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Report No: PP5389

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED GRANT

IN THE AMOUNT OF

US\$ 4.44 MILLION

TO THE

REPUBLIC OF NAMIBIA

FOR THE

NAMIBIA RENEWABLE ENERGY SCALE UP SUPPORT PROJECT

June 27, 2023

Energy & Extractives Global Practice
Eastern And Southern Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 23, 2023)

Currency Unit = Namibian Dollars
(NAD)

US\$1 = NAD19.25

FISCAL YEAR

January 1 - December 31

Regional Vice President: Victoria Kwakwa

Country Director: Marie Françoise Marie-Nelly

Regional Director: Wendy Hughes

Practice Manager: Julia Fraser

Task Team Leader(s): Nadia Taobane, Sandhya Srinivasan

ABBREVIATIONS AND ACRONYMS

Namibia Renewable Energy Scale Up Support Project

List of Abbreviations

AfDB	African Development Bank
BESS	Battery Energy Storage System
DFI	Development Finance Institution
CPS	Country Partnership Strategy
ECB	Electricity Control Board
ESF	Environmental and Social Framework
EPC	Engineering Procurement Contract
ESCP	Environmental and Social Commitment Plan
ESIA	Environmental and Social Impact Assessment
FAA	Funded Activity Agreement
FM	Financial Management
GCF	Green Climate Fund
GDP	Gross Domestic Product
GRN	Government of the Republic of Namibia
GRS	Grievance Redress Service
HFO	Heavy Fuel Oil
HPP	Harambee Prosperity Plan
IFC	International Finance Corporation
IPP	Independent Power Producer
ISP	Integrated Support Plan
KfW	Kreditanstalt für Wiederaufbau
MSB	Modified Single Buyer
MME	Ministry of Mines and Energy
MW	Mega Watt
NDC	Nationally Determined Contribution
NDP	National Development Plan
NIRP	National Integrated Resource Plan
NPF	New Procurement Framework
Project	Namibia Renewable Energy Scale Up Support Project
PPA	Power Purchase Agreement
PPP	Public Private Partnership
PIU	Project Implementing Unit
RE	Renewable Energy
RED	Regional Electricity Distributor
REFIT	Renewable Energy Feed-in-Tariff
RETF	Recipient Executed Trust Fund
RSA	Republic of South Africa

SACU	Southern African Customs Union
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SCD	Systematic Country Diagnostic
SEP	Stakeholder Engagement Plan
SRMI	Sustainable Renewables Risk Mitigation Initiative
VRE	Variable Renewable Energy



BASIC INFORMATION

Is this a regionally tagged project? No	Country (ies)	
Financing Instrument Investment Project Financing	Classification Small Grants	
Approval Date 21-Jul-2023	Closing Date 30-Jun-2027	Environmental and Social Risk Classification Substantial
Approval Authority CDA	Bank/IFC Collaboration No	

Please Explain

Proposed Development Objective(s)

The development objective is to enable renewable energy development in Namibia.

Components

Component Name	Cost (USD Million)
Preparatory studies to support development of RE projects	2,440,000.00
Advisory and capacity building to support procurement of RE projects	2,000,000.00

Organizations

Borrower : NamPower
Implementing Agency : NamPower

PROJECT FINANCING DATA (US\$, Millions)



SUMMARY

Total Project Cost	4.44
Total Financing	4.44
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	4.44
Energy Sector Management Assistance Program	4.44

Expected Disbursements (in USD Million)

Fiscal Year	2024	2025	2026	2027
Annual	0.84	1.40	1.20	1.00
Cumulative	0.84	2.24	3.44	4.44

INSTITUTIONAL DATA

Financing & Implementation Modalities

Situations of Urgent Need of Assistance or Capacity Constraints

- Fragile State(s)
 Fragile within a non-fragile Country
 Small State(s)
 Conflict
 Responding to Natural or Man-made Disaster

Other Situations

- Financial Intermediaries (FI)
 Series of Projects (SOP)
- Performance-Based Conditions (PBCs)
 Contingent Emergency Response Component (CERC)
- Alternative Procurement Arrangements (APA)
 Hands-on Expanded Implementation Support (HEIS)

Practice Area (Lead)

Energy & Extractives



Contributing Practice Areas

OVERALL RISK RATING

Risk Category

Rating

Overall

● Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No



Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

Legal Covenants

Sections and Description

Institutional and Other Arrangements (Section 2.03): Without limitation to the provisions of Section 2.02 above, the Recipient shall ensure, throughout Project implementation, that the Project Implementing Unit, is maintained with mandate, composition and resources satisfactory to the Bank and with experienced and qualified staff in adequate numbers, with functions and terms of reference acceptable to the Bank to be responsible for the overall implementation of the Project, including: (a) developing terms of reference for the various studies to be undertaken using the proceeds of the Grant; (b) carrying out the procurement of service providers and disbursement of payments under the studies to be carried out under the Project; (c) supervising, reviewing, and providing technical inputs to the work provided by service providers to finalize studies within the agreed timelines; and (d) liaising with MoF as appropriate for administrative procedures.

Sections and Description

Environmental and Social Standards (section 2.04): (a) The Recipient shall ensure that the Project is carried out in accordance with the Environmental and Social Standards, in a manner acceptable to the Bank. (b) Without



limitation upon paragraph (a) above, the Recipient shall ensure that the Project is implemented in accordance with the Environmental and Social Commitment Plan (“ESCP”), in a manner acceptable to the Bank. To this end, the Recipient shall ensure that: (i) the measures and actions specified in the ESCP are implemented with due diligence and efficiency, and provided in the ESCP; (ii) sufficient funds are available to cover the costs of implementing the ESCP; (iii) policies and procedures are maintained, and qualified and experienced staff in adequate numbers are retained to implement the ESCP, as provided in the ESCP; and (iv) the ESCP, or any provision thereof, is not amended, repealed, suspended or waived, except as the Bank shall otherwise agree in writing, as specified in the ESCP, and ensure that the revised ESCP is disclosed promptly thereafter.

(c) In case of any inconsistencies between the ESCP and the provisions of this Agreement, the provisions of this Agreement shall prevail.

(d) The Recipient shall ensure that: (i) all measures necessary are taken to collect, compile, and furnish to the Bank through regular reports, with the frequency specified in the ESCP, and promptly in a separate report or reports, if so requested by the Bank, information on the status of compliance with the ESCP and the environmental and social instruments referred to therein, all such reports in form and substance acceptable to the Bank, setting out, inter alia: (A) the status of implementation of the ESCP; (B) conditions, if any, which interfere or threaten to interfere with the implementation of the ESCP; and (C) corrective and preventive measures taken or required to be taken to address such conditions; and (ii) the Bank is promptly notified of any incident or accident related to or having an impact on the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers, including, inter alia, cases of sexual exploitation and abuse, sexual harassment, and accidents that result in death, serious or multiple injury, in accordance with the ESCP, the environmental and social instruments referenced therein and the Environmental and Social Standards.

(e) The Recipient shall establish, publicize, maintain, and operate an accessible grievance mechanism, to receive and facilitate resolution of concerns and grievances of Project-affected people, and take all measures necessary and appropriate to resolve, or facilitate the resolution of, such concerns and grievances, in a manner acceptable to the Bank.

Sections and Description

Article II: The Recipient declares its commitment to the objective of the project described in Schedule 1 to this Agreement (“Project”). To this end, the Recipient shall carry out the Project in accordance with the provisions of Article II of the Standard Conditions and Schedule 2 to this Agreement.

