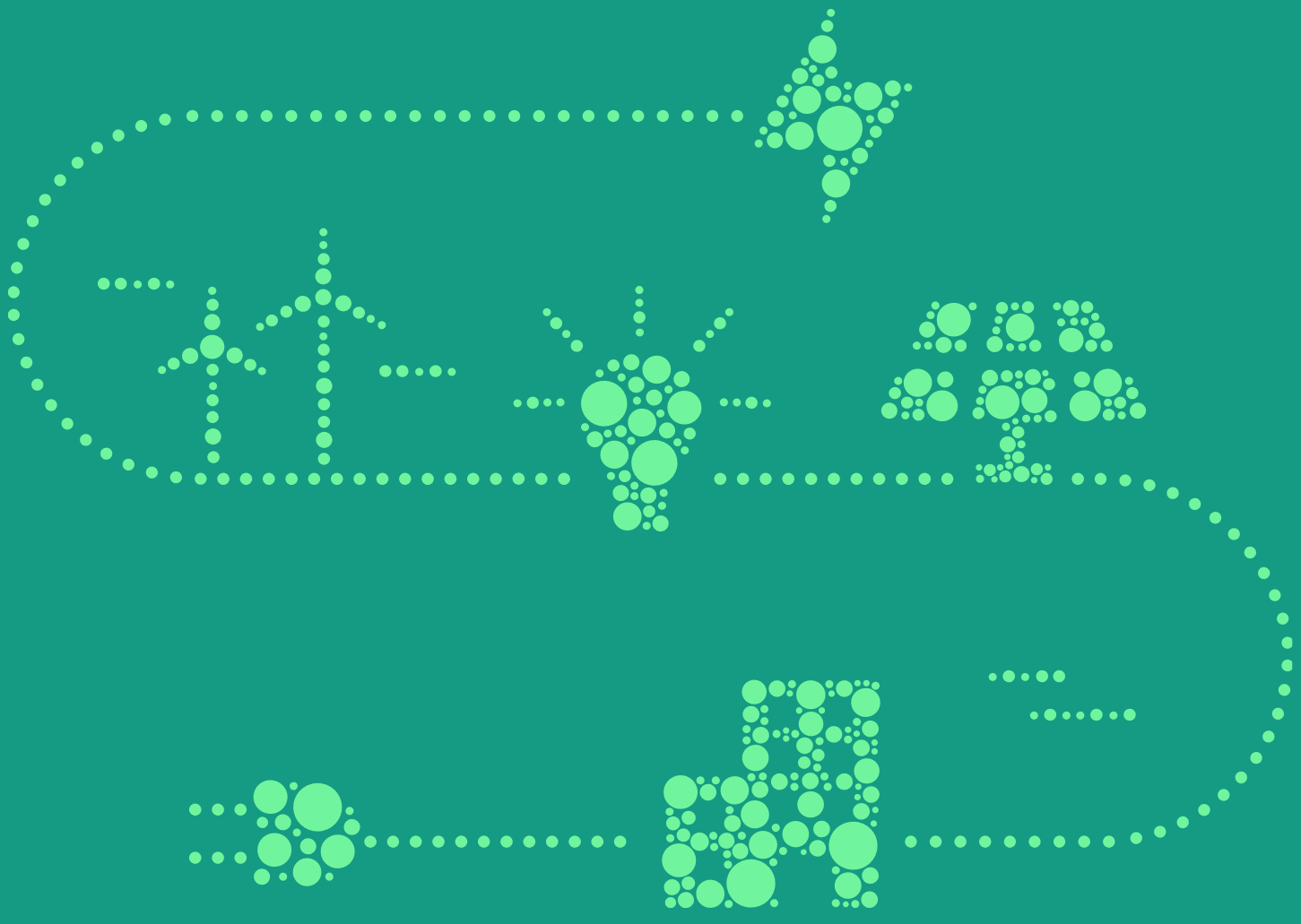
CrossBoundary Energy

Kamoa-Kakula Solar/BESS Baseload Project

Factsheet



Overview

About Kamoa-Kakula Solar/BESS Baseload Project

The Kamoa-Kakula Solar/BESS Baseload Project is a landmark renewable energy facility supplying the Kamoa-Kakula Copper Mining Complex near Kolwezi in the Democratic Republic of Congo.

Developed, financed, owned, and operated by CrossBoundary Energy under a long-term power purchase agreement with Kamoa Copper S.A., the plant combines 233 MWp of solar PV with a 123 MVA/526 MWh battery energy storage system (BESS). By storing surplus solar energy and dispatching it when required, the facility provides 30 MW of firm, round-the-clock renewable power with a 95% availability factor.

