



**CROSSBOUNDARY**  
ENERGY

# CrossBoundary Energy

Financing Commercial and Industrial Solar

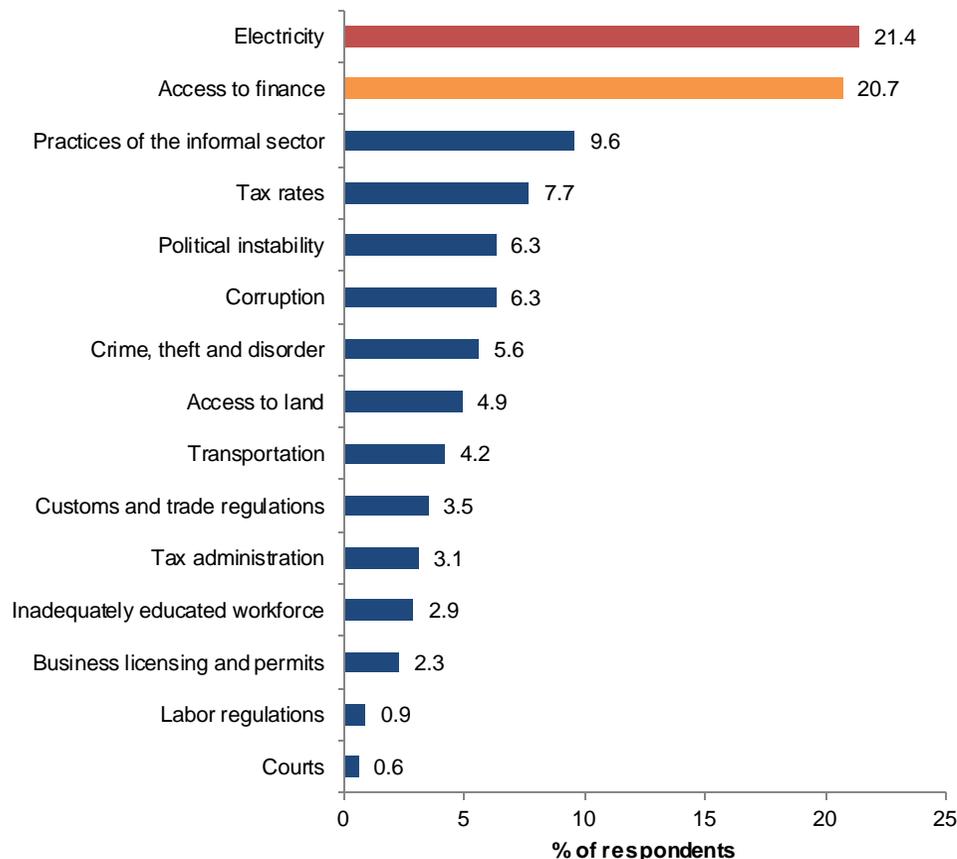
October 2015



# | INTRODUCTION

# African firms identify two major obstacles to business: finance and electricity

**Biggest obstacle to business identified by firms in Sub-Saharan Africa**



**Access to reliable electricity**

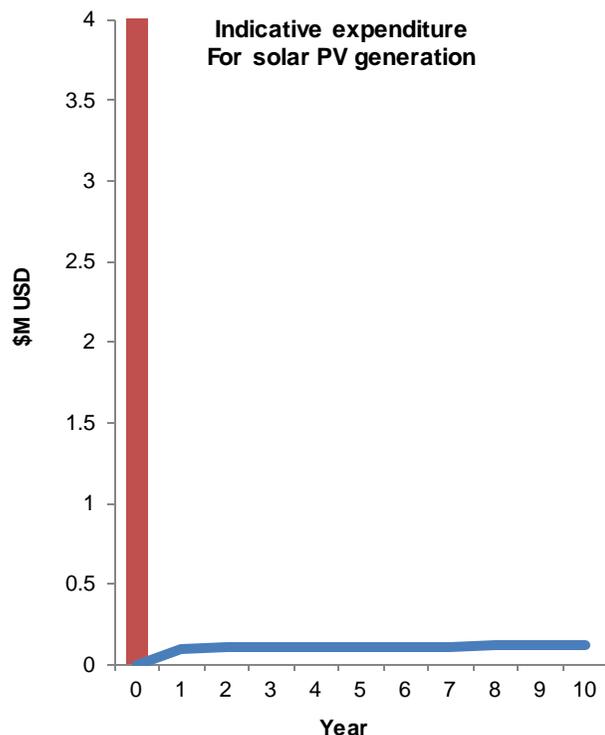
- Grid electricity is often limited and unreliable
- Independent generation requires upfront capital investment and ongoing fuel and maintenance costs

