CREEDS ENERGY

Discover the Power of Green

Solar Energy Strategies for Economic Reconstruction in Northern States of Nigeria

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John Hopkins University – School of Advanced International Studies, Washington DC

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Northern Nigeria: Socio-Economic Context

≈70%

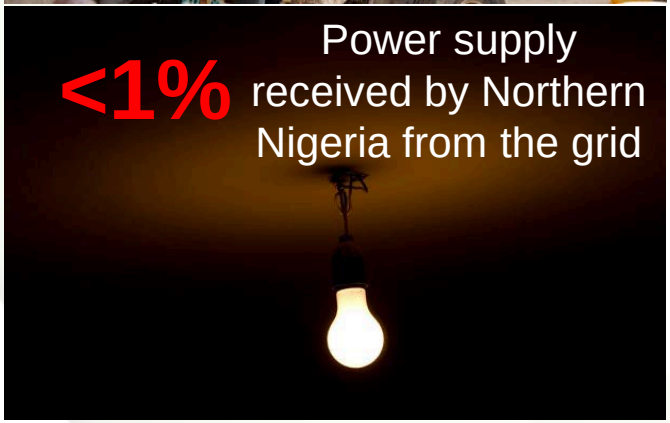
Northern Nigerian children and young adults are illiterate and/or have never attended school. More pronounced by gender and linked to unemployment

