



PROJECT FACT SHEET

ANIXAS II POWER PROJECT

Introduction and Background

In 2018, Namibia Power Corporation (NamPower) crafted its new [Corporate and Strategic Business Plan](#) for the period 2019-2023. In-line with the new corporate strategy and business plan, the NamPower Board of Directors approved the implementation of new generation projects in June 2018 under the “Strategic Pillar, Ensuring Security of Supply”. These projects were later considered by the Minister of Mines and Energy and a determination was made in October 2018 by the Minister that 220MW of Power Generation should be developed where:

- 150MW would be allocated to NamPower; and
- 70MW would be allocated on a competitive procurement basis as per current government procurement laws to IPPs for implementation.

At a Board Meeting on 8 November 2018, the NamPower Board ratified the implementation of the following projects as part of NamPower’s 150MW allocation.

- 20 MW PV Power Project;
- 40 MW Wind Power Project;
- 40 MW Biomass Power Project; and
- 50 MW Firm Power Project.

NamPower is thus advancing in the development to execute an engineering, procurement and construction (EPC) contract for its proposed 50 MWe Firm Power Station referred to as Anixas II Power Station. The proposed Power Station will be funded constructed, owned, and operated by NamPower.

NamPower is committed to supporting and achieving the government objectives as set-out in the national planning policies, and in particular the [National Integrated Resource Plan \(NIRP\)](#) and the [5th National Development Plan \(NDP5\)](#).

Project Objectives and Rationale

The Anixas II Power Station will be developed to increase the generation capacity of NamPower as well as provide backup power to stabilise the grid due to the intermittency of Renewable Energy sources.

The Power Station is to be constructed in Walvis Bay and is planned for completion by the Q2 2024.

The technology selected for the Anixas II Power Station is Internal Combustion Reciprocating Engine (ICRE) technology. While the envisaged fuel would be very low sulphur fuel oil (VLSFO), it will also be possible to operate using either diesel or compressed natural gas (NG).

The key objectives of the Project are to:

- Enhance security of supply of the Namibian electrical grid by introducing 54 MW dispatchable generation capacity;
- Provide grid support to compensate for sudden loss of energy caused by the intermittent renewable energy sources on the grid;
- Satisfy the SAPP 70MW Operating reserve requirement with the existing Anixas Power Station.
- Adding dispatchable capacity to unlock and integrate a greater share of renewable energy; and
- Indirectly support COP 21 commitments to increase the share of renewable energy generation within the country to 70% or more by the year 2030 as well as the National Renewable Energy Policy (NREP) of Namibia (July 2017).

SWOT Analysis

The Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for the Project are summarised in Figure 1.

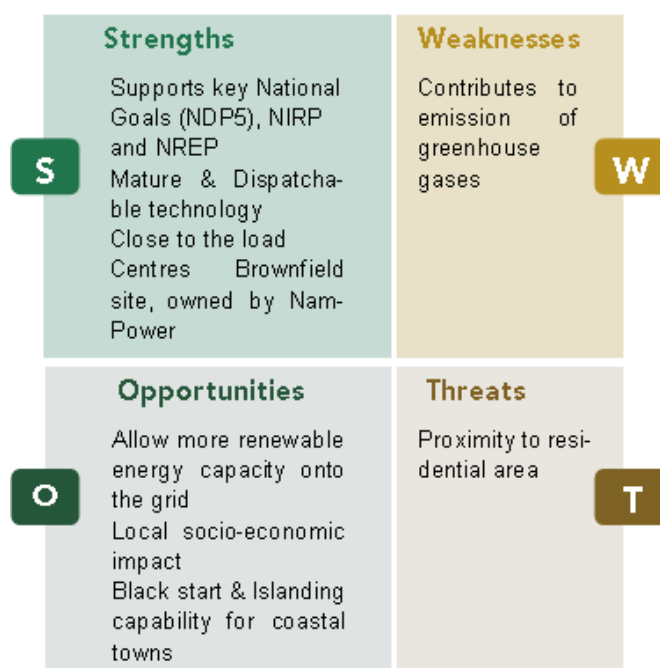


Figure 1: Project SWOT Analyses

Technical Description and Site Details

The Anixas II Power Station must be dispatchable, reliable and be capable of supplying a wide range of ancillary services to the grid when called upon. Thus, the Power Station is required to have fast start-up and shut-down capabilities (within minutes), while being able to deliver the rated power within an acceptable time, if and when required. A technical description of the Power Station is provided in Table 1 below:

