



PROGRESS TOWARD

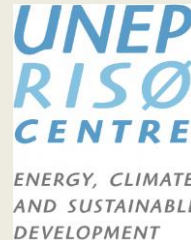
SUSTAINABLE ENERGY

Global Tracking Framework 2015

Coordinators:



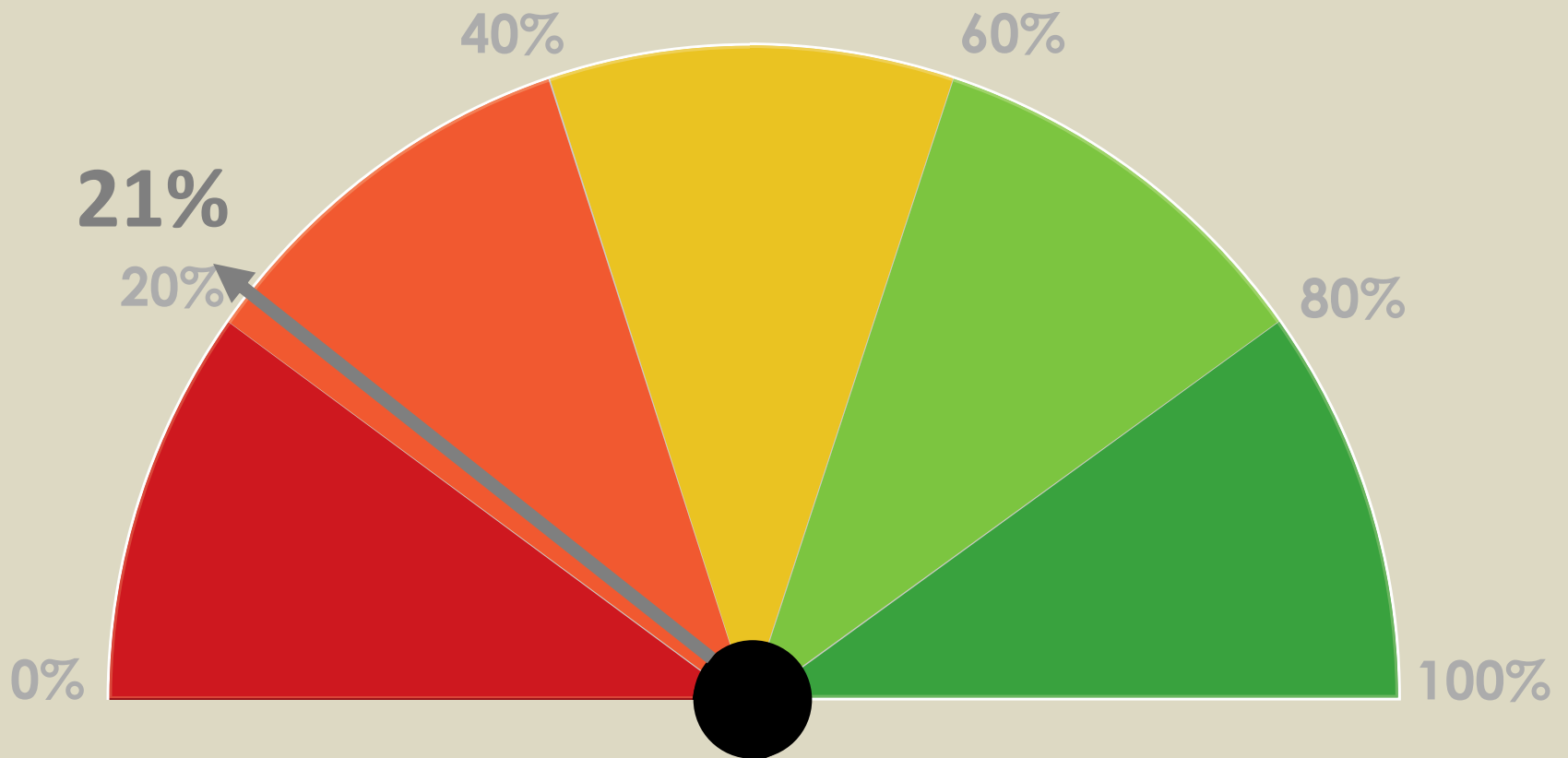
Partners:



Despite some acceleration,
Africa still not moving fast
enough to end energy
poverty by 2030

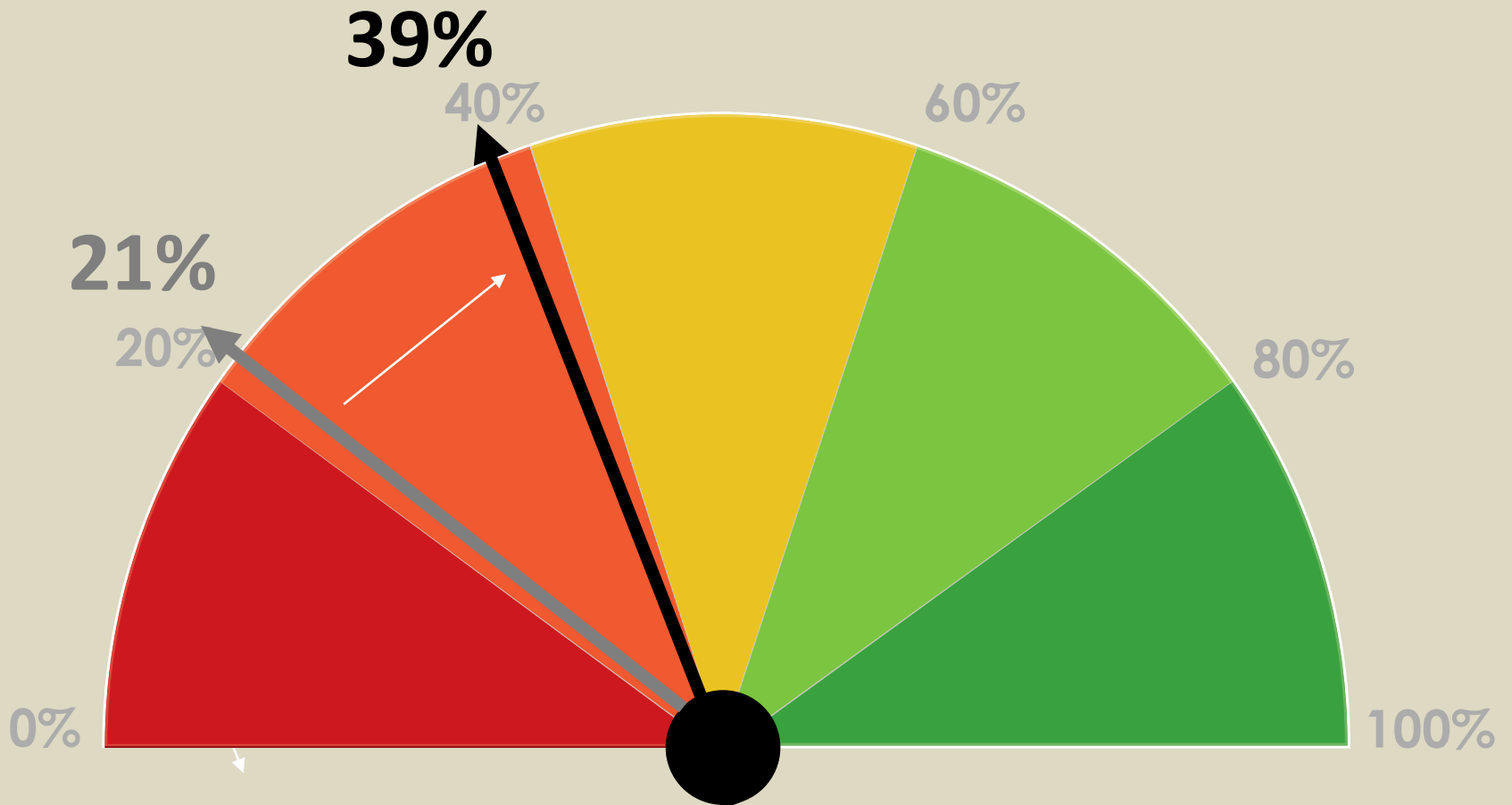


Pace of electrification doubled in recent years, but needs to double again to meet SDG7



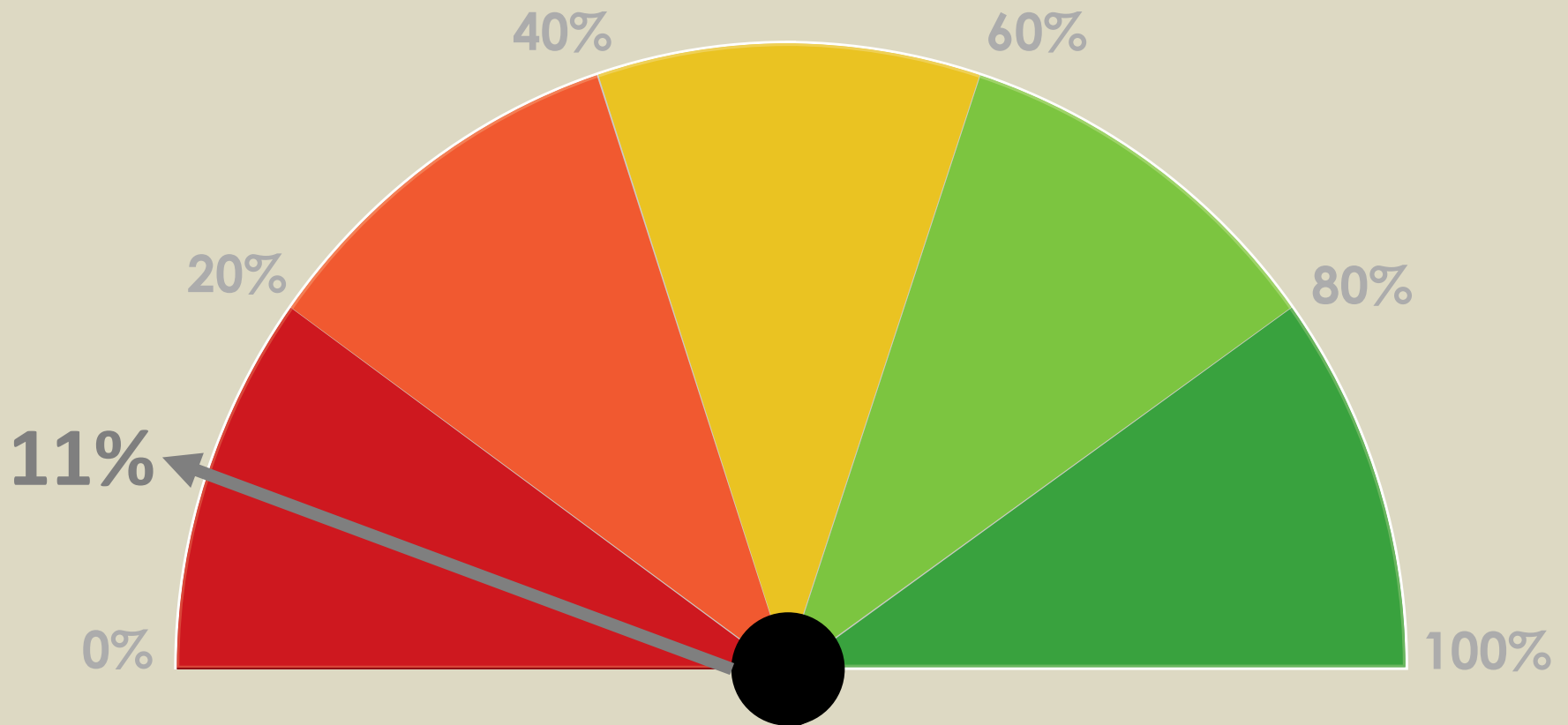


Pace of electrification doubled in recent years, but needs to more than double again to meet SDG7



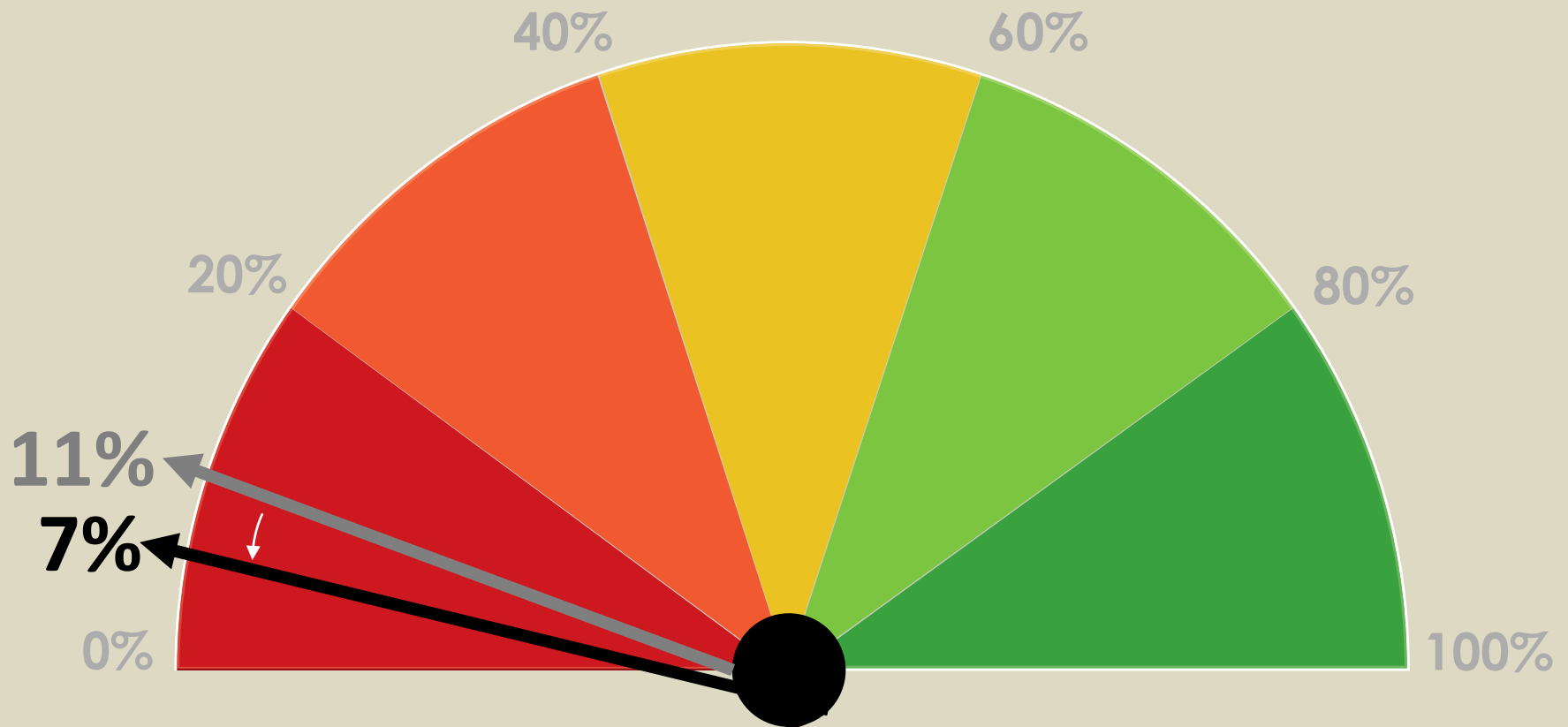


Minimal progress on access to non-solid fuels, and moving even more slowly than in the past