Sections and Description

Article IV: The Additional Event of Suspension referred to in Section 4.02 (k) of the Standard Conditions consists of the following, namely, that without the consent of the Bank, the [insert title of establishing document of NamPower e.g. Memorandum or Articles] of the Recipient, or the status of its incorporation pursuant to the Companies Act 28 of 2004 of the Guarantor, have been substantially amended, suspended, abrogated, repealed, or waived, including the formation of subsidiaries, so as to affect materially and adversely the ability of the Recipient to perform any of its obligations arising under or entered into pursuant to this Agreement, or to achieve the objectives of the Project.



Sections and Description

Article V

5.01 This Agreement shall not become effective until evidence satisfactory to the Bank has been furnished to the Bank that the execution and delivery of this Agreement on behalf of the Recipient has been duly authorized or ratified by all necessary governmental and corporate action.

5.02. As part of the evidence to be furnished pursuant to Section 4.01 (a), there shall be furnished to the Bank an opinion or opinions satisfactory to the Bank of counsel acceptable to the Bank showing on behalf of the Recipient, that this Agreement has been duly authorized or ratified by and executed and delivered on its behalf and is legally binding upon it in accordance with its terms.

Sections and Description

Section I.A.2 of Schedule 2

Not later than thirty (30) days after the Effective Date, the Recipient shall establish, and maintain thereafter throughout Project implementation a PIU with resources, with competent staff in adequate numbers and with terms of reference qualifications, and experience satisfactory to the Bank. The PIU shall be responsible for day-to-day management, implementation, administration, coordination, and monitoring and evaluation of the Project. The PIU shall include the following staff and consultants: (a) Project manager; (b) financial management specialist; (c) Project and management accountant; (d) procurement specialist; (e) environmental specialist; (f) social specialist, (g) technical specialist, each with terms of reference, qualifications and experience acceptable to the Bank.

Sections and Description

Section I.B of Schedule 2

The Recipient shall, not later than thirty (30) days after the Effective date, prepare and adopt a Project operations manual, and shall carry out the Project in accordance with said manual, containing, inter alia, detailed arrangements and procedures for: (i) implementation arrangements including (A) institutional set up with a structure of the designated supervision body and decision-making process; (B) composition, functions and terms of reference of the PIU; (ii) administrative, financial management, accounting, and disbursement mechanisms, procedures and protocols; (iii) procurement; (iv) environmental and social aspects; (v) monitoring and evaluation; (vi) grievance redress mechanism; and (vi) such other technical, administrative, fiduciary or coordination arrangements as may be necessary to ensure effective Project implementation (“Project Operations Manual”).

Sections and Description

Section III.B.1

Notwithstanding the provisions of Part A above, no withdrawal shall be made for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed [_____] may be made for payments made prior to this date but on or after [_____] , for Eligible Expenditures under Category (1).

**Conditions****PROJECT TEAM****Bank Staff**

Name	Role	Specialization	Unit
Nadia Taobane	Team Leader(ADM Responsible)		IAEE3
Sandhya Srinivasan	Team Leader		SCCFE
George Daniel	Procurement Specialist(ADM Responsible)		EAERU
Patrick Kabuya	Financial Management Specialist(ADM Responsible)		EAEG2
Tandile Gugu Zizile Msiwa	Financial Management Specialist		EAEG2
Aimonchok Tashieva	Social Specialist(ADM Responsible)	Social Safeguards	SAES3
Johanna Martina Whitfield	Environmental Specialist(ADM Responsible)		SAEE3
Carla De Nobrega	Team Member		IAEE3
Elisa Ilibagiza Mugiraneza	Counsel		LEGAM
Gaamangwe Thato Matswe	Procurement Team		AEMBW
Jean O Owino	Team Member	WFA	WFACS
Jorge Luis Alva-Luperdi	Team Member		LEGLE
Pierre Audinet	Team Member		IEEGK
Sandra M Kuwaza	Team Member	WFA	WFACS
Zijun Li	Team Member		IEEES

Extended Team

Name	Title	Organization	Location
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NAMIBIA
NAMIBIA RENEWABLE ENERGY SCALE UP SUPPORT PROJECT

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I. STRATEGIC CONTEXT

A. Country Context

- 1. Namibia is a small country of about 2.6 million people.** Political stability and sound economic management have helped anchor poverty reduction and allowed Namibia to become an upper-middle income country. The 2022 Global Gender Gap Index ranked Namibia eight out of 146 and one of the two countries in Africa that has closed at least 80 percent of its gender gaps. However, socio-economic inequalities inherited from the past apartheid system remain extremely high and structural constraints to growth have hampered job creation. Unemployment is among the highest in the world at 33.4 percent in 2018. Progress toward reducing inequality has been slow and as a result, Namibia has one of the highest rates of income inequality in the world. The consumption Gini index was 59.1 in 2015, down from 61 in 2009, and 63.3 in 2003.
- 2. Namibia's economy is constrained by structural challenges and faces high poverty, inequality, and unemployment rates.** After experiencing average annual growth of 4.4 percent between 1991 and 2015, Namibia's economy stagnated in 2016 before falling into recession in 2017, in part due to commodity price fluctuations, growth challenges in neighboring countries, declining investment, adverse weather conditions and fiscal consolidation. The weakening growth trend over 2016–19 was exacerbated by the COVID-19 (coronavirus) in 2020 which triggered the country's largest Gross Domestic Product (GDP) contraction since independence and further setback progress in social development. In the context of elevated unemployment, Namibia's poverty rate remains high for a country of its income level. The pandemic heavily affected already vulnerable people especially women and girls, which threatens to widen social and gender gaps further and increase already high inequality. Reducing poverty requires expansion of access to basic infrastructure and services, in an environment where sustained fiscal consolidation is needed to manage high public debt levels.
- 3. Despite Namibia's endowment in mineral resources, including diamonds and uranium, poverty is still relatively high.** Mining accounts for about ten percent of GDP. Investments in mineral extraction and government spending have been important pillars of growth. Since independence in 1990, Namibia had achieved notable progress in reducing poverty, with the national official poverty rate dropping by more than half between 2003 and 2015. In 2023, about 19.4 percent of Namibians lived on less than US\$2.15 per day compared with 37.5 percent in 2004. In part due to the negative impact of COVID-19 on livelihoods, poverty rates are estimated to have increased in recent years and only expected to decline slightly over the medium term.
- 4. Namibia's economy has been on a recovery path after the unprecedented pandemic shock in 2020 but the rebound has not been broad-based.** Real GDP contracted by 8.1 percent in 2020, before posting a partial rebound of 3.5 percent in 2021. In 2022, GDP growth increased to 4.6 percent as the economy benefited from a one-off increase in diamond production and waning effects of the pandemic, with the lifting of all restrictions. The mining sector, which is an important earner of foreign exchange, expanded by 21.6 percent. The tertiary sector grew by 2.2 percent. Despite the stronger growth in 2022, output remained below pre-pandemic levels. Namibia's economic recovery is expected to continue in 2023, supported by services, private investment, and sustained growth in mining output. The continuing recovery presents an opportunity for Namibia to transition toward more sustainable growth by implementing structural reforms to boost productivity and competitiveness and create new and higher-skilled jobs. With adequate management, the prospective large investments in the mining and energy sectors can significantly advance these efforts. The



impacts of Russia's invasion of Ukraine added pressure on domestic prices through higher costs of food and fuel prices. Headline inflation averaged at a five-year high of 6.1 percent in 2022.

