



**OXYGEN
ENERGY**



**Financed Renewable
Energy Solutions**

NO UPFRONT COST NO RISK PREDICTABLE RETURNS

INTRODUCTION: INNOVATION



“This highly innovative project will provide reliable and competitive solar power to multiple SMEs throughout the country. Working with a strong domestic financial institution has been essential in overcoming common barriers and will help achieve speed and scale,”

***Mr Ousseynou Nakoulima
African Development Bank’s
Director for Renewable Energy and Energy Efficiency.***



AfDB HAS FUNDED \$1.2 MILLION FOR THE DEVELOPMENT OF THE CONCEPT

REGULATORY ENVIRONMENT

Are we allowed to do what we are doing?

MINISTRY OF ENERGY & POWER DEVELOPMENT

- Project approved via letter of support.
- Project recommended for national project status.
- Investment incentives applied for.

MINISTRY OF FINANCE & ECONOMIC DEVELOPMENT

- Project granted National Project Status.
- 5 Year Tax Holiday
Applicable to IPPs on Solar Assets
- Application for prescribed asset status underway.

OTHERS: ZERA & ZESA

- Any installation from 100KWp upwards will require an IPP License from ZERA.
- Power banking and net metering discussions underway with ZESA.
- Outside the above there is no further regulation on rooftop solar.

BEYOND THE GRID: GROWTH OF OFFGRID SOLAR

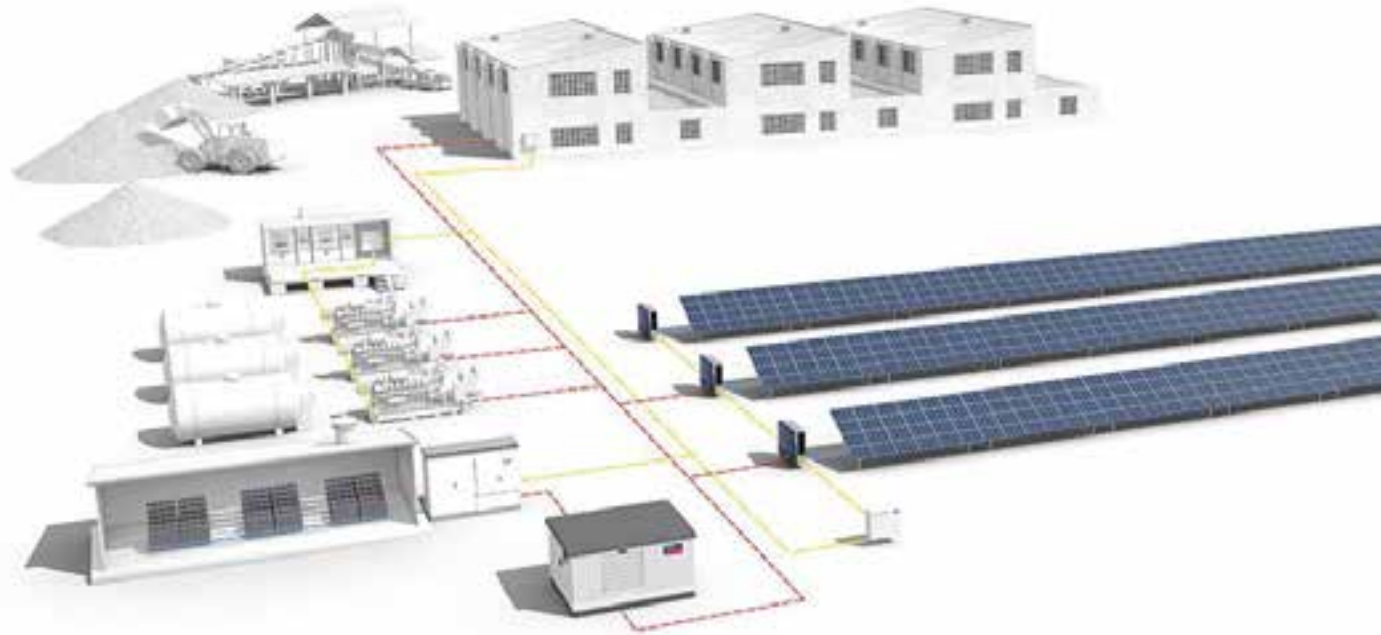
500GWp of installed diesel generators worldwide

~300GWp replaceable by solar (Source: SMA)

Solar already conomically attractive (without subsidy), IRR's >18%

Increasing interest and commitments from investors, including commercial debt and equity players, since 2014. More than USD 500 million has been raised in the past two years alone. (Source: Dalberg)

More than 25 countries are now engaged in partnerships with the World Bank Group (mostly in SS Africa) to build capacity and deploy funding to the sector. (Source: Dalberg)



PROOF OF CONCEPT: DOES SOLAR WORK?

