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GET.invest Finance Catalyst advisor



Solar and Storage in sub-Saharan Africa

Business Models, Drivers and Challenges

GET.invest is supported by



GET.invest in a Nutshell

A European programme to support investments in decentralised renewable energy, implemented by GIZ, hosted on the multi-donor platform GET.pro, and supported by the European Union, Germany, Sweden, the Netherlands, and Austria.

Advisory support via the “Finance Catalyst”

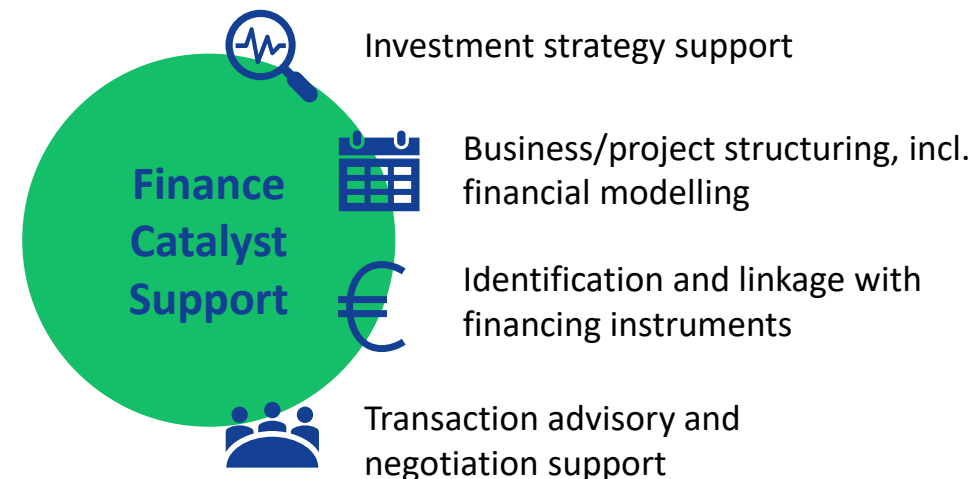
- Open facility linking projects/companies with finance
- 25+ experienced advisors, **~100 active clients**

Private sector mobilisation

- Linking partners via offline & online events
- Market information, studies
- Supporting associations

Capacity development and other complementary work

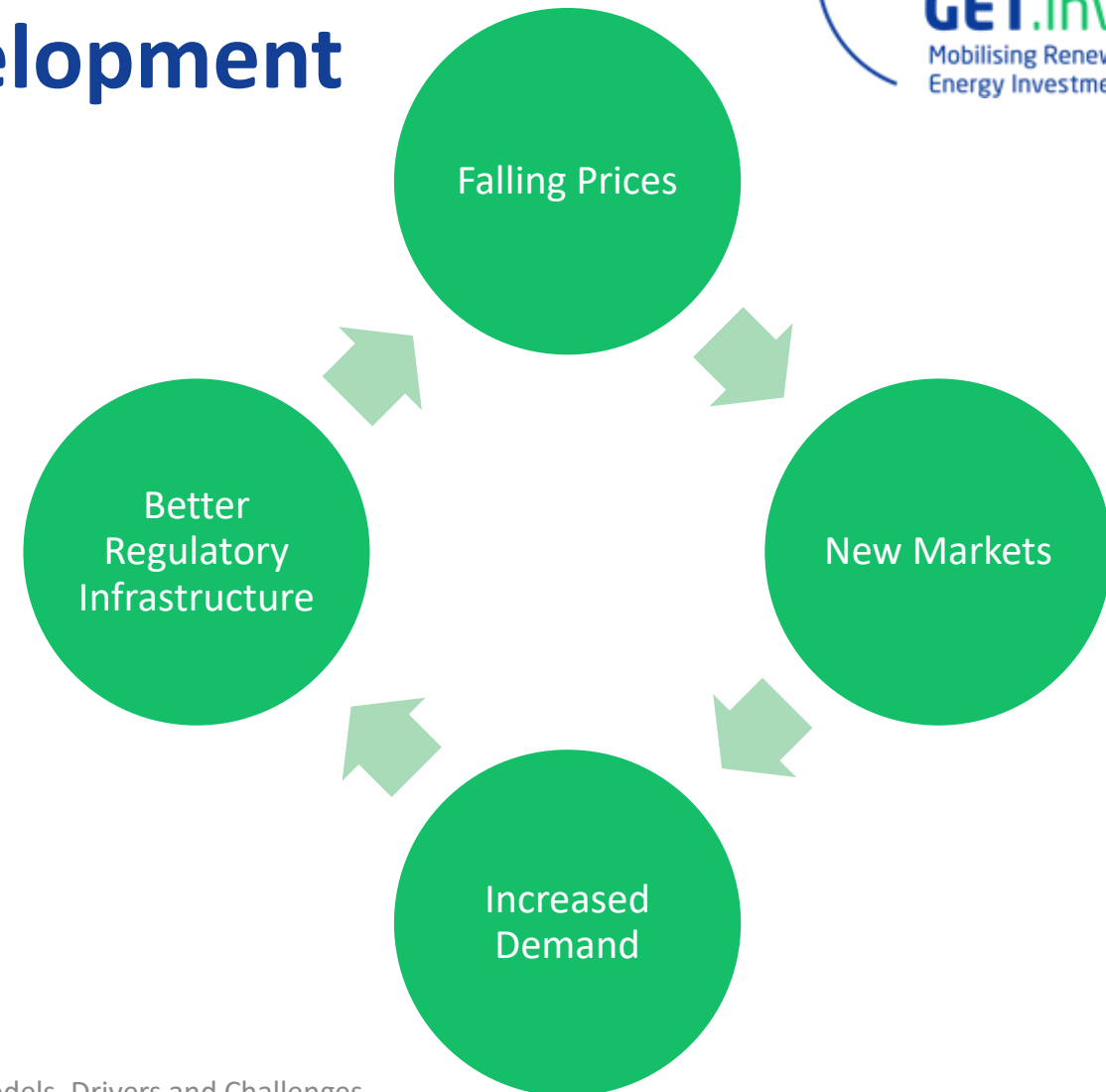
- Incl. trainings, advisory/support to regulators, etc.