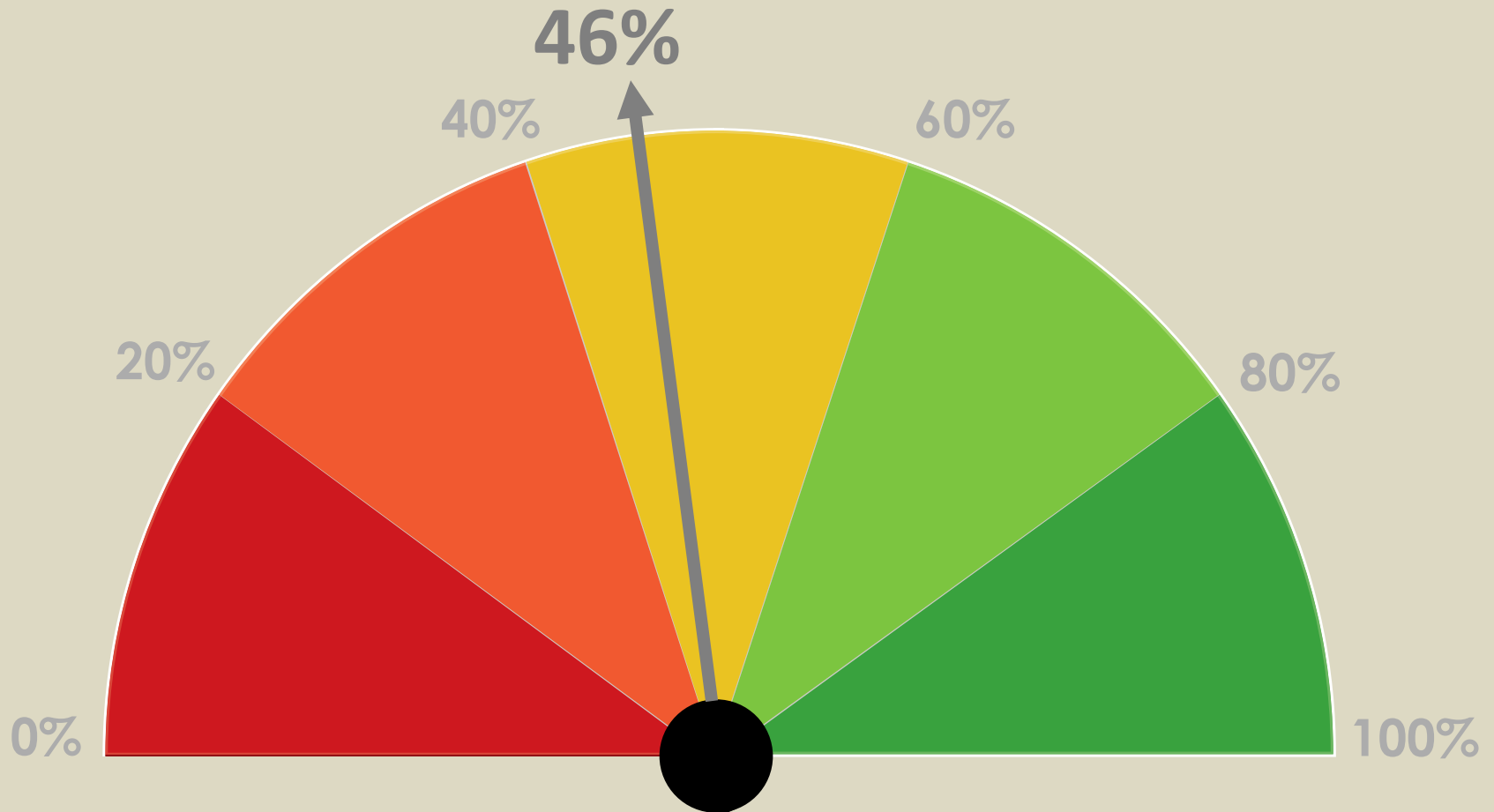


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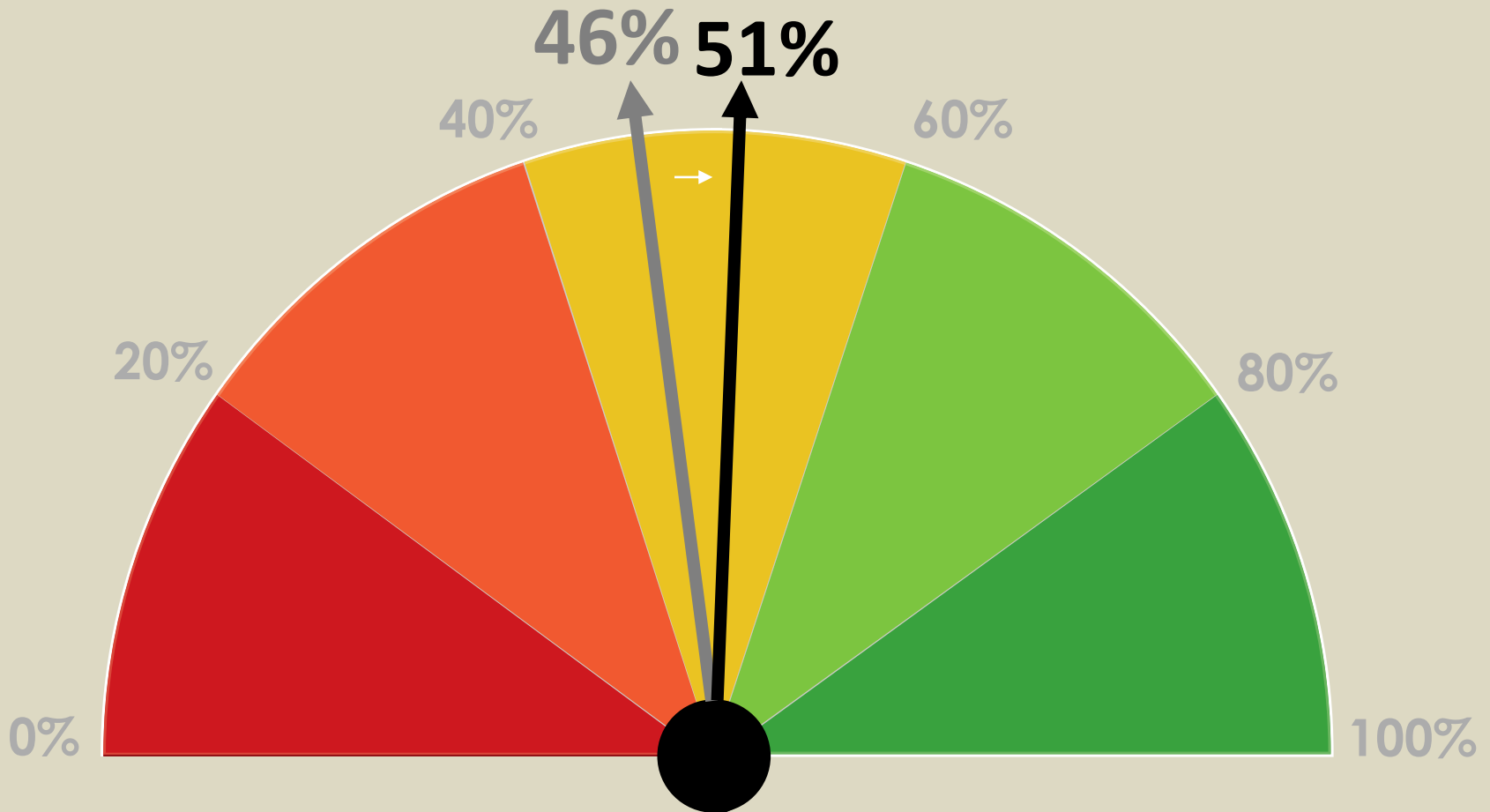


Africa's progress on energy efficiency is about half of what the global target envisages



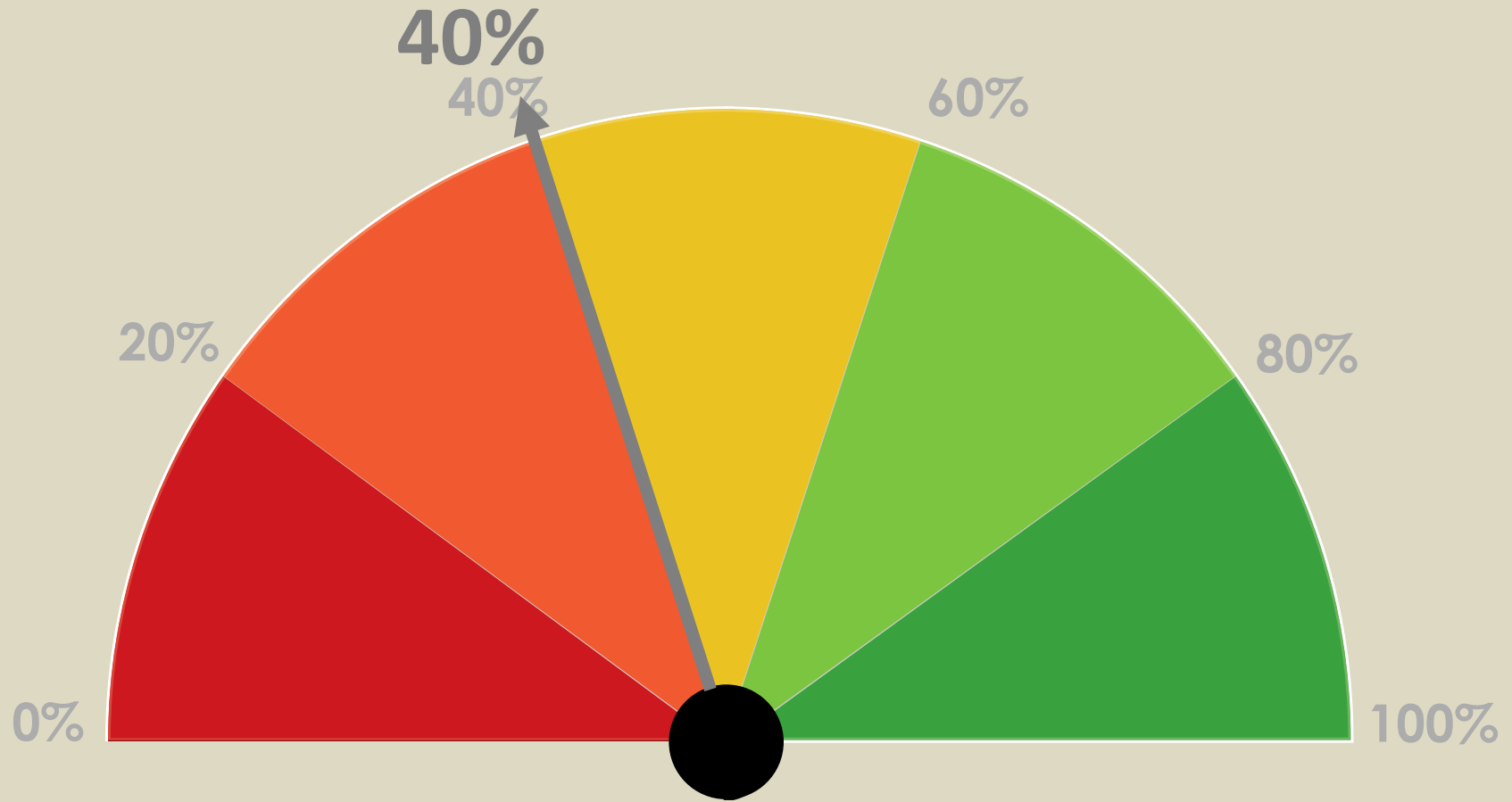


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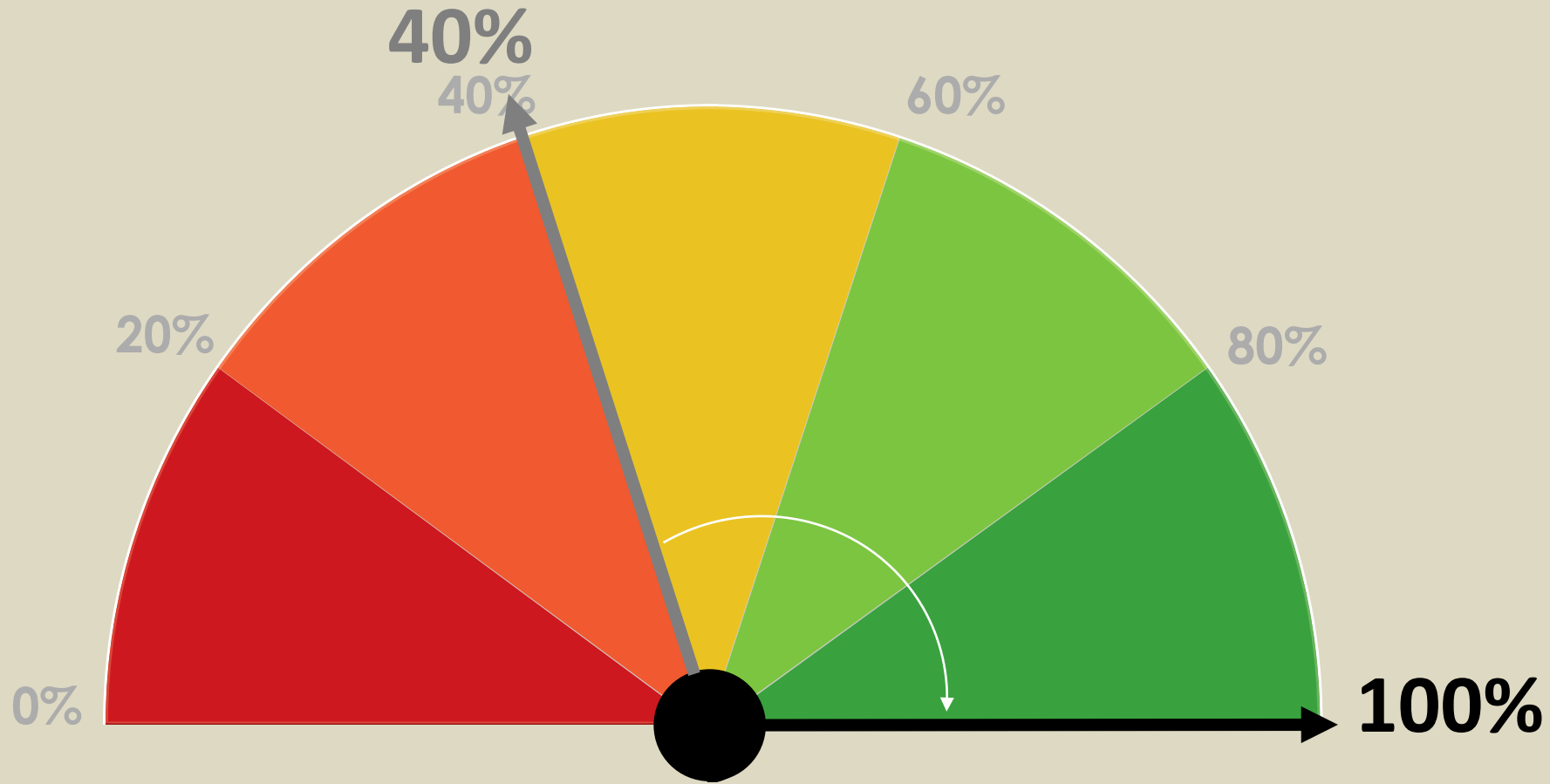


Recent acceleration of modern renewables, consistent with a doubling of the share by 2030

