Access to electricity in sub-Saharan Africa

Access results

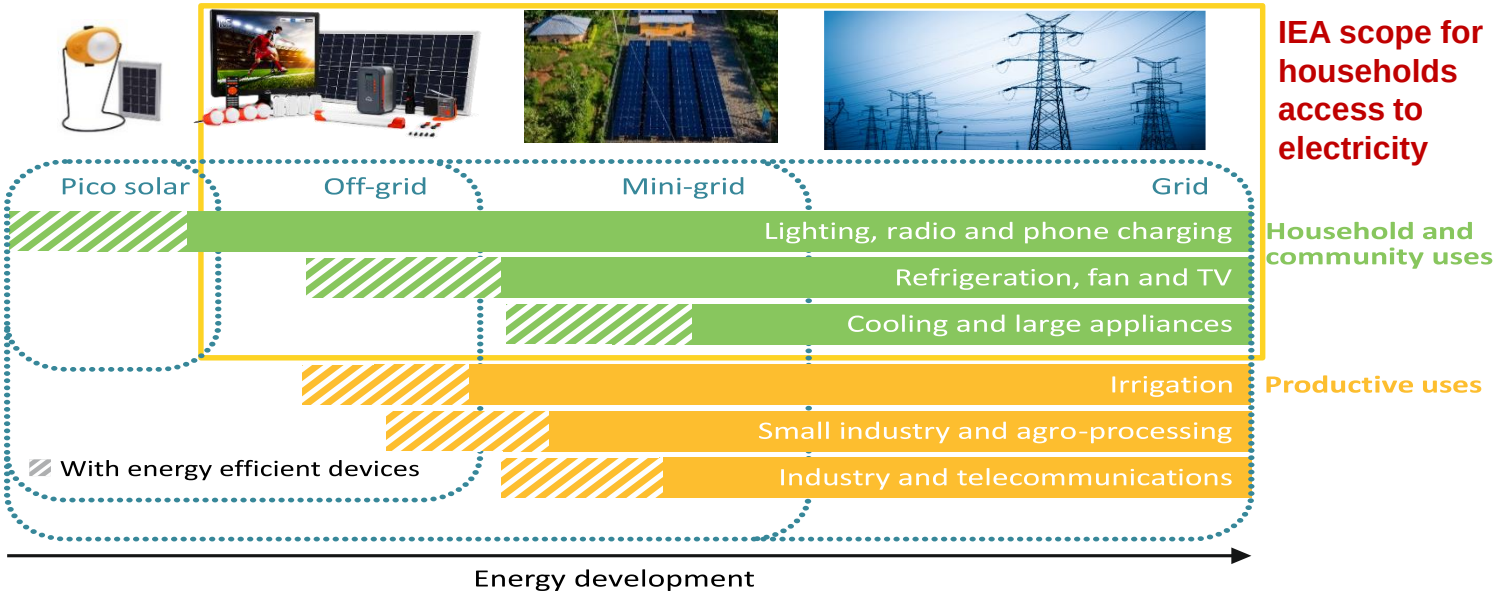
International Energy Agency

What is access to modern energy

- https://www.iea.org/articles/defining-energy-access-2020-methodology
- https://sdgs.un.org/goals/goal7

How to define access? No single internationally-adopted definition

- Different technological solutions and and several uses



- IEA definition : Electricity access entails a **household** having **initial access to sufficient electricity to power a basic bundle of energy services** – at a minimum, several lightbulbs, phone charging, a radio and potentially a fan or television – with the **level of service capable of growing over time**.