Table 1: Technical Description

Technical Description	
Export Capacity:	54 MWe (net)
Fuel type	VLSFO, Diesel, Natural Gas (NG)
Technology Type:	Internal Combustion Reciprocating Engine
Availability	≥92%
Lifetime	25 years
Planned Capacity Factor	<10%
Cooling system	Dry Cooling

The selected site is presently home to two ICRE power stations, namely Anixas I Power Station, commissioned in 2011, and Paratus Power Station, commissioned in 1976, which has subsequently been decommissioned. The Anixas II Power Station will be located within the NamPower owned erf.

NamPower's Walvis Bay site is situated on the border of an industrial area, adjacent to the recently constructed Bulk Fuel Storage facility.



Figure 2: Project Site location



Figure 3: Project Site

Anticipated Dispatch Profile

It is anticipated that Anixas II Power Station will under normal circumstances only be dispatched if the tariff is less than the cost of energy available in the market, during planned outages of backbone lines, or during emergencies. Hence, the dispatch could be during the morning and evenings peak time-of-use periods only. It is anticipated that the Power Station will accumulate less than 900 hours per year or have a capacity factor of less than 10%.

Environmental Considerations

Key environmental aspects to be considered are the impacts on air pollution as well as noise generation to the nearest receptors. Through consultations with key stakeholders, project guidelines have been proposed to minimize the environmental impact of the Project. The Project emissions will comply to international best practices as published the World Bank as well as the National Ambient Air Quality Standards (NAAQS) of South Africa.

The Environmental Clearance Certificate (ECC) for the Project was issued to NamPower by the Ministry of Environment, Forestry and Tourism (MEFT).

Capital Budget

The Project will be financed through NamPower's balance sheet on typical corporate funding principles. NamPower's Financial Statements are reported in NamPower's Annual Report, (Investor Relations section of the NamPower website, www.nampower.com.na).

The total EPC cost of the Project is currently at NAD 1,259 million and fixed in Namibia Dollar.

Value Proposition

The value proposition of the Project is drawn from the improved security of supply that it affords the Namibian grid. The additional dispatchable power would allow loads to remain connected, which may otherwise need to be disconnected during times of load shedding in South Africa. During times of load shedding, Namibia could be required to reduce its load by up to 20% during such times.

Ancillary services are currently provided mainly by Eskom at very attractive rates which may be repriced very differently if Eskom is unbundled or when the Eskom PPA is renegotiated in future. The Project will be capable of providing such ancillary services.

The Power Station will have the capability to allow black starting and island-mode operation of the coastal towns (Walvis Bay and Swakopmund) during a collapse of the grid.

Stakeholders and Authorisations

Key stakeholders involved in the Project are depicted in Figure 4 below.