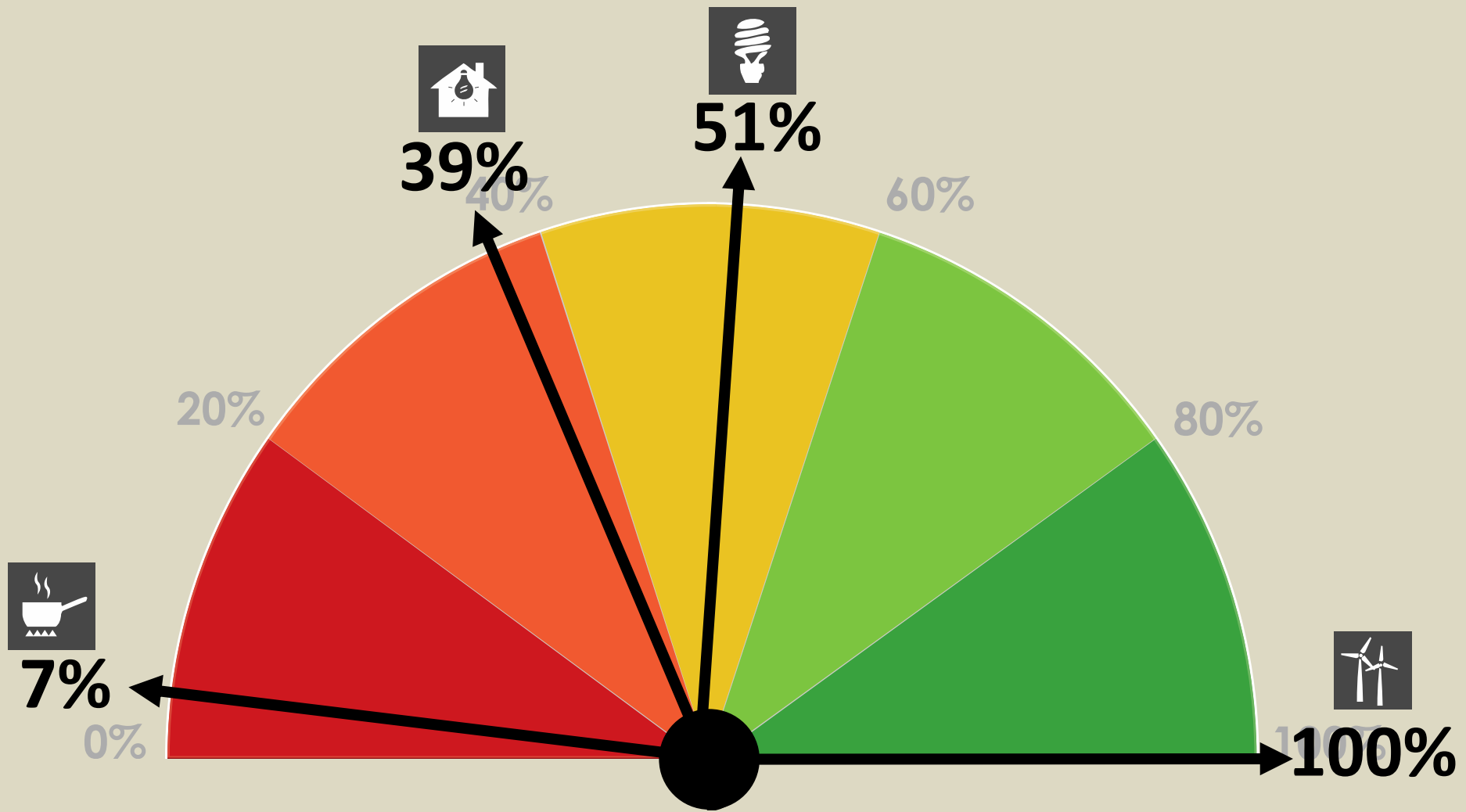




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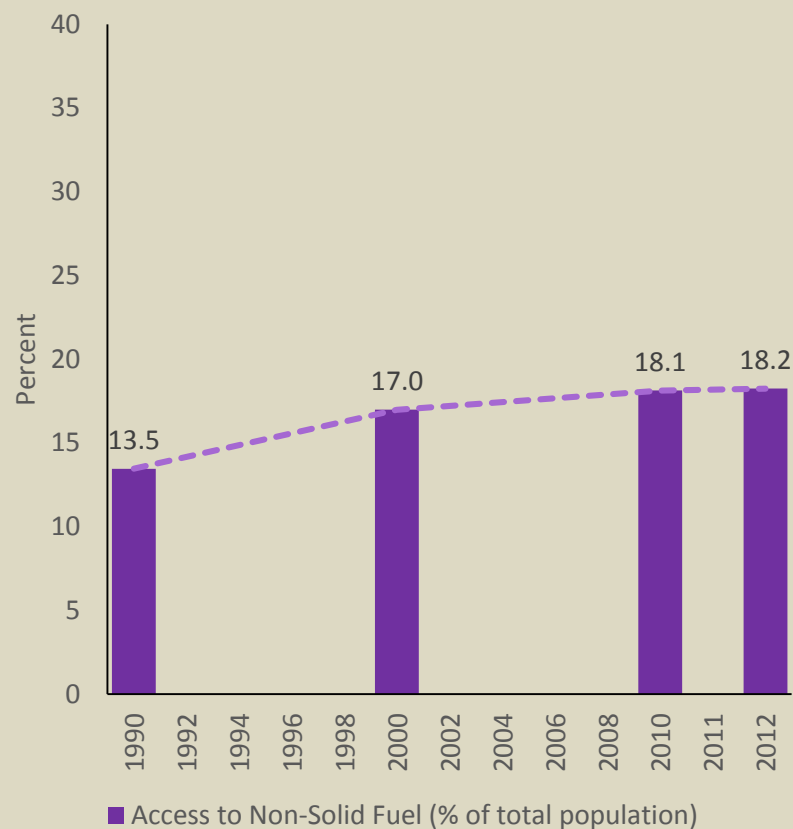
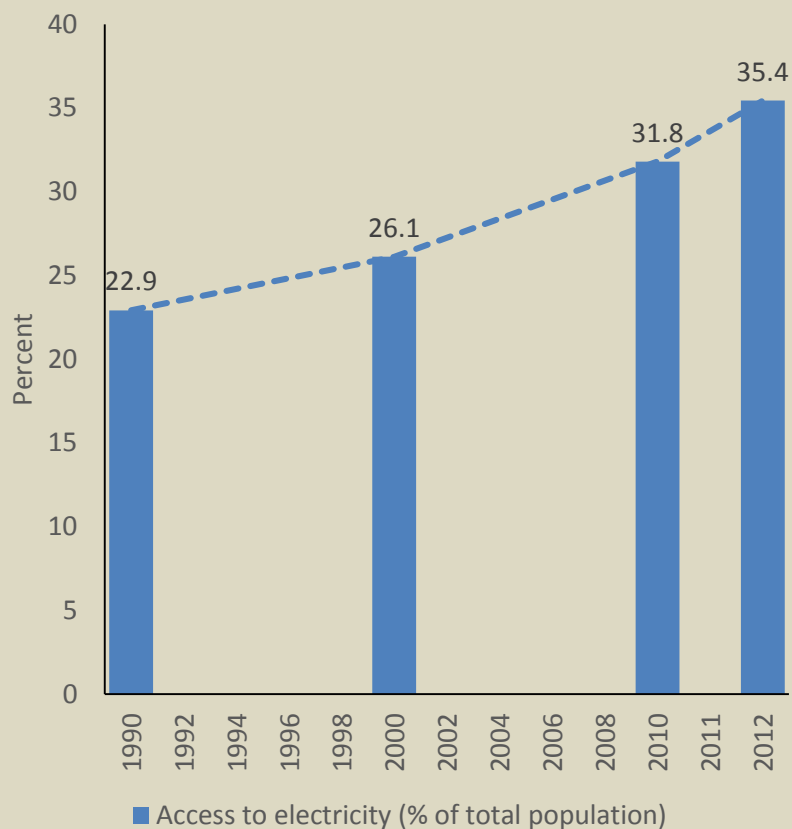


Africa's overall progress: a mixed report card



Many African countries are gearing-up on electrification, but challenging to stay ahead of population growth

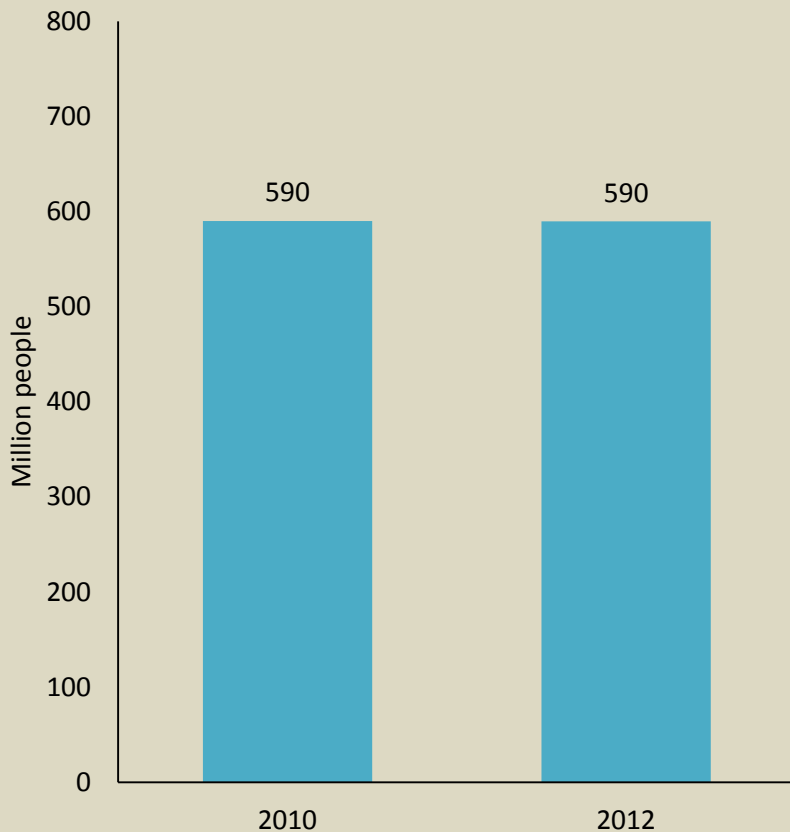
Notable long term acceleration in electrification rates, and stagnation in progress on non-solid fuels



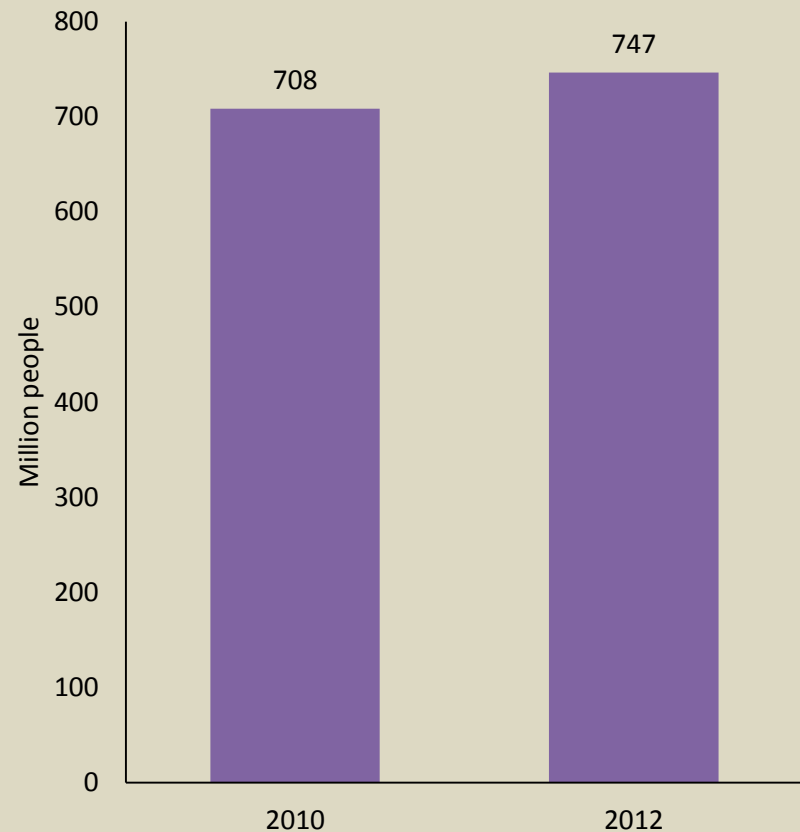
Access to electricity, 1990-2012

Access to non-solid fuels, 1990-2012

Absolute number of people without access constant for electricity (at 590m), growing for non-solid fuels (to 747m)



**Electricity access deficit
(millions of people)**



**Non-solid fuel access deficit
(millions of people)**

For the first time, African pace of electrification just kept up with population growth; not so for non-solid fuels

24 million



Average annual increase in electrified population 2010-2012

24 million



Average annual population increase 2010-2012

5 million



Average annual increase in population with access to non-solid fuels 2010-2012

In South Asia, pace of electrification already almost four times faster than population expansion

38 million



Average annual increase in
electrified population
2010-2012

11 million



Average annual
population increase
2010-2012

11 million



Average annual increase
in population with access
to non-solid fuels
2010-2012

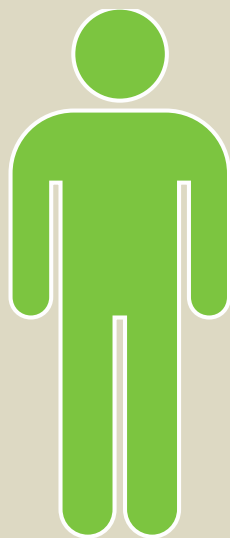
To stay ahead of population and meet SDG7 target 60-70 million Africans will need to gain access each year

24 million



Average annual increase in electrified population 2010-2012

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Average annual population increase 2010-2012

5 million



Average annual increase in population with access to non-solid fuels 2010-2012

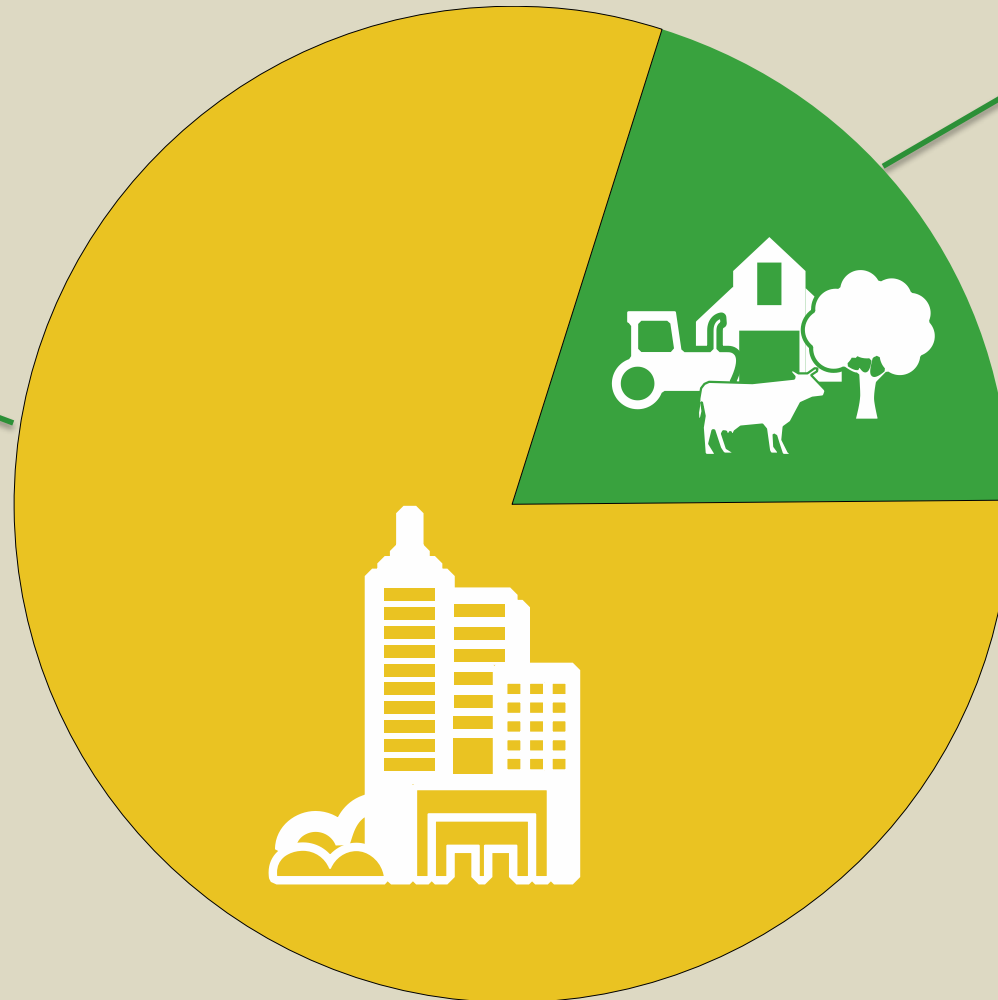
62 million

29 million

71 million

Four times as many people gained energy access in urban than rural areas over 2010-2012

Share of energy access in **rural** areas



Share of energy access in **urban** areas

Most African countries making steady progress on electrification



Electrification rate did not increase between 2010-2012

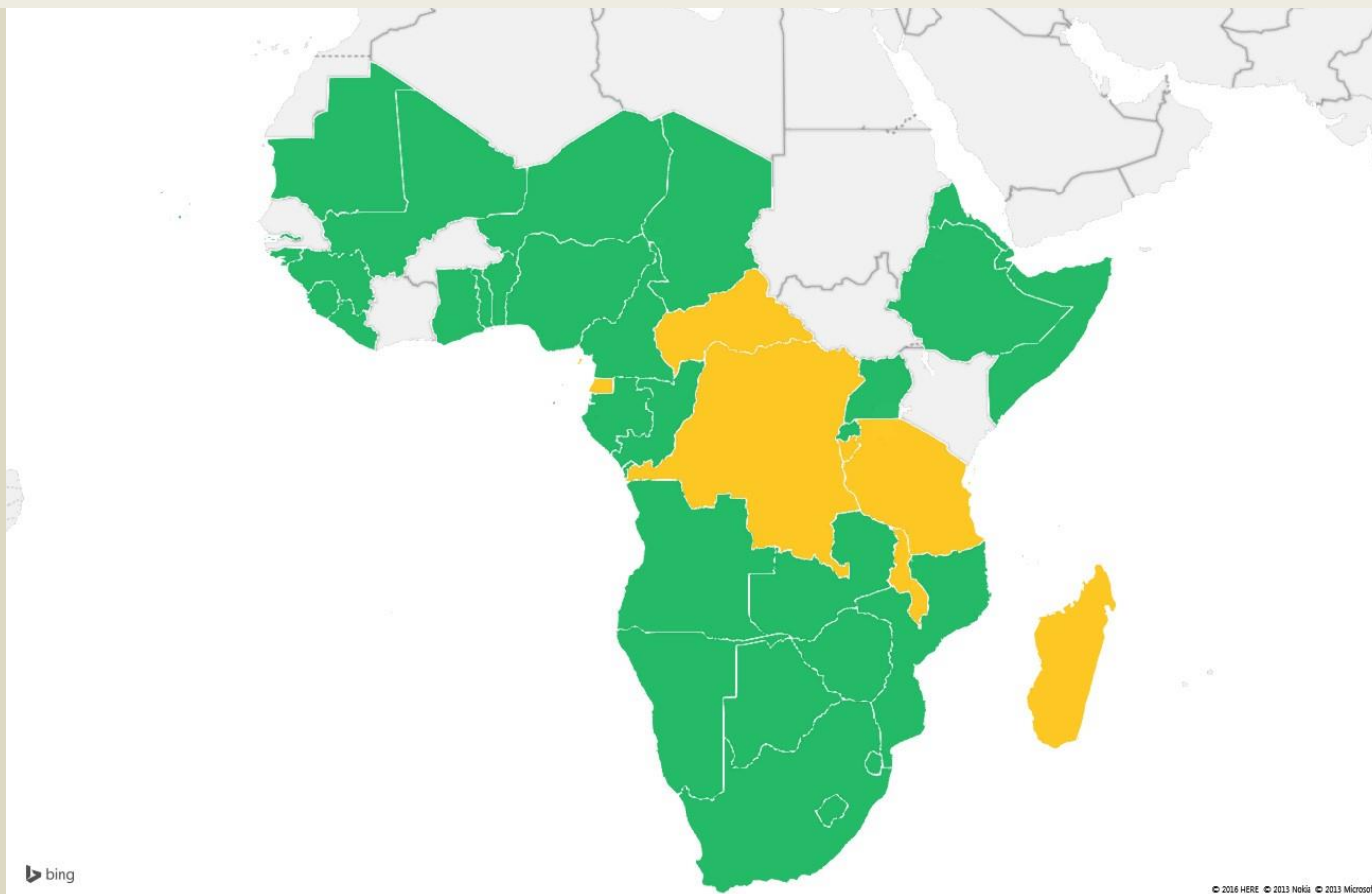





Electrification rate increased by less than 2 percentage points 2010-2012



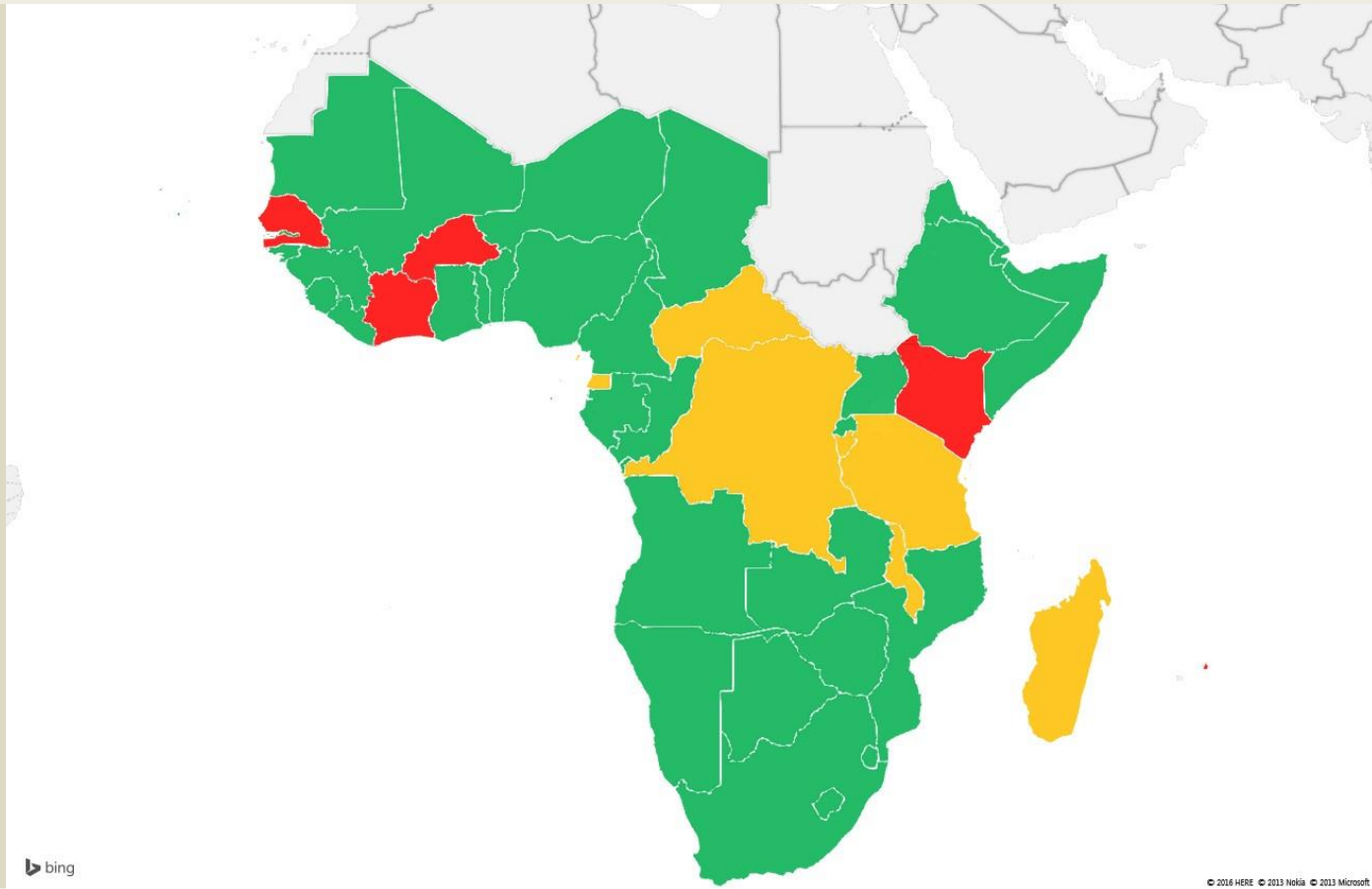
Electrification rate increased by at least 2 percentage points 2010-2012