© 2018 Oxygen Energy | A Zimbabwean Independent
Power Producer

PROOF OF CONCEPT: HOW DOES SOLAR WORK?

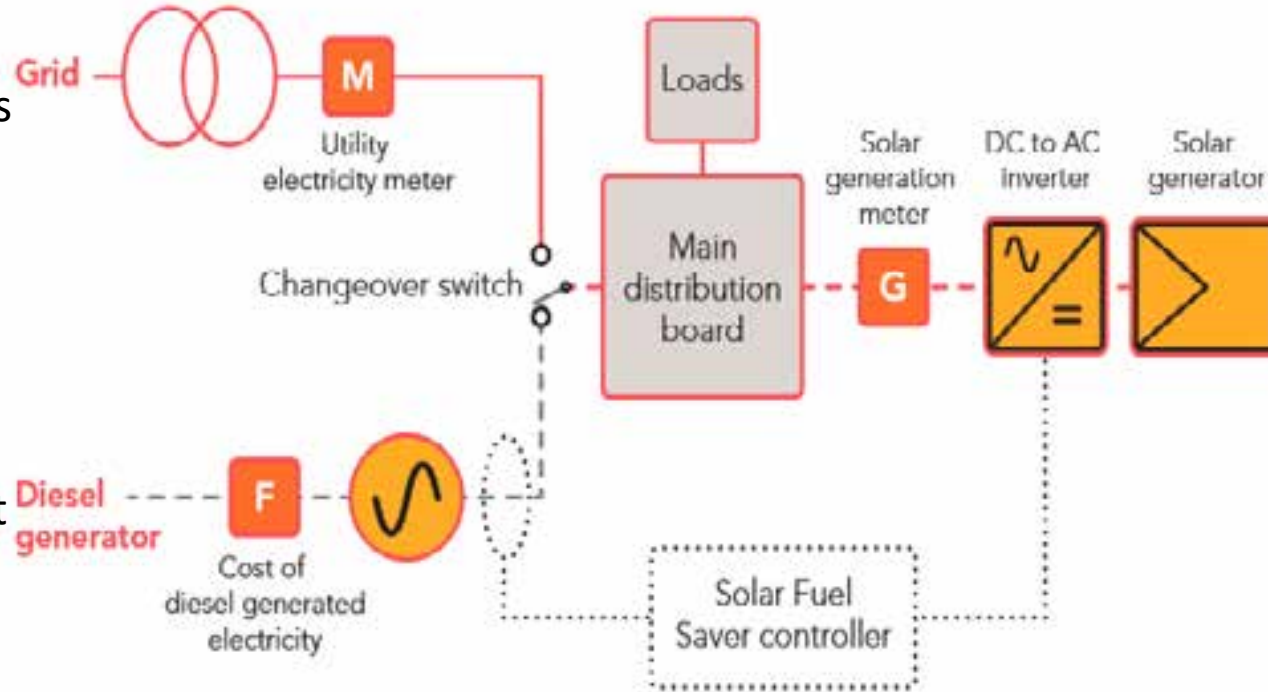
For high-energy users with intermittent grid and dependency on diesel generators

The PV system is grid tied, plus...

When the grid fails and the generator is running, the solar installation synchronises with the generator

To protect the generators and ensure that the electrical system is stable, a complex controller is required

Our technical are able to design and install at utility scale





an Old Mutual and Oxygen Africa project



OLD MUTUAL



OXYGEN AFRICA

TECHNOLOGY

Selecting from world leading brands to provide:

Long-term supply relationships
with leading manufacturers
– certainty of supply

Buying power
In fy2014/15, our partners bought nearly 1,000,000 solar panels

Technology agnostic
To provide the best solution for each project

Routine testing and auditing
Our partners visit factories regularly and use third-party auditors to check quality



HUAWEI

JinKO

JA SOLAR

SADEF



GINTECH

Ingeteam

solar edge

Trina solar



an Old Mutual and Oxygen Africa project



VALUE PROPOSITION

Why Solar, Why Oxygen?

PROPERTY OWNERS

- Oxygen Assumes all the risk: financial, technical and operational. The clients pays for the energy from its current operating expenses.
- It's affordable — and flexible. With a solar PPA there is no upfront payment.
- Hedging against future energy costs as it is a fixed energy cost
- It's worry-free. Clients do not own the equipment, so they do not have to worry about installation, monitoring, and repairs.
- Clients are entitled to all the energy produced by the system

