality (CHDM) Schools small scale wind (electric) wind water pumping: expected to be operational by December 2021.
<p>Component 4:</p> <ul style="list-style-type: none"> • DTU Online WAsP wind resource assessment course making use of WASA information, data, and examples for 28 South Africans, targeting lecturers at local tertiary institutions contract ending 31 Dec 2021. • SAWEP Communication and Events Service Provider, Litha, contract ending 31 Dec 2021. Litha to provide communication and event services with the handover of the CHDM Schools small scale wind (electric) wind water pumping systems by November/December 2021 and UB Mini-grid Wind farm commissioning by Dec 2021.

TE comments: Tentative timelines (except for component 2) proposed in the Project Closure Report seem aggressive. These activities are expected to be further delayed. This section can be updated based on actual progress at the time of closing the final TE report.

3.3.2 Relevance

The key criteria for assessing the project relevance have been defined in the UNDP guidance for terminal evaluations as follows: • the extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time; • the extent to which the project is in line with the GEF Operational Programs or the strategic priorities under which the project was funded. Further it is noted that, retrospectively, the question of relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances.

During the TE phase, all evidence (document review and stakeholder interviews) showed that the project is very relevant to the government of South Africa and addressed relevant topic of renewable energy promotion to diversify energy mix and GHG mitigation using renewable energy. The primary objective of SAWEF II is to assist the Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa's Integrated Resource Plan target of 3,320 MW of wind power generation online by 2018/19. This was to have the effect of contributing to a further reduction of CO2 emissions and increased socio-economic development. Hence, the project is well aligned with South Africa's: i) NDP 2030, ii) IPR 2010 and IPR 2019, and iii) climate change mitigation goals under the draft NDC 2021.

The project is relevant to GEF Climate Change focal area's CCM 3 - Investment in renewable energy technologies increased and Favourable policy and regulatory environment created for renewable energy investments. The project has also been highly relevant to UNDP activities in South Africa. It is well aligned with UNDP Priority Area 2: 'Climate change and greening South Africa's economy to support the South African Government to grow its ecological footprint, elaborating its intent to contribute to a cleaner and greener global environment'.

The ProDoc does not explicitly refer to the SDGs, maybe because it was not a requirement to do so at the time of ProDoc formulation. Based on project design, the TE can confirm that the SAWEF II addresses several SDGs including SDG 7: Affordable and Clean Energy, SDG 9: Industry, Innovation, and Infrastructure, SDG 13: Climate Action and SDG 1: No Poverty, both directly as well as indirectly.

By taking into account all of the above and as further confirmed by the interviews during the project evaluation mission as well as by the observations of the project mid-term evaluation, the project can be considered as fully relevant (R) addressing some key barriers to exploit the vast, still not fully utilised wind energy potential in South Africa, while also contributing to the national strategic priorities in the energy and environmental field together with those of the UNDP and the GEF. No such changes have taken place in the project environment and other circumstances during its implementation either that would have diminished this relevance.

Considering the above-mentioned facts, the project is considered Relevant.

3.3.3 Effectiveness

The Project has been able to achieve its overall objective of SAWEF-II project to assist Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa's IRP (2010) target of 3,320 MW of wind power online by 2018/2019". As on 31st December 2020, total wind power

generation procurement capacity in South Africa stands at 3466 MW⁸. The project has supported development of wind resources atlas covering newer areas, activities to support small wind energy deployment, and scholarships to students to undergo wind energy training programs.

Project suffered due to various factors including delayed start due to late hiring of project manager, covid-19 pandemic, and procurement delays in selection of vendor for small wind energy projects. At the time of writing TE report, small wind energy demonstration projects were not operational though progress was made in terms of contracting identified vendors, and start of implementation by project closure, and development of M&E and structure for continued support.

Nonetheless, the project has made significant progress to support wind energy project in South Africa. This will have long term positive impact in energy sector of the country and will also impact in Climate Change of global concern. The project is considered as an important driver for wind energy sector development in South Africa. The project has made significant contribution towards wind resource assessment, creating enabling environment for small-scale wind sector development, and capacity building of technical manpower in the country.

Considering the above-mentioned facts, Effectiveness was rated moderately satisfactory (MS).

3.3.4 Efficiency

Project efficiency is a measure of how economically resources and inputs (funds, expertise, time, etc.) are converted to results.

Though the project suffered due to a delayed start and covid-19 pandemic, the components 1, 2 and 4 of the revised Result Framework have been completed and have utilised resources in an efficient manner. The co-financing has materialized in line with what was expected in the project document.

On component 3, project has made progress on all elements, however at the time of project closure none of the demonstration project is operational. Hence some of the aspects, like learnings from such projects (implementation and operational stages), M&E are not complete.

On the fund utilisation part the Project appears to be efficient since it has been able to accomplish many of the desired outputs in the results framework while more than 94% of the GEF budget was utilised (including budget committed till 31st March 2022).

By considering the above, it can be concluded that in the light of the achieved overall results up to date and cost efficiencies, the overall efficiency of the project can be rated as moderately satisfactory (MS).

3.3.5 Overall Project Outcome

Assessment of outcomes	Rating
Relevance	Relevant
Effectiveness	Moderately Satisfactory
Efficiency	Moderately Satisfactory
Overall Project Outcome Rating	Moderately Satisfactory

⁸ <http://redis.energy.gov.za/power-producers/>

3.3.6 Sustainability: financial(*), socio-political(*), institutional framework and governance(*), environmental(*), overall likelihood of sustainability(*)

Sustainability is generally considered to be the likelihood of continued benefits after the project ends. Consequently, the assessment of sustainability considers the risks that are likely to affect the continuation of project outcomes.

Institutional and governance: There is a strong political will for the project at a national level demonstrated by various government policies and plans that lay the foundation for the promotion of wind energy in South Africa. The SAWEP II Project Steering Committee has representatives from a number of government departments including DMRE, DTI, DST, DHET and DEA. Rating: Likely

Financial: The South African REIPPPP has recently allocated wind energy projects under the Bid Window 5 and also the updated IRP has been gazetted. This programme will ensure continued local and foreign investment in the wind energy sector.

WASA 4 is expected to receive funding from the Danish Energy Agency. The Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT) and the Germany Lower Saxony State are the founder members of the UB Mini-grid. DEDEAT is working with the UB Mini-grid community stakeholders on a proposal for long term technical and capacity building support to the owners of the UB Mini-grid. This will ensure sustainability of the demonstration projects. On schools project- The CHDM representative is in discussions with the Eastern Cape Dept Public Works, Education and DEDEAT for the long term support of the schools projects.

Once operationalised, funding support for component 2 and 3 will definitely help in sustaining and expanding wind atlas project and small-scale wind energy projects in South Africa. Rating: Likely

Socio-economic: based on stakeholder inputs, it can conclude that the project has led to increased awareness about the benefits of using wind energy efficiently. Though relevant Government policies are now in place, there will still be a need for continued support for wind energy development in the near future. Rating: Likely

Environmental: Environment sustainability is one of the important elements of the project strategy. The project generates a positive environmental effect through promotion of wind energy for electricity generation. Based on the above, the environmental sustainability is rated Likely (L).

All these efforts are expected to sustain the impacts of the project beyond the project life. Governments buy-in and support of the project and the future of wind energy development in South Africa contributes positively to the sustainability of project and future work. Rating: satisfactory

3.3.7 Country Ownership

DMRE took the responsibility of project execution and its involvement in the project was on behalf of Government of South Africa, therefore Government has ownership in this project. There was an active

involvement of the government during the project design phase as well. The PSC had chairmanship with DMRE and involvement from other relevant ministries and government departments. The compositions of the PSC can be considered as adequate and indicative of country ownership.

As mentioned in PIRs, PSC minutes of meetings, and MTR as well as based on inputs from stakeholders during TE interviews, it may be said that the project did get desired support from DMRE. A strategic ownership by DMRE at a senior level was instrumental in fast decision making, detailed performance review, and possibly avoiding some of the shortcomings that the project faced. The Steering Committee brought together all relevant government representatives as well as representatives of other relevant stakeholders. When taking all this into account country ownership can be evaluated as high.

Document review and stakeholder inputs point to a high level of strategic ownership by the main executing partner and hence high-country ownership during the implementation phase.

3.3.8 Gender equality and women's empowerment

Gender mainstreaming: Gender as such is not reflected in the results framework, because at the time of project conceptualization (2015) there were no clear guidelines on including gender-relevant indicators in the results framework.

A gender analysis and training study was conducted during September 2018 which recommended updating of Result Framework to include gender disaggregated performance indicators. However, except for component 4: Training and human capital development for the wind energy sector, gender disaggregated indicators are not included or tracked in any M&E reports.

Out of 24 students who were supported with scholarship to undergo SARETEC Wind Turbine Service Technician Training (WTST) 9 were female students. Most of the sponsored students have been employed by OEMs. Apart from this, no gender disaggregated information is available for the project.

MTR suggested that the Result Framework should include gender relevant reporting and should also consider disaggregating data by age group. Revised Result Framework (April 2020), does not include gender relevant indicators for various components.

Despite lack of direct tracking of gender relevant indicators as a part of M&E reports, the project is expected to contribute to gender mainstreaming.