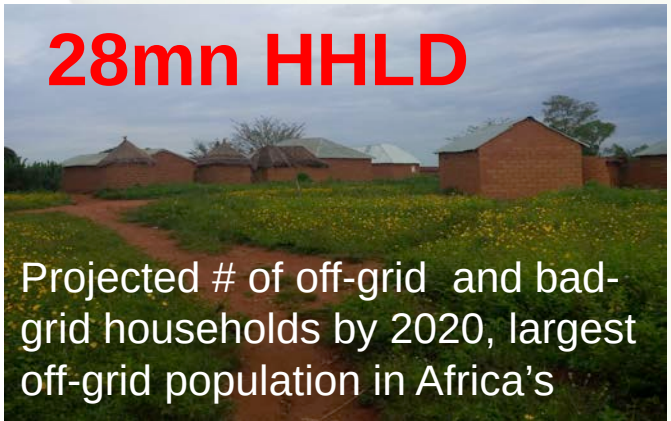
66%

of poor people in Nigeria are in the North

3.3m IDPs

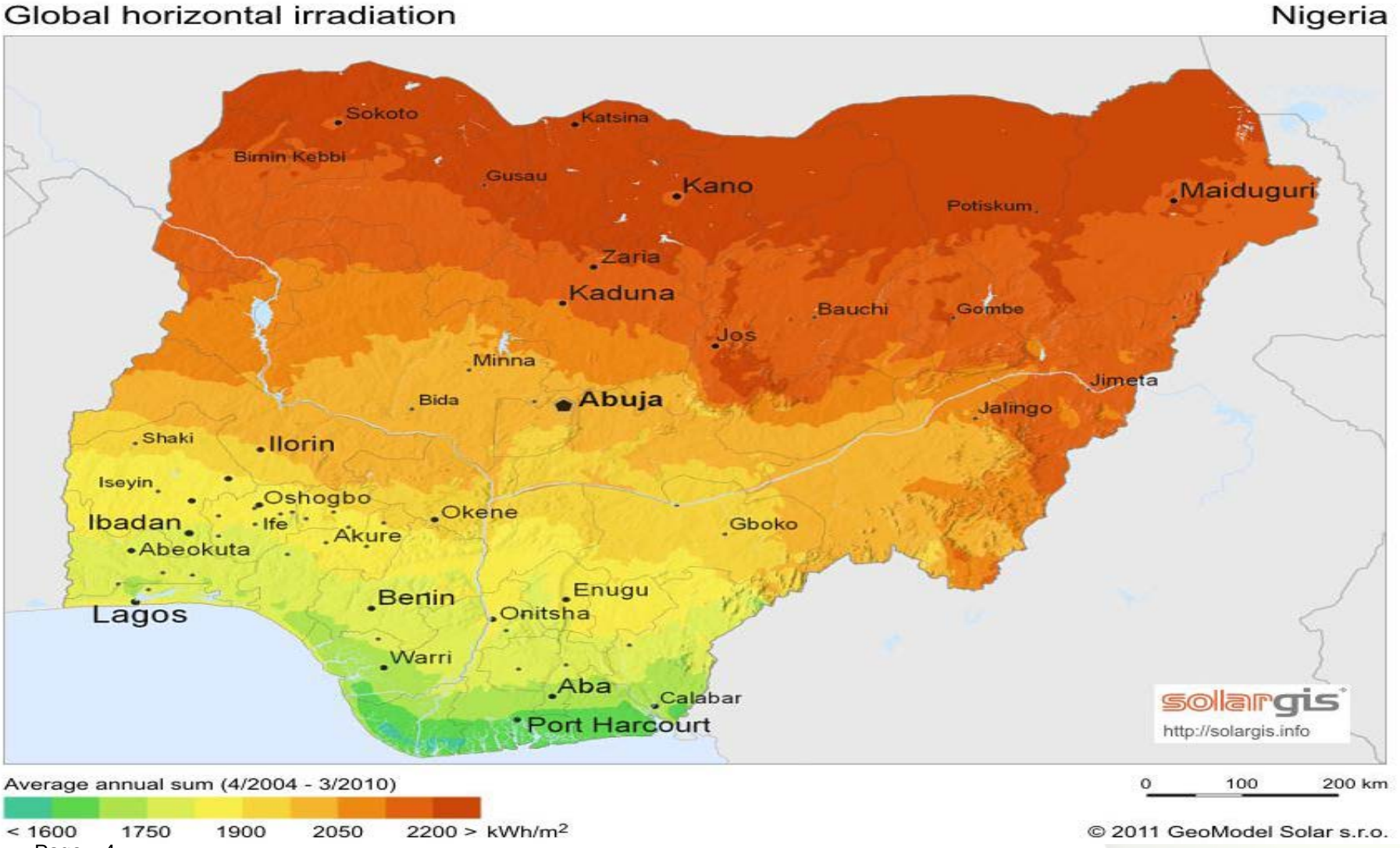
Third largest displaced population in the world related to conflict and violence in Northern Nigeria





Solar Energy Resource Potential

Enough Sunshine!, Enough Land!



Our Journey

“Energy is the golden thread **that connects economic growth, increased social equity, and an environment** that allows the world to thrive**.”** UN Secretary-General Ban Ki-moon

Newcastle → **Abuja** →

About Creeds Energy

Creeds Energy is a professional renewable energy company **addressing energy and electricity challenges** with cleaner alternative technologies.

We are dedicated to **providing sustainable solutions and services** that ultimately **improve access, awareness and adoption.**

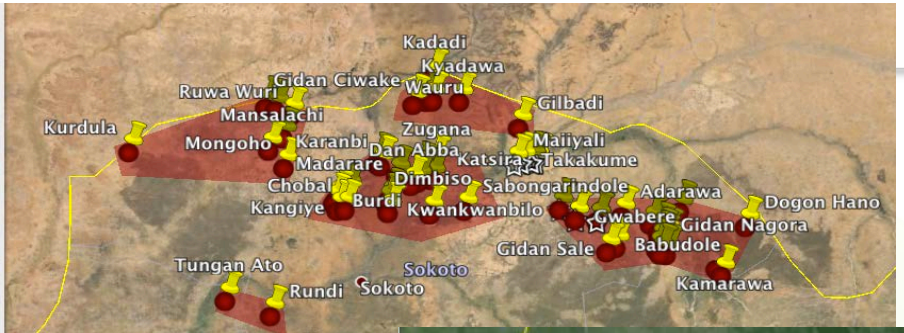
Our company is setting the pace to **realize the development of a green economy** with low carbon emissions, resource efficiency and social inclusivity.