5. **Climate vulnerability, proneness to prolonged periods of drought, desertification, land and water resource degradation, and loss of biodiversity pose a risk to the economy.** Namibia is the driest country in Sub-Saharan Africa and severe drought conditions experienced in 2019 constrained agricultural output which led to a sharp decline in harvests. The reduction in precipitation also affected the broader economy through lower electricity and water generation, with repercussions on industrial production. Severe drought is a persistent threat for economic performance and for the welfare of farmers. Namibia is highly vulnerable to river, urban, and coastal floods, water scarcity, and wildfires. Climatic events and extreme heat also pose medium risk to the country.
6. **Namibia has outstanding renewable energy (RE) resources.** Namibia has abundant and excellent solar and wind potential, which presents a promising source of clean and affordable electricity for the country. Namibia receives about ten hours of sunlight per year and has one of the highest rates of Global Horizontal Irradiance in the world.^{1,2} It also has excellent wind potential that is favorably correlated with solar resource availability. Regions with the highest wind potential are located in the South-West part of Namibia, where mean wind speeds may exceed 10 m/s at typical wind turbine hub heights of 70–100m.³ Wind resources are underexplored and could present an avenue for energy sector development alongside solar for domestic generation and export of electricity to the region. In addition, with electrification lagging behind, off-grid solar can play a key role to support Government of the Republic of Namibia's (GRN) target to achieve universal access by 2040. RE development can help reduce import dependence, enhance energy security, diversify domestic generation, and support climate mitigation.
7. **Namibia aims to tap into this RE potential to become the first zero emissions country in Africa, playing a vital role in fighting and adapting to climate change.** Namibia's contribution to global emissions is less than zero point zero zero three (0.003) percent. The Agriculture Forestry and Land Use (AFOLU) sector is the largest contributor to the economy's emissions (79 percent as of 2016), followed by energy (3.79 GgCO₂e or 18 percent of total emissions).⁴ The most dominant source of energy in Namibia is liquid fuel, including petrol and diesel, which accounts for 63 percent of total net energy consumption and is mainly used in the transport sector, followed by electricity with 17 percent net consumption, coal with 5 percent, and renewable sources (hydro, solar, biomass, wind, etc.) with 15 percent. In its second Nationally Determined Contribution (NDC) makes an ambitious commitment to avoid 91 percent of Business-as-Usual emissions by 2030 and achieve net zero emissions by 2050, representing an increase in ambition from its first NDC. Climate goals are also integrated in national plans. The Harambee Prosperity Plan II, launched in March 2021, is Namibia's presidential socioeconomic development plan, which articulates Namibia's plans for low carbon growth. Namibia targets to support the decarbonization of the region by exporting clean electricity. The Southern Africa region is resource rich but energy poor and has an access rate of 50 percent in average. The region is characterized by a mismatch between demand and supply centers which can be smoothed with regional trade-aggregation of loads with different load profiles; efficient use of energy resources by exploiting large-scale power generation schemes that are viable on the basis of large, multi-country markets; and managing the risks of climate-related power shortages in hydro-dependent countries. Namibia outstanding RE resources

¹ Think Hazard, <https://thinkhazard.org/en/report/172-namibia>

² Global Solar Atlas, World Bank

³ Global Wind Atlas

⁴ UNFCCC (2021). Namibia Biennial Update Report (BUR4). unfccc.int/documents/268412



(in particular wind) could in this context be exported to its neighbors in particular ‘hydro’ rich countries such as Angola and Zambia from whom Namibia could import hydro power whenever its variable renewable energy (VRE) generation is not available or reduced, leveraging their complementarities and preserving the value of increasingly rare hydro-power, which can play a key role as storage.

B. Sectoral and Institutional Context

8. **Nearly half of Namibia’s population does not have access to electricity.** The electricity access rate is around 55 percent, and the government aims to achieve universal access by 2040, mainly through grid expansion with the remaining being done through off-grid solar, as identified by the geospatial least-cost electrification plan funded by the World Bank (WB) under Bank executed technical assistance (P171529: Namibia National Electrification Program). In this context, additional generation in the country will be critical to accommodate the load growth and the reduction of imports which is a key strategic priority for the country. Namibia’s installed power capacity is 654 MW. NamPower owns and operates the 347 MW run-of-the-river Ruacana hydropower station, 20 MW of solar PV, a 120 MW coal-fired power station that was commissioned in 1973 and a 22 MW Heavy-Fuel Oil (HFO) fired power station. Since Namibia has no significant coal resources of its own, the plant relies on coal-based electricity imported from South Africa, which is expensive. The plant also has very limited emission control equipment, leading to high levels of air pollutants from its operation. In 2021, NamPower concluded the bidding process for Engineering Procurement Contract (EPC) of the 50 MW Anixas II HFO power plant in Walvis Bay for quick-start power generation, and a contract was signed with FK Namibia and Joint Venture in March 2022. Anixas and Anixas II (under construction) are expected to serve as emergency and backup generation capacity for the growing solar PV capacity during cloud cover conditions.⁵ In addition, the country has 126.5 MW of solar PV and 5 MW of wind capacity through independent power producers (IPPs), as well as customer-owned solar PV capacity.⁶
9. **Namibia remains heavily dependent on electricity imports.** In 2022, Namibia imported 71 percent of its annual electricity consumption from the regional market, up from 68 percent in 2021.⁷ This has created import dependence and vulnerable electricity supply. Although imports from South Africa have so far remained reliable and of high quality, there is a potential risk of disruption in the future if sector conditions deteriorate in South Africa (RSA), or if the bilateral contracts for import of electricity, such as those with Eskom (RSA) and Zambia are not renewed in 2025. The import of energy requirements places a burden on the balance of payments. About 25 percent of Namibia’s electricity imports come from South Africa (92 percent coal based), and one-third is purchased from the Southern African Power Pool (SAPP) market. Namibia also has Power Purchase Agreements (PPAs) in place with utilities in Botswana, Zambia, Zimbabwe, the Democratic Republic of Congo, and Mozambique. During peak hours – when coal fired electricity is highest – Namibian imports can rise to 90 percent. In this context, energy security has emerged as a key priority for the GRN in addition to electricity access.
10. **GRN has taken an important policy decision to increase domestic supply and reduce electricity import-dependency through the procurement of public and private investments in electricity generation and transmission.** The GRN and NamPower have committed to reduce the current dependence on electricity

⁵ NamPower Annual Report (2022). https://www.nampower.com.na/public/docs/annual-reports/NamPower_2022%20Annual%20Report_210223.pdf

⁶ Precise figures for customer-owned installations to be confirmed, estimated 13 MW solar PV +/-80 MW rooftop solar PV.

⁷ *ibid.* footnote 4



imports by building more domestic generation capacity. The fifth National Development Plan (NDP5) for 2017/18 – 2021/22 outlines the importance of secure and reliable electricity provision to improve the country's competitiveness through lower import costs whilst accelerating rural electrification and underscoring the promotion of the role of IPPs and acceleration of investments in solar, wind, and biomass resources. NDP5 further sets a target of 755 MW of locally generated energy capacity by 2022 (that remains to be achieved)⁸ and provisions 70 percent of electricity needs from renewable resources by 2030, significantly contributing towards the target of 80 percent self-sufficiency in the near future.⁹ The National Renewable Energy Policy adopted in 2017 aims to drive emerging technologies that substitute existing higher emission technologies with cleaner, more efficient technologies and signals the commitment of the government to a clean energy future powered by renewables. Similarly, Harambee Prosperity Plan II (HPP-II) for 2021-2025 identifies energy supply security through RE resources as a key priority to achieve the intertwined economic and energy goals of the country. The Economic Recovery Programme, Green-Blue Namibia Economic Advancement Pillar published in December 2020 further underscores the role that Namibia's extensive RE resources will play in underpinning the economic recovery, whilst following principles of strong environmental stewardship and economic inclusion.