Most African countries making steady progress on electrification



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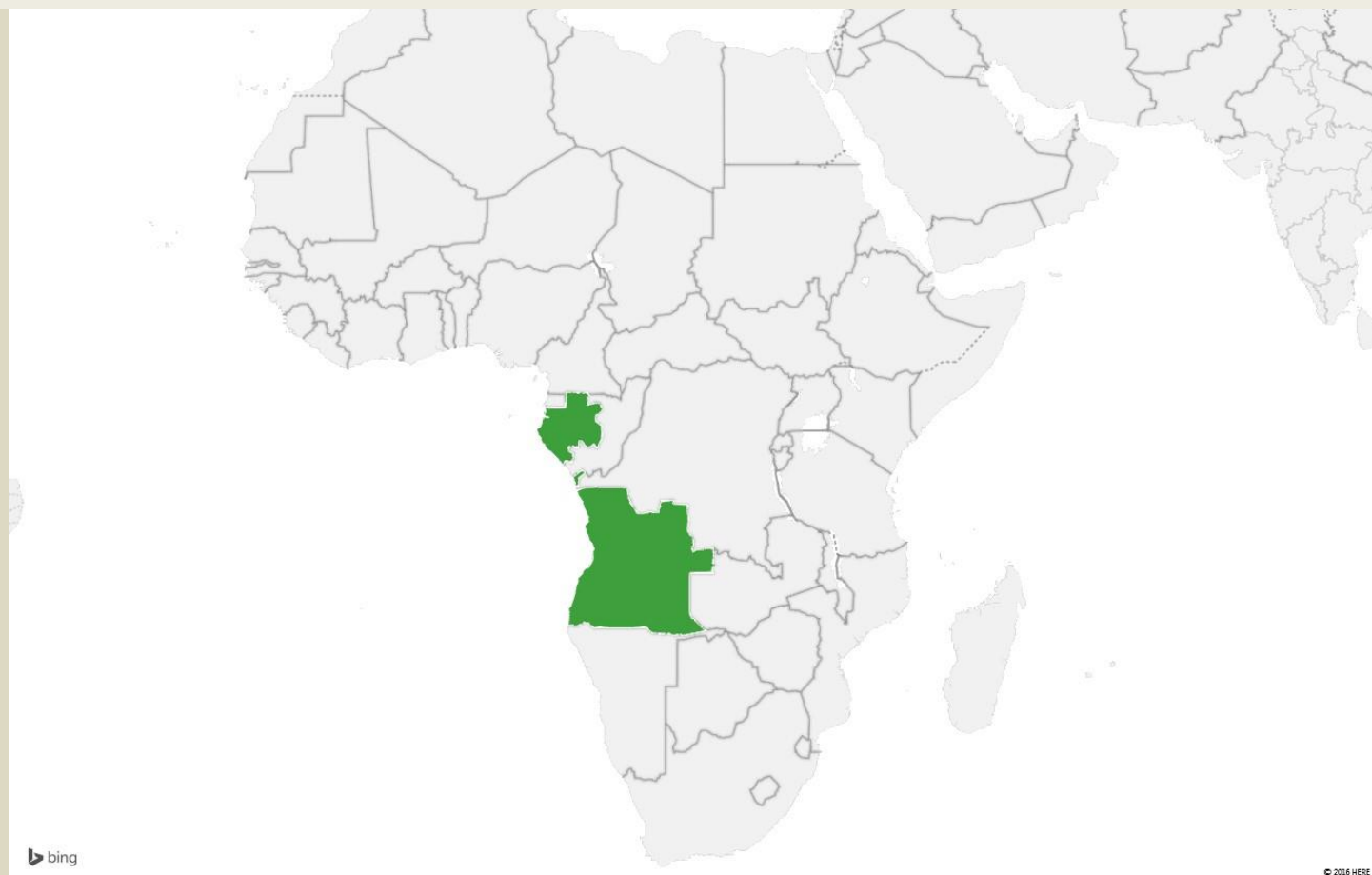


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Progress on access to non-solid fuels lackluster across the board



Rate of access to non-solid fuels did not increase between 2010-2012

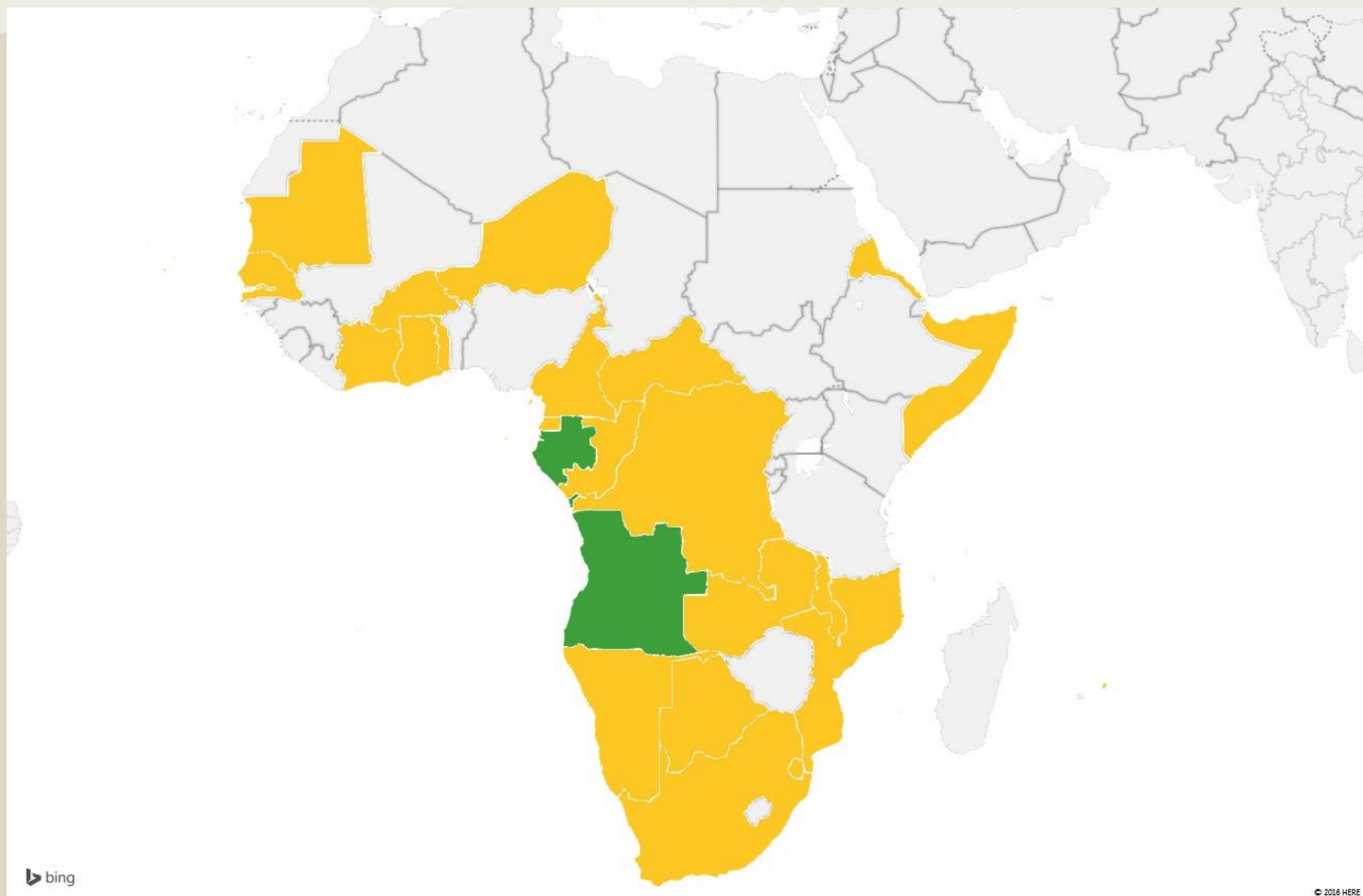


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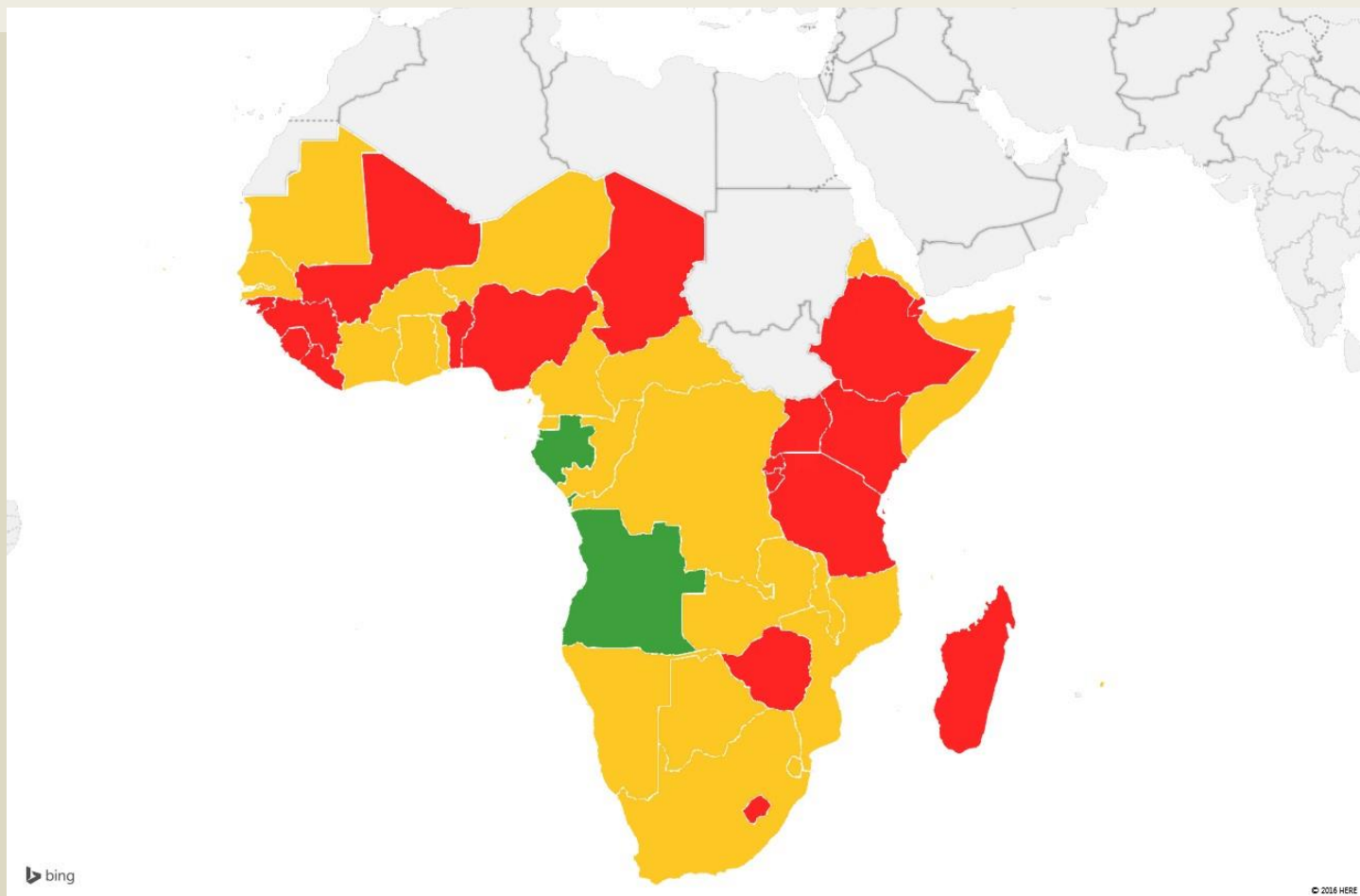


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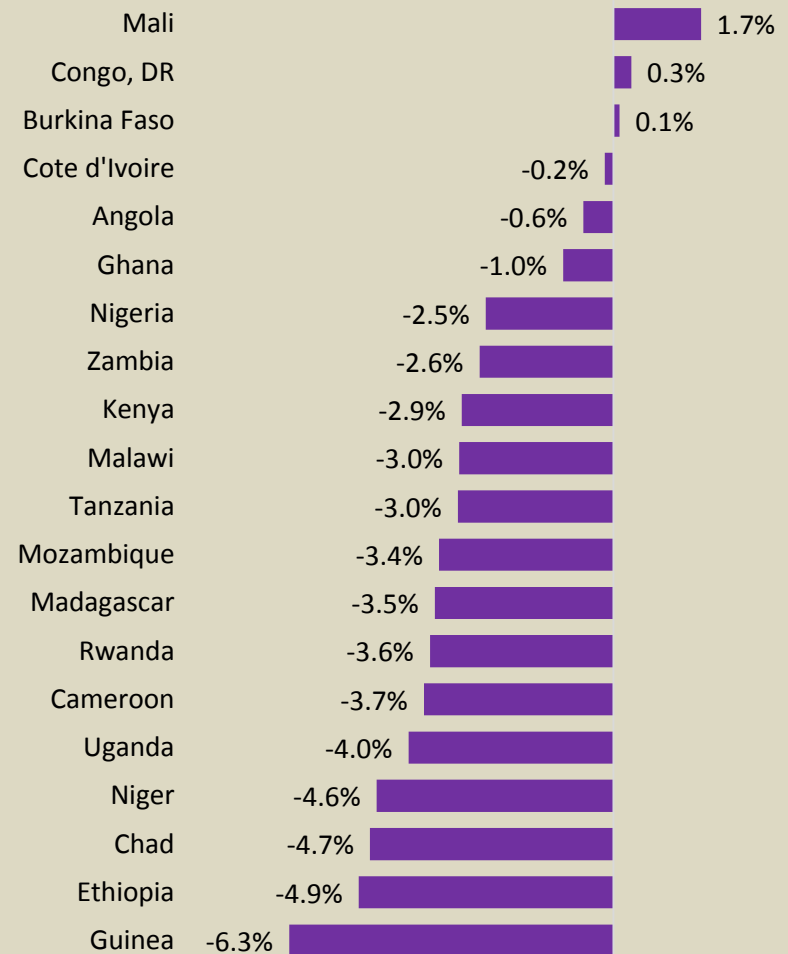
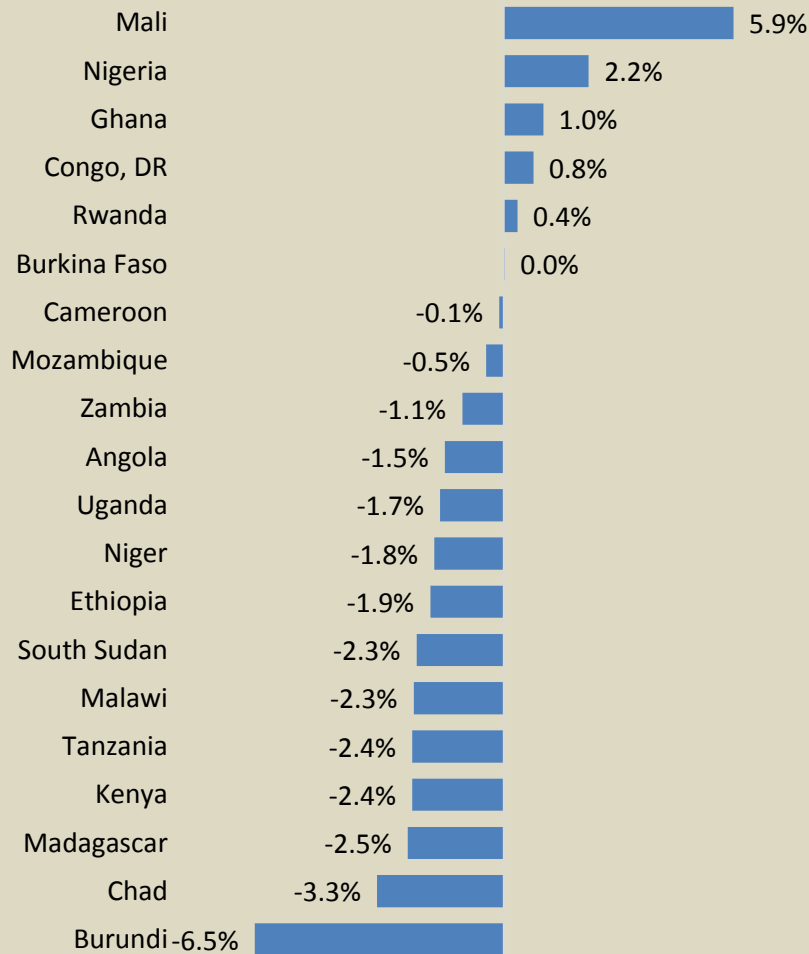