FUND MANAGERS

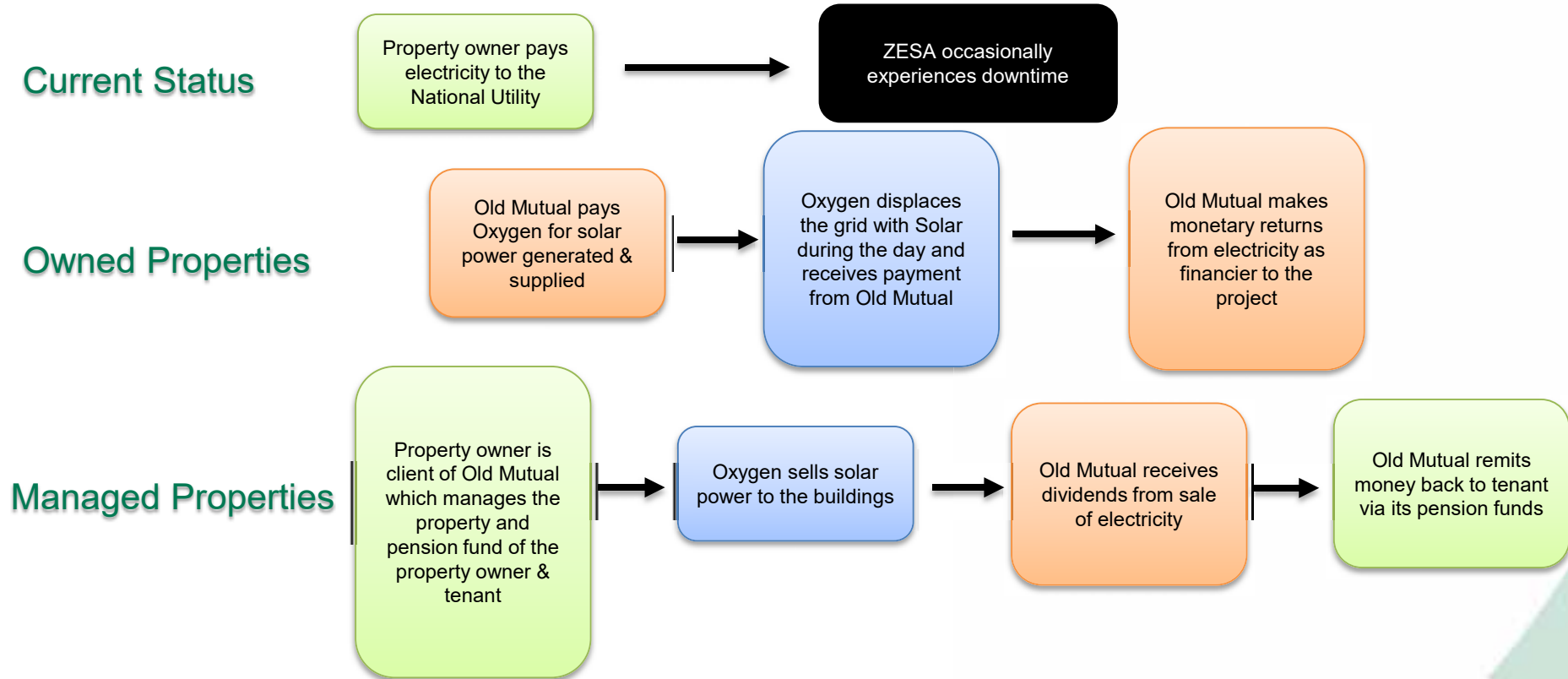
- An alternative investment into the energy sector
- Sharing the risk with established international financiers
- Predictable income over a 20 year period with steady returns.
- Clients can make money from their electricity via their pension funds that can invest into the project.

REPUBLIC OF ZIMBABWE

- Investment into Zimbabwe's energy sector
- Energy access
- Demand management
- Diversity of supply
- Skills and capacity development
- Climate change response measure
- Job creation
- Skills Development
- Carbon Emissions reduction