- Small scale wind demonstration projects are expected to provide sustainable source of energy generation, reduced pressure on women to collect wood for energy purposes, provide opportunities for self-employment and income generation. As these activities are still ongoing, the project team can try capture these details and document them once project is operational.
- 'Small wind power integration in the Upper Blinkwater (UB) Mini-grid project-June 2021' prepared by CSIR for the UNB mini-grid highlights key co-benefits including women empowerment, employment opportunities for women, and health benefits due to avoidance of wood use as primary energy source in the community.
- As a part of the project activities associated with the UB mini-grid project, CSIR will conduct a M&E study of the wind component of the mini-grid project by Dec 2021. The M&E study is also expected to identify benefits to women and youth.

- Training programs conducted by SARTEC are useful in developing trained people for the wind energy sector including female professionals.

3.3.9 Cross-cutting issues

The project was designed in a period when capturing broader development impacts (i.e., income generation, gender equality, and women empowerment, improved governance, livelihood benefits, resilience etc.) were not mandatorily required to be included the project design and project result framework. The ProDoc refers to these developmental issues, however these are not captured in the result framework (socioeconomic co-benefits and sex-disaggregated/gender-responsive indicators and targets).

However components of this project are expected to provide impetus to broader development issues including income generation, giving new opportunities for both youth and woman in particular, livelihood benefits.

Upper Blinkwater is a small rural village located within the Raymond Mhlaba Local Municipality, in the Province of the Eastern Cape, South Africa. The village is not grid-connected. As per the initial feasibility done by GIZ, there is little prospect of electrifying the village in the next ten years. Upper Blinkwater is geographically isolated, with sparsely scattered settlements and inadequate infrastructure development with limited accessibility. Every household uses wood as a primary energy resource.

UB mini-grid will provide energy access to local community. Once a community has access to electricity, it can also have access to safe potable water, better health conditions, food security, as well as lighting and information. Women are the key beneficiaries of the availability of and access to energy. Having access to electricity not only enables them to use appliances for cooking, lighting etc., but emancipates and empowers them, as it will release them from the long hours of household work and fuel collection and enable them to engage in income-generating activities within the home and community. It is therefore expected to help in improving quality of life and eradicating poverty.

3.3.10 Catalytic/replication Effects

Wind Atlas developed with support of SAWEP project has a high catalytic effect. The Wind Atlas will help in further scaling up and replication of wind energy projects in provinces which were not covered in earlier wind assessment programs. Similarly, small-scale wind demonstration projects will further promote small-scale wind projects by dissemination of learnings from pilot projects.

3.3.11 Progress to Impact

Project Objective: To assist the Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa's Integrated Resource Plan target of 3,320 MW of wind power generation online by 2018-19.

Indicators: Performance is from information provided in the Final Project Closure Report 2021

- Generation from wind farms (GWh) - produced or contracted by Year 4 of project implementation,
 - Target: 1,367 GWh cumulative by end- 2018.
 - Actual achievements: 31,200 GWh by December 2020

- Number of individuals benefiting from wind-generated electricity by Year 4 of project implementation.
 - Target: 74,230 individuals will benefit annually from project-supported new wind-generated electricity.
 - Actual achievements: 225,867 individuals
- Incremental tonnes of CO2 emissions reduction due to wind energy capacity contracted by Year 4.
 - Target: Direct greenhouse gas reductions of 70,378 tCO2 cumulative by end-2018 (using a conservative 5% project causality factor).
 - Actual achievements: 32,136,000 tCO2 avoided emissions, cumulative by December 2020

4 Main Findings, Conclusions, Recommendations, Lessons Learned

4.1 Main Findings

The project has achieved most of the outputs and outcomes, however demonstration projects under component 3 remain work in progress at the project closure stage. Support provided towards WASA, small wind energy deployment, and training & capacity development have contributed towards growth of wind energy sector in South Africa, hence project objective remains relevant.

Table 12: Evaluation Rating Table

1	Monitoring & Evaluation	Rating
	M&E design at entry	S
	M&E plan implementation	S
	Overall quality of M&E	S
2	Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	
	Quality of UNDP Implementation/Oversight	S
	Quality of Implementing Partner Execution	S
	Overall quality of Implementation/Execution	S
3	Assessment of Outcomes	
	Relevance	Relevant
	Effectiveness	MS
	Efficiency	MS
	Overall Project Outcome Rating	MS
4	Sustainability	
	Financial sustainability	S
	Socio-political sustainability	S
	Institutional framework and governance sustainability	S
	Environmental sustainability	S
	Overall Likelihood of Sustainability	S

Best Practice: Multi stakeholder participation and involvement in the project been successful. The lessons learned working with different government departments, educational institutes, other donor agencies in the country need to be adopted into other similar projects. Wind energy atlas is critical for utilisation of wind energy potential in the country.

Poor Practices: One of the single most limiting factors that created issues for project implementation and resulted in a lack of actual implementation of demonstration projects. Regular procurement models might not work when demonstration projects of this nature are setup, the market may lack sufficient resources as well as depth to bid for such projects. A more flexible approach wherein direct sourcing of equipment/services is adopted may be more apt for such projects.

4.2 Conclusions

The project has made important contributions towards growth of wind energy sector in South Africa. There is a significant progress made in all components especially in geographical expansion of wind resources

assessment, assessment of small-scale wind energy project potential, sponsorship support for student undergoing wind technology related training program. However, some of the outputs and outcomes remain work in progress at the project closure stage namely, implementation of small-scale wind energy demonstration projects. The project has made necessary resources allocation for work in progress components, and it is expected that remaining activities will be completed by March 2022.

Relevance

- The project's objectives are fully aligned with the GEF, Government of South Africa, and UNDP strategic priorities.
- By focusing on efficient use of wind energy, the project aimed to reduce GHG emission and contribute towards global climate change mitigation goals.

Effectiveness & Efficiency

- As some of the outcomes are still work in progress, the project has been moderately satisfactory in achieving its primary objectives.

Partnership and Cooperation

- The project has developed successful partnerships with several stakeholders including government agencies, industry partners, and other initiatives funded by donor agencies.
- The project has received desired strategic and technical support from DMRE as the key executing agency.

Poverty and Gender

- The project was designed in a period when capturing broader development impacts (i.e., income generation, gender equality, and women empowerment, improved governance, livelihood benefits, etc.) were not mandatorily required to be included the project design and project result framework.
- The ProDoc refers to these developmental issues, however these are not captured in the result framework (socioeconomic co-benefits and sex-disaggregated/gender-responsive indicators and targets).
- Except for one component, gender disaggregated information for performance indicators is not available in M&E reports.
- Despite lack of direct tracking of gender relevant indicators as a part of M&E reports, the project is expected to contribute to gender mainstreaming.

Sustainability

- The project has developed strong institutional and governance frameworks to support key interventions.
- No major risks to financial, socio-political, and environmental sustainability of the project results have been identified during the TE process.

Impact

- GHG emission reduction attributed to the project have been computed and found to be in line with targets set in the Project Document. In future, GHG emission reduction due to use of wind energy could be significant if sectoral development takes place as per current Government plans.

Recommendations

There are a number of actions, which should be followed up to achieve sustainable benefits from the Project.

Table 13: TE Recommendations

Rec #	TE Recommendations	Entity Responsible	Time frame ⁹
1	A number of activities remain work in progress and effort is required to ensure that all planned interventions achieve desired outcome. It is recommended that DMRE provides project management and supervision support to all remaining activities till March 2022 and beyond (ideally 12 months of supervision support).	DMRE	Dec 2022
2	The project has witnessed learning in terms of initiation of small-scale wind energy projects implementation (from conceptualisation to procurement of services to implementation. These learnings can be documented and shared with other agencies/countries to implementation of similar projects.	DMRE	March 2022
3	Knowledge material developed for activities must be documented and handed over to relevant partners and agencies including Government Departments. These knowledge materials and learning from the project can also be shared with other regional or local programs in Africa.	DMRE	March 2022
4	Though project was identified as having low social and environmental risks, it may be important to assess these aspects for demonstration projects. These learning will be useful for future development of small-scale wind energy projects in the country.	DMRE	March 2022
5	Terminal Evaluation has been conducted at the time when many activities under component-3 are still work in progress. An update to TE report can be provided once all activities are successfully implemented. This update could be in form of supplementary report to the TE report.	UNDP CO	April 2022
6	The project has not actively tracked impact on gender, poverty alleviation aspects, and youth as a	DMRE/CSIR	April 2022

⁹ Some of the recommendation require workshops or consultations, and due to covid-19 restriction a firm timeline is not included.

	part of Result Framework. However, many of the activities conducted in this project have had important impact on gender empowerment, supporting youth, and promoting economic activities. These aspects can be documented.		
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The suggested “follow-up project” may consist of the following elements:

- Follow-up project can focus on expansion of WASA project to cover newer areas including offshore wind energy, assess impact of climate change on medium- and long-term wind energy potential in the country, and assessment of wind potential at higher wind mast height levels to be able to utilise high-capacity windmills (>15-20 MW windmills).
- There is a good potential for a follow-up project to support refurbishment of older windmills of lower capacities with higher capacities.
- UNDP may need further provide handholding and support for an extended period of another 12 months to ensure completion of demonstration projects, documentation of key learning, knowledge dissemination and ensuring that project receive require operations and maintenance support for a continued period. Provision of this support is important to ensure small-scale projects are implemented and operational.