11. **Despite Namibia's excellent renewable energy resources, installed renewable capacity in the country represents approximately 30 percent of total generation.** Namibia has one of the highest solar irradiation levels in the world, at nearly 3000 kWh/m² over a large part of the country and more than 300 sunny days in a year, as well as excellent wind resources. While renewables (other than hydropower) have been incorporated into the domestic supply mix in Namibia, to date this has only been on a small-scale. In addition, effective integration of variable renewable energy requires grid investments. The decreases in global prices of solar and wind – associated with the exceptional level of the wind and solar resources in the country - offer an unprecedented economic opportunity for Namibia to diversify its generation mix and address the twin challenges of electricity access and energy security. RE development can reduce spending on electricity imports, expand domestic job creation, expand access to reliable and low-cost electricity, and help the country achieve its climate goals.

12. **The Government of Namibia also adopted a new market structure, the Modified Single Buyer (MSB) Model,** which allows certain electricity consumers (Contestable Customers) to purchase up to 30 percent of their consumption from Eligible Sellers, including IPPs, by transacting directly with each other and allowing private generators to build new capacity specifically for export. NamPower will continue to play a critical role in the electricity sector and will build new supply, procure new supply and act as the Supplier of Last Resort. This represents a significant shift from a centralized model dominated by a single utility to a hybrid decentralized model with multiple actors generating and supply electricity. However, there may be some uncertainty with regard to the implementation of the MSB. The captive market may face some challenges to off-take in a context where the private sector off-takers and suppliers may not have an investment-grade credit rating. In addition, these off-takers may only be in a position to sign PPAs for a medium-term duration, which can affect the bankability of private generation projects. Furthermore, the limit on purchases may initially create a *duck*

⁸ Local power generation capacity is 624 MW and NamPower's Generation Master Plan aims to expand capacity to 879 MW by 2025. Current installed capacity owned by NamPower is 509.5 MW, including 347 MW Ruacana hydro, 120 MW Van Eck coal, 22.5 MW Anixas diesel, and 20 MW Omburu PV. 13 REFIT and IPP projects account for the remaining capacity. NamPower will add 130 MW capacity through 50 MW Anixas II, 40 MW Rosh Pinah wind, and 40 MW Otjikoto biomass. An additional 70 MW is expected to be added through IPPs through 20 MW Khan PV and 50 MW Luderitz wind. NamPower is also constructing 58 MW Omburu BESS.

⁹ Ibid.



curve effect, with more solar capacity being developed during the day when it is cheap. This could have implications for NamPower's role as supplier of last resort.

13. **Namibia has limited experience with procuring large-scale IPP projects.** IPPs accounted for about 364 GWh of generation in 2021-22.¹⁰ Under the Renewable Energy Feed-in-Tariffs (REFIT) program, 14 PPAs were concluded with IPPs as of 2022, of which 13 are operational.¹¹ In 2019, the 37 MW Hardap solar IPP project was commissioned. The Khan solar 20 MW IPP achieved financial close in 2022. A transmission connection agreement has been signed for the 44 MW Diaz wind IPP project, although the project is yet to commence. More recently, a PPA was signed for the development of the Luderitz wind 50 MW IPP projects in 2023. While these projects provide valuable lessons for future procurements, they remain relatively small scale. Several RE projects have been facing issues during their development leading to significant delays. Namibia's national plans for rapid development of scaled-up RE capacity requires significant preparatory work for de-risking and supporting the development of a bankable pipeline of large-scale RE projects while ensuring affordability of electricity for end consumers.
14. **There is an urgent need to mitigate risks to electricity supply.** The Ruacana hydropower station is the main source of local generation, providing the most affordable RE in the country. However, the amount of electricity generated by Namibia's hydroelectricity sector directly depends on rainfall received. Negative impacts to generation have already been witnessed in the last few years due to reduced rainfall in the Cunene Province of Angola, where the Kunene River originates. The energy generated during 2022 from the plant was 780.15 GWh, the lowest recorded in the past 10 years due to significantly lower than normal Kunene River flow.¹² This raised cost of electricity supply by nearly 14 percent. In 2022, import PPAs accounted for 65 percent of electricity supply, NamPower generated 20 percent of total supply, IPPs provided 9 percent, and the SAPP market accounted for the remaining 6 percent. NamPower has long-term bilateral PPAs with Eskom in South Africa for 100 MW, with ZESCO in Zambia for 180 MW, and ZPC in Zimbabwe for 80 MW. The PPA with Eskom expires in 2025, which creates urgency for implementation of NamPower's capacity expansion program, which emphasizes RE development, to ensure energy security and avoid any shortfall in supply. In addition, Namibia has a non-firm arrangement for 300 MW from Eskom, which is not available during any load-shedding or emergency event in South Africa. In such cases, NamPower supplements the deficit with power purchased from other utilities in the SAPP.
15. **Namibia has set ambitious goals to become a regional leader in RE deployment and the Namibia's National RE Policy (2021) signals the government's commitment to a clean energy future for its people powered by RE.** The national RE policy sets out objectives to (a) make RE a vehicle for expanded access to affordable electricity in Namibia; (b) create an enabling environment for RE development; and (c) enhance value chains to enable greater participation of Namibians in the sector. The Ministry of Mines and Energy (MME) in 2022 adopted a revised version of the 2016 National Integrated Resource Plan (NIRP) to update underlying assumptions and to incorporate changing market conditions, specifically the reduced technology prices of renewables and storage (wind, solar PV, concentrated solar power or CSP, and energy storage). The 2022 NIRP makes commitments as large as 2850 MW of planned RE generation capacity until 2040 plus 650 MW of Battery Energy Storage Systems (BESS) in the context of an expected (mid-case) peak demand that the draft

¹⁰ NamPower Annual Report, 2022. https://www.nampower.com.na/public/docs/annual-reports/NamPower_2022%20Annual%20Report_210223.pdf

¹¹ Ibid.

¹² Ibid. Generation from Ruacana was 1505 GWh in 2019-20.



NIRP projects will grow to 1,243 MW by 2040 (up from 737 MW in 2021).

16. **Substantial progress has already been made in recent years to accelerate the development of renewable electricity generation projects in Namibia.** As part of the efforts to increase renewable domestic generation, NamPower commissioned a fourth turbine at the Ruacana hydropower plant in 2012. It is able to generate an extra 92 MW of power during the high-flow season – in addition to the 255 MW already installed. However, in recent years, Ruacana’s operating capacity has been adversely impacted by droughts, and there is a need to ensure resilience of the electricity system, including through the diversification of supply sources. In 2015, the Namibian REFIT program was initiated in collaboration between MME, the Electricity Control Board (ECB), and NamPower which led to the construction of 13 solar PV plants and one wind power plant with a cumulative capacity of 70 MW (5 MW each). In recent years, a strategic change in procurement has been implemented for large solar projects, which are now considering procuring them through Public Private Partnership (PPP), IPP or EPC schemes instead of feed-in tariffs. Moreover, with grant funding from Kreditanstalt für Wiederaufbau (KfW), NamPower is currently endeavoring to develop the first pilot utility-scale storage facility in the country, to demonstrate that the battery storage technology can play a critical role in accelerating integration of variable renewable energy (from solar and wind), while also managing reliability of imports and a growing national peak electricity load. While paving the way on the technical front, such demonstration project could also address concerns regarding perceived dispatchability/integration of renewables and contribute to developing a regulatory environment for the deployment of storage.

