Background

More than a century after the light bulb was invented most of the African continent is still in the dark after nightfall. School children often cannot read after dusk, businesses cannot grow, and clinics cannot refrigerate medicine or vaccines, and industries are idled hampering economic growth, jobs, and livelihoods.

Today some 25 countries in sub-Saharan Africa are facing a crisis evidenced by rolling blackouts. Although the African continent is well endowed both with fossil fuels and renewable resources, these are not evenly distributed, creating windfall profits for some countries and exacerbating the crisis in others.

Since the mid-1990s, external finance to Africa's power sector has averaged only around US$600 million per year of public assistance, plus a similar volume of private finance. More recently, Chinese, Indian and Arab sources have also emerged as significant energy financiers. Nonetheless, it is estimated that doubling current levels of energy access by the year 2030 will require sustained investment at much higher levels.

Key Issues in Africa's Energy Sector

- ***Low access and insufficient capacity*** **-** Some 24 percent of the population of sub-Saharan Africa has access to electricity versus 40 percent in other low income countries. Excluding South Africa, the entire installed generation capacity of sub-Saharan Africa is only 28 Gigawatts, equivalent to that of Argentina.
- ***Poor reliability*** **-** African manufacturing enterprises experience power outages on average 56 days per year. As a result, firms lose 6 percent of sales revenues in the informal sector. Where back-up generation is limited, losses can be as high as 20 percent.
- ***High costs*** **-** Power tariffs in most parts of the developing world fall in the range of US$0.04 to US$0.08 per kilowatt-hour. However, in Sub-Saharan Africa, the average tariff is US$0.13 per kilowatt-hour. In countries dependent on diesel-based systems, tariffs are higher still. Given poor reliability, many firms operate their own diesel generators at two to three times the cost with attendant environmental costs.

Shortcomings in the power sector threaten Africa's long term economic growth and competitiveness. The cost to the economy of load-shedding is equivalent to 2.1 percent of GDP on average.

Source: https://bit.ly/2wo8UBh

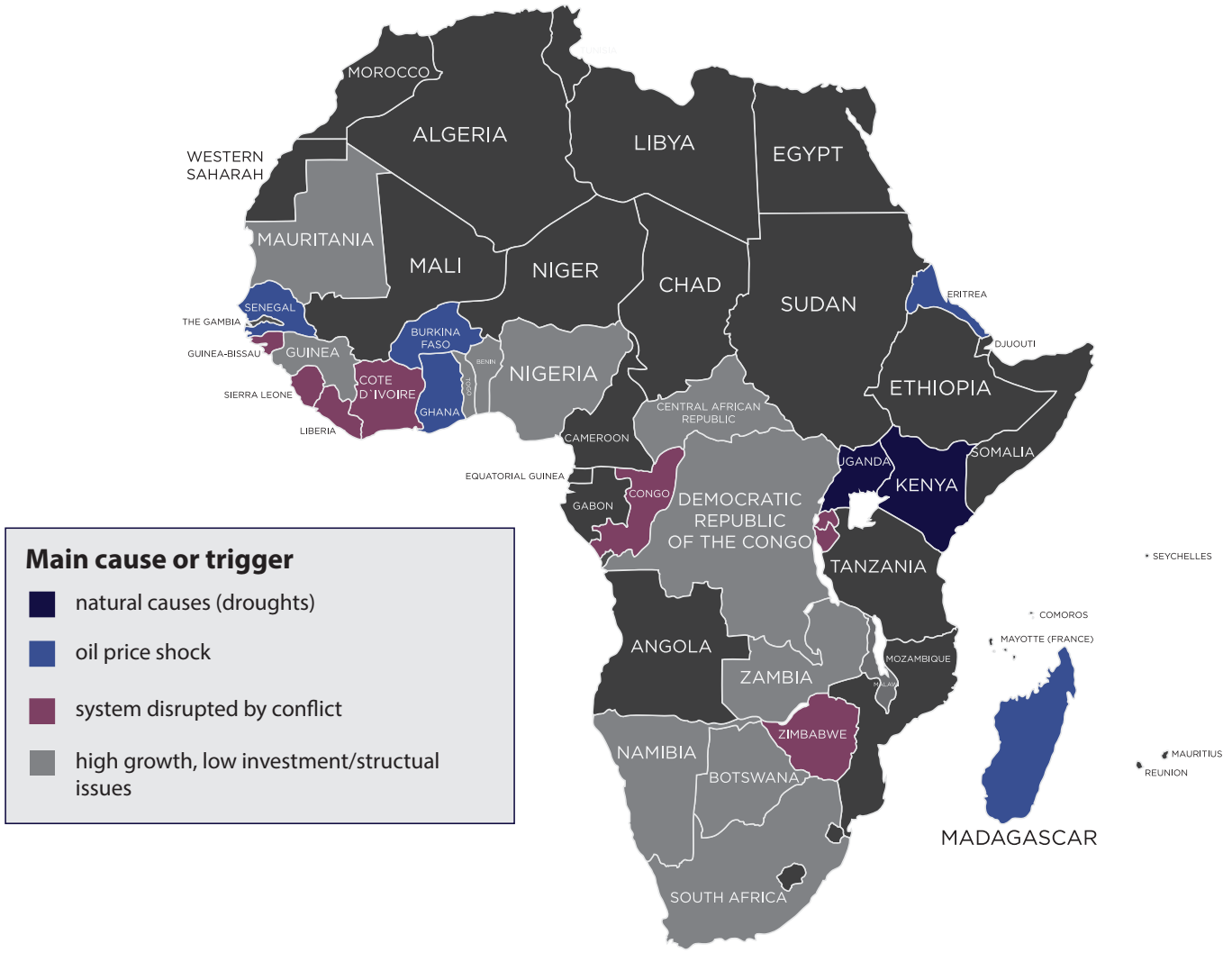
The entire installed generation capacity of Africa's 48 Sub-Saharan countries is just 68 gigawatts, no more than Spain's. As much as one-quarter of that capacity is unavailable because of aging plants and poor maintenance.