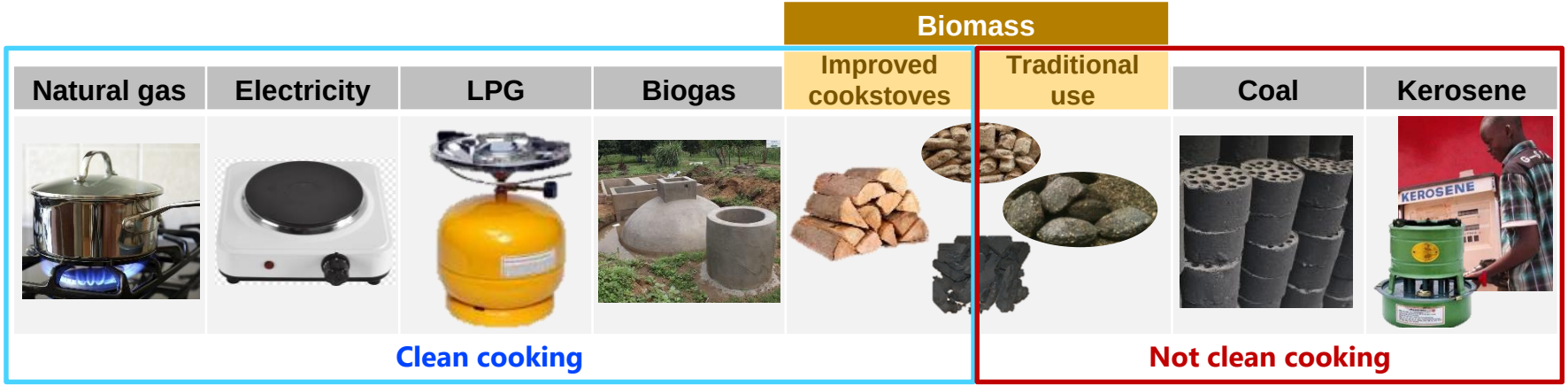
Defining clean cooking access

- Solid biofuels in developing countries are mainly used for cooking, a topic covered under the SDGs

SUSTAINABLE DEVELOPMENT GOAL 7

Ensure access to affordable, reliable, sustainable and modern energy for all

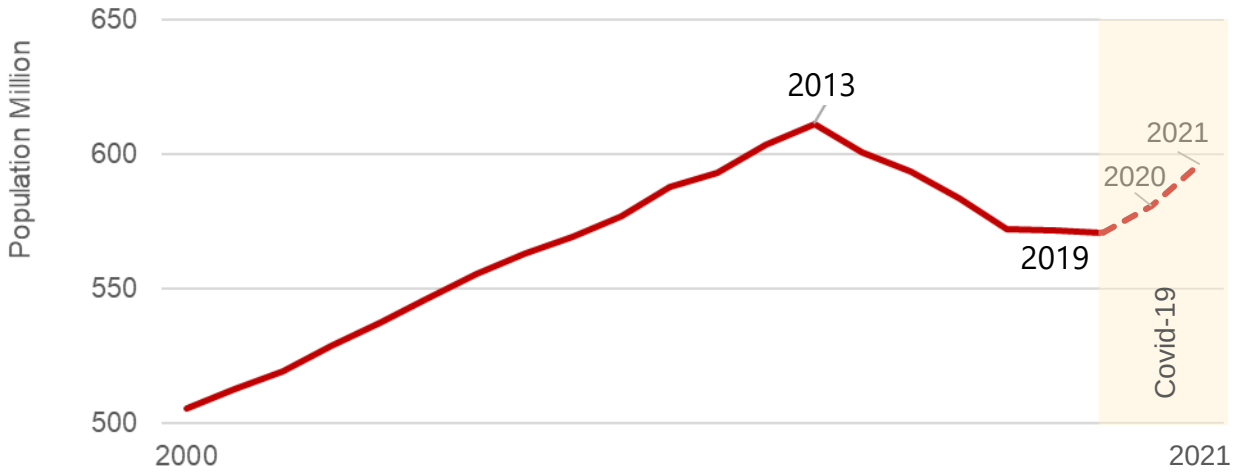
  - Target 7.1: Ensure universal access to affordable, reliable and modern energy services
  - Indicator 7.1.2: Proportion of population with primary reliance on **clean fuels and technology**



- Definition: access to clean cooking facilities means access to (and primary use of) modern fuels and technologies

Sub-Saharan Africa access historical trends

People without access to electricity in sub-Saharan Africa



The number of people without access peaked in 2013.