17. **Namibia is part of the Mega Solar initiative,** a partnership between the Governments of Namibia and Botswana, the African Development Bank (AfDB), IBRD, International Finance Corporation (IFC) and the African Union Development Agency-New Partnership for Africa’s Development developed under USAID’s Power Africa initiative to promote the regional goals of the Southern African Development Community (SADC) and the Southern Africa Power Pool (SAPP). The Mega Solar Memorandum of Intent was signed by the Minister of Mines of Energy of the Government of Namibia in April 2021. The Mega Solar initiative is expected to add large scale solar (and wind) capacity in Botswana and Namibia to meet expected domestic demand for electricity on the mid-term; and new large scale solar (and wind) capacity to meet regional electricity demand on the long term. WB is coordinating closely with the Mega Solar partners on support to renewables in Namibia and in particular with AfDB as they are procuring a Regional Market Study to inform export of electricity from Namibia and Botswana on the long term. The activities covered under this Project are to be financed only by the WB and aim primarily at supporting domestic generation (connected to the grid) to serve domestic needs.

18. **The WB has an ongoing sector engagement since February 2018 with GRN based on a comprehensive strategy built around clean and affordable energy.** As part of this engagement, the Bank completed a RE roadmap under the Sustainable Renewables Risk Mitigation Initiative (SRMI) to support the development of bankable and sustainable RE projects. SRMI aims at supporting countries harness their domestic resources in a sustainable manner (i) by reducing reliance on public finances: by identifying the critical public investments needed to unlock private investments at scale, (ii) optimizing the overall risk mitigation in an integrated manner to attract the private sector in better conditions; and (iii) maximizing the socio-economic benefits triggered by the RE deployment throughout the design and implementation of the RE programs. The roadmap developed in alignment with the SRMI framework identifies the key challenges with scaled-up RE development, including the need for de-risking measures to enable reductions in tariffs offered by IPPs for long-term PPAs for large and more complex RE projects. The report provides recommendations for: (i)



institutional capacity and enabling environment to increase the visibility of the Namibian RE market from an international perspective and strengthen coordination with other initiatives and plans such as the national green hydrogen strategy; (ii) planning and procurement, such as the inclusion of the captive market envisioned under the MSB in the national planning framework to balance supply and demand forecast scenarios; and (iii) contract bankability and residual risk mitigation, with a particular focus on the most critical development risks – grid, land, site, and legal. It lays out options for the country on how to develop and implement sustainable and bankable RE programs. It explores approaches to reduce the risk premium embedded in the electricity tariff offered by IPPs by mitigating critical risks perceived by the private sector. It also explores concrete opportunities for local companies and local communities in targeted areas to benefit from the solar and wind projects planned, maximizing the socio-economic benefits triggered in terms of jobs creation, skills development and local development. Finally, the RE Roadmap explores near-term options for Namibia to transition to a regional power exporter leveraging its world class solar resources. This is expected to inform GRN's RE strategy. In response to GRN's request to explore the potential for integrating VRE in its grid, the WB mobilized trust fund resources and initiated a VRE integration study to assess options for integrating VRE technologies in Namibia's power system to inform the public investments such as BESS needed to unlock private investments in RE. The WB also supported the development of a geospatial least cost electrification plan aimed at delivering a comprehensive grid expansion, and off-grid complement plan to put the country on a path toward universal electricity access. The results informed the Bank's support to GRN for the design of a comprehensive national electrification strategy, that would arrive at the technical, financial, and institutional parameters for efficient electrification rollout. The team is also developing a complementary energy sector PASA for Namibia and Botswana that will provide additional support for the development of sustainable and bankable RE projects and enabling environment.

C. Higher Level Objectives to which the Project Contributes

19. **The proposed Renewable Energy Scale Up Support Project will support Pillar 2 of the World Bank Group Country Partnership Strategy (CPS) for Namibia FY14- FY17,**¹³ as updated by the Performance Learning Review FY18–FY 20.¹⁴ *Pillar 2. Private Sector Development - Investments in Production and Infrastructure Program* sets out the objective that Namibia will have in place adequate base load energy to support industry development (DO 5.2). Pillar 2 also notes the WB would seek to assist Namibia to leverage the private sector for growth and sustainable development by adopting the “Maximizing Finance for Development” approach. The proposed Project can help address challenges associated with the development of bankable projects that can attract private sector investments using the Sustainable Renewables Risk Mitigation Initiative (SRMI) approach, which facilitates the development of sustainable and bankable renewable energy projects while maximizing the associated socio-economic benefits. This is expected to mitigate other key risks associated with private sector participation through the development of detailed studies and suitable risk allocation frameworks that effectively leverage private finance.
20. **Moreover, the WB conducted a Systematic Country Diagnostic (SCD) for Namibia in July 2021.** The SCD will inform the WB in formulating its next CPF for Namibia. The SCD identifies extreme vulnerability to climate change as one of the four key binding constraints to inclusive economic growth. More specifically, the SCD notes that large-scale development of solar and wind industries can create jobs, boost growth in remote areas, and reduce inequality. The SCD also notes that the development of the renewable energy sector presents an

¹³ Discussed by the Board on June 26, 2013 (Report No. 77748-NA)

¹⁴ Report No. 122699-NA



opportunity to stimulate private investment across the value chain. The project will also be aligned with the WB Gender Strategy (FY16-23) which underlines key gender gaps and actions necessary to close existing gender disparities in the RE sector.

21. **This project is consistent with Namibia’s NDC.** As noted above, Namibia’s updated NDC plans to avoid 91 percent of Business-as-usual emissions by 2030. To meet this highly ambitious emission reduction goal, Namibia plans to increase the share of RE in the generation mix through various activities.¹⁵ This project enables and contributes to Namibia’s commitment to a clean energy future as articulated in its National Renewable Energy Policy, and its plans for RE expansion as outlined in the IRP.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

The development objective is to enable accelerated renewable energy development in Namibia.

B. Project Beneficiaries

22. **The direct project beneficiary is NamPower.** Through the Project, NamPower will be able to access resources to prepare for the procurement and tendering of renewable energy projects. The proposed studies will provide a strong techno-economic basis and carry out the necessary studies to facilitate utility scale renewable energy procurement by NamPower, in addition to the capacity building activities for NamPower (and MME and ECB as the case may be) - including the appointment of experts to provide implementation support and the organization of south-south knowledge exchanges.
23. **Other indirect beneficiaries include the RE IPPs/PPPs that will benefit from a transparent and competitive tendering process, and the Namibian people, especially vulnerable populations such as female-headed households, who will have access to sustainable and affordable electricity from the procured renewable energy sources.** This is expected to result in development co-benefits in the form of improved air quality, reduced pollution, and climate change mitigation. It will also result in increased resilience of the electricity system through diversification of sources and reduced reliance on imports, thereby enhancing the affordability of electricity and NamPower’s financial position.