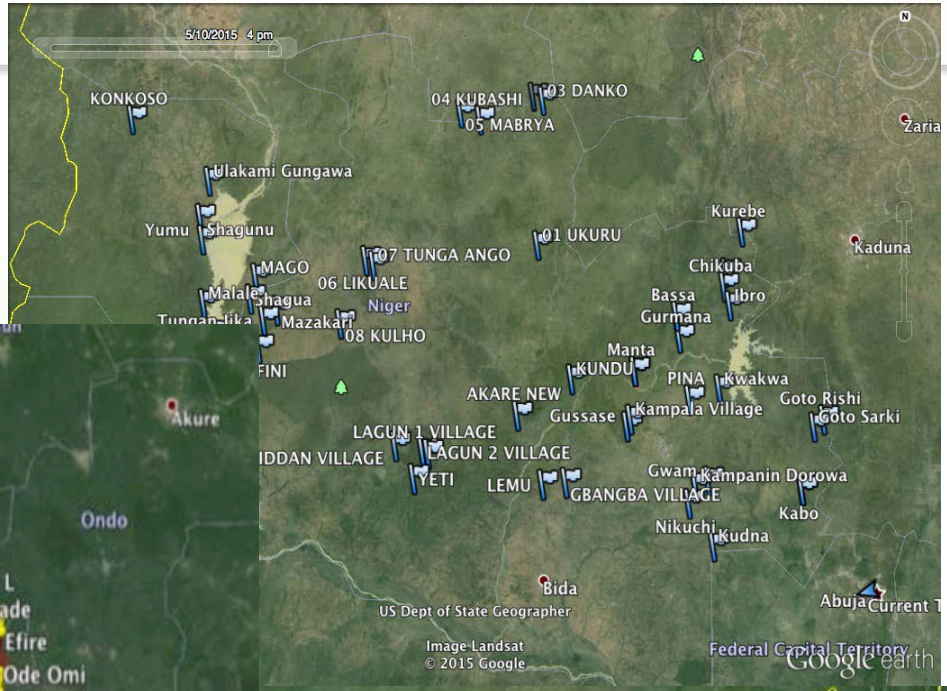
Empowering Youth

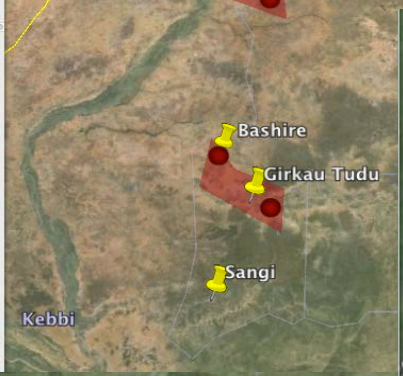
Green Energy NYSC Camp – Kubwa, Abuja

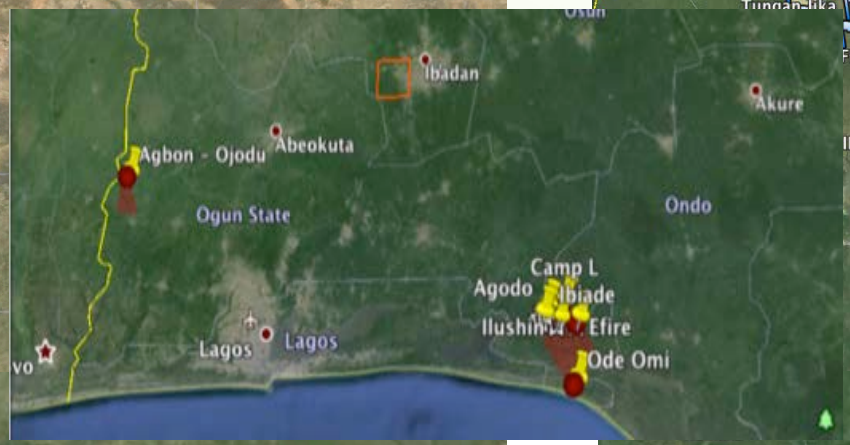
5 Day Awareness Workshop, 70 Youth Corp members were enlightened about climate change issues and how it affects our environment, the benefits of adopting green technologies and practices as well as practical sessions on the use of improved cook stoves and solar PV installation.