In Sub-Saharan Africa, just one person in five has access to electricity. If current trends continue, fewer than 40 percent of African countries will reach universal access to electricity by 2050.

Per capita consumption of electricity in Sub-Saharan Africa (excluding South Africa) averages only 124 kilowatt-hours a year and is falling. The rate of consumption is barely 1 percent of that in high-income countries. If entirely allocated to household lighting, it would hardly be enough to power one light bulb per person for six hours a day.

More than 30 African countries are now experiencing power shortages and regular interruptions in service, leading many to rely on very costly leased generating plants as an emergency stopgap (see figure). Frequent power outages mean big losses in forgone sales and damaged equipment—6 percent of turnover on average for formal enterprises, and as much as 16 percent of turnover for informal enterprises unable to provide their own backstop generation. The economic cost of power shortages can amount to more than 2 percent of gross domestic product. For some countries, it has shaved as much as one-quarter of a percentage point off annual per capita GDP growth rates.

Africa's power supply crisis has many underlying causes



http://infrastructureafrica.opendataforafrica.org/kquobdg/africa-s-chronic-power-problems-have-escalated-into-a-crisis-affecting-30-countries-this-tolls-heavi

Poor Infrastructure Is Africa's Soft Underbelly

In one of Africa's most ambitious investment decisions, South Africa's President Jacob Zuma has unveiled a plan to spend $97 billion on infrastructure over the next three years to upgrade roads, ports, and transportation networks aimed at accessing coal and other minerals.

South Africa's bold move to focus on infrastructure is not just a matter of assessing the rate of return on specific investments. It is about building the core foundations for economic growth.

Take agriculture as an example. Africa continues to suffer from low levels of agricultural productivity and is constantly bedeviled by famines. A large part of the continent's inability to feed itself and stimulate rural entrepreneurship can be explained by poor infrastructure (transportation, energy, irrigation, and telecommunication).

Click on the link below for the full article. Read up to 'South Africa's plan is part of a long-term infrastructure strategy to be implemented over the next 15 years at the cost of $462 billion.'

http://www.forbes.com/sites/mfonobongnsehe/2012/10/25/poor-infrastructure-is-africas-soft-underbelly/#2e5b250e55c6