4.3 Lessons Learned

- There should be a strong focus on the inception phase especially if time has passed between PIF/ Project Document development and project start. The purpose of the inception phase is to set-up the project management system and to critically review the Project Document with key stakeholders involved in the implementation of the project. Changes since project definition, new challenges or wrong assumptions should be critically investigated and – where necessary – considered in the activities under the project.
- The Result framework should be revised at the inception phase itself with updating indicators properly based on learnings derived from the inception phase. Updating of the Result Framework should be done based on latest GEF-UNDP template. Project design, especially the Project Results Framework and the M&E system should include interim targets and milestones, as these help project team take necessary adaptive actions as required during project implementation.
- Hiring of project staff should start much earlier. Ideally based on the progress of PIF approval process, recruitment process can be initiated so that project team is in place as soon as project is approved.
- The project witnessed delays due to procurement. One of the reasons for procurement delays was a lack of capacity for such procurement at the IP level. In future, for similar projects an IP capacity assessment can be done at the start of the project to identify areas where some additional support or capacity building is required.

- UNDP was expected to provide oversight role, however due to lack of procurement capacity at IP level, UNDP had to also provide implementation support in the areas of procurement, financial management, contract management. It is important that oversight and implementation roles are separate. In future for such situations, a third party can be engaged to provide support in the areas where IP lacks capacities.
- Procurement models should be more flexible when trying to implement demonstration projects. For a new technology demonstration, local market may not have necessary players or resources.

Annex 1: Terms of Reference (TOR)

Terminal Evaluation for the UNDP-supported GEF-financed full-sized project titled South Africa Wind Energy Project (SAWEP) - Phase II (PIMS 5256)

1 INTRODUCTION

In accordance with the United Nations Development Programme (UNDP) and Global Environment Facility (GEF) Monitoring & Evaluation (M&E) policies and procedures, all full- and medium-sized UNDP-supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the *full-sized* GEF-funded project titled South Africa Wind Energy Project (SAWEP) - Phase II (*PIMS 5256*) implemented through the Department of Minerals and Energy (DMRE) in South Africa. The TE process must follow the guidance outlined in the document 'Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects' (see http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf)

2 PROJECT BACKGROUND AND CONTEXT

SAWEP Phase II, a successor to SAWEP Phase I, was formulated by UNDP and the South African Department of Energy (DoE, now DMRE) during 2013-14 with financial support provided by the GEF. The project document was signed on the 18th of December 2015 and the actual date of first disbursement was the 28th of September 2016. Implementation started de facto in the second half of 2016 with an agreement with the South African National Energy Development Institute (SANEDI) to provide project management services and with the Inception Workshop held in October 2016.

The objective of the SAWEP II project *“to assist Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa’s Integrated Resource Plan (IRP) (2010) target of 3,320 MW of wind power online by 2018/2019”*.

The objective of SAWEP II project is being achieved through four components: 1) Monitoring and Evaluation of the implementation of local content requirements; 2) Resource-mapping and wind corridor development support for policymakers; 3) Support for the development of small-scale wind sector; 4) Training and human capital development for the wind energy sector.

The period between project preparation (2013-2014) and de facto start of activities (2016), saw the successful implementation of four bidding windows under the South Africa’s Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) during 2011-2015, which boosted large-scale grid-connected wind power development in the country. This contributed to changes in the importance and allocation of resources across the four project components but without a change in the overall scope (as determined in the mid-term review). This was also one of the contributing factors to SAWEP II’s first extension. The following contextual developments have also been key to large scale wind development in South Africa: the signature of bid windows 3.5 and 4 of the REIPPPP on 18 April 2018; the launch of South Africa’s Integrated Resources Plan (IRP 2019) in October 2019 with the allocation of 14,4 GW new wind development by 2030; and the issuing of REIPPPP bid window 5 Request for Proposals on 12 April 2021.

The TE should seek to assess how the aspects above have affected the project, as well as assessing the revised project scope’s ability to meet project objectives and targets.

2.1 Changes to project components based on mid-term review report and update

There were several changes in scope across the project, most notably under Component 3 and Component 4. For example, in regard to Component 3, Eastern Cape Authorities requested diversification of the application of small scale wind for water pumping at local government institutions such as schools that are dependent on rainwater, and comparing it with solar PV water pumping for potential better decision-making for government support of rural water supply options. For Component 4, the project expanded training opportunities (post-graduate student training), and also sponsored high profile wind energy events. SAWEP also supported the development of the South African Renewable Energy Master Plan (SAREM). These, and other changes in scope, have been well documented (e.g. in progress reports, Project Board Meeting minutes and briefs) for sharing with the evaluation team.

2.2 COVID-19 implications in South Africa and impact on project components

The advent of the COVID-19 pandemic has been a serious challenge to South Africa and it has drastically affected its development trajectory. The government has put several measures such as restricted movements within the country, and from abroad to South Africa. On 23 March 2020, the President of South Africa announced a national lockdown at national alert level 5 that was lowered to national alert level 3 from 1 June 2020, to 2 from 17 August and 21 September 2020, restrictions were lowered to alert level 1. In December 2020, the country experienced a second wave of COVID-19 infections. The lockdown was tightened from an adjusted level 1 to an adjusted level 3 starting on 29 December 2020. The lockdown was lowered from an adjusted level 3 to an adjusted level 1 starting on 1 March 2021. On 17 February 2021, the national COVID-19 vaccination program was officially rolled out. As of May 2021, South Africa has the highest number of confirmed COVID-19 cases in Africa and 10th highest number of confirmed infections worldwide (26 May 2021). As at June 2021, the country is currently entering a 3rd COVID-19 wave.

2.3 Current project extension

The result of the COVID-19 impact led to the DMRE request in December 2020 for a 2nd extension to end of June 2021 in order to complete WASA 3 as well as to allow sufficient time for engineering, procurement and commissioning of the small-scale wind energy pilot projects (in lieu of knock-on effects of supply chain and travel restrictions).

3 TERMINAL EVALUATION PURPOSE

The TE report will assess the achievement of project results against what was expected to be achieved and draw lessons and best practices that can improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments.

Terminal Evaluations for GEF-financed projects have the following complementary purposes:

- To promote accountability and transparency;
- To synthesize lessons that can help to improve the selection, design and implementation of future UNDP-supported GEF-financed initiatives; and to improve the sustainability of benefits and aid in overall enhancement of UNDP programming;
- To assess and document project results, and the contribution of these results towards achieving GEF strategic objectives aimed at global environmental benefits;
- To gauge the extent of project convergence with other priorities within the UNDP country programme, including poverty alleviation; strengthening resilience to the impacts of climate change, reducing disaster

risk and vulnerability, as well as cross-cutting issues such as gender equality, empowering women and supporting human rights.

It is advised that the TE should take place during the last few months of project activities, allowing the TE team to proceed while the Project Team is still in place, yet ensuring the project is close enough to completion for the evaluation team reach conclusions on key aspects such as project sustainability.

4 TERMINAL EVALUATION APPROACH & METHODOLOGY

The TE report must provide evidence-based information that is credible, reliable and useful.

The TE team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team will review the baseline and mid-term GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement and mid-term stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins. For the SAWEF project, this relates to a Tracking Tool for Climate Change Mitigation Projects.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP CO, the Regional Technical Advisor, direct beneficiaries and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to:

- Department of Mineral Resources and Energy (DMRE), formerly Department of Energy (DoE)
- South African National Energy Development institute (SANEDI)
- Department of Science and Innovation (DSI)
- The Department of Trade, Industry and Competition (the dtic)
- Department of Forestry, Fisheries and the Environment (DFFE), Formerly Department of Environmental Affairs (DEA)
- Department of Higher Education and Training (DHET)
- Independent Power Producers Procurement Programme (IPPPP) Office
- Council for Scientific and Industrial Research (CSIR)
- South African Weather Service (SAWS)
- University of Cape Town (UCT)
- University of Stellenbosch
- Nelson Mandela University
- University of Fort Hare
- Technical University of Denmark (DTU), Wind Energy Department
- Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT)
- GIZ South Africa
- Raymond Mhlaba Local Municipality
- Chris Hani District Municipality
- Embassy of Denmark - Pretoria
- South African Renewable Energy Technology Centre (SARETEC)
- South African Wind Energy Association (SAWEA)

Additionally, the TE team is expected to conduct field missions to SARETEC (Western Cape Province), including the following project sites¹⁰:

- Wind Atlas for South Africa: Wind Measurements masts (18) spread over the Northern, Western, and Eastern Cape Provinces, KwaZulu-Natal and Free State Provinces;
- Upper Blinkwater Minigrid near Fort Beaufort (Eastern Cape Province); and
- Schools for Small Scale Wind Water Pumping: Matyantya JS and Kleinbooi JS near Queenstown (Eastern Cape Province).

The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, social and environmental issues are assessed as well as other cross-cutting issues and SDGs are incorporated into the TE report.

