



Nigeria energy market

Open DC Grid Project

November 2021

pirlcharger.com

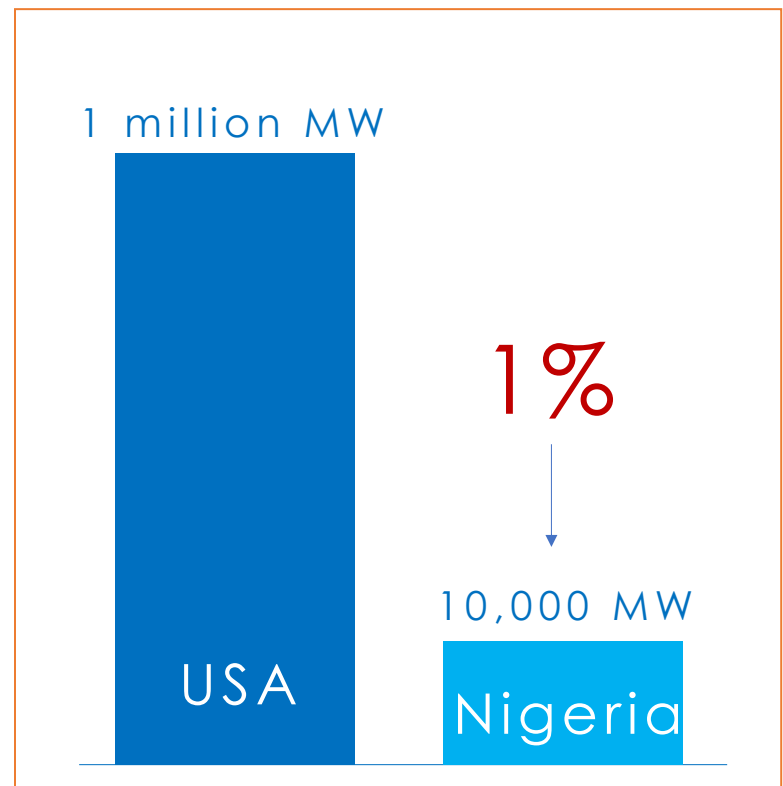
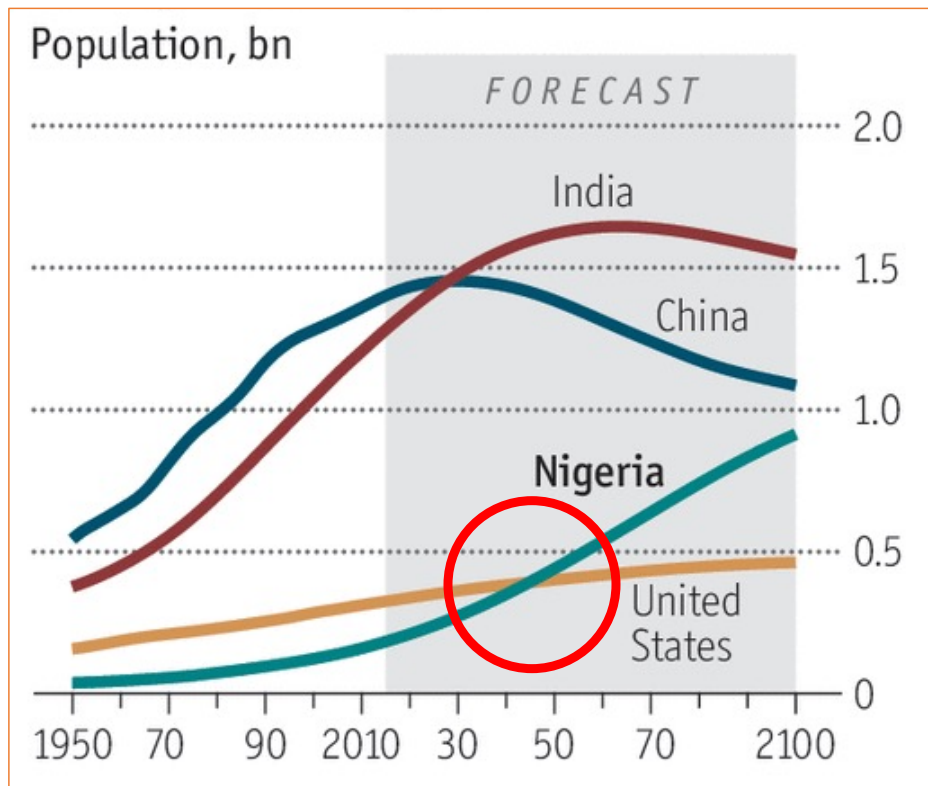
About me



