



2022 Catapult

Cape Town

Oct 2022

www.afida-Africa.org

Green Energy Africa Summit, Cape Town



AfIDA CATAPULT ACCCELATOR

The AFIDA Catapult Accelerator is a platform for infrastructure project developers from across the African continent.

The objective of this program is to create the basis for a better project development outcome on the Continent - reducing timelines and uncertainty to financial close, and increasing scale and improving the risk-reward balance between public and private sector.



Supported by



Participating developers benefit from access to:

- @capital providers for project development capital, construction debt and equity
- @advisory and procurement eco-system
- Opeer-peer learning and bespoke training
- Advocacy support for a dialogue between public-private sector stakeholders for more effective regulatory mechanisms and financial instrument

IN-TAKE OF DEVELOPERS IS THROUGH TRANSPARENT CALLS, AND GEAS WILL HOST THE FIRST PITCH SESSIONS ON 05 OCT IN CAPE TOWN.

Wanergy Limited

@ Energy Now

Kwanza Infrastructure Group

Allpro Green Energy Limited

@ Buffalo Energy

O Natura Energy, Republic of Namibia

THE PITCH SESSIONS WILL BE FOLLOWED BY A ROUND OF WORKSHOPS FROM PRACTICING INVESTORS AN ADVISER, AND WILL INCLUDE

 Project Management and HSE for developers

- ESG and ESIA imperatives during project development
- @Presentation and Negotiation Skills
- Legal Skills for developers

PROGRAMME OVERVIEW

09.5

Chairman Welcome: Mr Vivek Mittal, CEO, Africa Infrastructure Development Association ("AfIDA")

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Wanergy Waste to Energy Project, Republic of Kenya

Developer Name: Wanergy Limited Project Name: Wanergy Waste to Energy, Nairobi

Investment Value: \$500,000 iritial leasibility finance with a projected \$39.5m USD Project investment

Website: www.warergysfrica.com Investment value: 6500,000 project development capital and 629.5 m construction debt and equity.

10,20

Buwangani 6mw Micro Hydro Project, Republic of Uganda

Developer Name: Novariza. Infrastructure Group Speaker name: Herbert Waksabu Project synopsis: A proposed small hydropower project located in Eastern Uganda, East frice to be developed along ther Manatwa

Project Name: Buwangani Hydro Investment Value: \$6m USD

Website: www.kwanzaig.com

10:40

Buffalo Energy 80MW solar PV project, Republic of Zambia

Developer Name: Buffalo Energy Speaker Name: Charlie Troughton Project Name: Buffalo Tera Sun Solar Project Investment Value: \$100m USD Website: www.buffaloenergy.co

1.00

South Africa 50MW embedded generation Solar, 69MW Wind Asset, 140MW wind asset

Developer Name: Energy Now **Speaker Name:** Stuart MacWilliam & Racul Garnsu

Project Name: Energy Now South Africa Investment Value: \$20m USD

11.20

Solar Republic of Zambia

Developer Name: Allpro Green Energy Limited

Speaker name: Bill Milula Project Name: Alpro Green Solar Investment Value: \$800,000 USD project development capital and \$50 microstruction debt and equity

Website: www.allprogreenenergy.com

11.40

300Mw, Republic of Namibia

Developer Name: Natura Energy, Pepublic of Namibia. Speaker Name: Jennifer Stride Project Name: Natura Energy Solar Website: www.natura-energy.com

12:00

Session ends

The Developers



In early Oct-22, six developers participated in the maiden Catapult Pitch Sessions held as part of the Africa Oil Week and Green Energy Africa Summit in Cape Town

This is what they said -

This was possible through the generous support from the Africa Finance Corporation, Development Bank of Southern Africa, African Development Bank, Hyve Group and the AfIDA Board. AfIDA's work in connecting capital and advocacy at the GEAS summit is a fantastic resource that all developers should consider.

Charlie Troughton – Buffalo Energy, Zambia

The AfIDA Catapult process is an excellent platform to fast-track exposure of developing projects to funders of substance.

Ezio Vernetti – Natura Energy, Namibia

The founding Catapult [is] a success. Excellent platform to connect with investors, peers, share war stories and industry knowledge.

Jennifer Stride, Balmoral Projects, South Africa

AfIDA's catapult enabled EnergyNow to secure significant equity interest.

Stuart MacWilliam, Energy Now, South Africa

This is a good initiative to help local developers in Africa. I look forward to the training and mentoring sessions.