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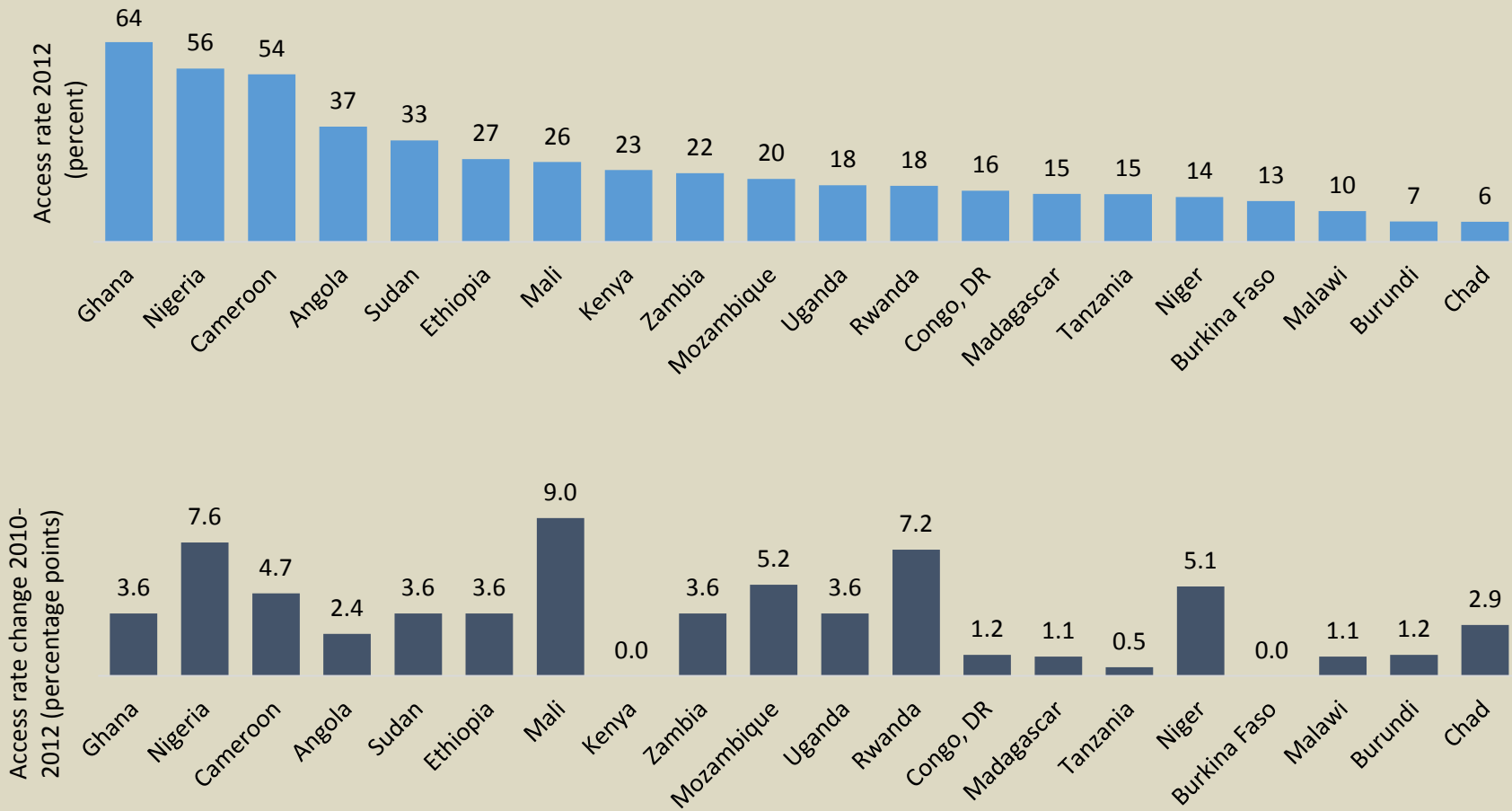
Despite strong efforts only a handful of countries are accelerating energy access faster than population



Access to electricity net growth rate, 2010-2012

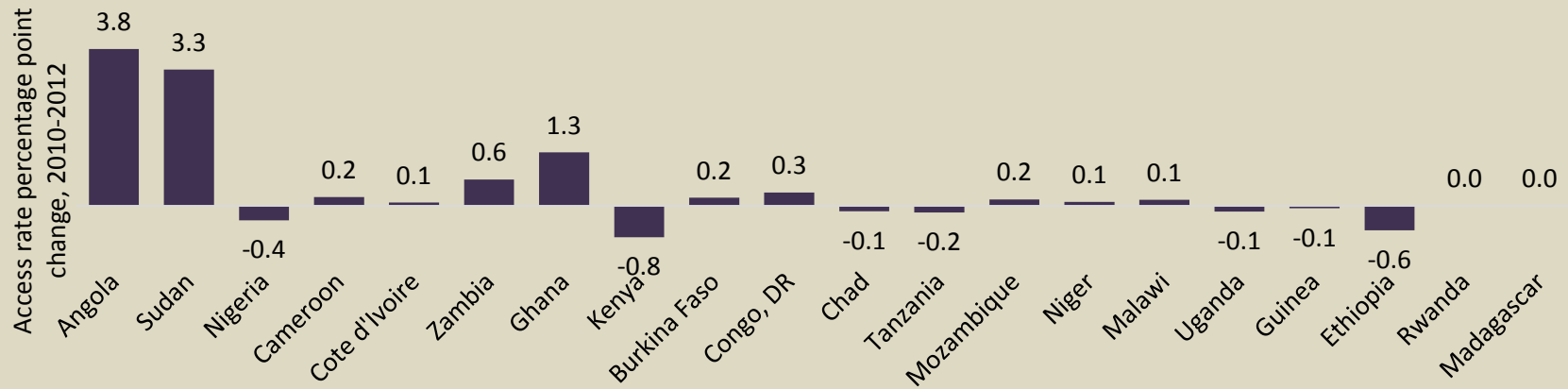
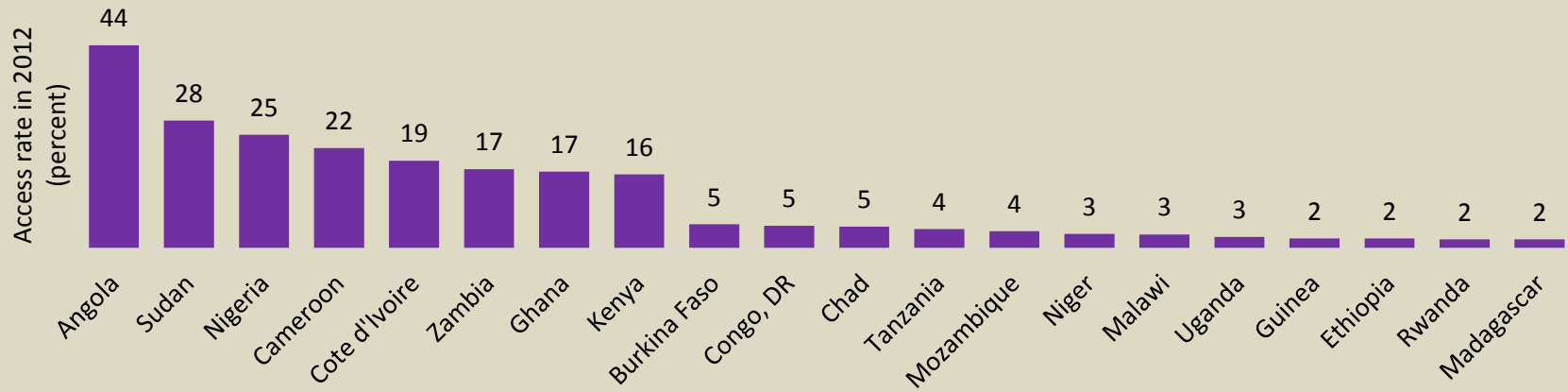
Access to non-solid fuels net growth rate, 2010-2012

Among top 20 electricity access deficit countries, show slow expansion in countries with lowest electrification



Electricity access rate in 2012 (top)
and access rate percentage point change, 2010-2012 (bottom)

Among top 20 non-solid fuel access deficit countries, fastest expansion among those with highest access



**Non-solid fuel access rate in 2012 (top)
and access rate percentage point change, 2010-2012 (bottom)**



Measuring energy access: the multi-tiers



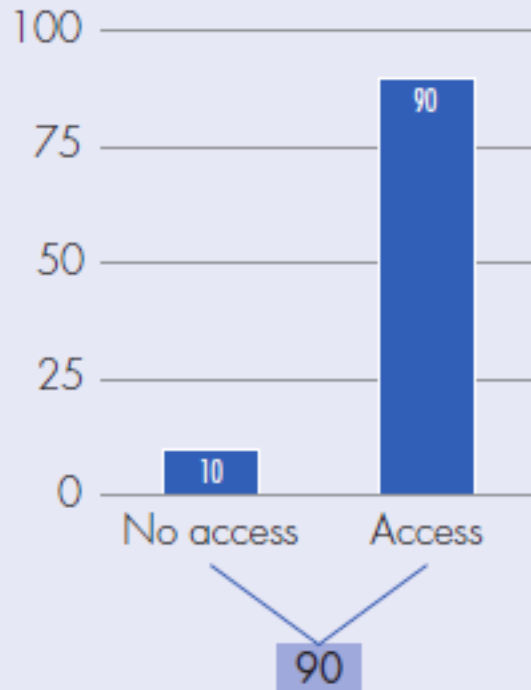
Improving attributes of energy supply leads to higher tiers of access.

Kinshasa pilot shows multi-tier framework gives a much more nuanced picture of energy access

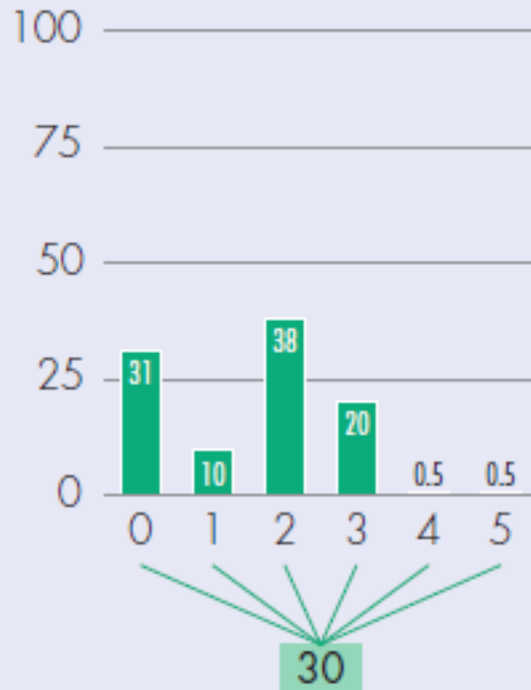
Binary or multitier measurement of access to electricity in Kinshasa

%

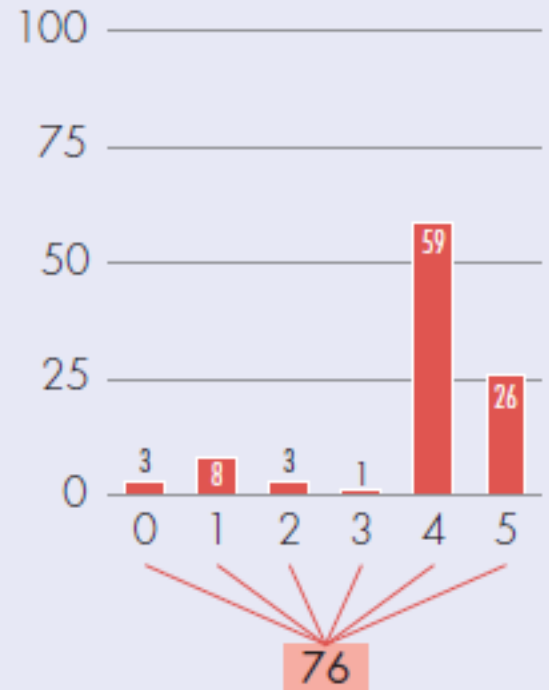
Binary metric of electricity access



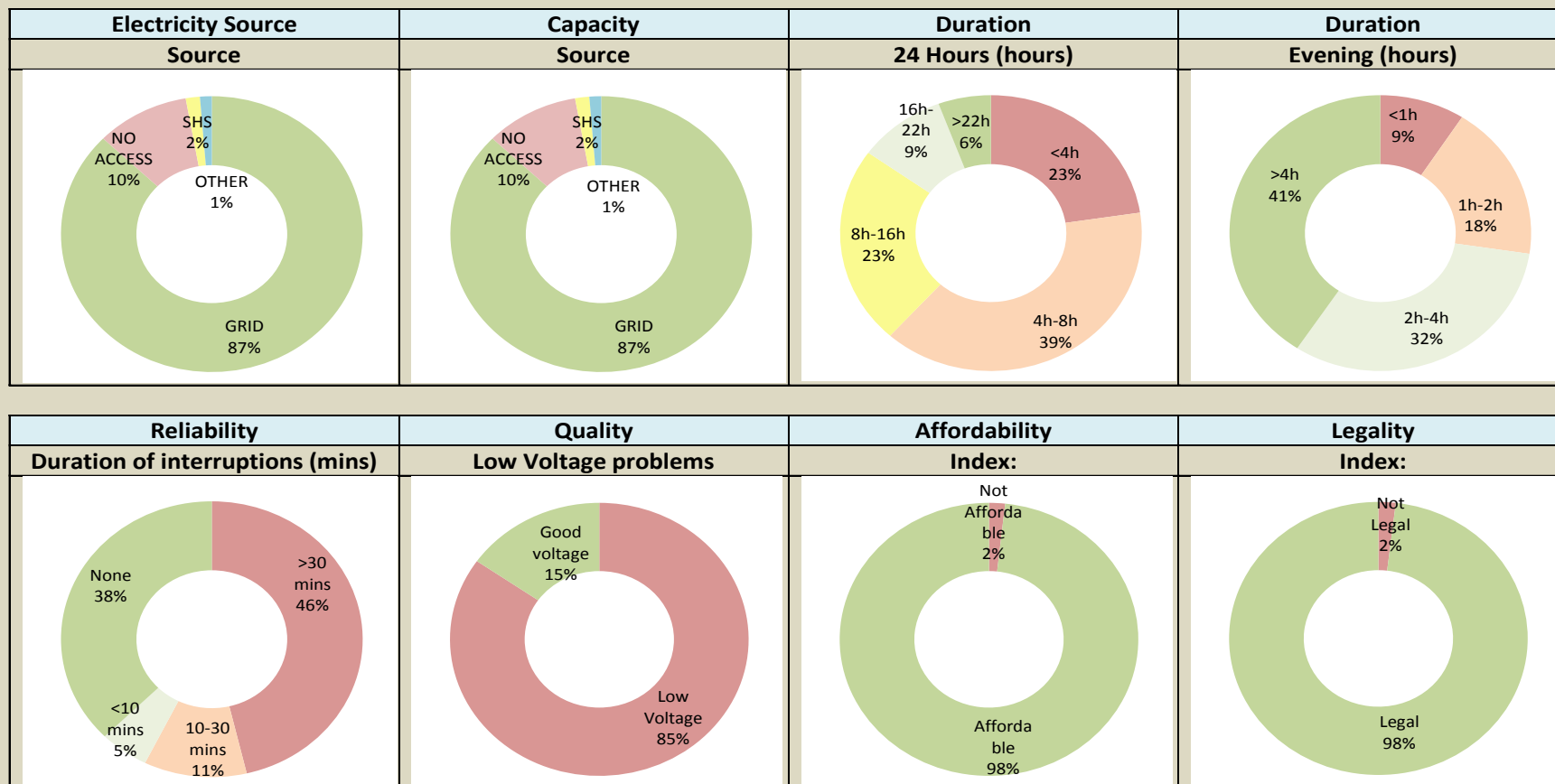
Multitier index of electricity access



Multitier index of access to appliances



Conventional measures of energy access fail to capture many important dimensions of service quality