And kept declining till… 2019

The pandemic has:

1) **Slowed down new connections**
2) **Reduced household income**
3) **Increased energy prices**

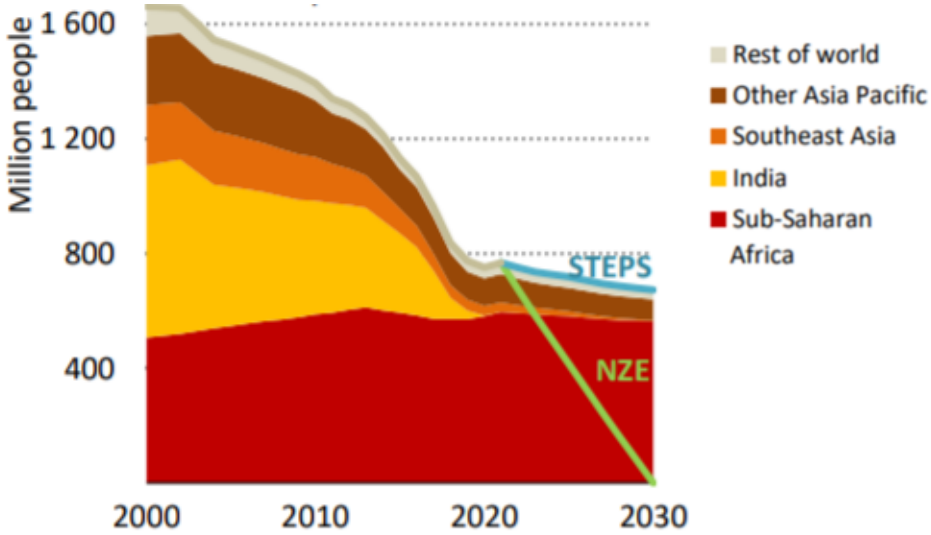
The Russia-Ukraine war is worsening the whole situation

Source: IEA WEO 2021

Today 4 out of 5 people without access is in sub-Saharan Africa

Global access Trends and projections

Population without access to electricity in STEPS and SDS/NZE



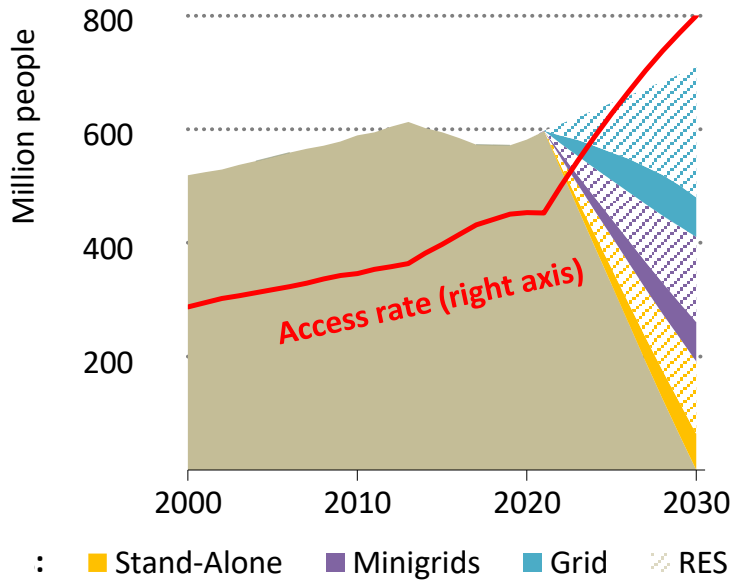
To achieve access goals progresses needs to accelerate at a very fast pace

Source: IEA WEO 2021

If no additional efforts in policies and investments are deployed, by **2030** more than **650 million** will still be **lacking basic electricity** access, most of them in sub-Saharan Africa.