Elizabeth Kaijuka-Okwenje, KK Advisors, Uganda

The AFIDA Catapult program is a catalyst for converting business ideas to real projects in the marketplace and Iam one of the beneficiaries.

Junnie Wangari, Wanergy Africa, Kenya

The Mentors and Judges



... the developers were mentored before the Cape Town event by six leaders of the African infra investing, lending and advisory sector from Actis, AIIM, Climate Fund Managers, DBSA, Herbert Smith Freehills, and Inspired Evolution

These mentors then evaluated the presentations and provided additional feedback for success

The developers also took part in workshops covering areas such as project development skills, ESG/ESIA, financial structuring and presentation/negotiation skills

The first Afida catapult session marked a turning point in the quality of conversation on real project development issues. The dynamic created by putting a real development investment opportunity into a collaborative and expertly informed discussion yielded invaluable insights, advise, guidance and expressions of support for the participants, as well as a broad window of opportunity for early stage infrastructure investment in Africa.

Andrew Johnstone, Founder & CEO Climate Fund Managers & Chairman of the Board AflDA

The Catapult pilot session was a success and should be repeated. The energy between the presenters and the judges was palpable and productive.

Lisa Pinsley, Partner and Head Energy Africa & Middle East, Actis

Member of the Board, AfIDA

The Catapult sessions showcased an impressive list of investible opportunities, demonstrating innovation in the renewable energy sector, particularly the emerging merchant market. It was good to participate and engage on real project opportunities. The significant effort and resources that the developers have committed to develop these projects was evident, and we look forward to further discussions on these and other opportunities.

Mohan Vivekanandan, Group Executive: Client Coverage and Origination, Development Bank of Southern Africa

Project development challenges have stemmed from the government procurement side as well as a dearth of skills and capital on the developer side. With Catapult I hope we will get well on our way is remedying the latter, while our advocacy initiatives drive progress on the procurement side of things.

Vuyo Ntoi, Managing Director & Co-Head, AllM & Member of the Board, AflDA

We found the Catapult pitches well presented and inciteful, and we see great value in the platform to bring developers and investors together to accelerate projects towards bankability.

Steven Faure, Partner, Inspired Evolution



Creating an annual \$12M Circular Economy using Municipal Solid Waste in Athi River, Kenya



Our Vision is to sustainably improve the quality of life for all Kenyans by keeping our cities free of waste and using optimal technology to derive value from this waste and design a Circular Economy around our solution

Background & Impact

- Open dumpsites especially in residential areas has become an eye sore and a health hazard and so in 2019 we started the journey of finding a solution to this unsustainable practice
- Key partners include Machakos County and key off-takers namely Savannah Cement & CFAO Kenya
- We have completed the pre-feasibility study, identified potential land site& determined the optimal business model of generating heat & power to sell to the cement company

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Economics (USD eqiv.)

- Development Capital-\$500,000
- Construction Capital- \$29,000,000
- ➤ Unlevered IRR 19.6%
- Equity return 22%

Project(s) outline

- > Technology-Biogas + CHP
- Overall Capacity -5MW
- Annual output- 2543MWh electricity & 2543MHh of heat
- Start of development-Dec'22
- > Start of Construction-Sep'23

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TeraSun Energy – 80MW solar plant in Namibia for high-value export returns in SAPP market



Our vision is to successfully trade fixed term PPAs and merchant power on the SAPP regional market through a portfolio of utility scale renewable energy plants in Namibia.

Background & Impact

The progressive regulatory framework in Namibia allows IPPs access to the national grid for domestic supply and export. Commenced in 2019, the TeraSun Energy power park project is in an advanced stage of development. Focused on exports to the SAPP market and C&I PPAs, Natura Energy together with its development partner Globeleq Africa Limited, believes that the project can benefit from a first-mover advantage position on the SAPP regional market.

120ha site, 60km from Swakopmund, Namibia Solar Irradiation GHI 2418kWh/m² Specific Production: 2799kWh/kWp/year Talaeb conservancy Ugaran Ugaran Cross Barroe Mile 72 Heritenbase Trakkople Otymtengree Otymtengree Windhock Swakopmund Swakopmund Swakopmund Swakopmund Swakopmund Swakopmund Mile 12 Cross Barroe Mile 12 Mile 12

Economics

- > Development Capital is secured.
- Construction Equity already secured for 20MW out of 40MW for phase 1.
- Construction Equity required: USD22M for up to 50% in project HoldCo.
- > Returns: USD Equity IRR market related.