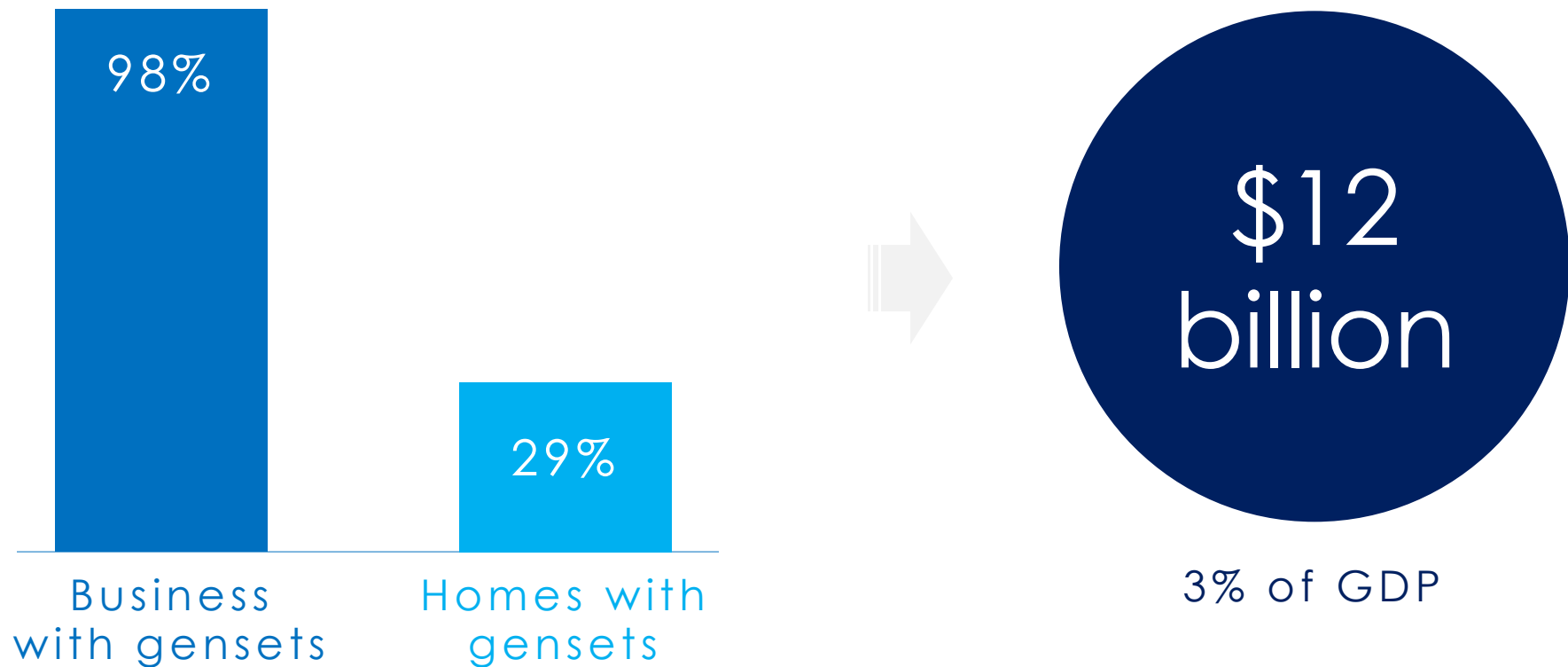
Kobby Osei-Kusi
Founder & CEO

- Project developer
 - Developed 500 MW gas power plants with AES (US energy company)
 - Worked in Nigeria for ~4 years
- Founded Pirl to “go solo”
 - Launched smart charger in 2018
 - LBNL on energy reporting
- Fun facts
 - Lived in Bay Area for 6 years
 - Fun fact: My dad installs solar charging stations in Ghana

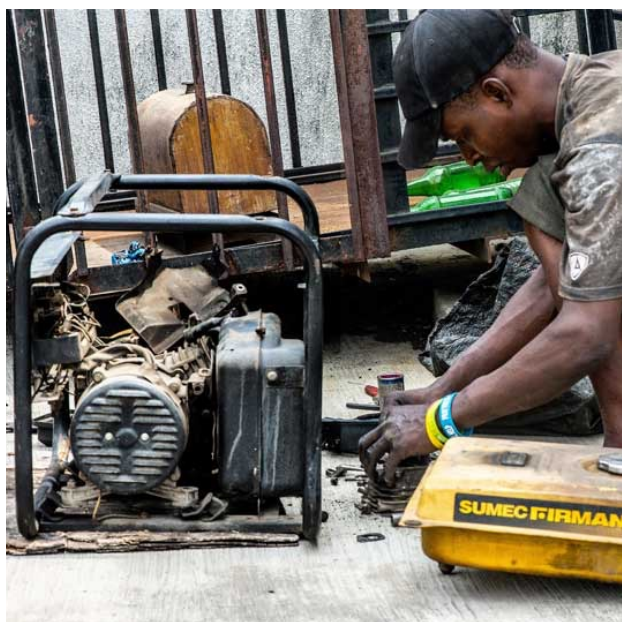
Nigeria may overtake the US as 3rd most populous country in 2050 yet...



Nigeria's grid is down 50% of the time so everyone relies on generators



Exacting a heavy toll on Nigerians



20%

Revenue lost by firms

70%

Higher lung cancer risk

160

Million tons of CO_{2e} / year

6% of Nigeria emissions

Many solar companies in Nigeria

Solar only 1% of installed grid capacity

Expensive

Rainy season & dust



Our product: Pirl Pack (1st storage company)



270 watt-hours

40 phones

Grid & solar charged

Analytics

Track usage

Significant benefits over generators



For electronics

\$200 device

\$0.10 grid charging cost

Zero maintenance

Zero pollution



Larger AC loads

\$200 device

\$10 fuel/week

\$150 maintenance/year

Noisy and toxic

Reducing Nigeria genset usage by 50%



12-hour daily outage



DC loads



AC loads

Cheaper than installing solar

Is this possible in Nigeria?

