



Noupoort Solar-Powered Boreholes and Feasibility Study

Noupoort, Northern Cape, South Africa



Project Details

Client:	Noupoort Wind Farm / ENVUSA
Project Type:	Feasibility Study, EPC and O&M (1 year)
Initiated:	Feb 2025
Completed:	Sep 2025
Design Capacity:	1000 m ³ /d
Project Value:	CAPEX and OPEX (1 yr) ZAR 5.2m

Project Description

Noupoort, located in the Northern Cape of South Africa, receives most of its rainfall during the summer months and experiences dry winters. Although more than 12 municipal boreholes have been identified in the area, the town has faced daily water shedding since 2022, with outages between 08:00 and 17:00 disrupting essential services, particularly at schools and clinics. These challenges are mainly caused by issues within the water reticulation system, including non-operational boreholes and leaking pipelines.

To address this, the project is being implemented in phases. In Phase 1, three municipal boreholes were equipped with solar power systems and a monitoring platform in partnership with a local SME contractor. This intervention reduces reliance on grid electricity, limits groundwater over-extraction, and is expected to supply approximately 1 ML/day, benefiting around 7,000 residents.

The project also included a hydrogeological feasibility study at three clinics and one school to assess the development of decentralized groundwater systems, reducing reliance on the municipal network. A report with recommended solutions has been submitted to support reliable, all-day water access and uninterrupted service delivery in education and healthcare.

Project Impact