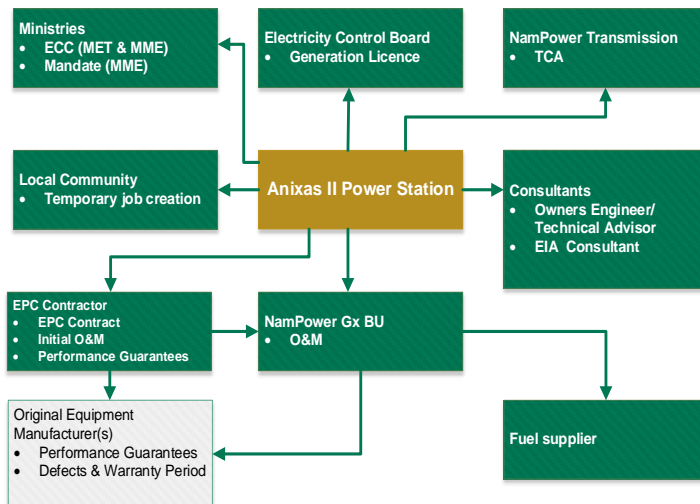


Figure 4: Key Project Stakeholders

Procurement Methodology

The procurement of the EPC Contractor for the Project will be completed within the provisions of the Namibian Public Procurement Act, No.15 of 2015.

The contract between NamPower and the successful bidder (EPC Contractor) is done on the FIDIC Conditions of Contract for EPC/Turnkey Projects (Silver Book), 2017 edition.

The EPC procurement process was completed as an open international bidding process without a pre-qualification stage. The scope of the EPC Contractor will include the following:

- The engineering, procurement and construction of the Project under a turnkey contract (FIDIC Silver Book);
- Subcontract all possible local works/services to Namibian companies in order to achieve a local content spend of >10% of the total EPC contract value; and
- Ensure the local employment of all unskilled and semi-skilled labour.

Risk Assessment

A risk workshop was subsequently held together with the appointed Technical Advisor in February 2020, which involved key internal stakeholders and the Environmental Consultant. The key risks identified during the risk workshop are listed below:

- Fuel price increases due to market factors;

- Operational cost increase, due to higher capacity factor, or greater use of diesel due to HFO unavailability;
- Delays due to Exceptional events such as wars and earthquakes (Russia – Ukraine war, Turkey earthquake, Israel – Hamas war)
- Exchange rate fluctuates adversely resulting in higher CAPEX costs and

The risk register updated regularly as the project moves through its different phases (i.e. procurement, construction and operation).

Project Schedule and Progress

The following next steps are required to bring the project to financial close:

Table 2: Key Next Steps

Key Next Steps
Complete commissioning of power station
Issue Taking-Over Certificate

The completed tasks of the project are summarised in Table 3.

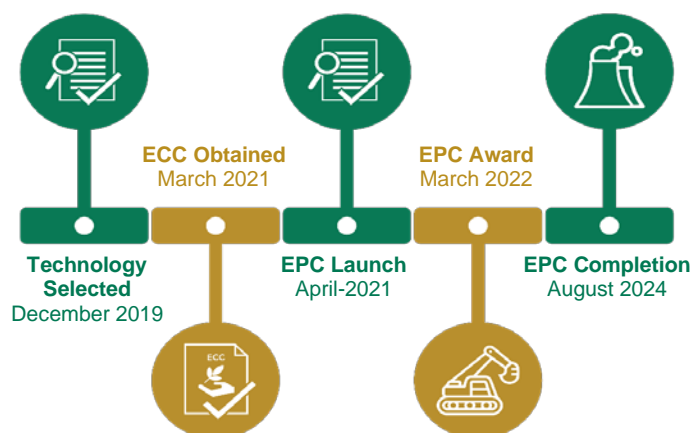
Table 3: Completed Tasks

Completed Tasks	Completion Date
Minister's determination and approval of the Project	12-Oct-18
FIDIC Approval by MoF	19-Feb-19
NamPower Board approval for Project	20-Feb-19
Appointment of Technical Advisor and Owners Engineer	2-Sep-19
Technology Selection Study approved	5-Dec-19
Environmental Clearance Certificate received	3-Mar-21
Board Final Invest Decision & Appointment of EPC Contractor	4-Mar-22
EPC Contract Effectiveness and start of engineering, procurement and construction (99% complete)	4-May-22
Issue of EPC Completion Certificate	28-Aug-24

Project Key Milestones

The key milestones of the Project are summarised in Figure 5.

Figure 5: Project Development Timeline



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