**Access to finance**

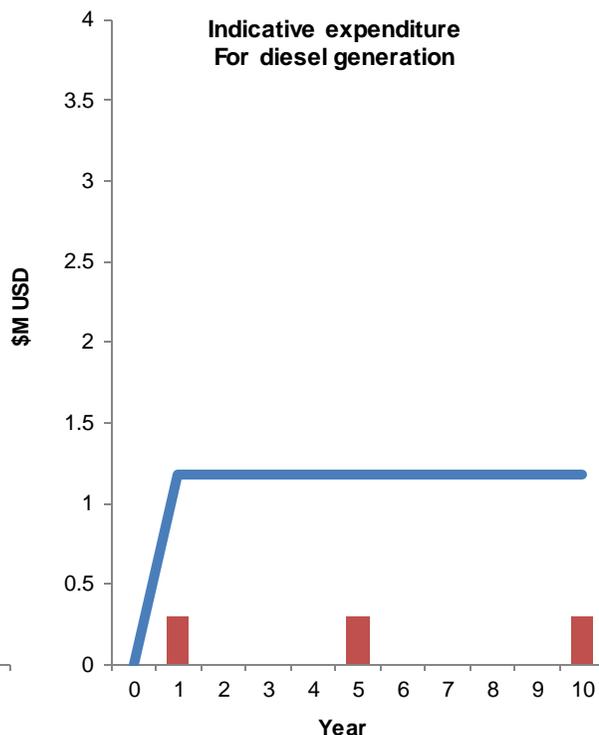
- Loans are often high interest, require 1-1.5x collateral and are extended for 2 years or less
- Reluctance to lend and high fixed costs of diligence present barriers to credit

# Yet without financing, a large upfront investment is required to switch to independent renewable generation

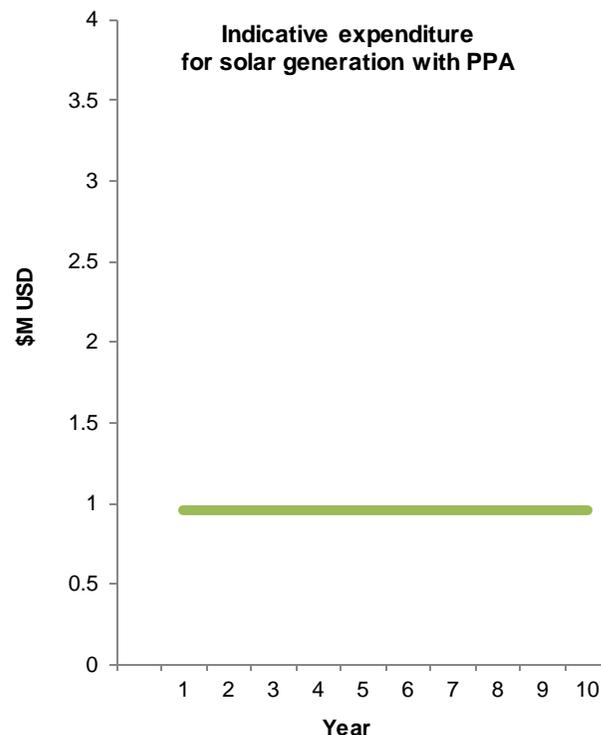
**Solar PV requires large upfront CapEx but very low ongoing maintenance costs**



**Diesel has a very low upfront cost; But exposes firms to high operating cost and uncertainty in price and supply**



**Third party financing can convert solar into an operating expense for firms. However finance is not generally available**



■ Capital Expenditure   
 ■ Operating Expenditure   
 ■ Solar PPA/Lease

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# SOLUTION: SOLARAFRICA PLATFORM

# The SolarAfrica Platform

## TECHNICAL CONTRACTORS & DEVELOPERS:

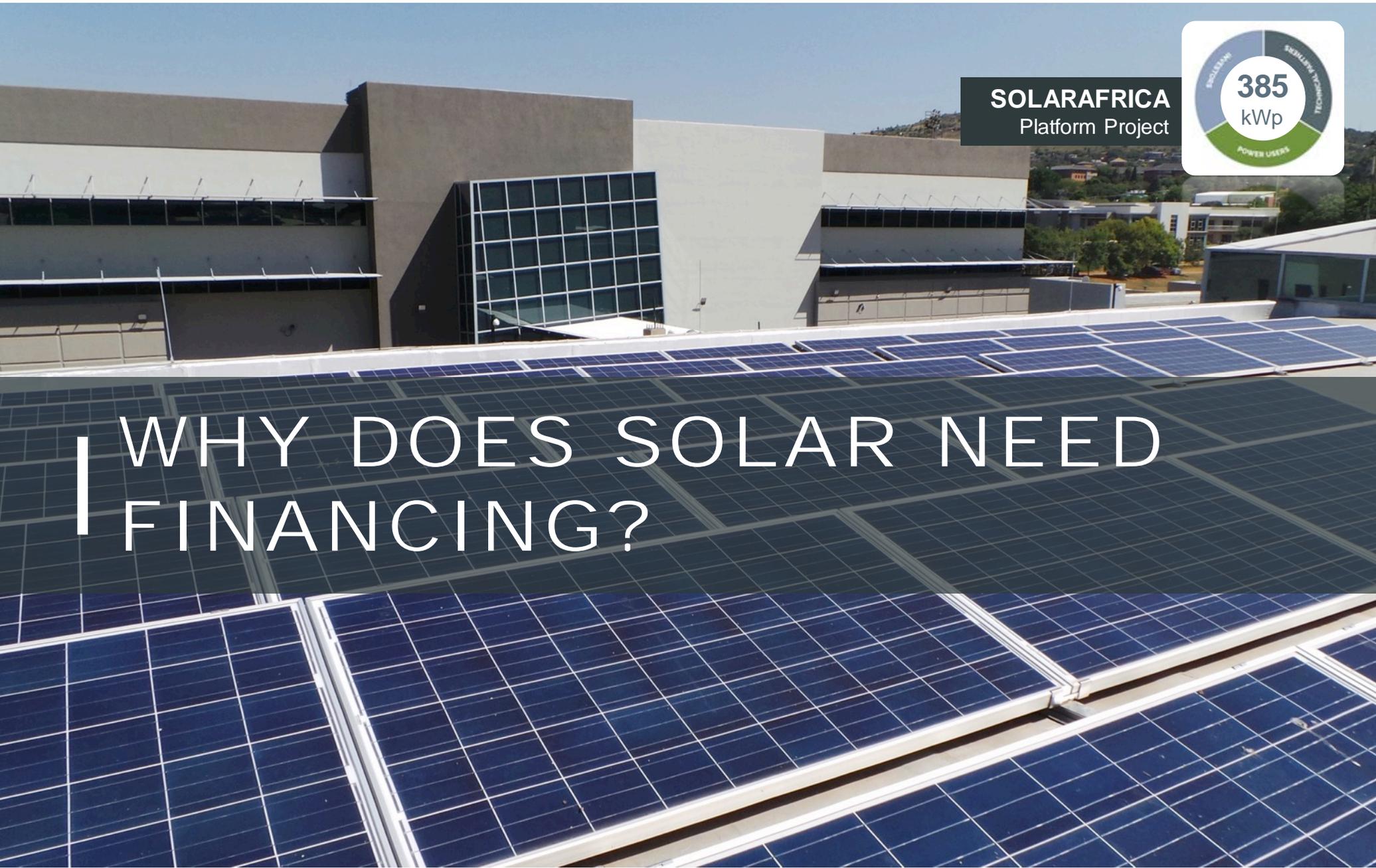
- ❖ Funding For Projects
- ❖ Procurement Services
- ❖ Standard Templates (Legals)
- ❖ New Project Opportunities

