

Lack of reliable electricity is putting a brake on Nigerian development. Half of Nigerians have no access to electricity, the other half make do with generators as the grid is failing their needs.

Pay As You Go Solar (PAYG Solar) provides clean electricity to individual households, anytime anywhere. The solar panels provide between 1 and 5 kva to the household, enough to run a small business such as a tailor or barber shop during 24 hours per day. Finance is provided a 100 per cent by the PAYG solar company, which commits to providing quality service through an MoU with government. Government regulates and rewards honest business with interest waivers and tax holidays. Customers pay on a monthly basis and own the panels after 2 years without having to pay a large sum upfront (no loan scheme required at consumer level). PAYG Solar is fast growing in East Africa, with companies such as MobiSol and M-KOPA installing many MW in Tanzania, Kenya. There is no limit to growth as the business is built on quality service provided in small household and MSME units.

FEDERAL GOVERNMENT		
SON / Standards Org of Nigeria, with support from Energy Comm of Nigeria: Import of Quality Solar Products	NERC / DisCos: Regulatory framework for off-grid to protect the growth of off-grid solutions	Customs: Zero % duty on solar (as stipulated in Renewable Energy Policy approved by FEC in May 2015)
Medium term: Rural Electrification Agency to reinvent itself as the Nigeria Renewable Energy Development Agency to focus on promotion of off-grid, mini-grid and solar roof top solutions working with private sector investors to achieve fast rural electrification.		

COLLABORATION FEDERAL & STATE GOVERNMENT
Training & job creation: Support to training provided by PAYG Solar companies for technicians, installers and artisans (NAPTIN, ECN Research Centres, State Electricity Boards)

STATE GOVERNMENTS		
Tender process for PAYG Solar companies, with technical check by an ad-hoc panel of Nigerian renewable energy (RE) experts	MoU between State Govt and selected PAYG Solar companies, holding companies responsible to provide quality installation & service	State Electricity Boards to support & run training for technical staff.
Loans / loan guarantees to PAYG Solar companies: It is likely that angel investors will provide the pioneer funding. Loans by State Govt are a tool to reward honest business, as well-performing companies (abiding by/exceeding the terms of MoU or creating jobs) could be rewarded with interest rate rebate, waivers or tax holidays.		Female employment could be increased if State Govt offered one-year free subscriptions to female MSMEs. The cost of these is entirely predictable.

For increased **publicity**, it is recommended to start the roll-out with MSME in main markets of state capitals and through SME business associations.



PAYG SOLAR COMPANIES

Companies can **predict their profits** because customers pay fixed charges on a monthly basis, in line with the technical capacity of the solar panels (usually 1kVA or 3.5kVA).

The companies are held to provide product **warranties, guarantees**, after sales support and training of staff by the MoU signed with State Govt. Companies should **recycle** batteries.

Companies undergo **quality checks** by SON, the State Govt's tender process and technical experts verifying the products they are installing before roll-out at state level.

Companies take out their own **insurance**, which Govt can support indirectly if desired.

Remote monitoring technology allows companies to detect tampering with the solar equipment. A 10% or 20% down payment by customers will belong to the companies in case of non-payment of monthly charges.

CUSTOMERS

1 KVA SOLUTION

Tailoring Business

Providing for:
3 sewing machines,
1 TV, 1 ceiling fan,
4 lighting points

N 30,000 down payment
N 11,250 monthly fixed charges

3.5 KVA SOLUTION

CYBER CAFE

Providing for:
12 computers,
photocopy machine,
server,
lighting points

N 93,000 down payment
N 35,000 monthly fixed charges

Customers pay by **Mobile Money** and if they fail to pay for the service, they can be cut off remotely.

After two years of payment, the solar panels & kit become the **Customer's Property**. That means no more payments for electricity after two years, with constant power supply.

OUTCOMES

Pay-as-you-go solar can bring affordable clean energy to small businesses and households everywhere. Customers no longer have to wait for the national grid to reach them. Solar power beats the noise of generators and it can beat the cost too!

Investing in PAYG Solar makes good business sense. An investment of between \$1m and \$2m will bring about the installation of about 1,000 to 2,000 PAYG Solar systems. This can be achieved within 6 to 8 months. A PAYG Solar company would typically reach break-even around 5,000 installations.

Compared to grid extension, this is a time and cost-efficient, private sector-driven and people-oriented solution. One km of grid extension costs between \$7,000 and \$20,000 and takes years to be planned and delivered.