C. PDO-Level Results Indicators

24. Progress toward achieving the PDO will be measured by the following project outcome indicators:
 - a. Utility-scale RE capacity procured through IPPs/PPPs (MW of solar/wind awarded)
 - b. Private investments enabled for RE through IPPs/PPPs (US\$ Million)

¹⁵ Namibia updated NDC. https://unfccc.int/sites/default/files/NDC/2022-06/Namibia%27s%20Updated%20NDC_%20FINAL%2025%20July%202021.pdf



III. PROJECT DESCRIPTION

A. Project Components

25. **NamPower is finalizing an Integrated Supply Plan (ISP) outlining plans for the least cost expansion of the country's electricity generation mix in alignment with the 2022 NIRP.** The ISP envisions significant addition of renewable energy capacity. For this to materialize in the targeted timeframe, NamPower needs to develop RE projects under the ISP that can attract the private sector in optimized conditions while being properly integrated in the grid. The Project will support NamPower structure the RE projects prioritized under the ISP such that they are bankable and sustainable in the long-term, and risks are allocated appropriately between the public and private sector in a context where the utility has limited experience with large scale IPP/PPP projects. This would require preparatory work and advisory support to mitigate the development risks which can further improve the risk profile of the projects, hence making them more affordable for the country (by reducing the risk premium embedded in the tariff proposed by IPPs), as well as capacity building to empower the key stakeholders and ensure the replicability of the approach as the ISP gets rolled out. The Project will be instrumental in properly preparing the solar and wind projects targeted (including their integration to the grid) while optimizing the associated timelines in view of the need to accelerate generation to address the uncertainties of the electricity system due to droughts impacting hydropower generation, the expected expiry of the PPA with Eskom and others, as well as the challenges from increased VRE deployment and integration.
26. **The Project aims at preparing sustainable and bankable RE projects through two components.** The project components are aligned with the country's IRP and will be further informed by the ongoing VRE integration study. The proposed Project will carry out (i) preparatory studies to support the development of RE projects; and (ii) advisory and capacity building to support procurement of RE projects. The objective of NamPower is to prepare the first batch of solar and wind projects falling under the IRP, targeting 300MW wind and 300MW PV, and to support under this Project the procurement of 200MW PV.
1. **Component 1: Preparatory studies to support development of RE projects (US\$2.44M):** This component will focus on preparatory studies to reduce the risk of RE project development, including resource assessment studies, safeguard studies, site studies, and feasibility studies.
 - i. **Resource assessment:** The resource assessment studies aim to measure and collect bankable data for wind and solar in selected areas (prioritizing wind resource measurement). The main objective of this assignment is to provide high quality measurement data to support future development of wind projects at targeted sites. This is expected to be carried out for specific sites (to be identified through the locational study included under the ongoing VRE integration study) by an international consulting firm. The contract is expected to result in bankable reporting data.
 - ii. **Studies:**
 - **Safeguard studies:** Environmental and social studies as per the Environmental and Social Framework (ESF) that integrate gender considerations to ensure all vulnerable groups benefit from the projects, will be carried out for the wind/solar projects prioritized as well as for the transmission line needed for integration of renewables (from wind generation to the closest substation).
 - **Site studies:** Site studies, such as topography study, geotechnical/seismic study, hydrological study, logistic study, will be carried out for the wind/solar projects prioritized. The full scope



- of the studies will be finalized during Project implementation (in particular as some solar sites have already several site sites completed).
- **Feasibility studies:** Feasibility studies will be carried out for the wind/solar projects prioritized (including the 200MW PV projects to be procured) and for the transmission lines prioritized (the one from wind generation to the closest substation and the Auas-Kokerboom 400kV second transmission line to be financed by the Bank under the TEES project (P177328)). The scope of work is expected to cover the analysis needed to inform the technical specifications of the solar/wind projects and the transmission lines targeted. The feasibility studies will also take into consideration gender impacts pertinent to land resettlement in areas where installation of energy infrastructure will be necessary.
2. **Component 2: Advisory and capacity building to support procurement of RE projects (US\$2.0M):** Solar and wind generation capacity are expected to be developed through IPP/PPP schemes.
- i. **Transaction advisory services** to support the Project Implementation Unit (PIU) in structuring and tendering of bankable and sustainable RE projects. The transaction advisory services are expected to support the specific projects defined during the resource measurement and the feasibility studies stage (targeting at this stage one procurement process for two PV projects for a total capacity of 200 MW). This is expected to include assistance with the procurement process, negotiation and award, obtaining regulatory approvals, mitigating potential risks, liaising with relevant stakeholders, and achieving financial close.
 - ii. **Capacity building:** Capacity building activities on development and implementation of sustainable and bankable RE projects will be carried out for the PIU of the Project and will involve as applicable key public stakeholders involved in the solar/wind bidding process such as the MME and the ECB in addition to the Utility (NamPower - PIU). Given the underrepresentation of women in RE, capacity building activities will ensure meaningful engagement of women in various roles to tackle some of the gender gaps in the sector. Specifically, capacity building will include training of NamPower staff to increase their awareness of gender disparities within the RE sector and to ensure meaningful engagement of women and women-led enterprises in the project and in the development of the sector. Training will include areas such as gender-inclusive procurement to ensure gender equality in RE vendor bidding processes.
 - iii. **Project management:** This will support the PIU for the RETF-funded activities during implementation of the Project.

B. Project Cost and Financing

27. **The proposed Project is financed through a grant from the WB Energy Sector Management Assistance Program (ESMAP) for a total of US\$ 4,440,000**, allocated for recipient executed activities under the SRMI window of ESMAP.

IV. IMPLEMENTATION



A. Institutional and Implementation Arrangements

28. **NamPower, the PIU, will play a key role in enabling the achievement of the government’s diversification, climate, and energy security objectives.** NamPower, is one of the rare power utilities in Africa to operate in a cost-recovery electricity market. NamPower’s mandate is defined by the licenses issued in accordance with the Electricity Act of 2007. Current licenses include the permission to generate, transmit, supply and trade electricity, including the importing and exporting of electricity within the SAPP. NamPower’s license to distribute electricity is limited to areas where Regional Electricity Distributors (REDs) have not been formed or where the municipalities are not able to provide distribution services. NamPower foresees a significant change in demand profiles and consumption patterns in the near future, in part due to the growing share of solar (including self-generation). The MSB model and the diffusion of distributed PV may present challenges for NamPower related to generation and transmission planning, profitability, pricing, and grid stability. In consultation with the GRN, NamPower prepared a US\$1 billion equivalent capital expansion program that aims to implement diverse RE generation projects, significant transmission expansion, and a utility-scale battery storage program. NamPower has initiated technical work to assess the configuration, capacity, and use of BESS in order to integrate large-scale variable renewable energy into the grid and address intermittency. The proposed Project funding would therefore support the GRN’s policy goals of scaling up renewable energy in its electricity mix, as well as inform NamPower’s capital expansion program, by ensuring a sound and replicable approach to renewable energy development and facilitating private investment in bankable, sustainable renewable energy projects. The Recipient shall submit to the Bank within 30 days after effectiveness the operation manual of the Project (Project Operation Manual) describing the operational procedures, steps and processes on how the project activities are implemented, in particular the institutional set-up with structure of designated supervision body and decision-making process. It will detail the mandate and composition of the PIU, responsible for the overall implementation of the Project, with resources satisfactory to the Bank and with experienced and qualified staff in adequate numbers, as well as functions and terms of reference acceptable to the Bank.

B. Results Monitoring and Evaluation

29. **The project-level monitoring and evaluation (M&E) framework will track progress on implementation.** The PIU will submit semi-annual reports to the WB no later than 45 days after the end of each semester. The semi-annual reports will cover the progress and updates on procurement activities, financial management (FM), and disbursements – of which eligible expenditures consist of goods, non-consulting services, consulting services, and/or training and workshops inclusive of taxes - as well as implementation issues and associated action plans, progress on indicators and targets, and status of financing agreement covenants. Monitoring and Evaluation (M&E) experts will be responsible for:

- i. monitoring physical progress;
- ii. carrying out M&E of delivered outcomes;
- iii. reviewing and supervising the E&S issues identified and any mitigation measures; and
- iv. providing guidance to the implementation team in early identification and resolution of any issues identified.