Africa is far from achieving universal electricity access

Population without access and gaining access by technology in the SDS in Africa



Source: IEA WEO 2021

To achieve access goals progresses needs to accelerate at a very fast pace

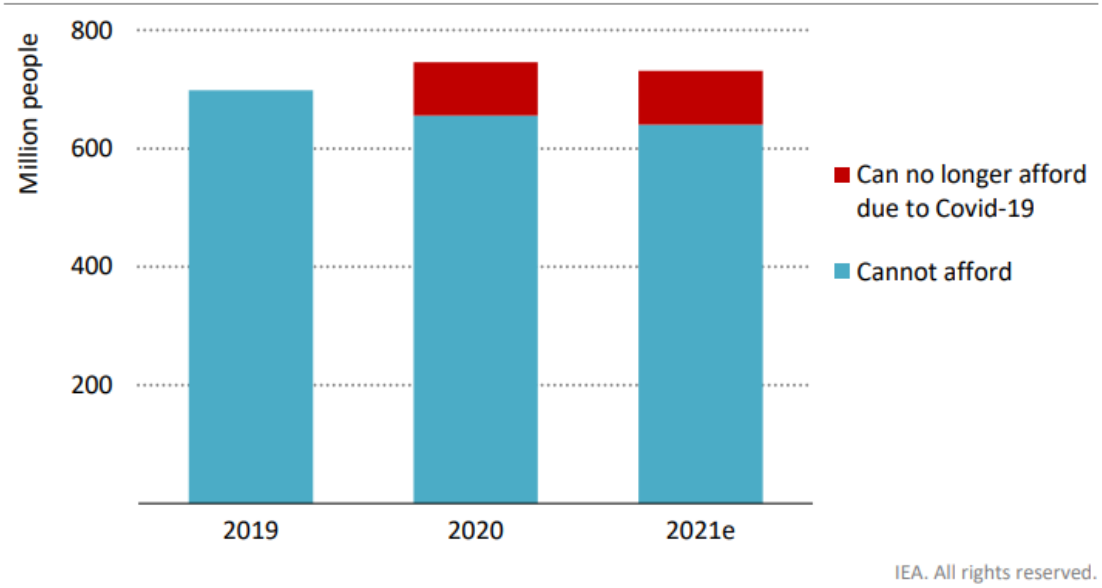
Multiple solutions must be deployed.

Grids will reach most people by 2050
Off-grid systems play a key role in the short and mid term and are integrated in some cases to the grid

Access rates must increase at unprecedented pace from a low of 45% today in SSA.
Grids provide access to around 45% of people gaining access, Mini-grids and stand alone system covering the Gap.

Why is it so difficult to make improvements: Affordability

Population with an electricity connection unable to afford an extended bundle of services in Africa and developing Asia



Source: IEA WEO 2021

+40% of sub-Saharan Africans live in extreme poverty

Basic energy services cost more than 10% the income of this family in most cases/countries

This is the key:
People cannot pay for electricity
So Electrification is not profitable

Electrification shall go beyond a connection and provide people the tools to also increase their revenues.
#Productive uses
#Simultaneous Infrastructure development
#Access to finance
#Demand stimulation (e.g. incentivise efficient appliances)

Even before the pandemic, 700 million people could not afford an extended bundle of electricity services; Covid-19 increased this number by 90 million

Conclusions

- Modern **energy services** is **a right** of every human;
  - And yet almost **half of people in SSA are in the dark**.

- The **pandemic** and now the Russian war **slowed down** and **reversed progress** in some countries;
  - Stronger actions, policies and investments are now needed.

- **Multiple solutions shall be considered**;
  - Grids alone cannot solve the problem.
  - Off-grid solutions like mini-grids and solar home systems are key.

- Access shall finally aim at improving household income - affordability
  - To ensure in the mid-term selling electricity is a sustainable business.

- **Upcoming:** The IEA will release **this month the Africa Energy Outlook 2022**
  - with a lot of content on access but also on the power sector and all the other energy supply and demand trends, projections and best practices.
  - Stay tuned.

Thanks

Gianluca.Tonolo@iea.org