The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Inception Report and be fully discussed and agreed between UNDP, stakeholders and the TE team.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

Covid-19 considerations

If it is not possible to travel to or within the country for the evaluation then the evaluation team should develop a methodology that takes this into account the conduct of the evaluation virtually and remotely, including the use of remote interview methods and extended desk reviews, data analysis, surveys and evaluation questionnaires. This should be detailed in the Inception report and agreed with the Evaluation Manager.

If all or part of the evaluation is to be carried out virtually then consideration should be taken for stakeholder availability, ability or willingness to be interviewed remotely. In addition, their accessibility to the internet/computer may be an issue as many government and national counterparts may be working from home. These limitations must be discussed at the inception meeting and reflected in the evaluation report.

If a data collection/field mission is not possible then remote interviews may be undertaken through telephone or online (skype, zoom etc.). International consultants can work remotely with national evaluator support in the field if it is safe for them to operate and travel. No stakeholders, consultants or UNDP staff should be put in harm's way and safety is the key priority.

A short validation mission may be considered if it is confirmed to be safe for staff, consultants, stakeholders and if such a mission is possible within the evaluation schedule. Equally, qualified and independent national consultants can be hired to undertake the evaluation and interviews in country as long as it is safe to do so.

5 DETAILED SCOPE OF THE TERMINAL EVALUATION

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects:

http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf

¹⁰ The timing of project site visits will be subject to the COVID-19 situation at the project sites, and must follow Government recommendations.

5.1 Scope of the Terminal Evaluation

The findings section of the TE report will cover the topics listed below. A full outline of the TE report's content is provided in ToR Annex C.

The asterisk “(*)” indicates criteria for which a rating is required.

Findings - the TE should assess:

i. Project Design/Formulation

- National priorities and country ownership
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Standards (Safeguards)
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks, and risk management
- Lessons from other relevant projects (e.g. same focal area) incorporated into project design
- Stakeholder participation
- Linkages between the project and other interventions in the sector
- Management and supervision arrangements

ii. Project Implementation

- Adaptive management (changes to the project design, project outputs and timelines during implementation as well as mitigation and management of project delays)
- Actual stakeholder participation and partnership arrangements
- Project Finance and Co-finance
- Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)
- Implementing Agency (UNDP) (*) and Executing Agency (*), overall project oversight/implementation and execution (*)
- Risk Management, including Social and Environmental Standards (Safeguards)

iii. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (*), Effectiveness (*), Efficiency (*) and overall project outcome (*)
- Progress to sustainability: financial (*), socio-political (*), institutional framework and governance (*), environmental (*), overall likelihood of sustainability (*)
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.

- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses and results of the project, respond to key evaluation questions and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to incorporate gender equality and empowerment of women.
- Main findings, conclusions, recommendations and lessons learned should also account for findings and recommendations from a recent GEF audit.

The TE report will include an Evaluation Ratings Table, as shown below:

Table 14. Evaluation Ratings Table for SAWEP Phase 2.

Monitoring & Evaluation (M&E)	Rating ¹¹
M&E design at entry	
M&E Plan Implementation	
Overall Quality of M&E	
Implementation & Execution	Rating
Quality of UNDP Implementation/Oversight	
Quality of Implementing Partner Execution	
Overall quality of Implementation/Execution	
Assessment of Outcomes	Rating
Relevance	
Effectiveness	
Efficiency	
Overall Project Outcome Rating	
Sustainability	Rating
Financial resources	
Socio-political/economic	
Institutional framework and governance	
Environmental	
Overall Likelihood of Sustainability	

¹¹ Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight & Execution, Relevance are rated on a 6-point scale: 6=Highly Satisfactory (HS), 5=Satisfactory (S), 4=Moderately Satisfactory (MS), 3=Moderately Unsatisfactory (MU), 2=Unsatisfactory (U), 1=Highly Unsatisfactory (HU). Sustainability is rated on a 4-point scale: 4=Likely (L), 3=Moderately Likely (ML), 2=Moderately Unlikely (MU), 1=Unlikely (U)

6 TIMEFRAME

The total duration of the TE will be approximately 20 working days over a time period of 5 weeks starting on 5 July 2021. The tentative TE timeframe is as follows:

Table 15. Tentative TE timeline

Timeframe	Activity
21 June 2021	Application closes
28 June 2021	Selection of TE team
5 July 2021	Preparation period for TE team (handover of documentation)
8 July 2021	Document review and preparation of TE Inception Report
12 July 2021	Finalization and Validation of TE Inception Report; latest start of TE mission
26 July 2021	TE mission: stakeholder meetings, interviews, field visits, etc.
30 July 2021	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
17 August 2021	Preparation of draft TE report
20 August 2021	Circulation of draft TE report for comments
6 September 2021	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report
9 September 2021	Preparation and Issuance of Management Response
10 September 2021	Concluding Stakeholder Workshop (optional)
13 September 2021	Expected date of full TE completion

Options for site visits should be provided in the TE Inception Report.

7 TERMINAL EVALUATION DELIVERABLES

Table 16. TE deliverables.

#	Deliverable	Description	Timing	Responsibilities
1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	No later than 2 weeks before the TE mission: (9 July 2021)	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	End of TE mission: (30 July 2021)	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report (<i>using guidelines on report content in ToR Annex C</i>) with annexes	Within 3 weeks of end of TE mission: (20 August 2021)	TE team submits to Commissioning Unit; reviewed by RTA, Project Coordinating Unit, GEF OFP
5	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report (<i>See template in ToR Annex H</i>)	Within 1 week of receiving comments on draft report: (9 September 2021)	TE team submits both documents to the Commissioning Unit

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.¹²

¹² Access at: <http://web.undp.org/evaluation/guideline/section-6.shtml>

8 TERMINAL EVALUATION ARRANGEMENTS

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is the UNDP Country Office. The Commissioning Unit will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

9 TERMINAL EVALUATION TEAM COMPOSITION

An independent team consisting of two evaluators will conduct the TE – one team leader (with experience and exposure to projects and evaluations in other regions) and one team expert, usually from the country of the project. The team leader will be responsible for the overall design and writing of the TE report, etc.) The team expert will assess emerging trends with respect to regulatory frameworks, budget allocations, capacity building, work with the Project Team in developing the TE itinerary, etc.

The evaluator(s) cannot have participated in the project preparation, formulation and/or implementation (including the writing of the project document), must not have conducted this project's Mid-Term Review and should not have a conflict of interest with the project's related activities.

The selection of evaluators will be aimed at maximizing the overall "team" qualities in the following areas:

Education

- Master's degree in Engineering, Energy, Finance, Economics, Physics, Environment or Development Studies, or other closely related field;

Experience

- Relevant experience with results-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to Climate Change;
- Experience in evaluating GEF projects;
- Experience working in South Africa;
- Experience in relevant technical areas for at least 10 years (experience in small-scale wind energy and mini-grids, as well as wind skills capacity building will be an added advantage)
- Demonstrated understanding of climate change;
- Experience in gender responsive evaluation and analysis;
- Excellent communication skills;
- Demonstrable analytical skills;
- Project evaluation/review experience within United Nations system will be considered an asset.

Language

- Fluency in written and spoken English.

10 EVALUATOR ETHICS

The TE team will be held to the highest ethical standards and is required to sign a code of conduct upon acceptance of the assignment. This evaluation will be conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The evaluator must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The evaluator must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

11 PAYMENT SCHEDULE

- 20% payment upon satisfactory delivery of the final TE Inception Report and approval by the Commissioning Unit
- 40% payment upon satisfactory delivery of the draft TE report to the Commissioning Unit
- 40% payment upon satisfactory delivery of the final TE report and approval by the Commissioning Unit and RTA (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail

Criteria for issuing the final payment of 40%¹³:

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e. text has not been cut & pasted from other TE reports).
- The Audit Trail includes responses to and justification for each comment listed.

12 APPLICATION PROCESS¹⁴

Recommended Presentation of Proposal:

- a) **Letter of Confirmation of Interest and Availability** using the [template](#)¹⁵ provided by UNDP;
- b) **CV** and a **Personal History Form** ([P11 form](#)¹⁶) (highlighting the Team Lead, and Team Members' qualifications and experience in similar projects);
- c) Brief description of **approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
- d) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc), supported by a breakdown of costs, as per template attached to the [Letter of Confirmation of Interest template](#). If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted **through the e-tendering system**

(<https://etendering.partneragencies.org>) on or before the **21st of June 2021 5 pm SAST**. Incomplete applications or applications submitted via email will be excluded from further consideration.

¹³ The Commissioning Unit is obligated to issue payments to the TE team as soon as the terms under the ToR are fulfilled. If there is an ongoing discussion regarding the quality and completeness of the final deliverables that cannot be resolved between the Commissioning Unit and the TE team, the Regional M&E Advisor and Vertical Fund Directorate will be consulted. If needed, the Commissioning Unit's senior management, Procurement Services Unit and Legal Support Office will be notified as well so that a decision can be made about whether or not to withhold payment of any amounts that may be due to the evaluator(s), suspend or terminate the contract and/or remove the individual contractor from any applicable rosters. See the UNDP Individual Contract Policy for further details:

https://poppp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Individual%20Contract_Individual%20Contract%20Policy.docx&action=default

¹⁴ Engagement of evaluators should be done in line with guidelines for hiring consultants in the POPP <https://poppp.undp.org/SitePages/POPPRoot.aspx>

¹⁵ <https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx>

¹⁶ http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

If you face any difficulties in accessing or registering on the system or submitting your proposal, please contact procurement.enquiries.za@undp.org **well in advance** before the submission deadline, to ensure that any technical issues can be resolved before the procurement notice closes. Proposals after the deadline will **not** be accepted.

