

# BUFFALO ENERGY LTD



**Location**  
Zambia

## PROJECT SUMMARY

A convertible note from REPP is enabling British renewable energy developer Buffalo Energy Ltd to progress a diverse pipeline of projects in Zambia with a combined generating capacity of up to 100MW. Of the 100MW, an estimated 30MW will be achieved as a direct result of REPP's support.

Buffalo Energy Ltd was set up in 2016 to develop small-scale projects to provide low-cost electricity to the southern African country's rural communities, most of which currently lack reliable access to modern clean energy and instead have to rely on kerosene and other expensive and polluting fuels for their energy needs.

In 2017, the company raised seed capital to originate several opportunities and initiate development on a multi-project portfolio, which includes grid-connected, captive and off-grid schemes employing large-scale solar PV and wind technologies.

The convertible note has enabled Buffalo Energy to continue to grow its pipeline while also progressing its existing projects through the funding of development milestones. This includes the procurement and management of a wind measurement campaign on a 50MW wind project, and the subsequent completion of the full feasibility study for that project. REPP's support has also facilitated the completion of various environmental and geotechnical studies on a 25MW solar project, which has won a tender for a PPA with the innovative off-take structure of Africa Green Co. Africa Green Co will be an intermediary buyer and onsell the electricity into the Southern African Power Pool (SAPP) market.

Buffalo Energy will begin construction of this project in 2023, and it is expected that the unique development and offtake approach of the project will provide a clear template for the construction of additional projects both in Zambia, and the wider Southern African region through the SAPP market.

In September 2021, the company won a tender for the development and construction of a 25kW (DC) solar plus battery storage project to supply long-term, sustainable solar power to an elephant nursery and orphanage at the Lusaka National Park. Buffalo Energy completed construction of this project in April 2022 and the solar generated electricity has reduced the client's emissions of greenhouse gas emissions through the displacement of diesel generators.

Once built, Buffalo Energy's projects will contribute significantly to Zambia's energy diversification strategy and its aim to increase energy access to improve livelihoods (National Energy Policy 2019). They will also support the country's conditional NDC target to reduce greenhouse gas emissions by 47% by 2030 against a base year of 2010.

\* Estimate of achieved capacity during REPP's support.



### Country policy alignment

Supports Zambia's Updated NDC (2021) targets to reduce GHG emissions by 47% by 2030 and extend the grid to non-electrified rural areas. Project is also well-aligned with National Energy Policy (2019) and Eighth National Development Plan (2022-2026) objectives of diversifying the country's energy mix through the promotion of renewable energy sources.

## AT A GLANCE

### Technology

Grid-connected solar PV, wind, and mini-hydro

### Project type

Grid-connected and off-grid



### Offtaker

Industrials and rural communities

## KPIs



GHG emissions avoided: 49,869 tCO<sub>2</sub>e per year



People with first-time access to clean energy: 2,700



Planned capacity: 30MW\*

## FUNDING STRUCTURE

**Signed:** 23 October 2018

**Type:** Corporate convertible loan

**REPP funding:** Undisclosed due to confidentiality

## SDGs



"REPP's support has provided the foundation of the company's growth and played a key role in our award of a PPA by Africa GreenCo for the 25MW Ilute solar project. With construction starting in 2023, this merchant power station will be selling electricity to a diverse range of counterparts on the SAPP, with Africa GreenCo acting as the intermediary between the Pproject and the market. By avoiding the offtake risk typically associated with state utilities, we are optimistic that through the Ilute project, Buffalo Energy will demonstrate a game-changing precedent for successful project development in the region."

Will Dryer, Director, Buffalo Energy Ltd