Drivers for Market Development

Drivers

- Battery technology (lead acid, LiOH, capacitors...)
- Solar PV market development
- Price reductions (expected \$100/kWh by 2023)



Case studies SSA – PV+storage

Central African Republic, Bangui PV plant

- 25MWp + 25MWh BESS
- 100% WB grant funded
- Need for storage as grid stabiliser

Senegal “Teranga”

- 30MWp + 45MWh BESS
- Funded by CFM
- Exploration of PV+storage as base load alternative to expensive natural gas

Case studies SSA – PV+storage

Namibia

- 10MWp + BESS
- Namibian law curtailed some of the produced power to protect the vulnerable grid from intermittent power
- Could not be monetised in discussions with utility

South African Power Pool

- 30MWp + 45MWh BESS
- Spot prices of 2 ZAR/kWh available (opposed to 0.8 ZAR PPAs) if BESS is recognised same as gas PP
- Limited offtake and need for sophisticated sales infrastructure

Case studies SSA – PV+storage

Mozambique “Cuamba”

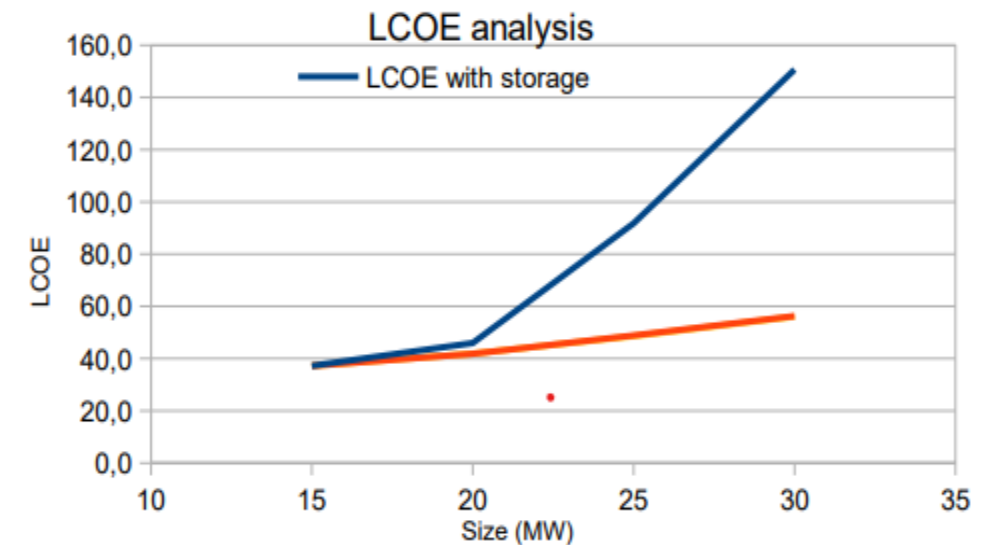
- 19MWp + 7MWh BESS
- Avoid network mgt issues, shift to different times of the day, distance btw loads and supply