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

13 TOR ANNEXES

- ToR Annex A: Project Logical/Results Framework
- ToR Annex B: Project Information Package to be reviewed by TE team
- ToR Annex C: Content of the TE report
- ToR Annex D: Evaluation Criteria Matrix template
- ToR Annex E: UNEG Code of Conduct for Evaluators
- ToR Annex F: TE Rating Scales
- ToR Annex G: TE Report Clearance Form
- ToR Annex H: TE Audit Trail

ToR Annex A: Project Logical/Results Framework

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: Stabilisation and reduction of carbon emissions, and climate change mitigation and adaptation strategies fully operational. By 2016, the governance systems, use of technologies and practices and financing mechanisms that promote environmental, energy and climate adaptation have been mainstreamed into national development plans.					
Country Programme Outputs: Design of scaling-up programmes for energy technologies, financing options for PPs ; design and implementation of capacity development programmes/integrated energy policy; implementation of scaling-up technologies					
Primary applicable Key Environment and Sustainable Development Key Result Area:					
1. <u>Mainstreaming environment and energy</u> OR 2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor.					
Applicable GEF Strategic Objective and Programme: GEF Focal Area Objective #3 to “Promote Investment in Renewable Energy Technologies” of the GEF-5 Climate Change Strategy.					
Applicable GEF Expected Outcomes: <ul style="list-style-type: none"> Favourable policy and regulatory environment created for renewable energy investments Investment in renewable energy technologies increased GHG emissions avoided 					
Applicable GEF Outcome Indicators: <ul style="list-style-type: none"> Extent to which policies and regulations for decentralized RE are adopted and enforced; Volume of investment mobilized; and Tonnes of CO2-equivalent avoided. 					
Objectives/Outcomes	Indicators	Baseline (Year 0)	Target	Sources of Verification	Assumptions
Project Objective: To assist the Government and industry stakeholders overcome strategic barriers to the successful attainment of South Africa’s Integrated Resource Plan target of 3,320 MW of wind power	Generation from wind farms (GWh) - produced or contracted by Year 4 of project implementation. Number of individuals benefiting from wind-generated electricity by	1,983 MW from W1 to W3 of REIPPPP. 980,990 individuals benefit per year from wind-generated electricity	1,367 GWh cumulative by end-2018. 74,230 individuals will benefit annually from project-supported new wind-generated	DoE IPP Unit reports Eskom System Operations	Production estimate based on Bidding Windows 1, 2 and 3 (BW1, BW2 and BW3) capacity and average capacity factor of 26%.

generation online by 2018/19.	Year 4 of project implementation. Incremental tonnes of CO2 emissions reduction due to wind energy capacity contracted by Year 4.	installed under W1-W3 of REIPPPP. ⁴³ 102,423,216 tCO2 over 20 years, as at 2017	electricity. ⁴⁴ Direct greenhouse gas reductions of 70,378 tCO2 cumulative by end-2018 (using a conservative 5% project causality factor).		
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Component 1: Monitoring and verification of the implementation of local content requirements for wind energy procurement mechanisms

Objectives/Outcomes	Indicators	Baseline (Year 0)	Target	Sources of Verification	Assumptions
Mechanisms in place for objective, evidence-based assessment and verification of progress in implementing localisation initiatives, taking into account any correlations between local content requirements, investment metrics (e.g. generation capacity, financial returns, costs, prices, etc) and socio-economic development (e.g. employment creation).	Detailed assessment on economic, socio-economic and enterprise development impacts of REIPPPP	<p>1. GIZ-supported reporting system in place at DoE IPP Unit. Quarterly reports filed by IPPs but no verification. No systematic review and consolidation of lessons learned.</p> <p>2. Implementation of a Climate Change Mitigation M&E system by DEA, expected to become operation mid-July 2015⁴⁵.</p>	<p>1.1 Enhanced capacity of DoE IPPP Office to strengthen M&V system</p> <p>1.2 Quarterly reports since 2015 on REIPPPP progress in RE, including wind, localisation and socio-economic development (SED) published.</p>	<p>At least one report containing assessment, analysis, and recommendations</p> <p>REIPPPP reports / discussions with DoE IPP Unit;</p>	<p>M&V system will be compatible with GIZ-sponsored Reporting System used by DoE IPP Unit and DEA's Climate Change Mitigation M&E (CCM M&E) system that is expected to become operational in 2015. It is also expected that the CCM M&E system will be used to assess the CO2 emissions effects of localisation.</p> <p>M&V system to focus on at least: (i) additional investments (ZAR billions) in wind farms by Year 4 of project implementation; (ii) trends in share of procurement</p>

⁴³ Estimated as follows: 1,983 MW of wind to be installed under Windows 1-3 of the REIPPPP. With an average capacity factor of 26%, this implies 4,516 GWh of wind-generated electricity per year. Annual per capita electricity consumption in South Africa (2011) is 4,604 kWh (i.e. 0.004604 GWh). This implies the electricity generated by wind is sufficient to provide the equivalent of 980,990 individuals with their annual electricity needs.

⁴⁴ Using a similar estimation methodology: 1,367 GWh to be generated cumulatively by project-supported new wind capacity, implying an annual average of 342 GWh – equivalent to the average annual electricity consumption of 74,230 South Africans.

⁴⁵ This will be complemented by a process to determine Desired Emission Reduction Objectives (DEROs), which is expected to be completed by end-2014, as well as the planned update of South Africa's GHG inventory.

⁴⁶ For the benefit of at least DoE, DTI, SAWEA and participating local manufacturers.

					spend attributed to locally-produced components and related services, taking into account DTI's Localisation Roadmap; (iii) trends in REIPPPP prices correlated with requirements for local procurement of components; and, (iv) trends in socio-economic development, job-creation, and enterprise development.
Component 2: Resource-mapping and wind corridor development support for policy-makers					
Objectives/Outcomes	Indicators	Baseline (Year 0)	Target	Sources of Verification	Assumptions

Expanded verified wind atlas (WASA ⁴⁷) completed for additional provinces in support of future wind power project development and procurement mechanisms.	2.1 Four masts and related equipment installed in the Northern Cape in WASA 3 bringing total WASA masts to 19	2.1 The installation of 5 masts and related equipment and systems required for the DANIDA-sponsored phase two of WASA (WASA II) underway from mid-2014. Focus on Eastern Cape, KZN and Free State provinces.	2.1 Geographical extension of verified Wind Atlas (WASA) developed for Northern Cape	WASA 3 PIU reports; WASA website.	WASA 3 PIU established at SANEDI will coordinate the implementation of SAWEP II-sponsored WASA 3 sites.
Strategic wind corridors/areas identified and formally approved for all WASA sites.	2.2: Completed and validated high- resolution wind resource map and database Wind energy development focus areas defined in SEA Phase 2	2.2 DEA, CSIR and Eskom scheduled to complete development of WASA I (REDZs) during second half of 2014.	2.2. WASA data processed to produce high- resolution wind resource map covering the whole nation. 2.3 Enhanced capacity within Government to use wind atlas data for energy planning at policy and strategic level	Project reports from DEA. Relevant website(s). IRP 2019	Methodologies similar to those used in the development of WASA I REDZs will be applicable.

⁴⁷ Wind Atlas of South Africa.

Component 3: Support for the development of the small-scale wind sector					
Objectives/Outcomes	Indicators	Baseline (Year 0)	Target	Sources of Verification	Assumptions

Capacity developed among relevant stakeholders on technical, financial, regulatory and socio-economic aspects of small-scale wind projects.	At least two small- scale wind farm demonstration projects developed in Eastern Cape and monitored	No small-scale wind farms installed. GIZ support for SALGA and AMEU ⁵⁰ towards integration of small-scale solar PV in municipal distribution systems, as well as DTI's study on small-scale RE.	3.1 Establishment of small-scale wind demonstration projects (electric, water pumping) 3.2 Publicly available Monitoring and Evaluation (M&E) Report on demonstration small-scale wind farm project.	SAWEP II project reports.	SAWEP II's role will be limited to technical assistance only.
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Component 4: Training and human capital development for the wind energy sector

Objectives/Outcomes	Indicators	Baseline (Year 0)	Target	Sources of Verification	Assumptions
Enhanced local stakeholders' capacity to manage, operate and maintain wind farms in a given area based on best practice models developed in other countries.	Increased number of Tertiary Institutions e.g. Technical and Vocational Education and Training (TVET) colleges participating in wind energy vocational apprenticeship programme. Receiving training in technical, management, operation and maintenance of wind technology	TVET college actively pursuing participation in wind energy vocational skills development.	4.1 Number of Tertiary institutions e.g. TVETs = maximum 5. 4.2 Number of WTST students supported and graduated 24 (30% female) 4.3 Number of graduate and post graduate students wind energy training sponsorships (60)	Project reports. DHET reports/ publications. SARETEC reports. Support to SAWEA WindAc event Support of wind energy courses at tertiary institutions	Close collaboration with DHET, SARETEC, GIZ and SAWEA members with operations in the Eastern Cape in place.