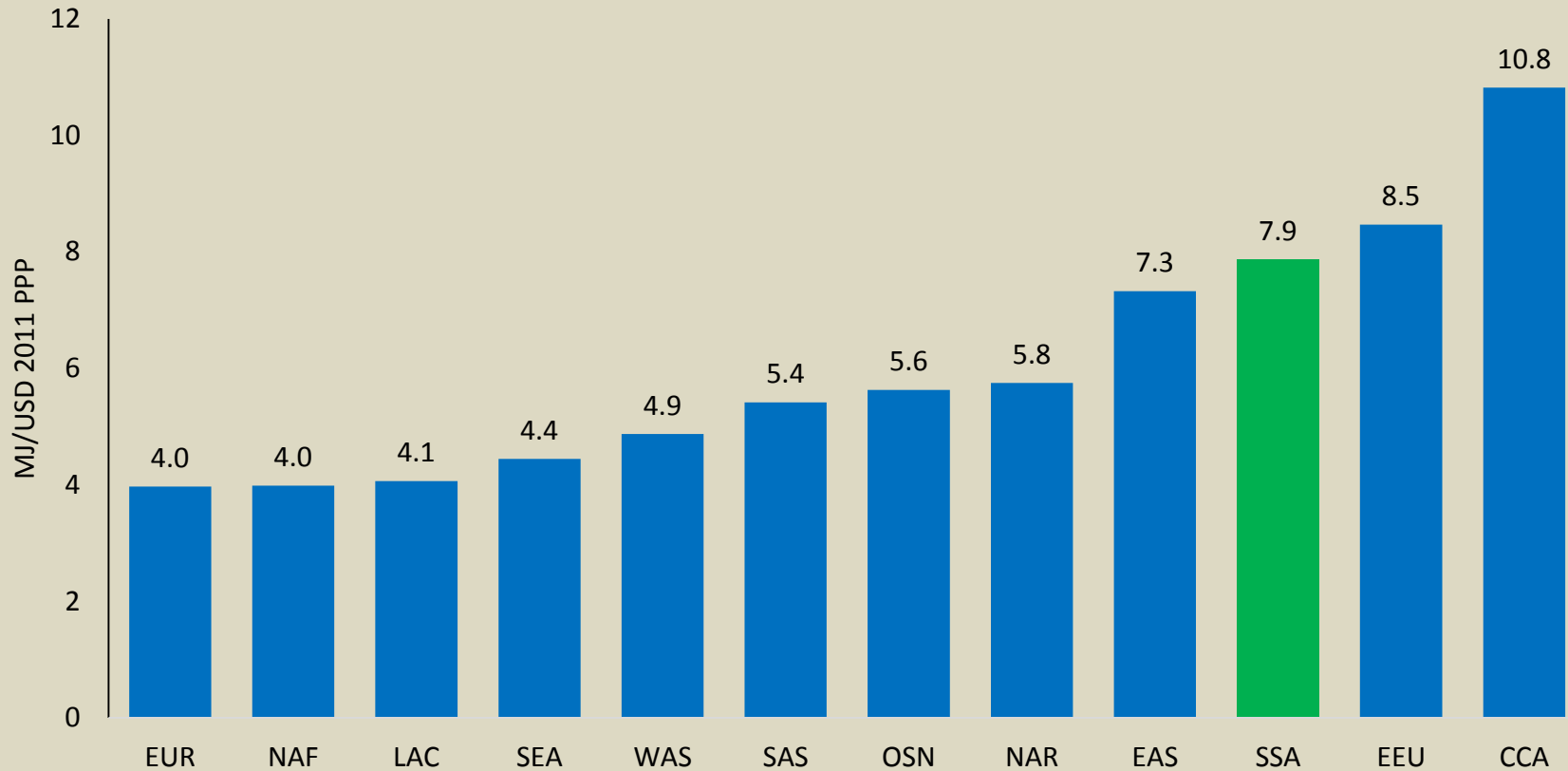
Less than 8 hours per day for 62% of the household

Unscheduled interruptions are longer than 30 minutes for more than 57% of the household

Almost 85% of the household experienced low voltage

African economies are surprisingly energy intensive, some progress driven mainly by transport and by South Africa

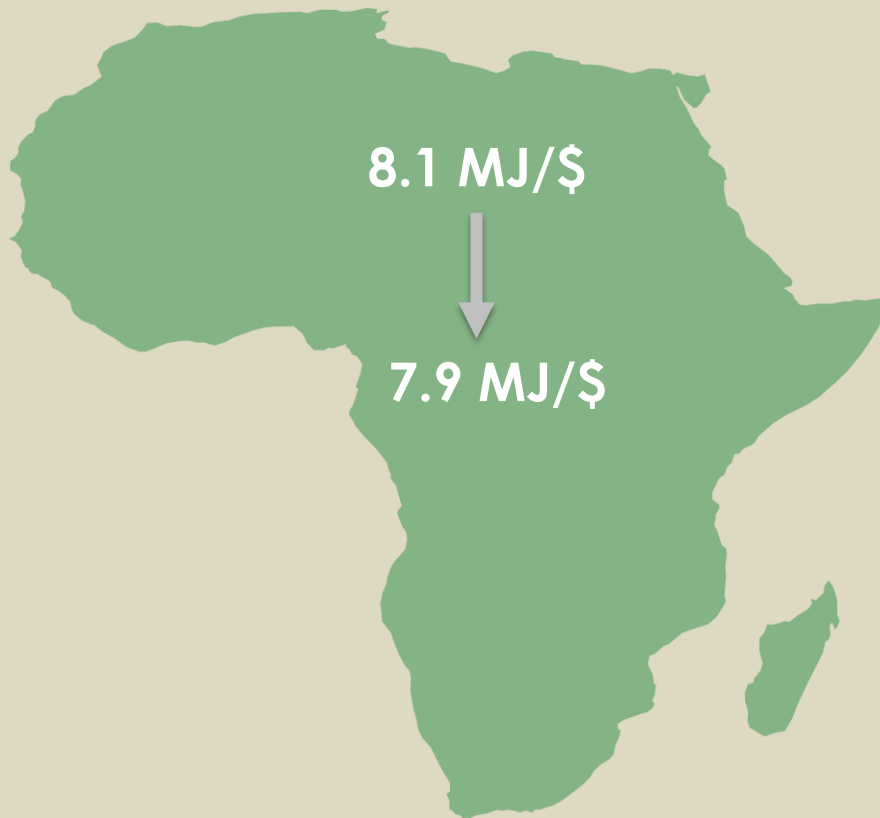
Africa shows high levels of energy intensity, compared to most other regions



Energy intensity by region, 2012

Africa most energy intensive continent after Eastern Europe and CIS, but making meaningful improvements

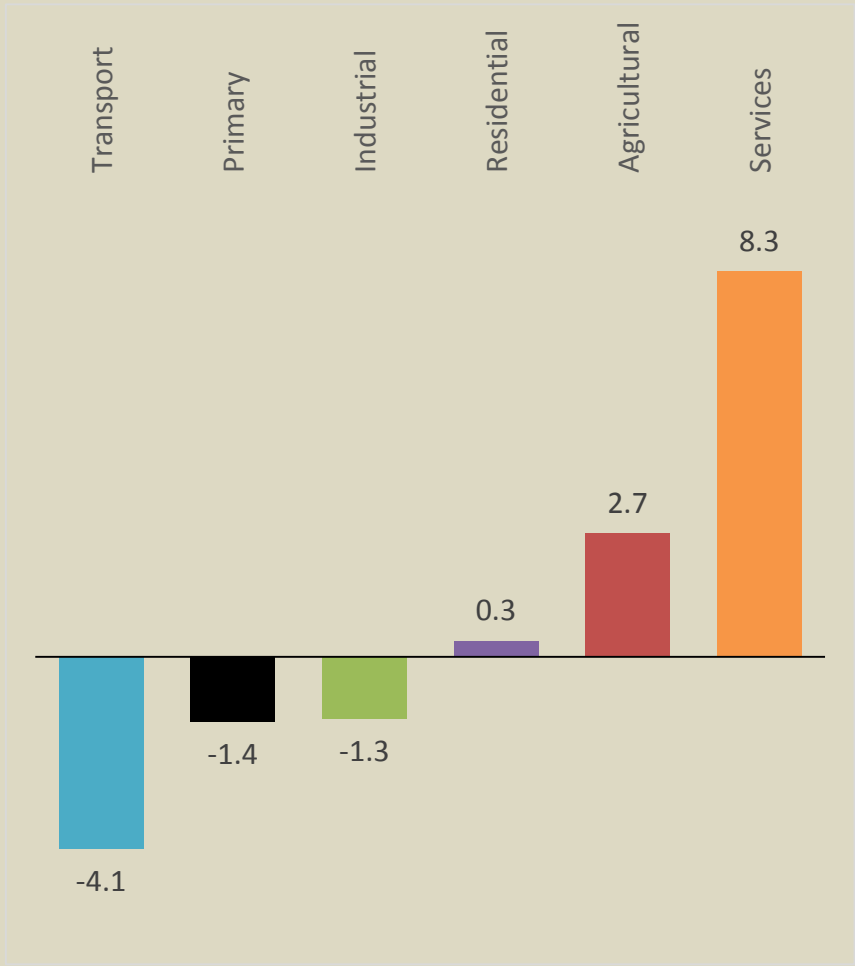
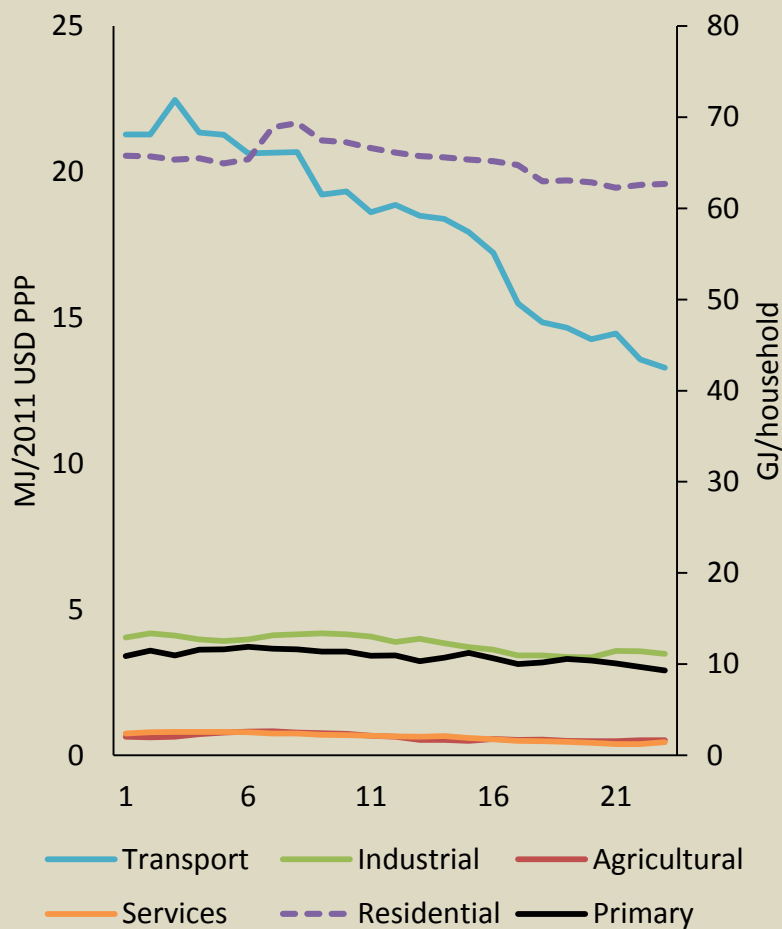
Primary Energy intensity reduction
2010-2012



Energy savings
2010-2012



Africa's energy intensity is decreasing at -1.4% per year, driven entirely by improvements in transport and industry