Project outline

- ➤ Solar PV 40MW phase 1
- Overall Capacity 80MW ac
- Capacity factor: +31%
- > Start development: 2019
- > Start construction: Q3-2033
- ➤ BESS planned in Phase 2

<u>ezio.vernetti@natura-energy.com</u> www.natura-energy.com



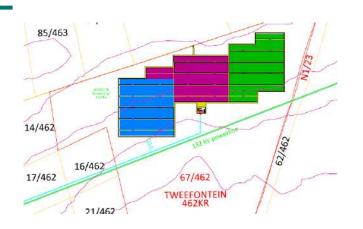
Providing wheeled green energy to South African businesses



Enabling South
African businesses,
large and small, to
go green

Background & Impact

- EnergyNow is a South African green energy utility
- Established 2022
- First project: 50MW solar
- > Full rollout: 500MW solar and wind
- Technical partner: Sturdee Energy



Economics (USD eqiv.)

- Construction Capital: \$56m
 - o Debt: \$31m
 - o Equity: \$25m
- Unlevered project level return: 13%+
- Equity return: 17%+

First Project Outline

- > Solar
- ➤ Overall Capacity: 50MW
- ➤ Annual output 132GWh/year
- > Start of development: 2022
- > Start of Construction: 2023



Kwanza Infrastructure Group - UGANDA



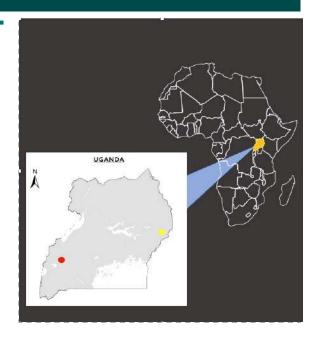
Fully Developed 13.8MW and 8MW Hydropower Projects as a Packaged Deal



Our Vision is to identify untapped market opportunities in Sub-Saharan Africa.

Background & Impact

- ➤ Founded in 2016, Kwanza Infrastructure Group has equity stakes in renewable energy projects under development in Uganda.
- Key partners include: Serengeti Energy, Ceylex Engineering and Mecamidi HPP India.
- > The projects are fully developed and transitioning to the construction phase.



Economics (USD eqiv.)

- ➤ Development Capital USD 472.5k
- ➤ Construction Capital USD 29,960k
- ➤ Unlevered project level return 15%
- ➤ Equity return 14%

Project(s) outline

- Technology HPP
- Overall Capacity 21.8MW
- Annual output 52.02 & 38.54GWh
- Start of development- 2019
- > Start of Construction 2024

<u>patience@kwanzaig.com</u> www.kwanzaig.com



Leveraging Solar PV potential to generate green energy for the National Grid and C&I offtakers



Our Mission is to deliver clean, reliable energy in a consistent, environmentally friendly and ethical manner. We will develop, build, own and operate utility scale solar PV power plants that add clean and cheap power to the national grid

Background & Impact

Allpro Green Energy Limited is a Zambia Renewable Utility. Our company has proposed the development of grid connected photovoltaic (PV) solar power generation plant in Mumbwa and Shibuyunji Districts of Central Province in the Republic of Zambia. The proposed solar PV projects will leverage the very significant solar energy potential to generate green energy.



Economics (USD eqiv.)

- Development Capital \$ 1.5 Million
- Construction Capital \$100 Million
- Equity return 15%+

Project(s) outline

- Solar PV
- Overall Capacity 50MW
- Annual output 109.5GWh
- Start of development 2022
- Start of Construction 2023

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Late stage development solar and wind projects in Zambia including SAPP and C&I offtake



Buffalo Energy and its partners have an experienced team in Lusaka and London focusing on developing the energy required to power high growth markets in southern Africa

Background & Impact

- Zambia is reliant on mining revenues and requires large amounts of power to extract copper and other minerals.
- The team has been developing projects there together since 2016 partnering with the likes of Serengeti Energy, Enel Green Power and REPP
- Feasibility studies including ESIA have been completed for at least 3 projects



Economics (USD eqiv.)