Case studies SSA – PV+storage

Mozambique, 20MWp + xMWh

LCOE Analysis – 3 scenarios					
Size PV		15	20	25	30
BESS capacity	None. Base Scenario		15875	38750	65000
Recovered energy	-		70,17%	70,11%	70,46%
Daily coverage	-		51,85%	45,57%	41,42%
1.LCOE without storage %change	Base Scenario		108,85%	123,06%	138,89%
2.LCOE with storage without grant %change	Base Scenario		153,08%	208,06%	255,93%
3.LCOE with storage grant %change	Base Scenario		110,15%	121,40%	131,27%

- Adding storage would not compensate, only being suitable for smaller scale batteries (100 to 200 kWh) offering very low % of recovered energy and value;
- A CAPEX storage grant allows the battery cost to be much lower, making it feasible for a higher battery capacity



Example of LCOE study for Option 2 – Single Axis Tracker

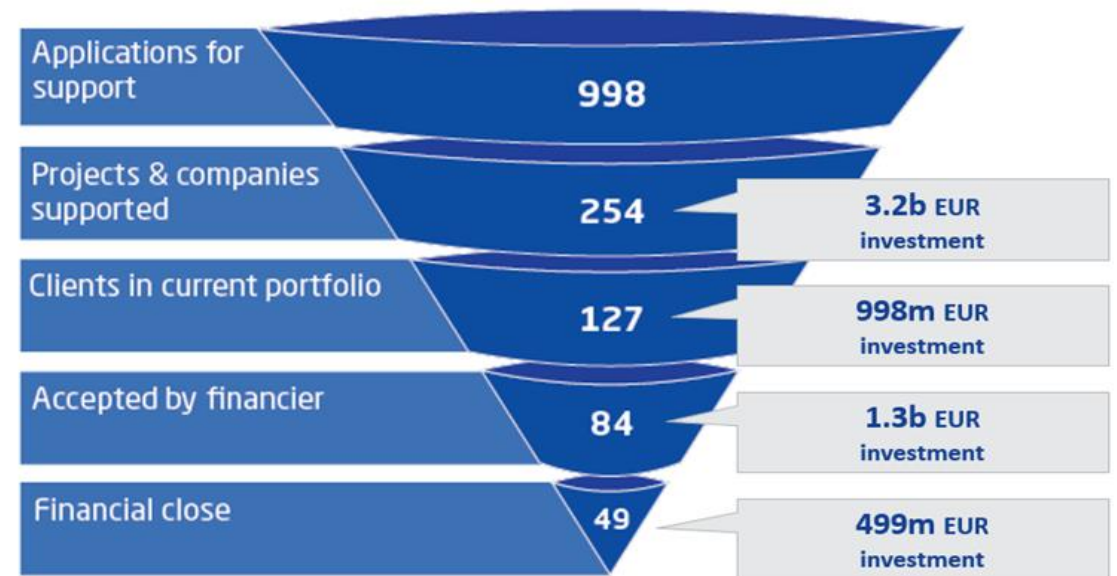
Economic rationale BESS

- Storage means extra cost and less energy > value depends on price paid for recovered energy
- For power smoothing and stabilising, there may be cheaper technical solutions like oversizing of the plant, statcom,...
- If peak shifting is the primary objective, this is reflected either in the tariff paid (e.g. “firm” vs “non-firm” tariff) or market spot price
- Grant finance is rarely available to IPPs, usually linked to Energy Access

How we mobilise investment: the “Finance Catalyst” at a glance



- Project Preparation Facility - honest broker
- Supports projects/companies and links them to financiers (public/private)
- 25+ experienced (external) advisors
- On demand, free of charge, incl. fast-track support
- One-click apply-here button, level playing field intake



“Funnel” from intake to outtake.
GET.invest and predecessor programme (2016-04/2022)

→ **Contact us, we are ready to support you!**

How to apply:

Applications for support can be submitted at:

www.get-invest.eu/finance-catalyst/access

- Information is treated confidentially;
- Applications are evaluated by two individual experts;
- Applications are evaluated in rounds.

Thank You for Your Attention!



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