⁴⁹ This will result in a cumulative total of 9 masts being installed for phase two WASA.

⁴⁸ Includes selected staff members and officials from relevant state-owned agencies and the local government sphere.

⁵⁰ South African Local Government Association and Association of Municipal Electricity Utilities, respectively.

ToR Annex B: Project Information Package to be reviewed by TE team

#	Item (electronic versions preferred if available)
1	Project Identification Form (PIF)
2	UNDP Initiation Plan
3	Final UNDP-GEF Project Document with all annexes
4	CEO Endorsement Request
5	UNDP Social and Environmental Screening Procedure (SESP) and associated management plans (if any)
6	Inception Workshop Report
7	Mid-Term Review report and management response to MTR recommendations
8	All Project Implementation Reports (PIRs)
9	Progress reports (quarterly, semi-annual or annual, with associated workplans and financial reports)
10	Oversight mission reports
11	Minutes of Project Board Meetings and of other meetings (i.e. Project Appraisal Committee meetings)
12	GEF Tracking Tools (from CEO Endorsement, midterm and terminal stages)
13	GEF/LDCF/SCCF Core Indicators (from PIF, CEO Endorsement, midterm and terminal stages); for GEF-6 and GEF-7 projects only
14	Financial data, including actual expenditures by project outcome, including management costs, and including documentation of any significant budget revisions
15	Co-financing data with expected and actual contributions broken down by type of co-financing, source, and whether the contribution is considered as investment mobilized or recurring expenditures
16	Audit reports
17	Electronic copies of project outputs (booklets, manuals, technical reports, articles, etc.)
18	Sample of project communications materials
19	Summary list of formal meetings, workshops, etc. held, with date, location, topic, and number of participants
20	Any relevant socio-economic monitoring data, such as average incomes / employment levels of stakeholders in the target area, change in revenue related to project activities
21	List of contracts and procurement items over ~US\$5,000 (i.e. organizations or companies contracted for project outputs, etc., except in cases of confidential information)
22	List of related projects/initiatives contributing to project objectives approved/started after GEF project approval (i.e. any leveraged or “catalytic” results)
23	Data on relevant project website activity – e.g. number of unique visitors per month, number of page views, etc. over relevant time period, if available
24	UNDP Country Programme Document (CPD)
25	List/map of project sites, highlighting suggested visits
26	List and contact details for project staff, key project stakeholders, including Project Board members, RTA, Project Team members, and other partners to be consulted

27	Project deliverables that provide documentary evidence of achievement towards project outcomes
<i>Additional documents, as required</i>	

ToR Annex C: Content of the TE report

- i. Title page
 - Title of UNDP-supported GEF-financed project
 - UNDP PIMS ID and GEF ID
 - TE timeframe and date of final TE report
 - Region and countries included in the project
 - GEF Focal Area/Strategic Program
 - Executing Agency, Implementing partner and other project partners
 - TE Team members
- ii. Acknowledgements
- iii. Table of Contents
- iv. Acronyms and Abbreviations
1. Executive Summary (3-4 pages)
 - Project Information Table
 - Project Description (brief)
 - Evaluation Ratings Table
 - Concise summary of findings, conclusions and lessons learned
 - Recommendations summary table
2. Introduction (2-3 pages)
 - Purpose and objective of the TE
 - Scope
 - Methodology
 - Data Collection & Analysis
 - Ethics
 - Limitations to the evaluation
 - Structure of the TE report
3. Project Description (3-5 pages)
 - Project start and duration, including milestones
 - Development context: environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope
 - Problems that the project sought to address, threats and barriers targeted
 - Immediate and development objectives of the project
 - Expected results
 - Main stakeholders: summary list
 - Theory of Change
4. Findings
(in addition to a descriptive assessment, all criteria marked with (*) must be given a rating¹⁷)
 - 4.1 Project Design/Formulation
 - Analysis of Results Framework: project logic and strategy, indicators
 - Assumptions and Risks
 - Lessons from other relevant projects (e.g. same focal area) incorporated into project design
 - Planned stakeholder participation
 - Linkages between project and other interventions within the sector
 - 4.1 Project Implementation

¹⁷ See ToR Annex F for rating scales.

- Adaptive management (changes to the project design and project outputs during implementation)
 - Actual stakeholder participation and partnership arrangements
 - Project Finance and Co-finance
 - Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)
 - UNDP implementation/oversight (*) and Implementing Partner execution (*), overall project implementation/execution (*), coordination, and operational issues
 - Risk Management, including Social and Environmental Standards (Safeguards)
- 4.2 Project Results and Impacts
- Progress towards objective and expected outcomes (*)
 - Relevance (*)
 - Effectiveness (*)
 - Efficiency (*)
 - Overall Outcome (*)
 - Sustainability: financial (*), socio-economic (*), institutional framework and governance (*), environmental (*), and overall likelihood (*)
 - Country ownership
 - Gender equality and women's empowerment
 - Cross-cutting Issues
 - GEF Additionality
 - Catalytic/Replication Effect
 - Progress to Impact
5. Main Findings, Conclusions, Recommendations & Lessons
- Main Findings
 - Conclusions
 - Recommendations
 - Lessons Learned
6. Annexes
- TE ToR (excluding ToR annexes)
 - TE Mission itinerary, including summary of field visits
 - List of persons interviewed
 - List of documents reviewed
 - Evaluation Question Matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)
 - Questionnaire used and summary of results
 - Co-financing tables (if not include in body of report)
 - TE Rating scales
 - Signed Evaluation Consultant Agreement form
 - Signed UNEG Code of Conduct form
 - Signed TE Report Clearance form
 - *Annexed in a separate file:* TE Audit Trail
 - *Annexed in a separate file:* relevant terminal GEF/LDCF/SCCF Core Indicators or Tracking Tools, as applicable

ToR Annex D: Evaluation Criteria Matrix template

Evaluative Criteria Questions	Indicators	Sources	Methodology
Relevance: How does the project relate to the main objectives of the GEF Focal area, and to the environment and development priorities at the local, regional and national level?			

<i>(include evaluative questions)</i>	<i>(i.e. relationships established, level of coherence between project design and implementation approach, specific activities conducted, quality of risk mitigation strategies, etc.)</i>	<i>(i.e. project documentation, national policies or strategies, websites, project staff, project partners, data collected throughout the TE mission, etc.)</i>	<i>(i.e. document analysis, data analysis, interviews with project staff, interviews with stakeholders, etc.)</i>
Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?			
Efficiency: Was the project implemented efficiently, in line with international and national norms and standards?			
Sustainability: To what extent are there financial, institutional, socio-political, and/or environmental risks to sustaining long-term project results?			
Gender equality and women's empowerment: How did the project contribute to gender equality and women's empowerment?			
Impact: Are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status?			
<i>(Expand the table to include questions for all criteria being assessed: Monitoring & Evaluation, UNDP oversight/implementation, Implementing Partner Execution, cross-cutting issues, etc.)</i>			

ToR Annex E: UNEG Code of Conduct for Evaluators

Independence entails the ability to evaluate without undue influence or pressure by any party (including the hiring unit) and providing evaluators with free access to information on the evaluation subject. Independence provides legitimacy to and ensures an objective perspective on evaluations. An independent evaluation reduces the potential for conflicts of interest which might arise with self-reported ratings by those involved in the management of the project being evaluated. Independence is one of ten general principles for evaluations (together with internationally agreed principles, goals and targets: utility, credibility, impartiality, ethics, transparency, human rights and gender equality, national evaluation capacities, and professionalism).

ToR Annex F: TE Rating Scales

<p>Evaluators/Consultants:</p> <ol style="list-style-type: none"> 1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded. 2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results. 3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle. 4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported. 5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth. 6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations. 7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation. 8. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented. 9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated and did not carry out the project's Mid-Term Review. <p>Evaluation Consultant Agreement Form</p> <p>Agreement to abide by the Code of Conduct for Evaluation in the UN System:</p> <p>Name of Evaluator: _____</p> <p>Name of Consultancy Organization (where relevant): _____</p> <p>I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.</p> <p>Signed at _____ (Place) on _____ (Date)</p> <p>Signature: _____</p>

Ratings for Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight, Execution, Relevance	Sustainability ratings:
<p>6 = Highly Satisfactory (HS): exceeds expectations and/or no shortcomings</p> <p>5 = Satisfactory (S): meets expectations and/or no or minor shortcomings</p> <p>4 = Moderately Satisfactory (MS): more or less meets expectations and/or some shortcomings</p> <p>3 = Moderately Unsatisfactory (MU): somewhat below expectations and/or significant shortcomings</p>	<p>4 = Likely (L): negligible risks to sustainability</p> <p>3 = Moderately Likely (ML): moderate risks to sustainability</p> <p>2 = Moderately Unlikely (MU): significant risks to sustainability</p> <p>1 = Unlikely (U): severe risks to sustainability</p> <p>Unable to Assess (U/A): Unable to assess the expected incidence and magnitude of risks to sustainability</p>

2 = Unsatisfactory (U): substantially below expectations and/or major shortcomings 1 = Highly Unsatisfactory (HU): severe shortcomings Unable to Assess (U/A): available information does not allow an assessment	
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ToR Annex G: TE Report Clearance Form

Terminal Evaluation Report for (Project Title & UNDP PIMS ID) Reviewed and Cleared By:	
Commissioning Unit (M&E Focal Point)	
Name: _____	
Signature: _____	Date: _____
Regional Technical Advisor (Nature, Climate and Energy)	
Name: _____	
Signature: _____	Date: _____

ToR Annex H: TE Audit Trail

The following is a template for the TE Team to show how the received comments on the draft TE report have (or have not) been incorporated into the final TE report. This Audit Trail should be listed as an annex in the final TE report but not attached to the report file.