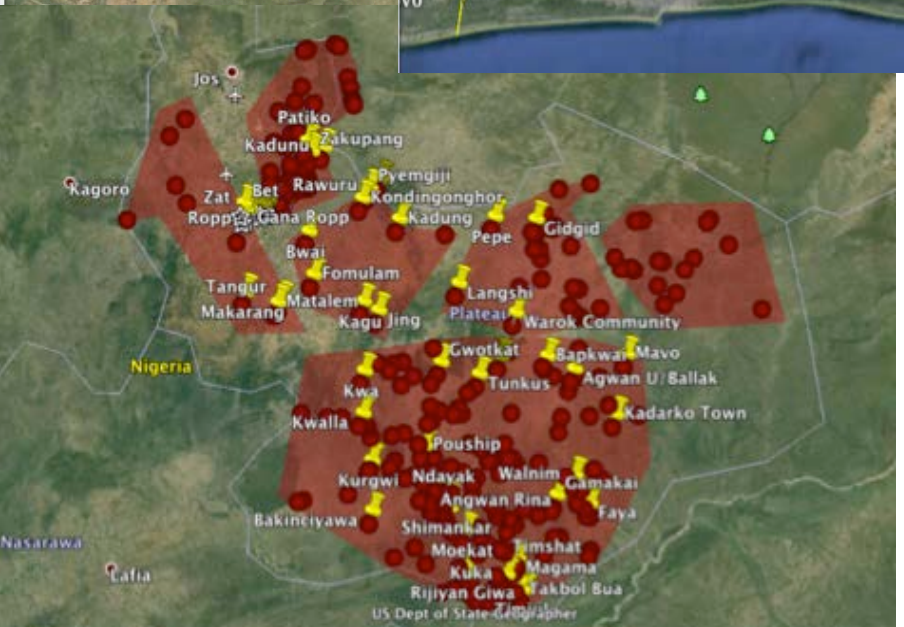
GIZ – 200+ off-grid community profiling in 5 state for RElect.











GIZ – 200+ off-grid community profiling in 5 state for RElect.

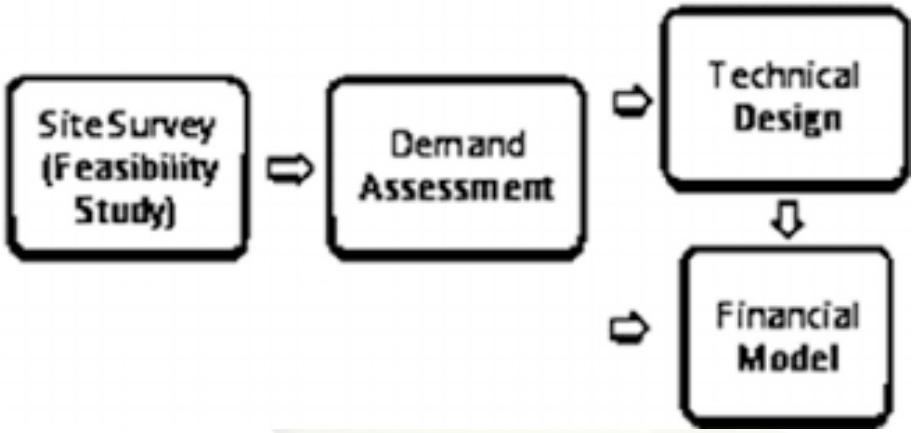
Gathered unique and accurate data from households, productive users and small businesses in:
Sokoto – Tambuwal, Silame, Kebbe, Tungan Ato
Niger – Paikoro, Maikunkele, Borgu, Auna, Maishagu, Mariga,
Plateau – Barkin Ladi, Mangu, Bokkos, Pankshin, Kanke, Langtang North & South, Mikang, Qua'an Pan, Shendam Wase LGAs