## POWER USERS:

- ❖ One-Stop-Shop - Financed Solutions
- ❖ Partner network– Lowest Offers
- ❖ Proven Project Delivery
- ❖ Full-Service Solution

## INVESTORS:

- ❖ Access to the C&I Market
- ❖ Standardised Investments
- ❖ Diversified Project Set



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# WHY DOES SOLAR NEED FINANCING?

# Why solar needs financing?

1

Show why SOLAR ENERGY is attractive to the C&I Market because it is cost competitive

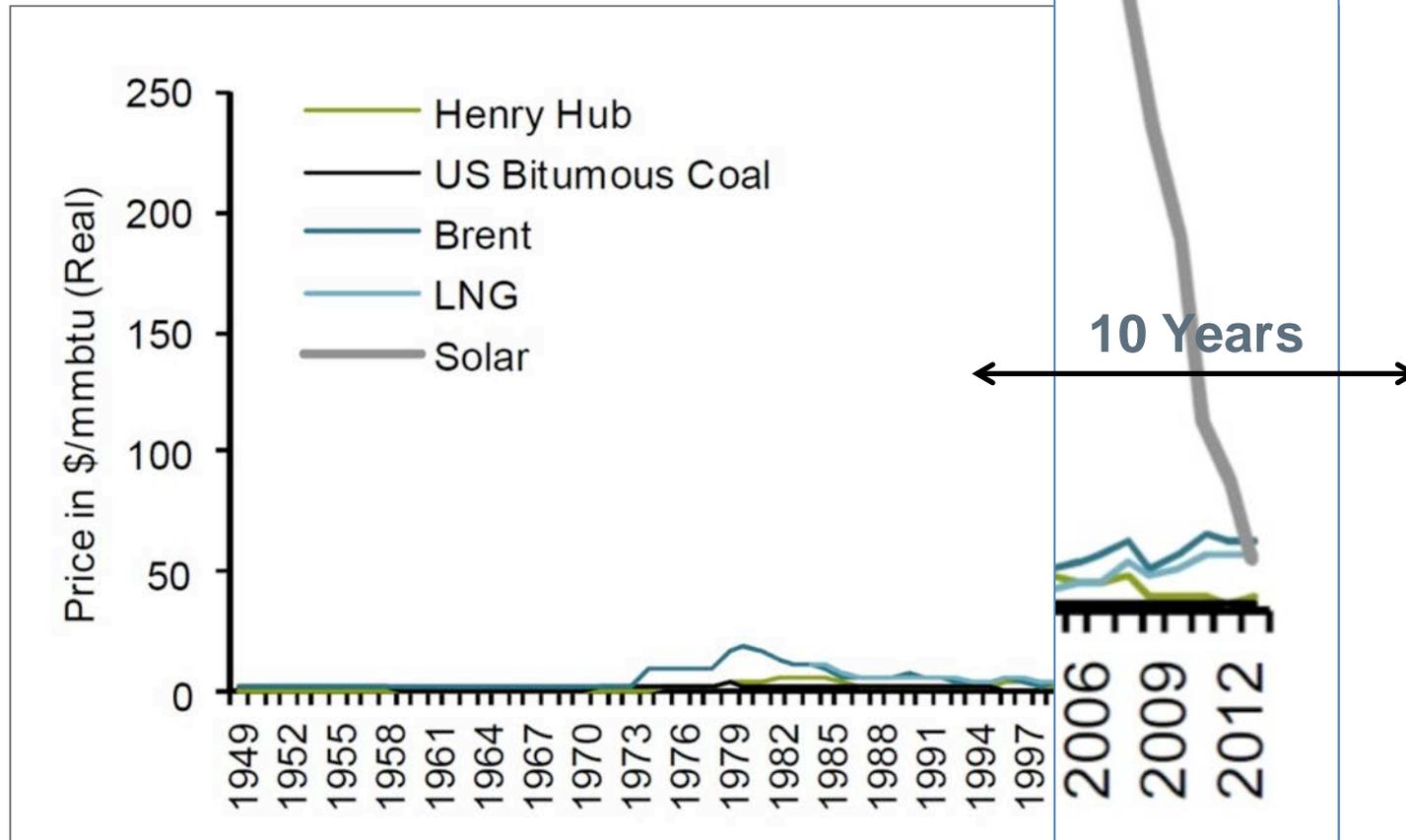
**AND**

2

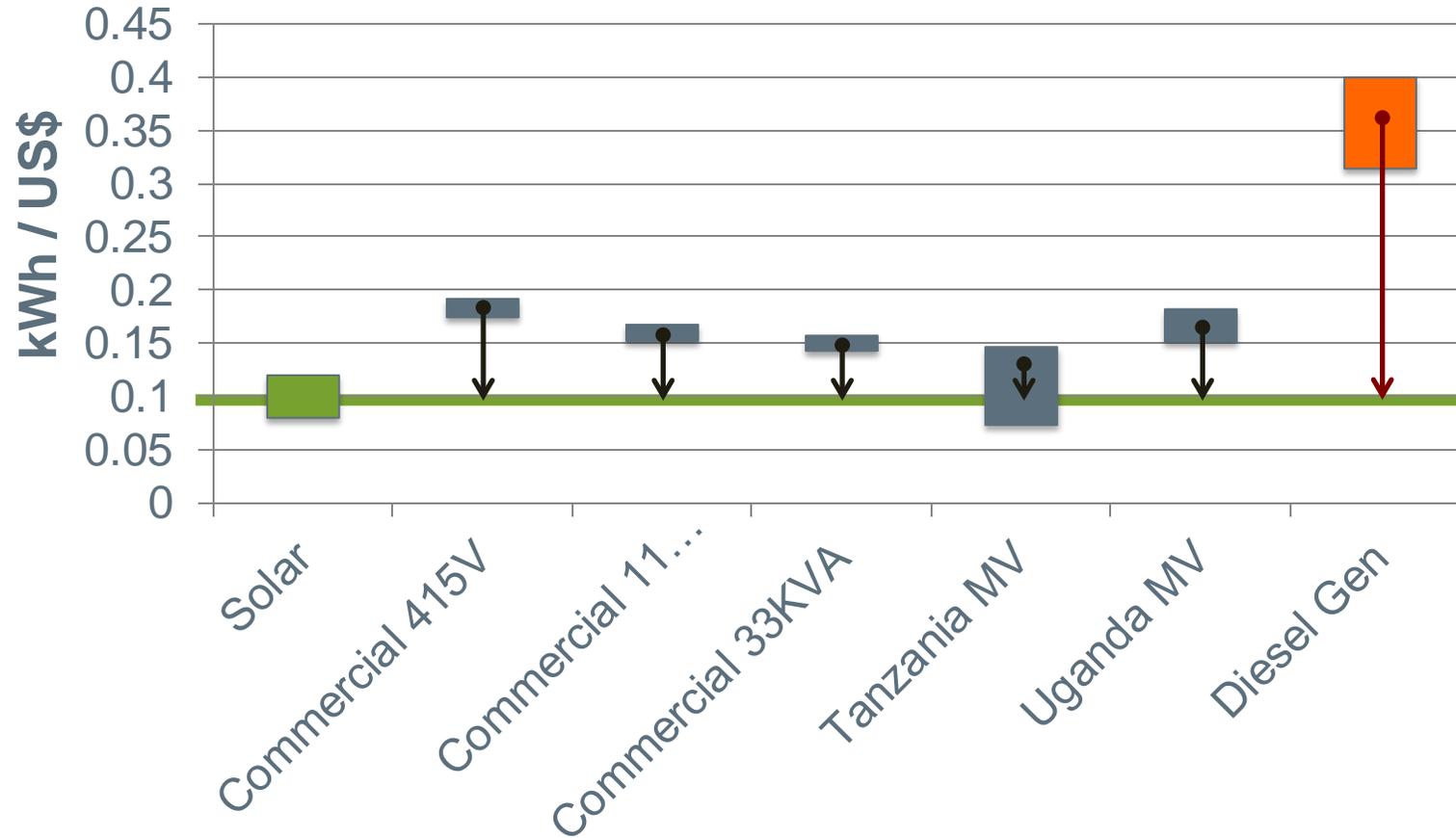
Solar PV has become a directly accessible technology

# Competitive Energy

US\$ /MMBTU



# Solar Electricity – LCOE



# Energy Revolution

## Technically Accessible...

Fundamental change in the choices available to businesses. First time in 100 year history of the utility model – have more than one choice:

