
POWER FOR ALL FACT SHEET

Decentralized renewable energy and SDGs in Nigeria

**POWER
FOR
ALL**

Nigeria is Africa's largest potential off-grid market with 75 million of its population still living without electricity access, and 80% of those who have access still use alternative sources of energy due to frequent power outages.¹ Evidence shows that Nigeria's off-grid market has the capability to create sustainability and improve living conditions in the country. This factsheet explores the latest data on Nigeria's off-grid technology and decentralized renewable energy (DRE) market and its positive linkage with the achievement of UN Sustainable Development Goals (SDGs).

65%

RURAL SCHOOLS THAT CAN
BENEFIT FROM DRE

61%

MSMES IN OFF-GRID AND
BAD-GRID AREAS THAT
CAN BENEFIT FROM DRE

\$6.4 MN

POTENTIAL TONS OF CO₂
AVOIDED FROM DRE
TRANSITION

Nigeria's DRE market is showing strong growth at 36% for off-grid solar products; ambitious plan for mini-grids underwent significant development.

- » Nigeria's off-grid market for mini-grids and solar home systems is estimated to yield \$10 billion annually in revenue, and savings of \$6 billion for Nigerian homes and businesses.²
- » Between 2015 and 2017, 1.7 million off-grid solar products were sold in the country with an annual growth averaging 36% between 2014 and 2016.³
- » Nigeria's Rural Electrification Agency (REA) plans to deploy 10,000 mini-grids across the country⁴ and estimates that installing 100kWh each per mini-grid will only meet 30% of anticipated power demand in the country.⁵

SDG3 -- Replacing kerosene with DRE brings health benefits.

- » Kerosene poses health hazards. An estimated 30 percent of hospital burn cases are due to kerosene lamp explosions.⁶ Indoor air pollution from kerosene affects 136 million Nigerians.⁷
- » DRE can provide opportunities for improved healthcare, particularly in rural regions: midwives in Nigeria find that solar lights and home phone charging contribute to better patient care.⁸
- » As part of the Solar Nigeria Program, DRE solutions have been deployed in 45 primary health centers. Positive impacts include improved night-time care, vaccination and medicine refrigeration, and more patients served.⁹

SDG4 -- DRE contributes to inclusive and equitable education by unlocking study hours and improve safety.

- » 65% of primary and secondary schools are without access to electricity, mostly in rural areas, which prevents their use of technology-based educational services.¹⁰
- » The Lagos Solar Project has provided DRE to 175 schools. Observable impacts include extended study hours, more computer usage, increased enrolment, and better school performance.¹¹
- » The Safe School Initiative provided solar lighting to schools in Northeast Nigeria, a conflict affected area, to improve lighting services and security.¹²

SDG5 -- DRE solutions help advance on gender equality by creating opportunities for women through entrepreneurship and savings from kerosene use.

- » Women are in the majority among Nigeria's poor and are the most affected by energy poverty. Training women entrepreneurs as distributors for DRE solutions presents opportunities to empower women at the same time brings profitability for DRE companies.¹³
- » The Rural Women Energy Security Initiative is using small-scale DRE projects to target rural energy-poor women with health-related issues from the use of kerosene, diesel and charcoal.¹⁴

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By the Numbers:

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SDG8 -- By improving electricity access, local businesses thrive and bring employments.

- » There are 37 million micro, small and medium-sized enterprises (MSME) in Nigeria, accounting for 84% of jobs. 61% of these MSMEs locate in off-grid or bad grid areas.¹⁵
- » DRE can significantly reduce MSME's operational cost and create induced jobs. Two mini-grid projects run by GVE Group serving 3,520 rural population have created 182 new jobs.¹⁶

SDG13 -- DRE fights climate change by replacing carbon-intensive energy sources.

- » A full transition to DRE can avoid 6.4 million tonnes of carbon dioxide emissions a year for the country -- the equivalent of 1.6 million mid-size cars removed from roads.¹⁷
- » Replacing the use of kerosene lamps with lighting from DRE can reduce Nigeria's carbon emissions by 20% by 2030.
- » The Great Green Wall program deployed solar pumps in 92 communities in Northern Nigeria and has increased irrigation and helped to combat desertification.¹⁸

Share the Message

- » DRE contributes to SDG by improving health and education, advancing gender equality, bringing employment opportunities and reducing carbon emissions.
- » Sound evidence and examples were found that DRE advances at least 6 SDGs in Nigeria.

Sources:

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