C. Sustainability

30. **The proposed Project aims to support NamPower in bankable and sustainable RE development by**



supporting the procurement and competitive bidding of large scale solar and wind projects and targeted public investments unlocking private investments in RE (such as battery energy storage and transmission line). It will help NamPower design solar and wind projects that are bankable, allowing them to attract the private sector in optimized conditions in a context where a significant pipeline of solar and wind has been announced in the IRP. The underpinning analysis (site studies, ESIA, bankable data collected etc.) will help to mitigate the development risks perceived by the private sector which would lead to a lower tariff by reducing risks. It will strengthen the capacity of NamPower and further leverage knowledge for future RE projects to serve domestic demand and export needs. To ensure replicability of the project, NamPower will combine recruitment and/or training, as necessary, and lead the organization of south-south knowledge exchanges. The objective is to ensure that NamPower can conduct competitive procurement of bankable private investments in RE while ensuring their integration in the grid.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

31. The risk associated with the overall project is rated moderate. The project presents substantial macro-economic risks as well as substantial environment and social risk. Risks rated substantial and proposed mitigation measures are presented below.

Table 3: Risks Summary Table

Risk Categories	Rating
1. Political and governance	Low
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of the Project	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Moderate
7. Environmental and social	Substantial
8. Stakeholders	Moderate
Overall	Moderate

32. **Macroeconomic risks are substantial.** Namibia faces significant domestic and external risks, as a small open economy dependent on resources. Prospects for development of more resource endowments (green hydrogen and possibly oil) will take time to develop and carry high uncertainty on timing. The substantial risk rating reflects potential impacts if these risks materialize. Namibia has entered (together with the rest of the Southern African Customs Union or SACU countries outside South Africa) a favorable cycle in SACU flows in 2023, which are expected to increase by approximately 70 percent year-on-year, boosting revenues. However, expenditure pressures persist, and debt levels remain elevated. It is to be noted though that the Project will be funded through a grant.



33. **Environmental and social risks are substantial at this stage.** The environmental and social risk is rated as substantial. The risks that have been assessed are not simply the impacts resulting from the TA activities themselves (as detailed in Section 26 above) but also the potential downstream environmental and social implications that may arise from the future investments (in particular the solar projects to be procured by NamPower under IPP/PPP scheme and hence to be financed by the private sector). Client capacity to manage E&S risks and impacts has also been considered in the overall E&S risk rating. NamPower has no experience in implementing World Bank funded projects under the Environmental and Social Framework (ESF) but has experience complying with the E&S requirements of other Development Finance Institutions (DFIs) such as KfW. Downstream E&S impacts may also arise from the transmission lines that will be required to connect to the grid the solar power plants, those can have impacts on the avian fauna (including cumulative impacts).
34. To mitigate the risks, the site location for the RE projects will be informed by the locational study conducted as part of the aforementioned VRE integration study financed by the World Bank. In addition, an ESIA that is an output of the TA will be conducted to assess the E&S impacts of the RE projects. Under project component one (preparation of RE projects), a focus will also be placed on community engagement and reflect feedback from communities when carrying out the ESIA, which will be complemented by the social assessments required under ESF.
35. For Paris Alignment, there are no risks associated with this project's objectives and/or activities.

VI. APPRAISAL SUMMARY

(i) Financial management

36. **The financial management (FM) assessment was conducted on NamPower,** the PIU that will be responsible for financial management responsibilities in reference to WB Small Recipient-Executed Trust Fund Grants Guidance Note. The objective of the assessment was to determine whether the project implementing unit has acceptable financial management arrangements, which will ensure: (a) that the project funds are used only for the intended purposes in an efficient and economical way, (b) the preparation of accurate, reliable and timely periodic financial reports, and (c) safeguard of the PIU's assets. Based on the assessment, the project financial management arrangements satisfy the Bank's minimum requirements, and the financial management residual risk rating is rated as "Moderate". The specific agreed FM arrangements are noted below.
37. **Budgeting:** The project activities shall be included in NamPower's annual planning and budget. In addition, the financial and project performance shall be included in the NamPower monthly management/project reports and be subjected to management review.
38. **Accounting:** NamPower's Chief Financial Officer will have overall financial management responsibility for the project. A Project & Management Accountant responsible for the Finance Business Unit will be responsible for the day-to-day FM operations of the project. The official will benefit from the many qualified accountants serving at NamPower Finance and Treasury Department. NamPower uses SAP ERP accounting system. The system shall be used to record the project transactions and generate the required reports. It was agreed that specific codes shall be incorporated in the NamPower chart of accounts to facilitate recording and tracking



project transactions.

39. **Internal Control and Internal Audit:** The internal controls set out in the NamPower Payment and Authorisation guidelines and Finance Procedures shall be applied on the project transactions. NamPower has an independent Internal Audit Activity, reporting administratively to the Managing Director and functionally to the Audit and Risk Management Committee (Subcommittee of the Board). It was agreed that NamPower Internal Audit Activity shall review the project transactions once a year and a copy of the report shall be shared with the Bank.
40. **Interim Financial Reporting:** Interim and annual project financial statements shall be generated from the SAP ERP accounting system. NamPower team agreed to:
- i. Prepare semi-annual unaudited financial statements for the project and submit them to the Bank 45 days after the semester.
 - ii. Disclose the financial information of the project as a separate note in the NamPower annual financial statements instead of issuing a separate set of project financial statements. NamPower financial statements are prepared in compliance with the International Financial Reporting Standards (IFRS) and publishes an integrated report.
41. **Funds Flow and Disbursement Arrangement:** The project will use any of the following four disbursement methods (a) advance, (b) reimbursement, (c) direct payment, and (d) special commitments. Funds will flow from the Bank to the Designated Account (DA) opened and managed by NamPower. The payments to consultants/ service providers to finance Bank eligible activities of all the project components will be paid directly from the DA.
42. **Auditing:** Project transactions shall be disclosed as a note in the NamPower annual financial statements. Therefore, the audit of the project transactions shall form part of NamPower annual audit process by the appointed external auditor. NamPower shall submit to the WB a copy of the audited financial statements within 6 months after year end.

(ii) Procurement

43. **Procurement arrangement:** All procurement under the project would be conducted through the procedures as specified in the WB's Procurement Regulations for Investment Project Financing Recipients - Procurement in Investment Project Financing, November 2020. The project will also be subject to the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants' dated July 1, 2016. The procurement planning, execution and contract management processes will be tracked through the Systematic Tracking of Exchange in Procurement (STEP) System.
44. **NamPower Procurement Procedures:** An assessment of the NamPower Procurement Unit showed a good track record of preparing and implementing projects— as demonstrated by the list of projects previously completed. However, the following key issues were identified: (a) the current procurement unit staff has adequate staffing; 14, with an average minimum of bachelor's degrees, 3 with Masters level qualification, and an average of more than 10 years of experience albeit with no previous experience with WB procurement procedures, including the use of Systematic Tracking of Exchanges in Procurement (STEP), (b) non-monitoring of complaints may impede speedy resolution of the same; and (c) limited participation of procurement staff



in contract management.