The Old Days	The Future
One energy company	Choice to generate own power
Scale very important	Scale hardly important
Reliant on a feed-stock	Very little dependence
Central Generation	Localized Generation
Product: Electricity (kWh)	Product: Electricity (kWh)

# Solar: an accessible source of energy





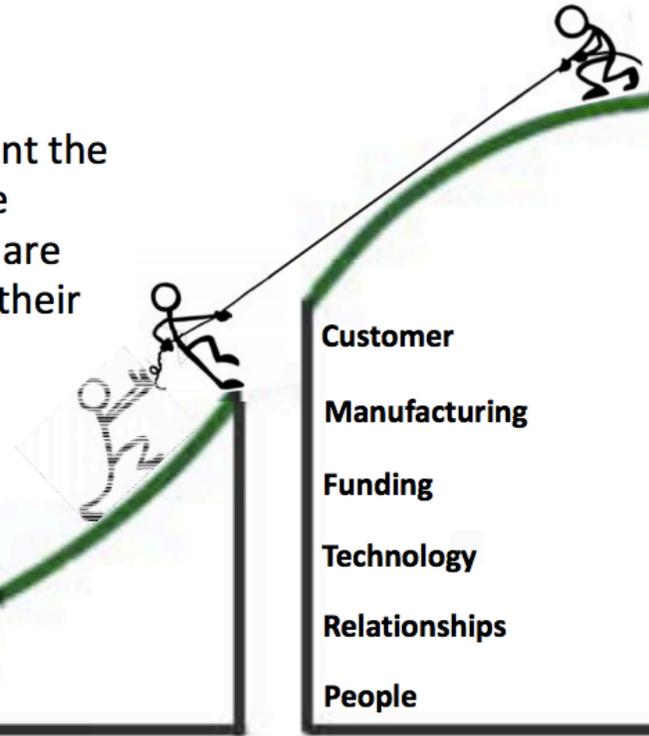
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# | AFRICAN C&I MARKET

# Finance Essential to Bridging the Gap

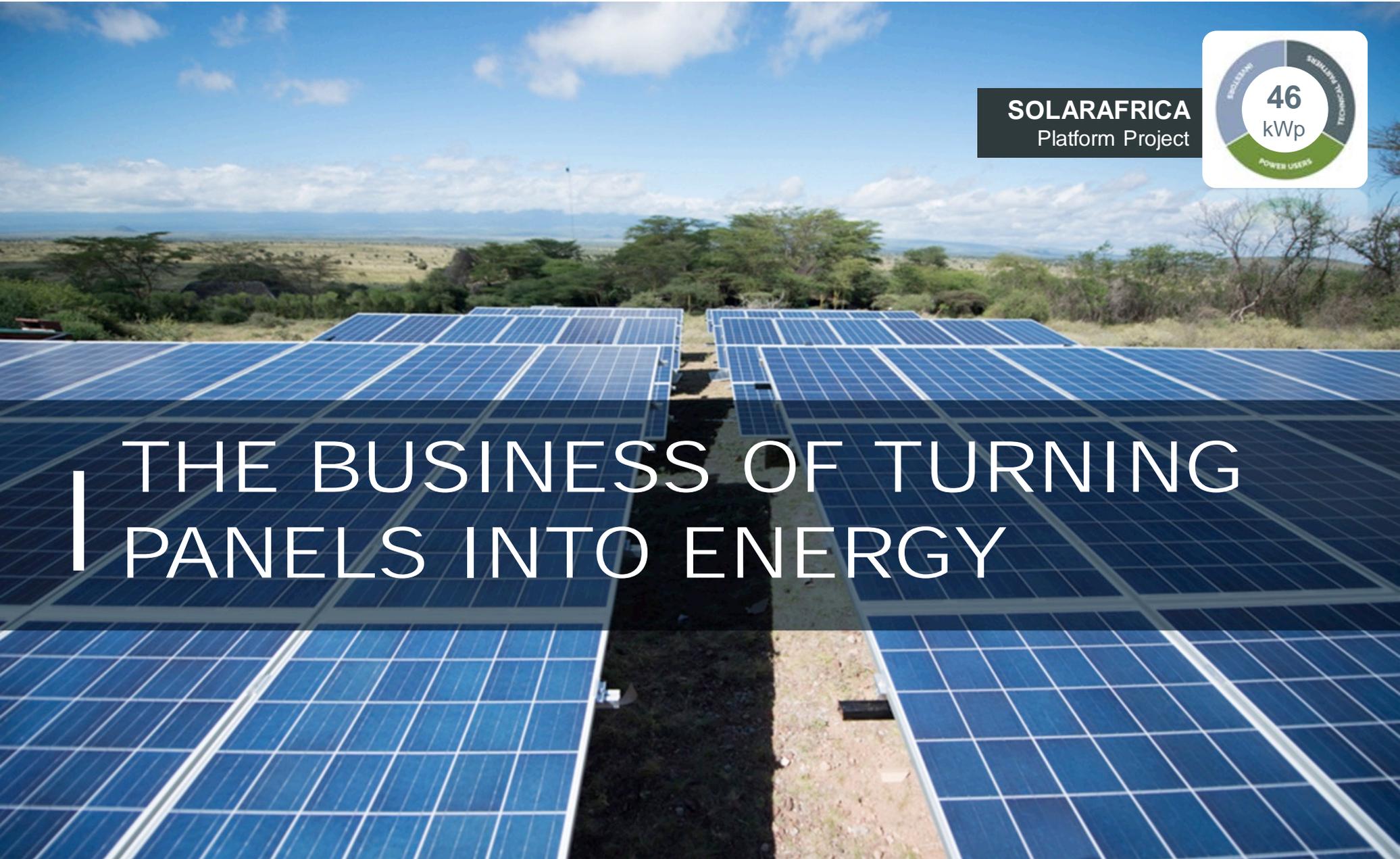
- The user must want the product or service enough that they are willing to change their behavior
- Our job is to make it easy for them to change



Two things become important:

- ❖ **Finance** – Must be able to “PAY” the LCOE
- ❖ **Simplicity** – As EASY as renting a Generator?