It comprises more than 357,000 solar panels and 180 battery containers and is expected to produce approximately 300,000 MWh of clean electricity each year, reducing reliance on diesel generation and avoiding an estimated 78,750 tonnes of carbon emissions annually.

Fun Facts

The system is designed to supply a minimum of 30MW firm power – enough to power >25,000 US households – with 24/7 energy, at a 95% availability factor

Solar PV installation is spread across 163 hectares, the equivalent of almost 230 football fields. Including the battery storage area, the project is over 180 hectares - almost 260 football fields.

The project required delivery of over 1,000 20ft containers and 870 40ft containers sourced and shipped through 4 different countries

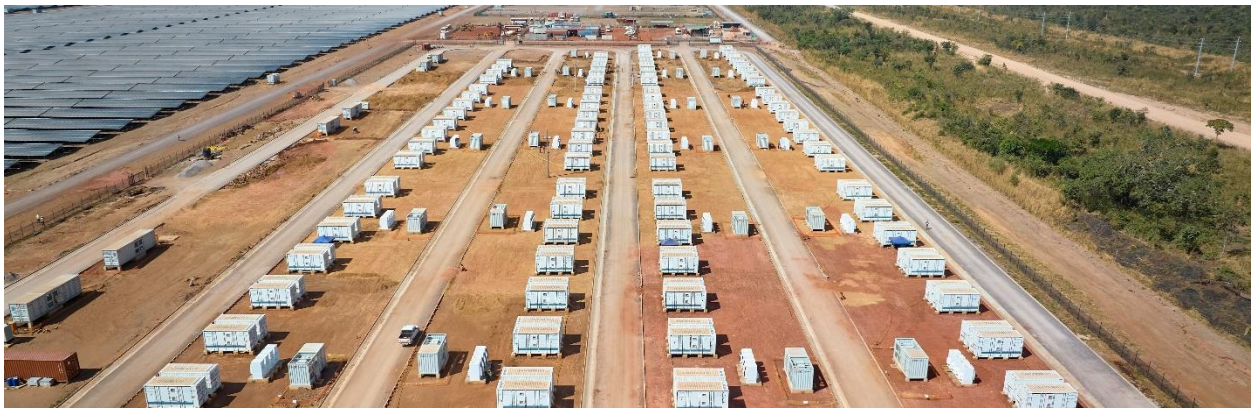
The plant contains more than 357,000 solar panels and 180 battery containers

In early operation the PV plant has already been providing >150 MW, supplying 50MW directly to the mine network with the remaining power charging the battery plant. This exceeds the guaranteed performance of 30MW which is to be provided at all times, which is the minimum guaranteed power supply. The expected operational maximum PV output is 180MW.

The project is expected to avoid 78,750 tonnes of $C0_{2\,eq}$

Technical factsheet

Dispatchable power size	30 MW, 95% availability factor
Energy produced per year	~300,000 MWh
Solar PV size	233 MWp Solar PV
Number of Solar PV Modules	357,048
Number of PV Inverters	513
Number of PV Transformers	27
Battery Energy Storage (BESS) Size	123 MVA/526 MWh BESS
Number of BESS Containers	180
Number of BESS Transformers	23
Number of BESS Power Conversion Systems	90



Technical factsheet

Number of truckloads from Durban Port to Kolwezi	~998
KMs traveled from Durban port to Kolwezi	3,080 kilometers and 18 days on the road per vehicle, cumulatively over 3 million kilometers traveled
Construction jobs created	1,200
On-site permanent jobs created	18 long-term permanent local jobs created
Project Partners	• Soventix – solar PV engineering and procurement management • DHybrid – BESS engineering and Energy Management System • Mine Engineering Services (Mining Services and Supply) – construction partner • Sigma Consulting Services – E-House design and supply • Aiko – solar PV module supplier • Sungrow Power Supply – PV inverters and MV stations supplier • Zimmerman – PV racking supplier • SYL – battery supplier • EPC power – BESS PCS

Technical factsheet

External counsel and licensing consultants	• Liedekerke DRC SASU – regulatory advice and legal counsel • Littell & Holy SASU – tax advisory • EMI Africa – permitting and licensing support
Local partners	• Petite Cuisine – accommodation and camp manager • Malabar – local travel and transport services provider • AGL – project logistics services provider • Congo Hembi Services – PV panel cleaning and vegetation Control • AKSENTI – vehicle and site camp furniture supplier

CrossBoundary Energy

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For more information, please contact
communications@crossboundary.com