- USD 20m development capital raised to date
- Buffalo and its partners have equity rights of over USD 100m in the projects they have developed
- These give an equity return of >14% at Financial Close

Project(s) outline

- ➤ Ilute Solar PV 25MWac
- Africa Greenco Pilot Project; power traded on SAPP markets
- > 76GWh per annum
- Construction start Q1 2023



2022 Developers Survey (Interim)



The four paradoxes

Capital providers compete for very few deals each year, and developers struggle to find capital

Projects spend too long in development

On-shore project development capability remains far behind international capacity

Perception of poor risk-reward transfer between public and private sector

The Catapult



2

50 developers to raise \$2.0-3.0 billion+ over 5 years

3

Advocacy for better frameworks, financial instruments & Risk Mitigation



30 responses from developers & funds planning a raise of \$ 2.88 billion in next 12 months

TOTAL

Sectors	No#
Renewable Energy Generation (including hybrid and C&I)	22
Other power sector (including Grid)	6
Non-power energy (eg Hydrogen, Oil & Gas)	4
Transport - Logistics - Industrial Parks	3
Digital - ICT – Telecoms	4
Other (please specify) – demand side management / nuclear coal / bio-gas	9

Country	Project(s)	Capacity (MW)	Investment (USD m)	Years in Dev.
Botswana	Biofuels & Battery Storage	-	-	16.0
Gambia	A Digital Economy and Financial Inclusion Pilot	-	5	5.6
Kenya	50 MW wind power project	50	100	6.6
Lesotho	50MW + 40MW wind farms	90	110	4.9
Namibia	80MV PV plus storage	80	80	4.5
Nigeria	70MW Hydropower	70	100	6.7
South Africa	50 MW Group Captive Solar	50	50	0.9
South Africa	239 MW embedded generation Solar and wind	239	450	7.8
South Africa	75mw solar	75	75	3.0
South Africa	100MW Small Modular Reactor	100	470	7.8
Uganda	221 solar and hydro mini-grids combined	6	66	1.1
Uganda	8+13.8 hydropower project	22	43	4.0
Zambia	25MW merchant solar	25	37	6.9
Zambia	2 x 50 MW grid connected solar	100	100	6.5
Zambia	118.4MW hydro projects	118	280	6.5
Zambia	52MW solar PV project	52	55	3.5
Zimbabwe	Rufaro Farm Solar Project 50 MW	50	75	2.9

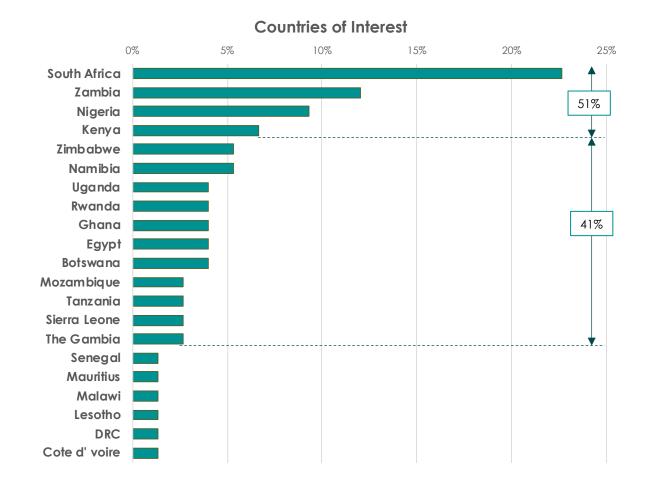
1,127 MW \$ 2.1 billion



Country focus is consistent with 2021 / 2022 surveys

Typically 4 countries account for ~50% of activity – Zambia appears to have displaced Ghana

10-12 countries account for a further ~40% of activity





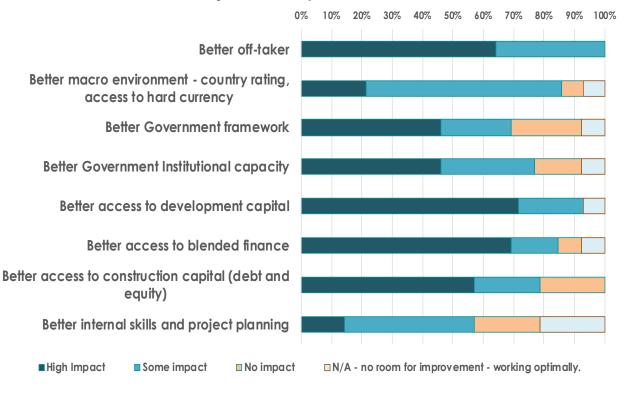
What would help speed up project development?



Access to Capital

Skills & Planning

Project Development Enablers





Training Demand

How to eliminate risk?

What do first developers need to know now- to be successful in attracting funding when their projects are ready?



AfIDA – the Association of African Infrastructure Sector



Developers





















Solar Water Leasing

Funds



















DFIs









KFW DEG















Advisers











International Proximity





How may we help you?

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