Findings:
-**Average # hhlds in community, # of pple/hhld** : 500hhlds, 9 pple/hhld
-**Income per annum** (NGN) : 730,000 livestock and 150,000 farming,
-**Occupations**: farming, livestock, mining, trading
-**Common energy needs for hhld**: phone charging, Light, TV
-**Current means of fulfilling electricity need:** battery lights, fuel generator
-**Impacts:** improved productivity e.g. irrigation, preservation of farm produce, Fulani milk storage, improved income and indirect employment e.g. grinding mills, welders, traders , up to 40% reduction in energy spend, may improve security

Off-Grid Community Solar PV

Decentralized Solar Mini-grids

≈ 8,000 Clusters Nationwide



Target: Un-served Rural Community Cluster, Industrial/Commercial Captive Power, Urban Under-served Estates already on Diesel Generators

Technology: Solar PV-Diesel Hybrid, ranging from 30kW to 500kW, smart metered PAYG

-**Mini-grid deployment cost, direct/indirect jobs created:** 30kW Hybrid ≈ US$200m, 30 jobs per site

Benefits: Generation/Distribution/Transmission all on-site, Fast deployment, Scalable, Provide electricity for most affected by energy poverty (women), Peak load displacement, Stimulate economic activity, Costs less than grid extensions in most instances

Requirements: Public/Private Partnerships, Funding

Off-Grid Solar PV

Integrated Solar Home Systems: Solar Enabler

Target: Urban/Semi Urban Residential, SMEs, Clinics Piloting 160 units with Solar Nigeria Program funding for Academic Lecturers at Ahmadu Bello University Zaria in May

Technology: Solar PV, Lithium ion batteries, smart monitoring system, metered for Lease-to-Own over 2yrs or PAYG model

Benefit: Fast Deployment, Plug- and Play, Remote monitoring, Back-up power with repayment spread out, Job creation (est. 60+ jobs 1MW deployment)

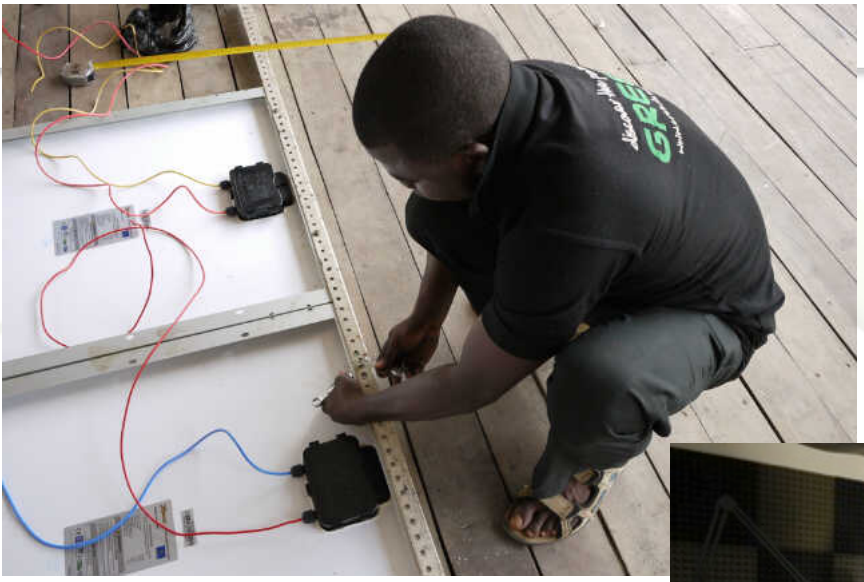
Requirements: 000's of systems per year- Inventory financing (economies of scale), 'patient capital' to be able to fall between DG Costs @ NGN88/kWh and Grid R2 Electricity Tariff @ NGN24/kWh