Energy intensity, 1990-2012

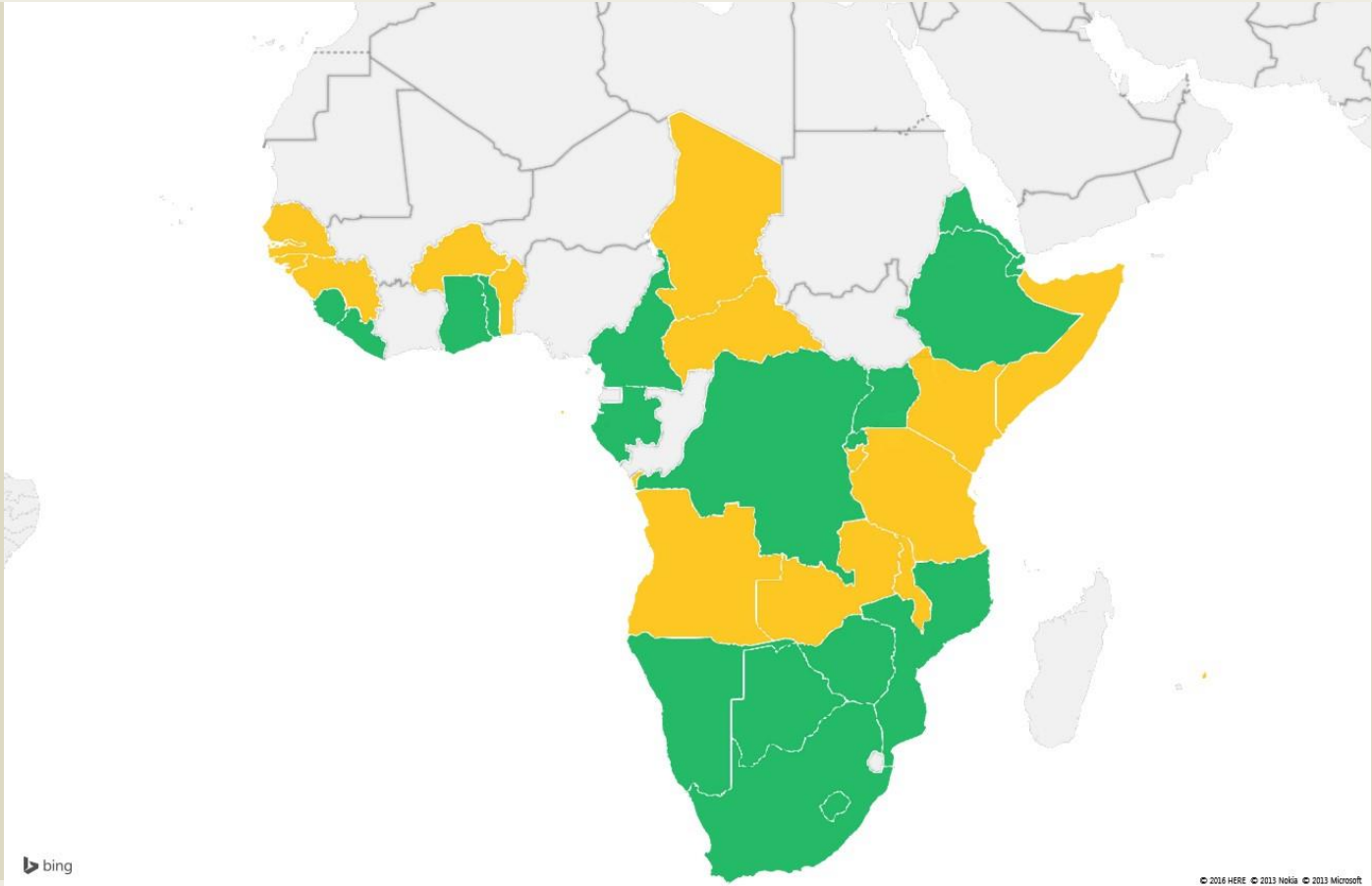
CAGR of energy intensity, 2010-2012


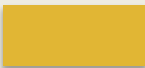

One third of countries making rapid progress on efficiency



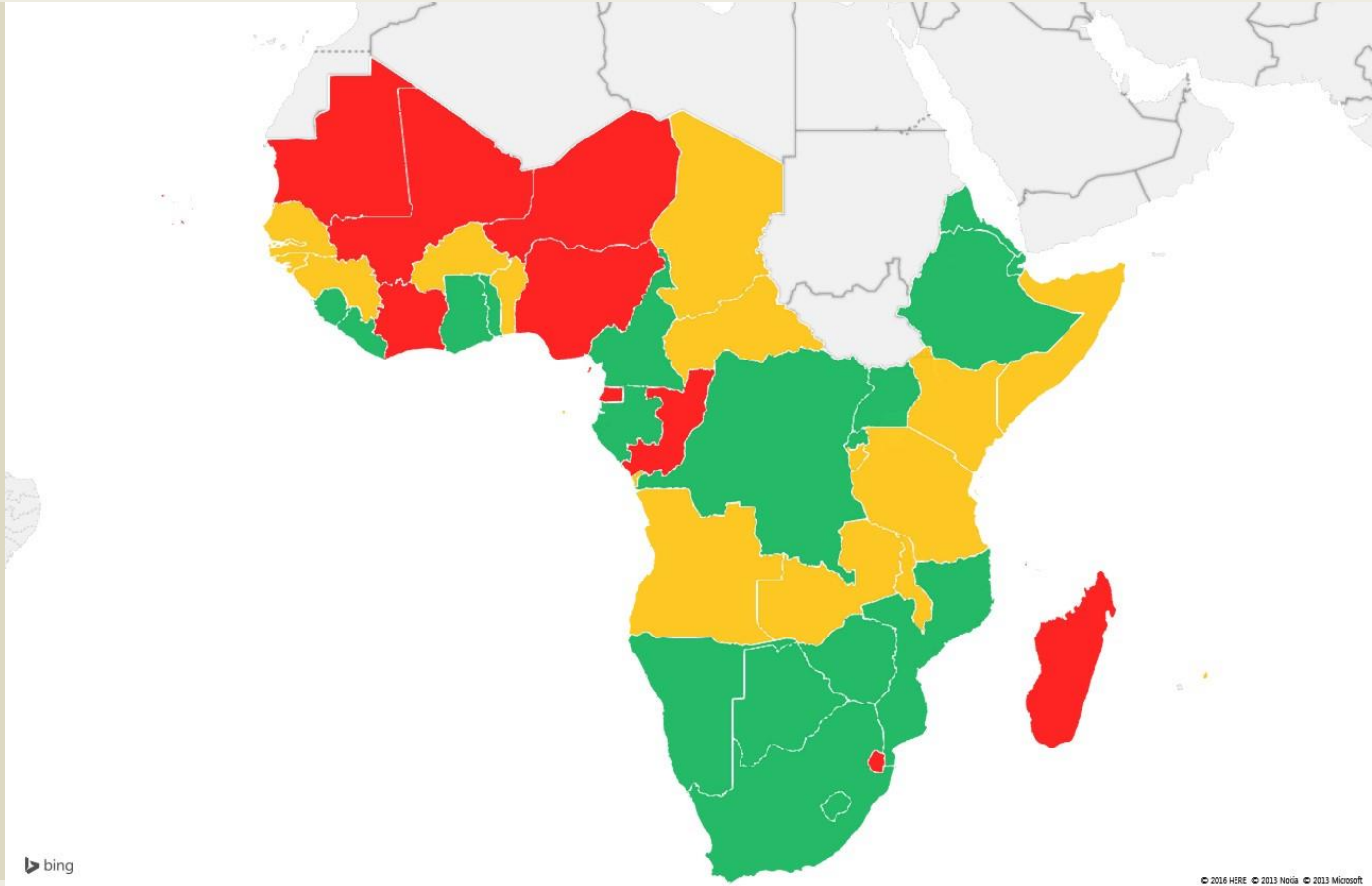
-  Compound annual growth rate of energy intensity did not improve between 2010-2012
-  Compound annual growth rate of energy intensity improved by less than 2.6% per annum in 2010-2012
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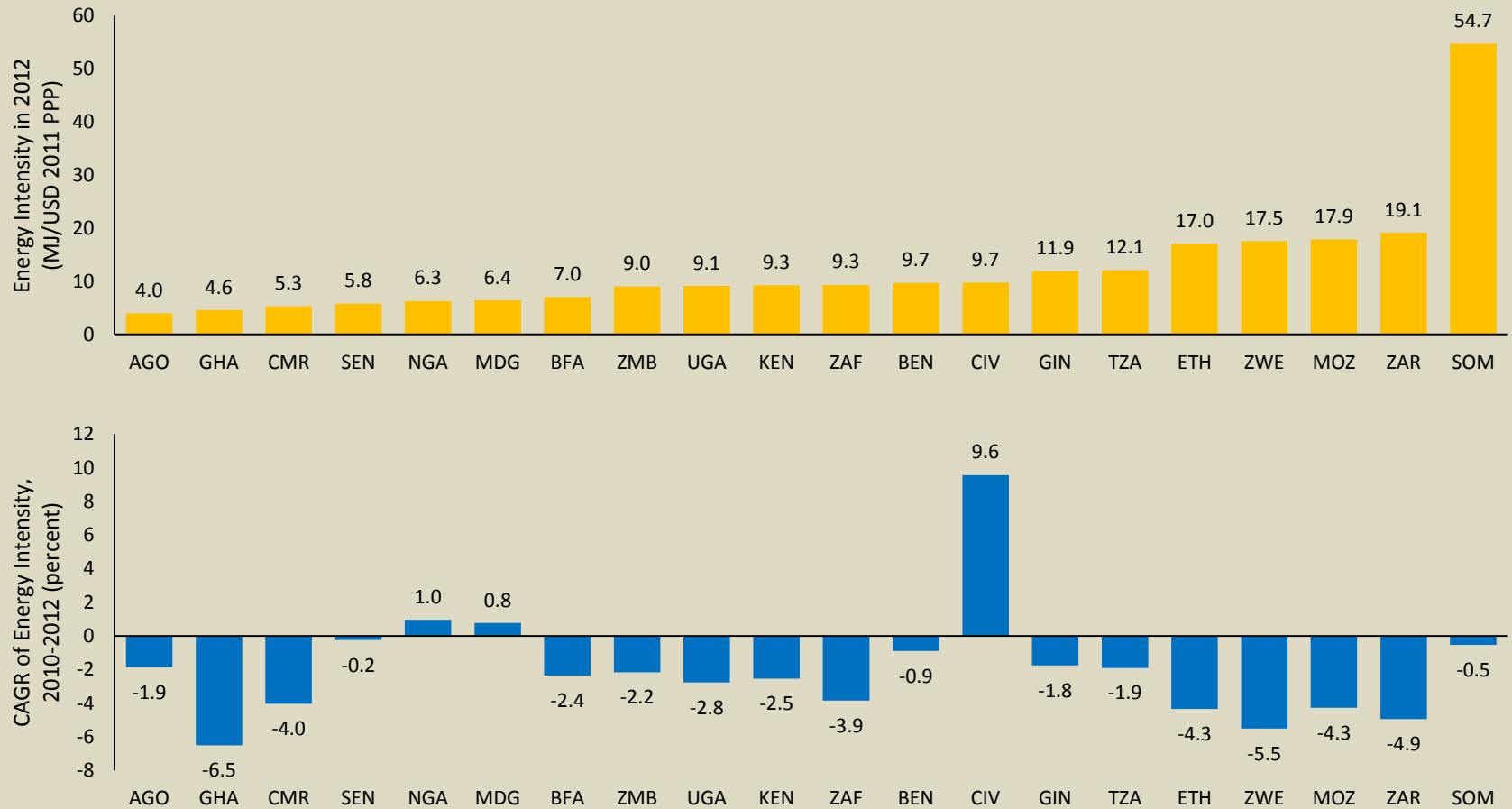
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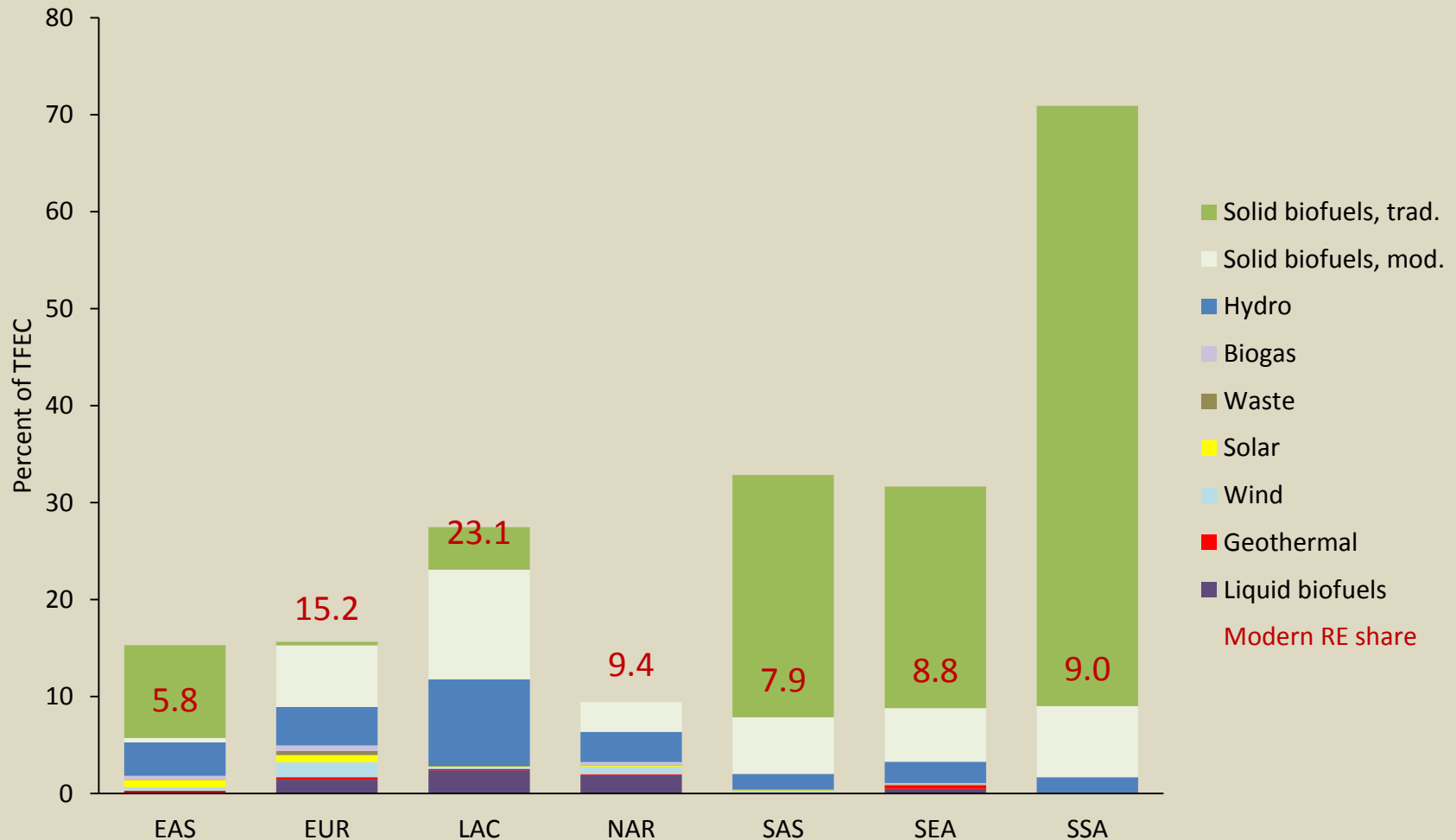
Among 20 top energy consumers, 8 exceeded SE4ALL energy intensity change target of -2.6% per year



Top 20 energy users primary energy intensity in 2012 (top)
and energy intensity CAGR 2010-2012 (bottom)

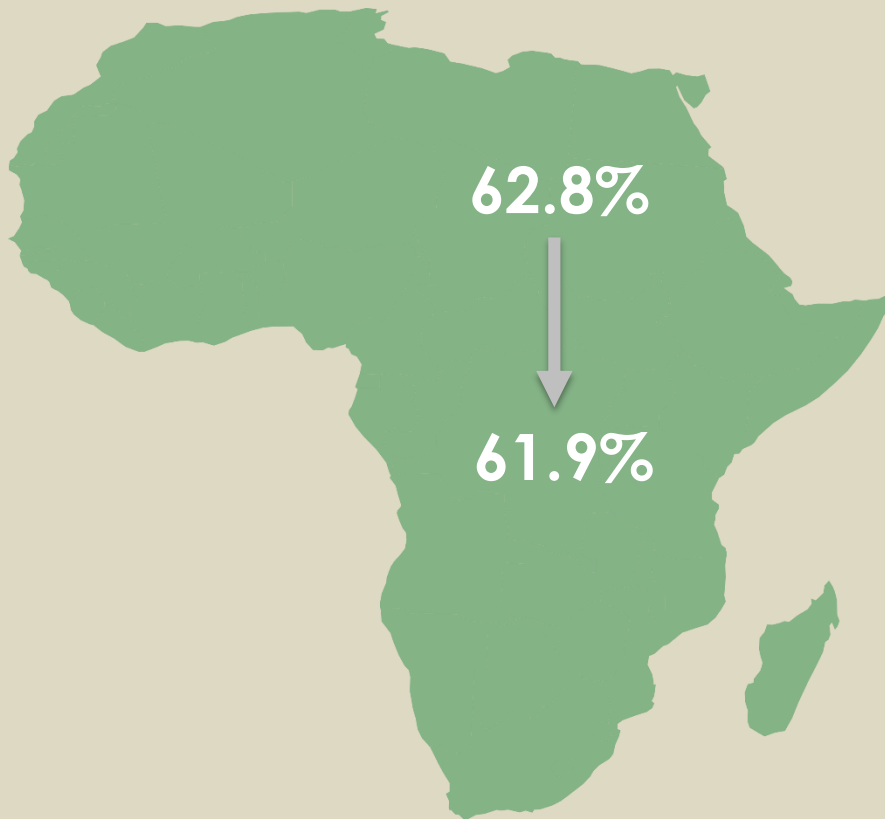
Africa is the world's most renewable continent, thanks mainly to biomass and hydro, in midst of structural shift from traditional to modern sources

Africa's energy consumption is 70% renewables, and 9% modern renewables comparing favorably with Asia



Traditional biomass consumption decreased 0.46 EJ 2010-2012, equivalent to Angola's annual energy consumption

Traditional RE share decrease
2010-2012

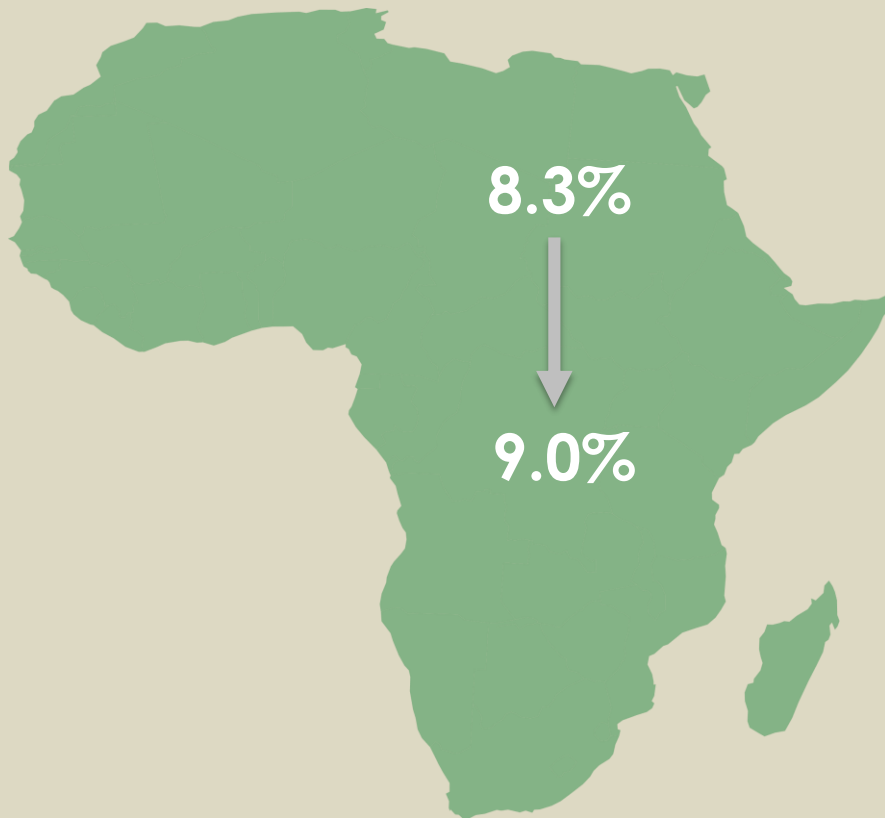


Annual traditional RE consumption
decrease, 2010-2012

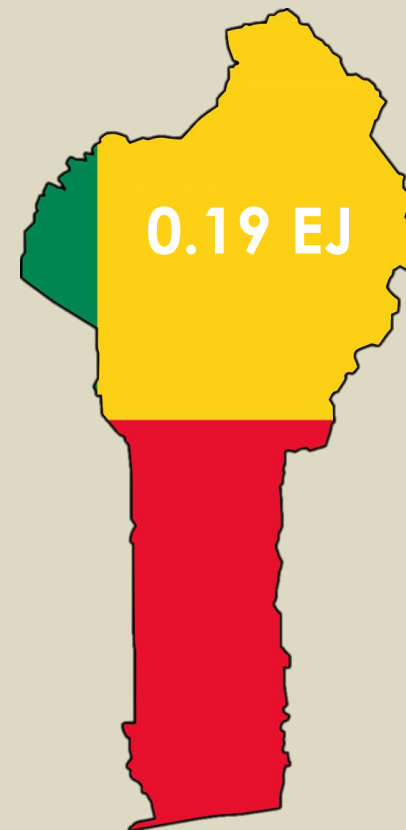


Modern renewable energy consumption increased 0.19 EJ 2010-2012, more than Benin's annual consumption