- 45. **Procurement Risk Assessment:** NamPower’s processes and procedures for engaging consultants and contractors for environmental and social impact assessments, design, supervision, and construction works are generally consistent with the Bank’s New Procurement Framework (NPF) with a few enhancements that can be mitigated through inclusion of certain provisions in the national bidding documents; (a) the national regulations and documents should not preclude the WB from its rights to review and audit procurement documentation and activities under the financing; (b) implementation of an effective complaints review mechanism; (c) maintenance of records of the procurement process; and (d) the request for bids/request for proposals document shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the WB’s Anti-Corruption Guidelines, including without limitation, the WB’s right to sanction and the WB’s inspection and audit rights. With the incorporation of the above provisions, the NamPower Procurement Procedures will be acceptable to be used under those procurements using open national approach not subject to the WB’s Prior Review as agreed with the Bank in the approved Procurement Plan. As there are competent professionals in NamPower, the Project will mitigate these risks by strengthening capacity through training, knowledge sharing, and awareness raising. Procurement risk is assessed as **Moderate**.
- 46. **Project Procurement Strategy for Development (PPSD):** The PIU has finalized a Project Procurement Strategy for Development (PPSD) to inform (a) determination of optimal procurement approaches and (b) the development of Procurement Plan for the first 18 months of project implementation. The PPSD and the Procurement Plan may be updated during project implementation to reflect any substantial changes in procurement approaches and methods to meet the actual project needs.
- 47. **Record keeping:** All records pertaining to award of tenders, including bid notification, register pertaining to collection of bidding documents and receipt of bids, bid opening minutes, bid evaluation reports and all correspondence pertaining to bid evaluation, communication sent to/with the WB in the process, bid securities, and approval of invitation/evaluation of bids by the PIU will be uploaded in the STEP.

A. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

B. Environmental and Social

- 48. **The environmental and social risk is rated as substantial at this stage.** The risks that have been assessed are not simply the impacts resulting from the TA activities themselves (as detailed in section 26 above) but also the potential downstream environmental and social implications that may arise from the future investments (in particular the solar projects to be procured by NamPower under IPP/PPP mode and hence to be include financing from the private sector).



The risks and impacts associated with the TA activities are likely to be minimal or negligible. However, the potential downstream impacts may be significant due to the scale of the investments, the limited information available during this stage of project preparation due to the sites not yet being known as well as the institutional capacity constraints. The TA activities include detailed site studies and capacity building. The E&S impacts of carrying out the TA activities themselves are likely to be minimal. Potential environmental and social risks and impacts that have been identified for the TA activities are: ESS2 labor and working conditions including minor risks of work place sexual harassment, in addition, conducting research in some geographic areas could require consultations with communities and possibly with Indigenous People, with implications under ESS10 and ESS7. Potential impacts associated with the geotechnical and seismic studies which may include small scale and isolated impact on biodiversity or loss of vegetation (ESS 6), potential soil and ground water pollution due to accidental hydrocarbon spills or leaks from vehicles and generation of small quantities of waste (ESS 3) and occupational health and safety hazards and risk such as noise, dust and interaction with moving machinery/ equipment. ESS4 may also be relevant as the activities may possibly also have an impact on community health and safety, e.g., road safety through increased road circulation, possible spread of communicable diseases and minor risks of Sexual Exploitation and Abuse (SEA) /Sexual Harassment (SH) during the technical investigations. The TA outputs may have potential downstream environmental and social implications that may arise from the future investments. The locations of the study areas are not yet known and therefore the anticipated risk and impacts associated with the downstream development of the solar and wind parks cannot yet be fully assessed, and will only be known once the Environmental and Social Impact Assessment studies have been completed. However, drawing on similar solar and wind projects in the region, in particular, it is anticipated that the land take will be relatively large and as such may have implications relevant to the following standards, ESS1, 2, 3, 4, 5, 6, 8 and 10, and possibly 7 depending on whether Indigenous Peoples are present. These potential impacts will be assessed in the ESIA that is an output of the TA. A stakeholder Engagement Plan (SEP) and Environmental and Social Commitments Plan (ESCP) have been developed as part of project preparation and have been disclosed in-country. The PIU capacity to manage E&S risks and impacts has also been considered in the overall E&S risk rating. Although the PIU does not have experience in implementing WB funded projects under the Environmental and Social Framework (ESF), it has some in-house E&S capacity and experience with executing large scale infrastructure projects, including projects funded by other DFIs such as KfW.

49. **This project is aligned with the goals of the Paris Agreement on both mitigation and adaptation.** The activities outlined in the two project components are likely to enable further RE in Namibia's energy generation mix. These activities fall under the common principles for climate mitigation finance tracking. Component 1 will focus on preparatory studies to reduce the risk of RE project development, including resource assessment studies, safeguard studies, site studies, and feasibility studies; while Component 2 will provide advisory and capacity building to support procurement of RE projects through IPP/PPP schemes. Both components will enable generation of RE, which is part of the universally aligned list of activities.

VII. World Bank Grievance Redress

46. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the WB may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or



could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit <https://accountability.worldbank.org>.



VII. RESULTS FRAMEWORK AND MONITORING¹⁶

Results Framework

COUNTRY : Namibia

Namibia Renewable Energy Scale Up Support Project

Project Development Objectives

The development objective is to enable renewable energy development in Namibia.

Project Development Objective Indicators

Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Name: RE capacity procured at bid awarding stage through competitive bidding (solar/wind)		Megawatt	0.00	200.00	Annual	NamPower formal communication to WB	NamPower
Description: Utility-scale renewable energy or support infrastructure project for which preparation is advanced.							
Name: Private investments enabled at bid awarding stage		Amount(USD)	0.00	180,000,00 0.00	Annual	NamPower formal communication to WB	NamPower

¹⁶ PDO indicators have been assessed for 200 MW solar PV being procured under IPP scheme.



Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
through selection of IPPs/PPPs							
Description:							

Intermediate Results Indicators

Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Name: Implementation capacity strengthened		Text	No capacity building activities performed	NamPower's capacity for procuring bankable and sustainable RE projects strengthened	Semi-annual	Project implementation progress report. NamPower formal communication to WB.	NamPower
Description: Institutional capacity of NamPower is enhanced to enable competitive procurement of private IPP/PPP investments in RE (including the design and implementation of bankable RE projects).							
Name: Percentage of PIU staff that have attended gender-inclusive trainings in RE		Percentage	0.00	50.00	Semi-annual	Project implementation report. NamPower formal communication to WB.	NamPower



Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Description:							
Name: Feedback from communities reflected in revised SEP		Yes/No	N	Y	End of project	Updated SEP	NamPower
Description: Collecting, recording, and reporting on inputs received from beneficiaries.							
Name: Note on lessons learnt from the tenders disseminated to key public stakeholders		Yes/No	N	Y	End of the project	Transaction advisory service for solar/wind	NamPower
Description:							



Target Values

Project Development Objective Indicators

Indicator Name	End Target
RE capacity procured at bid awarding stage through competitive bidding (solar/wind)	200.00
Private investments enabled at bid awarding stage through selection of IPPs/PPPs	180,000,000.00

Intermediate Results Indicators

Indicator Name	Baseline	End Target
Implementation capacity strengthened	No capacity building activities performed	NamPower's capacity for procuring bankable and sustainable RE projects strengthened
Percentage of PIU staff that have attended gender-inclusive trainings in RE	0.00	50.00
Feedback from communities reflected in revised SEP	N	Yes
Note on lessons learnt from the tenders disseminated to key public stakeholders	N	Yes