Enabling Agriculture: Production and Preservation

Enabling Healthcare Provision: 37 Health Clinics in Oyo

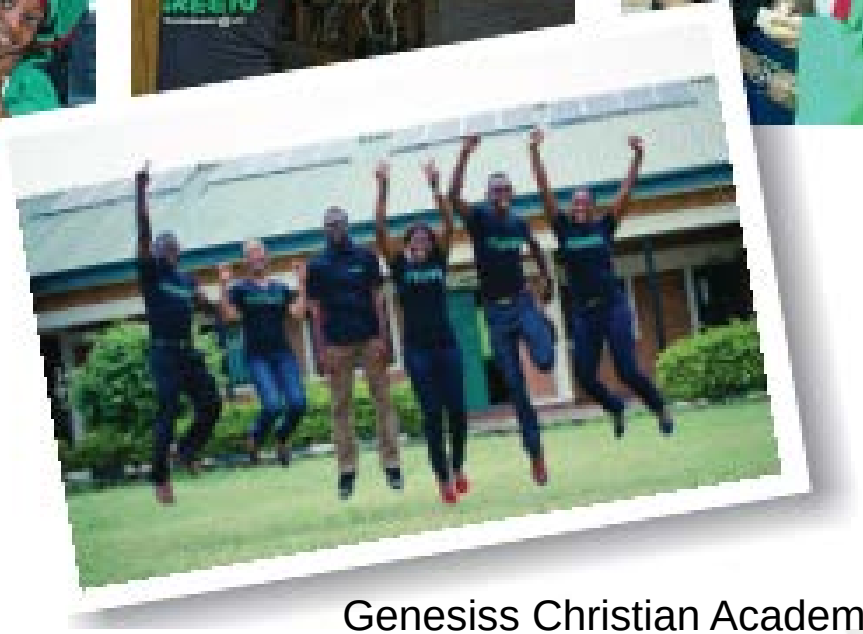
Enabling Local Outreach Chicoco PH

Chicoco Radio Now Running on Solar



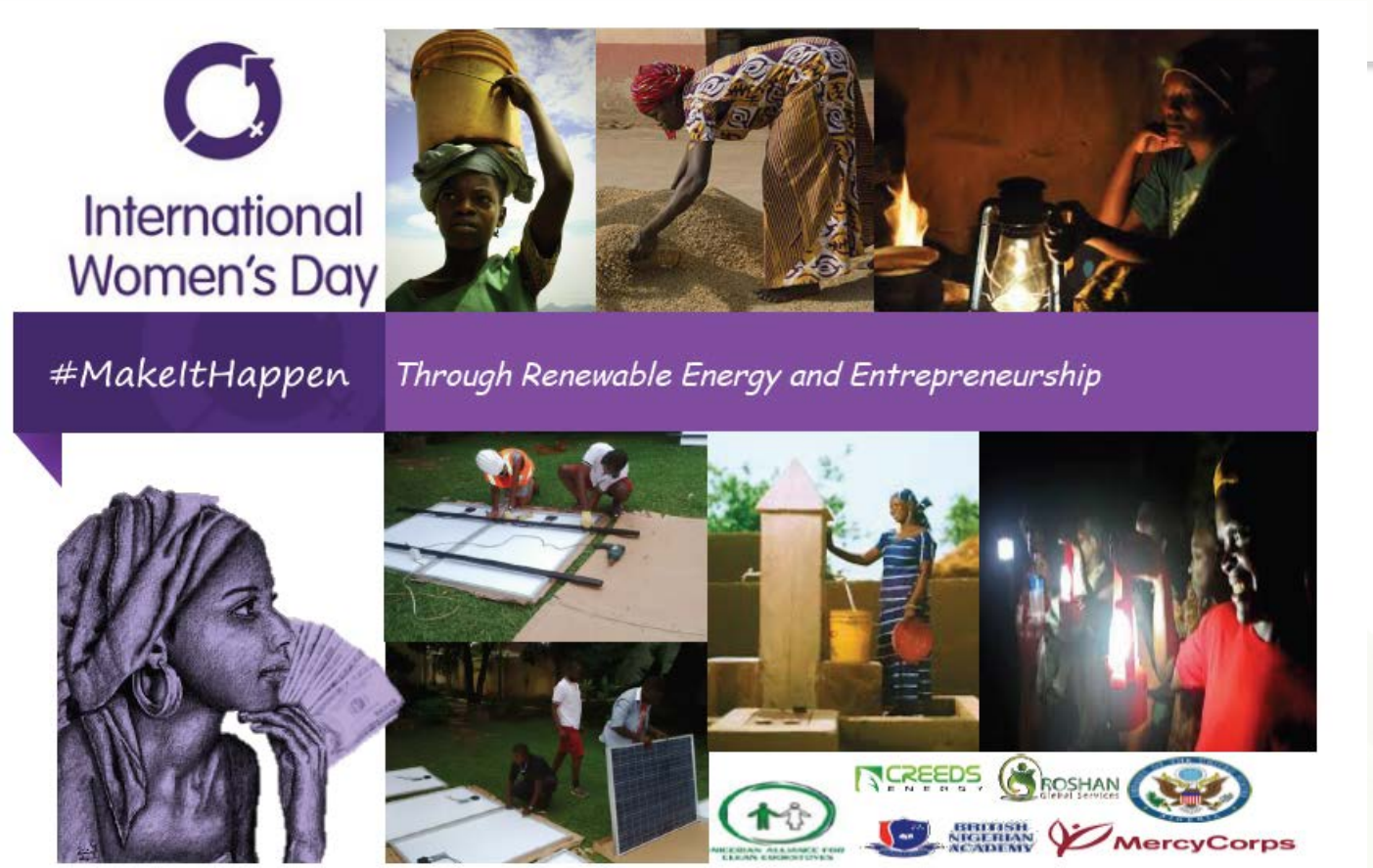
Enabling Education

1st off-grid School Powered by Creeds Energy!



Genesiss Christian Academy- Off-grid school installation- Kuje

Safe Energy for Humanitarian Response



On IWD 2015, IDPs were hosted to a day of energy consciousness tagged "Empowering Women, Empowering Humanity - Picture it and Make it Happen". It projected the fact that access to clean energy alternatives for women in communities, households and clusters can improve cooking and lighting needs by curbing the danger of gender-based violence, indoor air pollution and risk of fire from kerosene lamps

IDP's provided with solar lanterns and clean cook stoves

Solar Energy Strategies for Northern Nigeria

1. **Position**; envisage Northern Nigeria's solar resource as an asset for decentralized electricity generation regionally and nationally. Diversify energy mix to include more solar input, create capacity targets, sustain energy security.

1. **Plan**; create state-level plans aligned to policies such as RE Policy, Climate Change Policy, INDCs 13GW off-grid solar PV pledge, SDG 7 (access to affordable and clean energy) and NERC Regulations.

1. **Collaborate**; create strategic alliances both internal and external that prioritize artisanal and skilled capacity development, innovative/appropriate technology development linked to specific sectors (agriculture, ICT, transportation, education, healthcare), youth targeted programs and interventions

1. **Mobilize**; invest in manufacturing/recycling/assembly (deep cycle batteries, BOS, solar panels). Attract funding/ provide options and enabling incentives that foster long-term business growth for indigenous green enterprises in transparent and commercially driven manner

1. **Monitor**; oversight functions on service and product quality, end-user protection, business/project developer due diligence,

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