To the comments received on (date) from the Terminal Evaluation of (project name) (UNDP Project PIMS #)

The following comments were provided to the draft TE report; they are referenced by institution/organization (do not include the commentator's name) and track change comment number ("#" column):

Institution/ Organization	#	Para No./ comment location	Comment/Feedback on the draft TE report	TE team response and actions taken

Annex 2: List of persons interviewed

SN	Name	Institution	Mode of contact	Date
1	Andre Otto	SAWEP II	Google Meet	18-08-2021
2	Marlett Balmer	GIZ	Google Meet	23-08-2021
3	Andries Kruger	Weathersa	Google Meet	26-08-2021
4	Lawrence Pratt	CSIR	Google Meet	26-08-2021
5	Somila Xosa	DST	Google Meet	26-08-2021
6	Lindo Sibiya	SAWEA	Google Meet	27-08-2021
7	Olga Chauke	Ministry of Environment	Google Meet	30-08-2021
8	Christopher Lennard	CSAG	Google Meet	30-08-2021
9	Gareth	Stellenbosch University	Google Meet	30-08-2021
10	Jens Carsten Hansen	DTU	Google Meet	31-08-2021
11	Siyabonga Zondi	DMRE	Google Meet	03-09-2021
12	Lethabo Manamela	SANEDI	Google Meet	15-09-2021
13	Golden Makaka	University of Fort Hare	Google Meet	17-09-2021
14	Barry Bredenkamp	SANEDI	Google Meet	20-09-2021
15	Frederick Shikweni	UNDP M&E Team	Google Meet	21-09-2021
16	Brenda Swart	DHET	Google Meet	22-09-2021
17	Qaphela Mpotulo	CHDM	Google Meet	22-09-2021
18	Carol Litwin	UNDP RTA	Google Meet	24-09-2021
19	Alistair McMaster	DEDEA	Google Meet	28-09-2021
20	Janice Golding	UNDP	Microsoft Teams	01-12-2021

Annex 3: Summary of field visits

Due to covid-19 related travel restriction, no country visit was made by the international consultant. Online calls and email questionnaire were used for the consultation process.

Annex 4: List of documents reviewed

- Final Project Document approved in 2015
- Inception report 2016
- Midterm review report, 2018
- Annual workplans (2016, 2017, 2019, 2020)
- PIR (2016, 2017, 2018, 2019, 2020 and 2021)
- Final Project Closure report (2021)
- M&E plans (2016, 2017, 2018, 2019, 2020)
- Annual progress reports (2016, 2017, 2018, 2019, 2020)
- Combined delivery reports for financial details
- Quarterly progress reports
- Project steering committee meeting reports
- Consulting report on gender analysis and training, 2018
- Project reports including feasibility reports, project design report for demonstration projects
- Narrative reports for capacity building workshops

Annex 5: Evaluation Question Matrix

Evaluation Criteria	Evaluation Questions/Indicators	Sources
Relevance: How does the project relate to the main objectives of the GEF focal area, and to the environment and development priorities at the local, regional and national levels?	<ul style="list-style-type: none"> • How relevant is the project to target groups', including Governments', needs and priorities? • How relevant is the project to other key stakeholders' (executing agencies, partner organizations, including other UN agencies, NGOs etc.) needs and priorities? • Were the activities and outputs of the project consistent with the overall objectives and goals of the project's overall scope and objectives? • Is the project relevant to the local communities, women, and people from vulnerable community? • Does the project remain relevant considering the changing environment? 	<ul style="list-style-type: none"> • Desk review of project documentation including ProDoc, Mid-term review report, national policy documents, project progress reports etc. • Skype interviews with the UNDP project team and Government officials including Project steering committee members and key beneficiaries • Responses of key stakeholders to an online survey • Online research on status/past developments related to target beneficiaries
Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?	<ul style="list-style-type: none"> • Has the project's theory of change proven to be effective in pursuing its objectives? Does it hold up in practice? • Has the initiative established clear baselines, targets and milestones toward achieving its objectives and established a clear and effective process for monitoring progress? • Were the planned objectives and outcomes in the project document achieved? (both qualitative and quantitative) • What are the results achieved beyond the logframe? 	<ul style="list-style-type: none"> • Desk review of project documentation • Skype interviews with the UNDP project team and Government officials • Responses of key stakeholders to an online survey • Progress reports

	<ul style="list-style-type: none"> • What were the major factors influencing the achievement or non-achievement of the objectives? • To what extent were the project governance structures effective in facilitating smooth implementation of the project? • How was the management of challenges & risks? • Recommendations of Mid Term Review have been implemented? What are the relevant lessons from the project? • How do the stakeholders perceive the quality of outputs? Were the targeted beneficiary groups actually reached? • Indicator: To what extent is the HDVI producing worthwhile results (outputs, outcomes) and/or meeting each of its objectives? 	
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?	<ul style="list-style-type: none"> • How efficient is the project, i.e. how efficiently were resources (funds, expertise, time, etc.) converted to outcomes and impacts and have these been delivered on time and in accordance with agreed workplans? • Was there coordination with other projects, and did possible synergy effects happen? • Were there delays in project implementation and if so, what were their causes? • Level of discrepancy between planned and utilized financial expenditures • Are there alternative approaches that could have the same outcomes with less efforts/cost? • What lessons can be learnt from these projects on efficiency? • To what extent the project has made the best use of available human, technical, technological, financial and knowledge inputs to achieve desired results? 	<ul style="list-style-type: none"> • Desk review of project documentation • Data analysis of progress reports, financial expenditure reports

<p>Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?</p>	<ul style="list-style-type: none"> • Does the project have an appropriate strategy to disseminate its results and findings and promote/support scaling up and replication? • Has the project contributed or is likely to contribute to long-term social, economic, technical, environmental changes for individuals, communities, and institutions related to the project? • What sustainable difference has the project or programme made to beneficiaries? • The extent to which the net benefits of the intervention continue or are likely to continue? • What were the major factors which influenced the achievement or non-achievement of sustainability? • Is the exit strategy effectively implemented? 	<ul style="list-style-type: none"> • Desk review of project documentation • Data analysis • Interviews
<p>Impact/Results: Are there indicators that the project has contributed to, or enabled progress towards, reduced environmental stress and/or improved ecological status?</p>	<ul style="list-style-type: none"> • Have the planned outputs been produced? Have they contributed to the project outcomes and objectives? • Are the anticipated outcomes likely to be achieved? What is the initiative's progress toward achieving its objectives and associated impacts, including real difference made to target groups? • Are the outcomes likely to contribute to the achievement of the project objective? • Are the likely to be at the scale sufficient to be considered Global Environmental Benefits? • What were the major influencing factors towards achievement/non-achievement? • Did the initiative have unintended – either positive or negative – impacts? • Where negative impacts occurred, have mitigation strategies been defined and implemented? • How many people have benefitted from the impacts by aggregated sex and groups? 	<ul style="list-style-type: none"> • Desk review of project documentation • Data analysis • Secondary research on country/city specific programs • Skype interviews with the UNDP team, key partners

Gender equality and women empowerment	<ul style="list-style-type: none"> • How were gender considerations integrated in the project's design, including through a gender analysis with the specific context of the project for advancing gender equality and women's empowerment and a gender action plan with a specific implementation plan for the delivery of gender activities, with indicators, targets, budget, timeframe, and responsible party? • How was the project aligned with national policies and strategies on gender equality? • How were gender issues integrated in the project's strategy, rationale, and theory of change, including how advancing gender equality and women's empowerment will advance the project's environmental outcomes? • What gender expertise was used in the design and development of the project? Was it • adequate? This could be in the form of external consultant and/or internal UNDP capacity. • How was the UNDP Gender Marker rating assigned to the project document realistic and backed by the findings of the gender analysis? 	<ul style="list-style-type: none"> • Project reports review • Data analysis • PSC member interviews
Cross-cutting and UNDP mainstreaming issues	<ul style="list-style-type: none"> • How were effects on local populations considered in project design and implementation? • Positive or negative effects of the project on local populations. • Extent to which the project objectives conform to agreed priorities in the UNDP Country Programme Document (CPD) and other country programme documents; • Poverty-environment nexus: how the environmental conservation activities of the project contributed to poverty reduction and sustaining livelihoods • Extent to which the project contributed to a human rights-based approach 	<ul style="list-style-type: none"> • Project reports review • Data analysis