Slide by: A123 Systems

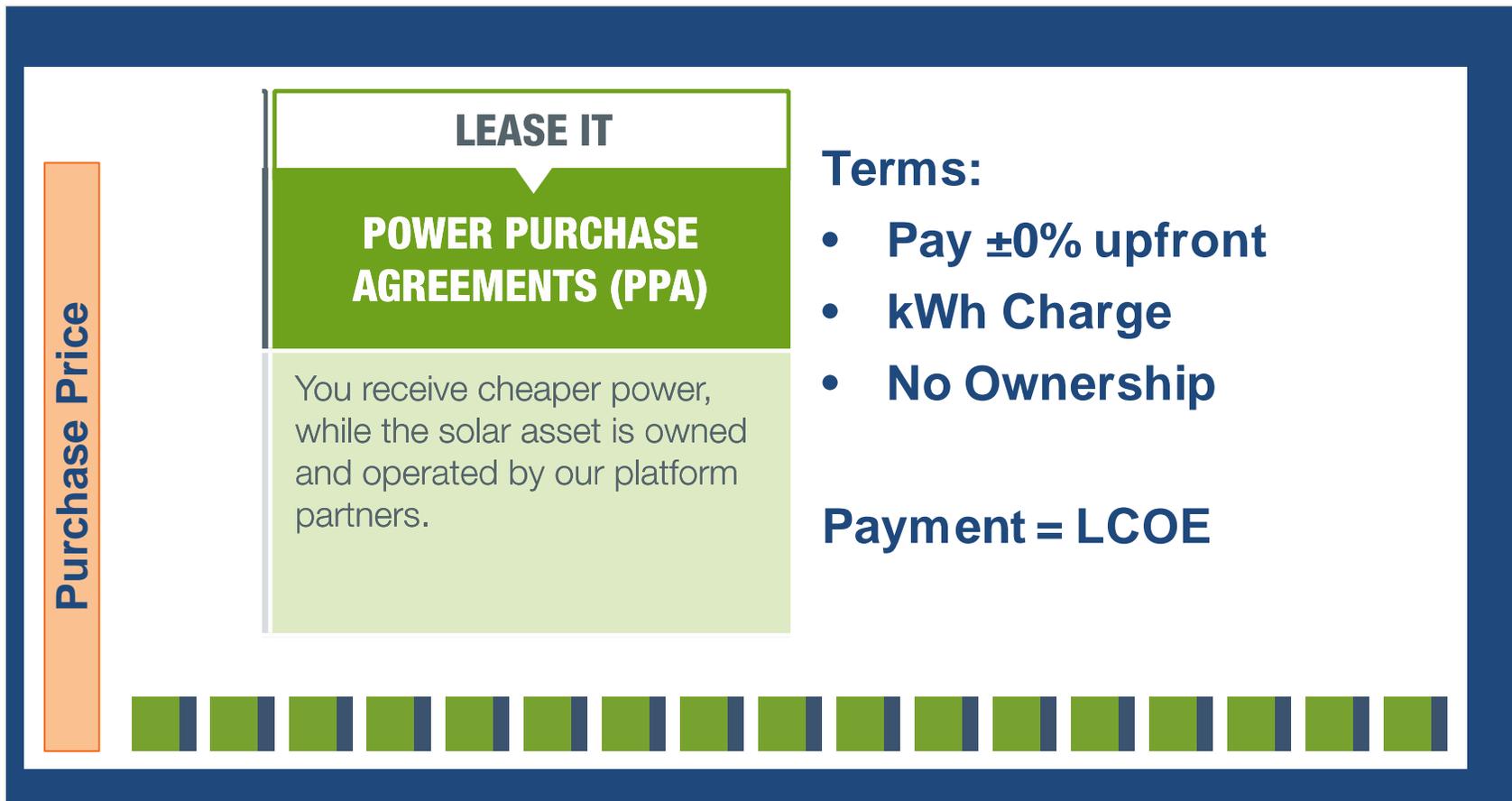


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# THE BUSINESS OF TURNING PANELS INTO ENERGY

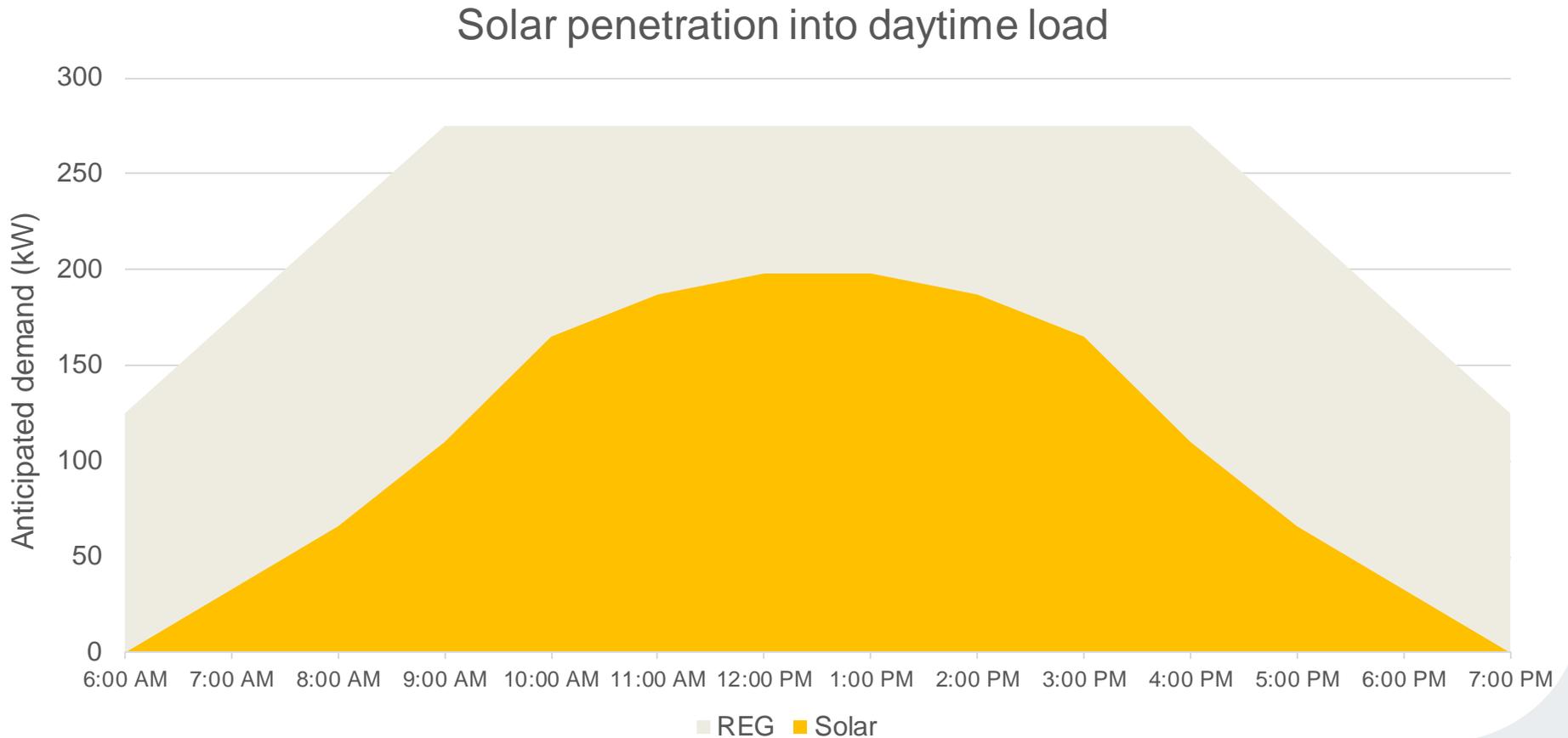
## PPA PLAN



# Risk Matrix: Financed solution best align incentives

Outright Purchase	Financed Solution
Incentivized to Oversize	Incentivized to Size Optimally
Assume Production Risk	No Production Risk (Pay For Power)
Use Own Capex for Non-Core Asset	Retain Capex for Core Business
Incur Insurance, O&M Costs	Insurance, O&M Included in Tariff
Product: Panels	Product: Energy (kWh Tariff)

# Example grid connected load impact



# Project Snapshot: Garden City Shopping Mall

Providing an innovative solar solution to the largest retail mall in East Africa

High impact project

- Largest solar-covered carport canopy in Africa; amongst the 5 largest solar installations in East Africa
- First mixed-use development in East Africa to gain LEED certification
- CO2 reductions of >490 tonnes per annum
- Energy output of 1,246,000 kWh per year, enough power for 280 homes