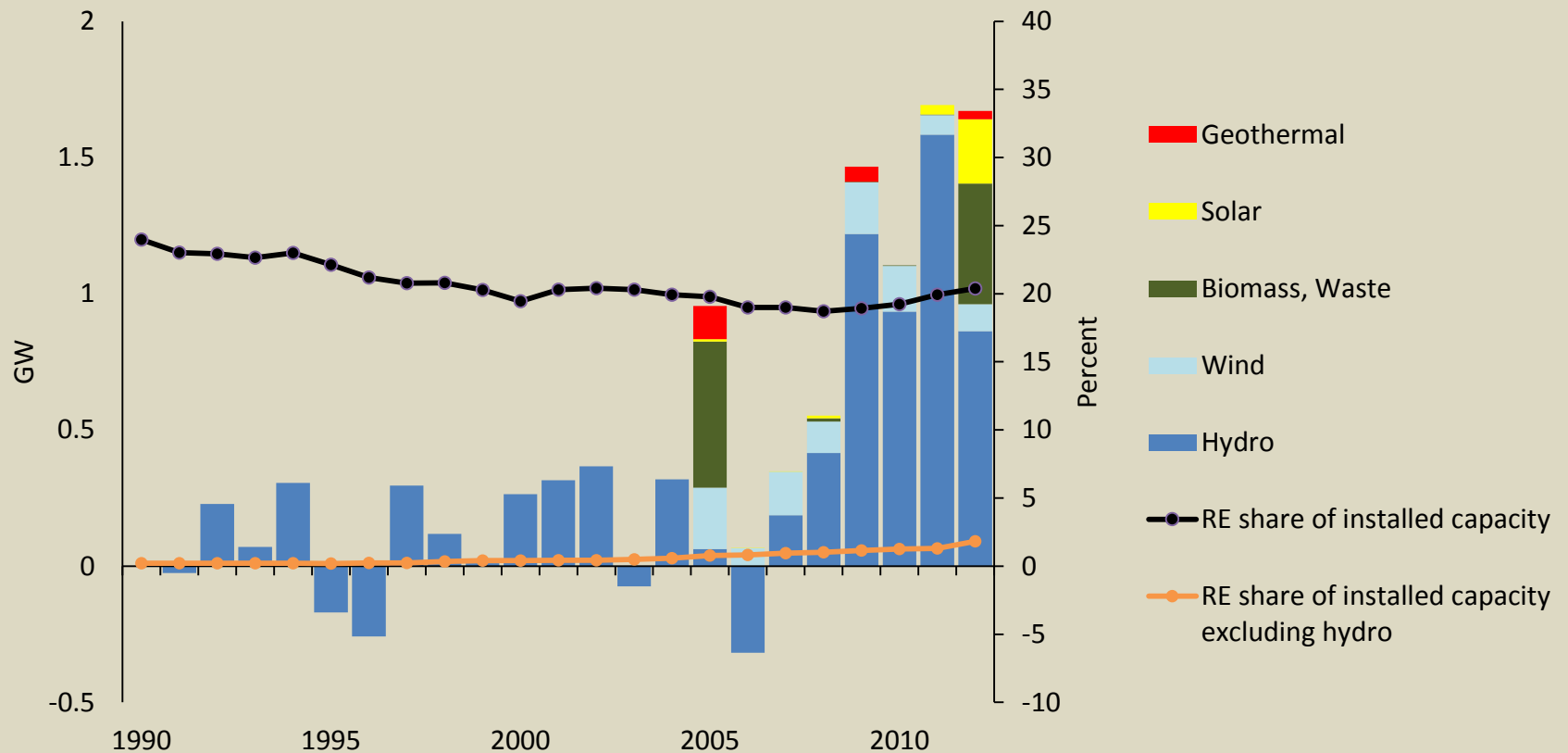
Modern RE share increase
2010-2012



Annual modern RE consumption
increase, 2010-2012

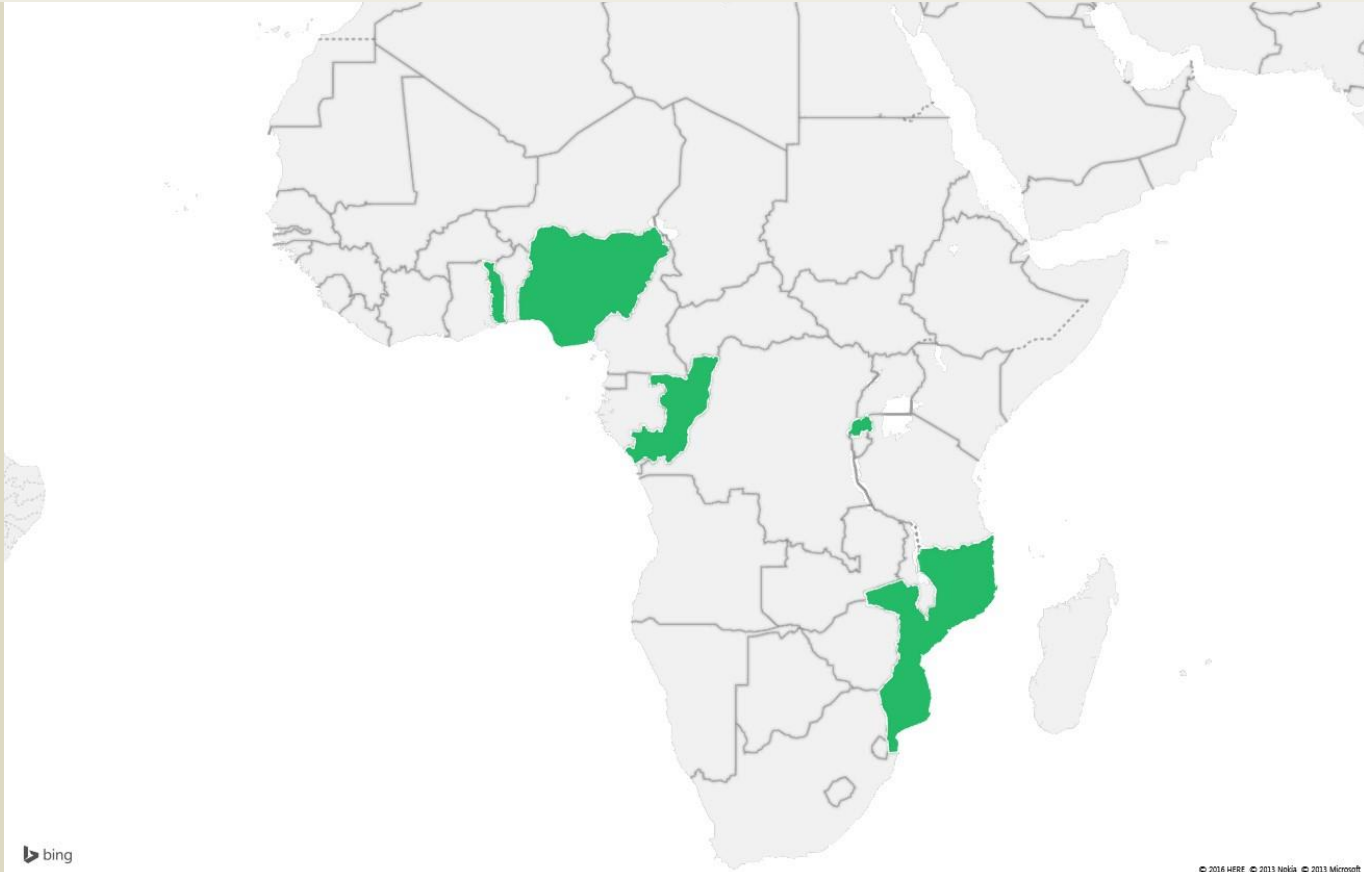


Modern renewable energy, mainly hydro-power, provide 20% of Africa's electricity



Renewable capacity change (left) and renewables share of capacity (right), 1990-2012

Few countries rapidly increasing modern renewable share



Share of modern renewable energy in total final energy consumption did not improve between 2010-2012

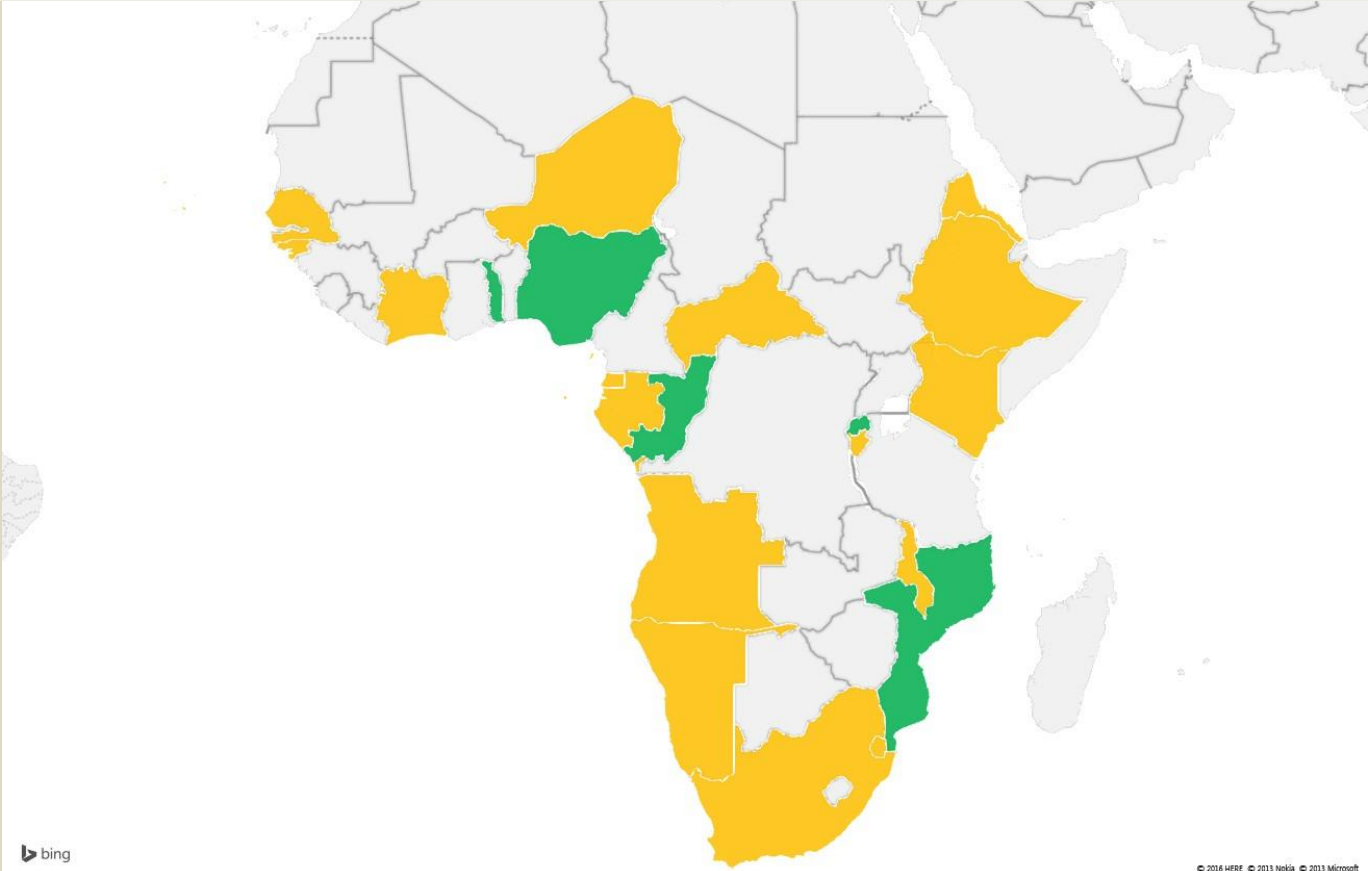


Share of modern renewable energy in total final energy consumption improved by less than 1 percentage point 2010-2012



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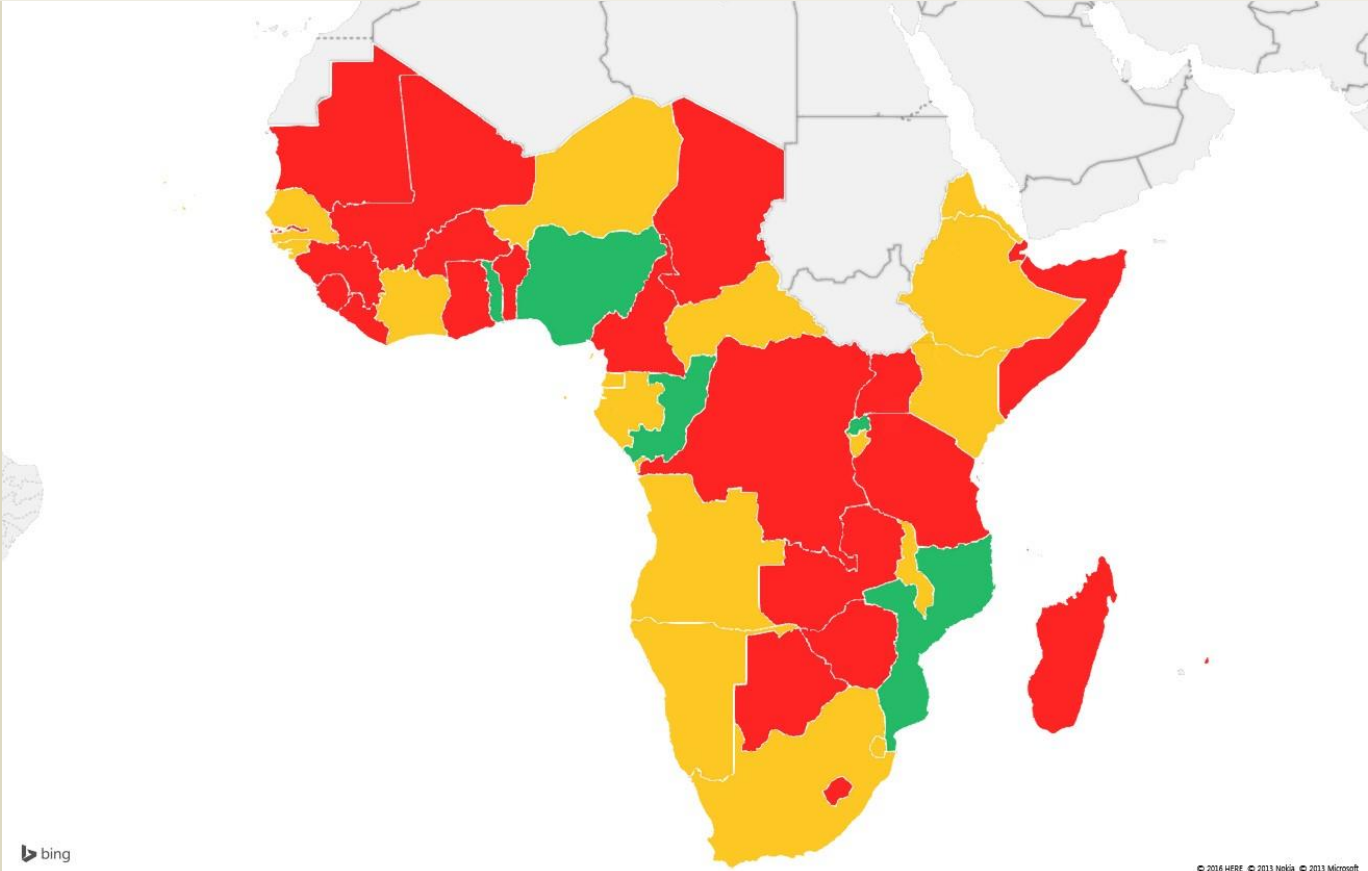


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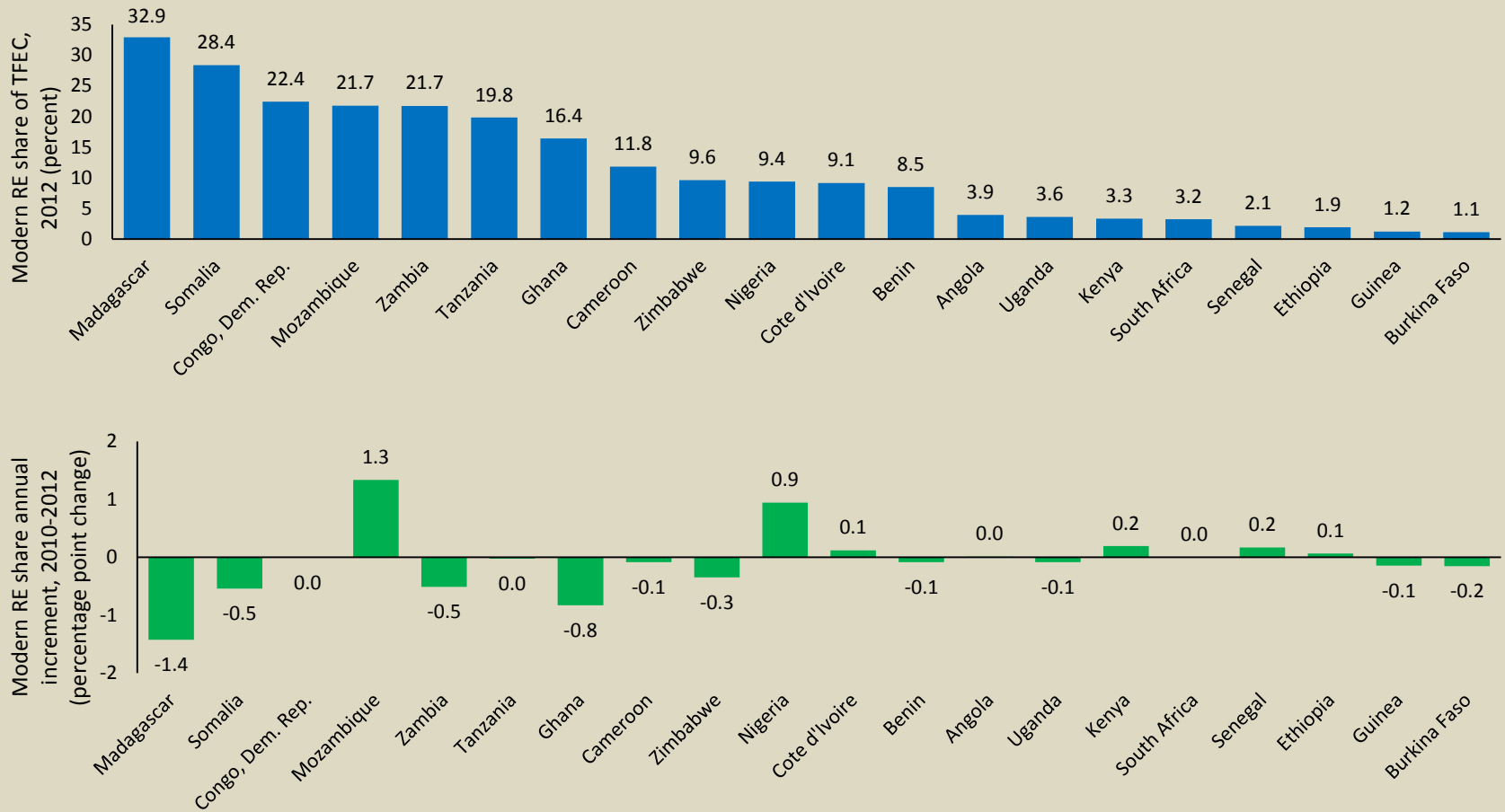


Share of modern renewable energy in total final energy consumption improved by less than 1 percentage point 2010-2012



Share of modern renewable energy in total final energy consumption improved by at least 1 percentage point 2010-2012

Among top 20 energy consumers, 8 expanded their renewable energy share between 2010-2012



**Top 20 energy consumers modern renewable energy share in 2012 (top)
and modern renewable energy share annual percentage point change, 2010-2012**

Annual investment needs
range from \$49-85 billion

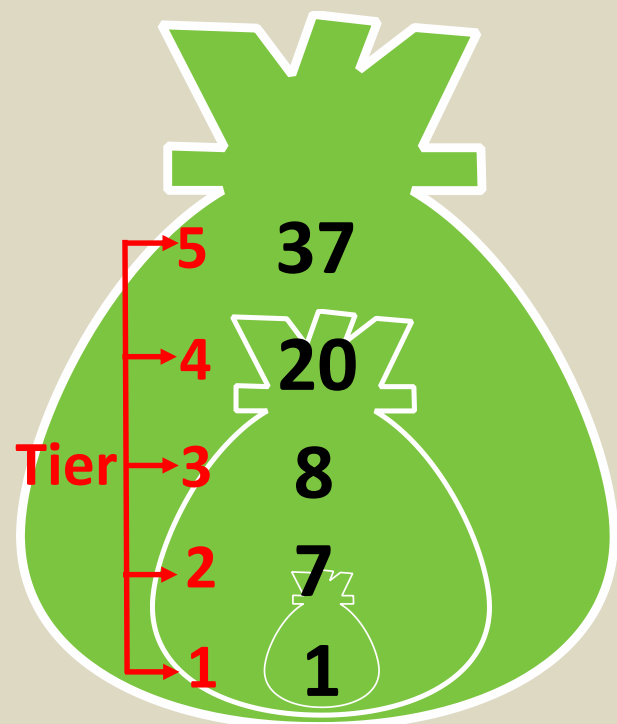
Annual investment needs very much depend on the level of ambition for energy access

Electricity access

Energy efficiency

Renewable energy

\$Billion/year



Providing at minimum universal Tier I/III/V electricity access to Sub-Saharan Africa's population

Significantly reducing energy intensity in Africa

Doubling Africa's share of RE in TFEC

Source: results from AIM model

Source: WEO 450

Source: IRENA REmap

For more information on the report,
please go to:

trackingenergy4all.worldbank.org

[#endenergypover](https://twitter.com/endenergypover)