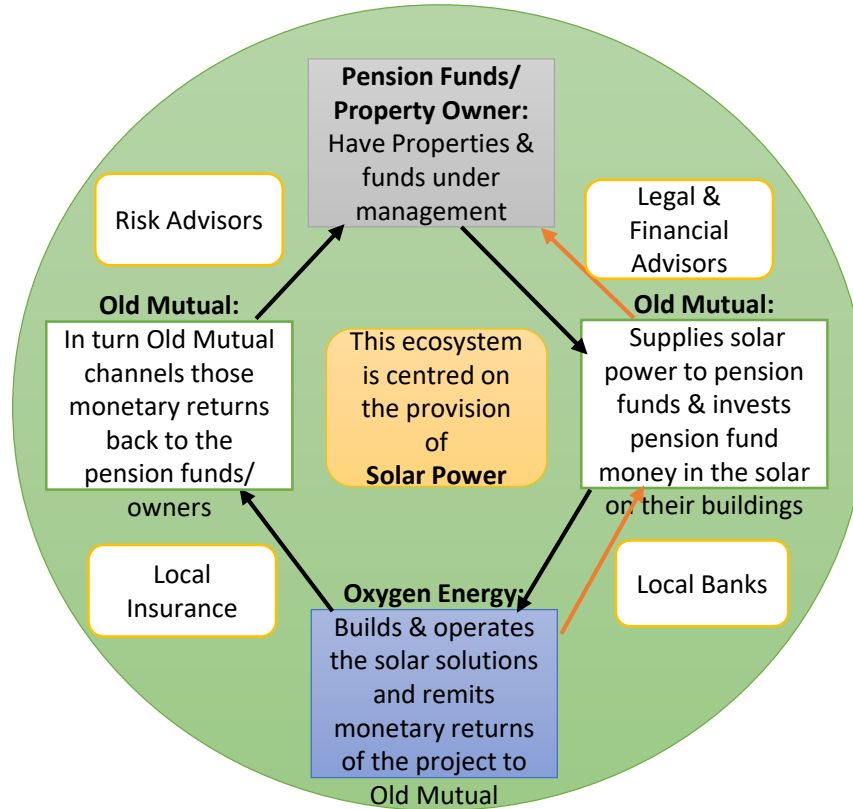
OXYGEN MODEL

How is money made by you?



OXYGEN MODEL

A new financial ecosystem:





THE NUMBERS: 20MW FINANCIAL MODEL

Name	Detail
Annual energy yield	35,757,315 kWh/ 1650 KWh/ KWp
CAPEX	\$ 25,300,000.00
Equity	\$5,280,000.00
Debt	\$20,240,000.00
Tenor of debt	8% over 15years
Tariff	US\$ 0.12/kWh
Project IRR/ Equity IRR	14.50% / 26.27%
Average Yearly solar energy Cost to OMP/ Project Revenue	\$4,093,047.00
Average Monthly solar energy cost to Off takers	\$341,087.25
Average Yearly Debt Repayments	\$2,208,591.00
Total Debt Service over 15 years/ Revenue to Funders	\$30,920,272.00
Average Yearly Net Cash Flow to Equity Shareholders	\$1,766,708.80



FUNDING PARTNERS

Prospective funding partners:

- Old Mutual Investment Group Zimbabwe
- Pembani Remgro infrastructure fund (SA)
- Proparco (French development agency)
- Norfund (Norwegian Investment Fund)
- FMO Netherlands development finance company
- Emerging Africa Infrastructure Fund (UK)
- Standard Bank (SA)
- Barclays Bank
- Overseas Private Investment Corporation (OPIC)
- CABS
- African Development Bank





SECURITY ARRANGEMENTS

How is money your investment protected?

All Risk Insurance	<p>Comprehensive All Risk Insurance from Hannover Re Germany through Old Mutual Insurance Company to be secured over the power generating assets with the OLMAC being named as the first loss payee.</p>
Performance Cover Insurance	<p>Performance Cover/ Warranty Insurance from Hannover Re Germany through Old Mutual Insurance Company. The performance warranty will provide cover over the performance of the plant should it fall below 90% thereby ensuring sufficient funds are available to offset all the debt instrument obligations to funders.</p>
Debt Service Account	<p>A sinking fund will be put in place in the form of a Debt Service Reserve Account that shall be funded and maintained from draw downs on the last day of construction and thereafter from cash flows so as to equal the forthcoming 3 months' receivables. The reserve is to act as a buffer in the event of the inability of the Borrower to service its debt obligations for whatever reason.</p>
Manufacturer and Product Warranties	<p>Modules/ Panels: Performance Warranty = 25 years (90% until year 10, 80% until year 25, or linear power warranty according to the manufacturer's specifications). Inverters: Warranty = 5 year factory warranty can be extended on request to 20 years. Jabil shall procure that all manufacturer's warranties are capable of assignment to Oxygen and/or any lenders providing finance with respect to the Project.</p>
Defects Liability Cover from EPC	<p>The Defects Liability Period will have a duration of 2 years from issue of Provisional Acceptance Certificate. During this period Jabil will repair, replace or make good any and all defects or damage caused by defects and omissions, in such a way that causes the least disruption to the Facility at its own cost.</p>



OXYGEN ENERGY



ADVANCING THE GLOBAL GOALS

For Sustainable Development



#GlobalGoals #SDGs #SharedValue #PoweringAfrica

THANK YOU: THE CYCLE OF TECHNOLOGY



“Everything is expensive in the beginning. As technologies improve, as research pushes new boundaries and is applied in practice, this will all become cheaper and, as a result, widely used. In any event, you are involved in a noble effort and I would like to wish you success”

***H.E. Mr Vladimir Putin
President of the Russian Federation***

**RUSSIA USED THE CONCEPT AS A CASE STUDY FOR POWERING AFRICA
AT #WFYS2017**