Top tier partners



Managed through SolarAfrica



Built by a leading UK solar EPC



Example Schletter solar car port

Timeline



# Project Snapshot: Garden City Shopping Mall

Providing an innovative solar solution to the largest retail mall in East Africa



# Value Proposition

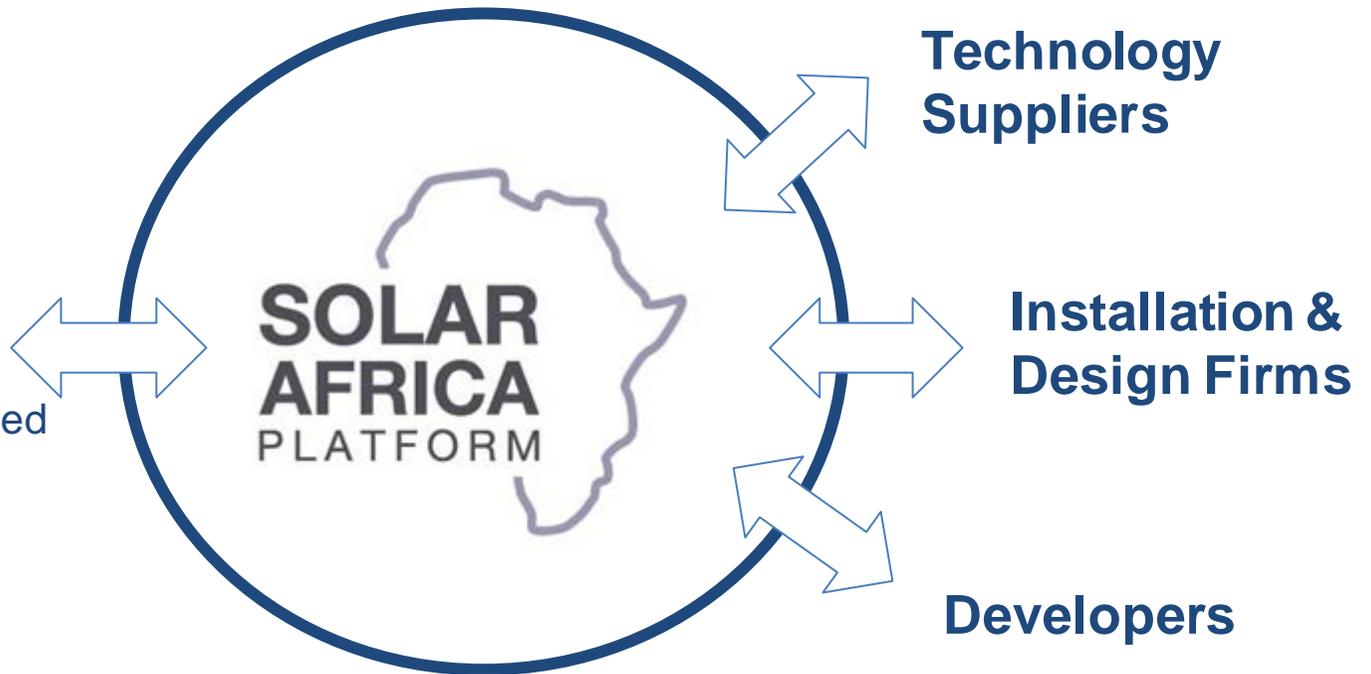


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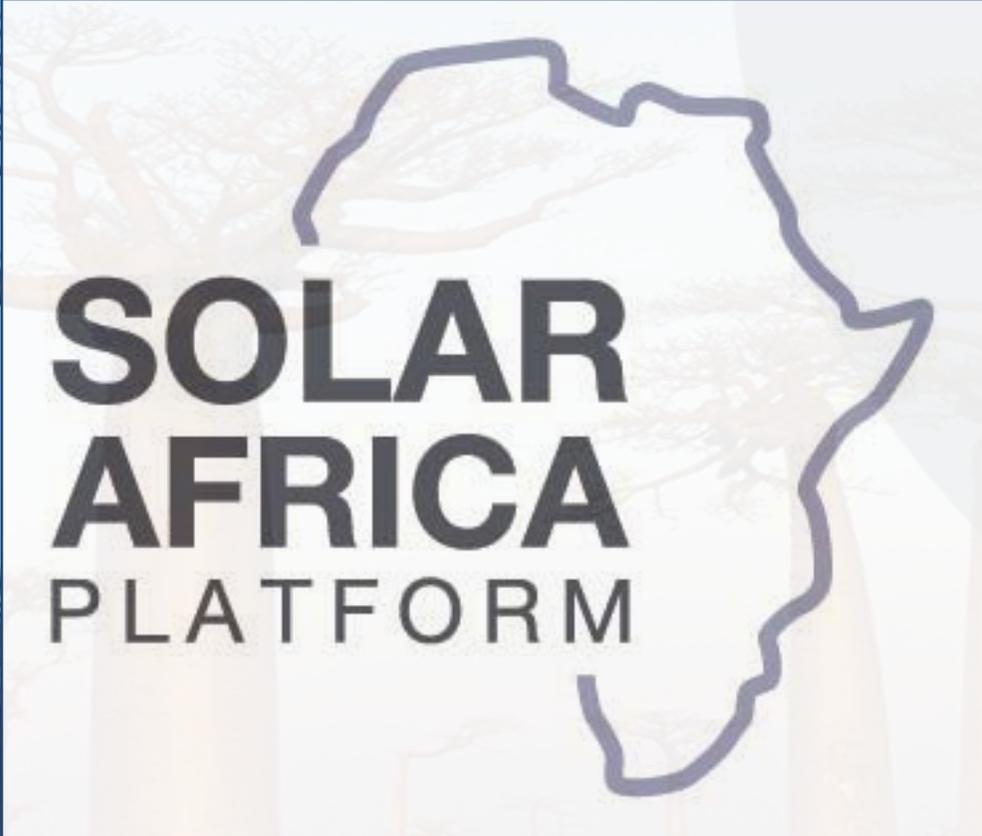


## For Power Users:

- ❖ Financed Solutions
- ❖ Managed Operations
- ❖ Only Pay for Power Produced
- ❖ Proven Project Delivery



Questions?



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**MAKING  
SOLAR  
WORK FOR  
AFRICA**

**Jake Cusack**  
[jake@crossboundary.com](mailto:jake@crossboundary.com)