Annex 6: Sample questionnaire

Name:

Organization:

Date:

Role in the project:

Relevance & Design	
<ul style="list-style-type: none">• Is the Project relevant to the objectives of the government of South Africa?• Is the Project relevant to South Africa's environmental objectives and economic and social situation?• Does the Project address the needs of target beneficiaries?• How is the Project complementary to activities of other stakeholders and donors active in the region or the country?• How would you describe the capacities of stakeholders involved in the project?• How did the Project address the priorities and development challenges of targeted beneficiaries?• Were the resources and others (legislation, project management arrangement) in place for the project?• What changes could have been made (if any) to the design of the Project in order to improve the achievement of the Project's expected results?	
Effectiveness	
<ul style="list-style-type: none">• To what extent have the expected outcomes and objectives of the project been achieved?• Do you think project has been successful in meeting its objectives? If yes, what are the main results and if not, what are the gaps?• How could the Project have been more effective in achieving its results?• How has the risks and risk mitigation of the project being managed• How was the project managed by UNDP?• What are the results achieved beyond the logframe?• What were the major factors influencing the achievement or non-achievement of the objectives?• To what extent were the project governance structures effective in facilitating smooth implementation of the project?• How was the management of challenges & risks?• Recommendations of Mid Term Review have been implemented? What are the relevant lessons from the project?	

<ul style="list-style-type: none"> How do the stakeholders perceive the quality of outputs? Were the targeted beneficiary groups actually reached? 	
Efficiency	
<ul style="list-style-type: none"> Was project support provided in an efficient way in terms of use of financial resources, project management and reporting? Did the project efficiently utilize local capacity in implementation? What was the level of efficiency of cooperation and collaboration arrangements? How could the project have more efficiently carried out implementation (in terms of management structures and procedures, partnerships arrangements etc...)? How efficient is the project, i.e. how efficiently were resources (funds, expertise, time, etc.) converted to outcomes and impacts and have these been delivered on time and in accordance with agreed workplans? Was there coordination with other projects, and did possible synergy effects happen? Were there delays in project implementation and if so, what were their causes? Level of discrepancy between planned and utilized financial expenditures Are there alternative approaches that could have the same outcomes with less efforts/cost? To what extent the project has made the best use of available human, technical, technological, financial and knowledge inputs to achieve desired results? 	
Implementation and Partnerships	
<ul style="list-style-type: none"> How well the project implemented? What were the positives and negatives in the way project was managed? Were progress reports produced accurately, timely and share with key stakeholders? How well financing was managed by the project? What were the key issues faced in using financing by the project? Were the findings, lessons learned and recommendations shared among Project stakeholders for ongoing Project adjustment and improvement? Did the Project mainstream gender/ vulnerable groups considerations into its implementation? Which partnerships/linkages were facilitated? Were objectives, outcomes, and outputs achieved on time? 	
Sustainability & Impact	
<ul style="list-style-type: none"> Do you think impact the project has made will be sustained after the project closure? 	

<ul style="list-style-type: none"> • Is there evidence that Project partners will continue their activities beyond Project support? • Are Project activities and results being replicated elsewhere and/or scaled up? • What are the main challenges that may hinder the sustainability of results? • What lessons can be learnt from the project? • Did the initiative have unintended – either positive or negative – impacts? • Where negative impacts occurred, have mitigation strategies been defined and implemented? • How many people have benefitted from the impacts by aggregated sex and groups? 	
Any other inputs or insights which you think will be important for evaluation of this project?	

Annex 7: Summary of results

Component	Summary of results/comments of TE	TE Rating					
		HS	S	MS	MU	U	HU
Outcome 1: Mechanisms in place for objective, evidence-based assessment, and verification of progress in implementing localization initiatives, considering any correlations between local content requirements, investment metrics (e.g., generation capacity, financial returns, costs, prices, etc.) and socio-economic development (e.g., employment creation).							
Output 1.1 Enhanced, technology-enabled capability among Government and industry stakeholders to monitor and verify implementation of local content requirements.	Indicators were already met at project Inception as a M&V system was already functioning at the DoE-IPP project.						
Output 1.2. Enhanced capacity among Government wind industry stakeholders to objectively monitor and verify factors related to the success or failure of project sponsors to meet local content requirements and socio-economic development commitments.	‘Assessment and Analysis of the Impact of the Renewable Energy Independent Power Producer Procurement (RE IPPP) Programme on the South African Economic Development’ was carried out. This report analyses the economic development impact of the RE IPPP Programme, that consists of the following sub-elements: creation, local content, ownership, management control, preferential procurement, and makes recommendations towards the achievement of optimal socio-economic benefits, enterprise development (EnD) and socio-economic activities (SED, education and skills, health, social welfare).						
Outcome 2: Expanded verified Wind Atlas (of South Africa, WASA), Phase II, completed for additional provinces in support of future wind power project development and procurement mechanisms							
Output 2.1: Geographical extension of verified Wind Atlas developed for Northern Cape	The wind atlas, database and the wind resource map now span all nine provinces (with WASA 3 completing the Northern Cape province) with the launch of the first High-Resolution Wind Resource map and database for South Africa Information on wind masts, data and maps can be downloaded from the WASA website (www.wasaproject.info).						
Output 2.2: Preliminary and final WASA II data processed for use in definition of RE Development Zones (REDZs) in WASA II sites.							
Output 2.3: Enhanced capacity within Government to use wind atlas data for energy planning at policy and strategic levels	The wind resource map and data now form the basis for the identification of areas for the Strategic Environmental Assessment for wind energy (SEA, Phase 2). Based on the SEA, eight Renewable Energy Development Zones (REDZ) were						

Component	Summary of results/comments of TE	TE Rating					
		HS	S	MS	MU	U	HU
	identified. In addition, WASA data are used in various planning documents, such as the IRP Update 2019 and in the DoE REIPPPP Quarterly update reports.						
Outcome 3: Capacity developed among relevant stakeholders on technical, financial, regulatory, and socio-economic aspects of small-scale wind projects.							
Output 3.1: Establishment of small-scale wind demonstration projects	<p>A study <i>Status & Specification on Small Scale Wind Energy Pilot Project</i> was carried out, based on this study it was decided to implement multiple small-scale wind energy demonstration projects so that learning from these projects can be utilised for further expansion of wind energy projects in the country. These learning were to include key aspects such as access to municipal electricity distribution networks, pricing, and financing, as well as socio-economic development.</p> <p>First such identified project was to integrate small scale wind energy project into the Upper Blinkwater (UB) Mini-grid project. Another was to setup wind energy powered water pumping projects in schools in CHDM.</p> <p>These pilot projects have been identified; detailed feasibility assessment has taken place, and procurement orders have been placed for the implementation part of the work. Currently implementation process is ongoing, and it is expected that these projects will be operational before March 2022.</p> <p>A number of other activities have been initiated, such as a) a "Green" tariff study with small-scale wind energy for Buffalo City Metro, and b) small-scale wind capacity building (with University of Fort Hare).), and feasibility study to assess potential for market for refurbishing smaller-scale turbines manufacturing.</p>						
Output 3.2 Enhanced capacity of project sponsors to develop small- scale wind energy projects							

Component	Summary of results/comments of TE	TE Rating					
		HS	S	MS	MU	U	HU
Outcome 4: Enhanced local stakeholders' capacity to manage, operate and maintain wind farms in each area based on best practice models developed in other countries.							
Output 4.1 Increased number of Technical and Vocational Education and Training (TVET) colleges participating in wind energy vocational apprenticeship programme	By the time project started, activities planned under this component were already operational with support from other donor agencies. Thus, a study was carried out on the <i>Status and Development of Wind Energy Training, Education, Skills and Human Capacity Development</i> . Based on recommendations in this report, SAWEP II was re-oriented to support the following:						
Output 4.2. National Artisan Development (NAD) programme extended to include wind energy training.	<ul style="list-style-type: none"> Financing Scheme (course fee and stipend) for 24 students (based on demand for trained students (in relation with the installed wind capacity in the country) for a WTST course (12 per year) at SARETEC (students would need to have NQF4 level), as well as BTT and BST training targeting 40 qualifying (minimum grade 10 level); Workplace Placement and Support for up to 15 SARETEC Students. Another output of SAWEP-2 is providing some financial support (in 2017, 2018 and 2019) to the organisation of the annual WindAc (SARETEC-organised) and Windaba (SAWEA-organised) events. The programme of the events includes presentation sessions in plenary, exhibits and many opportunities to network with academics, students and industry players. 						
Overall Project Rating							

Annex 8: Evaluation consultant code of conduct and agreement form

Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact during the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings, and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.


Evaluation Consultant Agreement Form¹⁸

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: Ashutosh Pandey

Name of Consultancy Organization (where relevant): NA

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Gurugram, India on 13/12/2021 

Signature: _____

¹⁸www.unevaluation.org/unegcodeofconduct

Annex 10: Terminal GEF Tracking Tool

Attached seperately