International Energy Agency

# *WORLD ENERGY OUTLOOK 2014* FACTSHEET

## *Sub-Saharan Africa - key projections to 2040*

- **The sub-Saharan energy system expands rapidly to 2040, but so do the demands placed upon it.** The economy quadruples in size, the population nearly doubles (to 1.75 billion) and energy demand grows by around 80% in the New Policies Scenario. The capacity and efficiency of the system improves, and access to modern energy services grows; but many of the existing energy challenges are only partly overcome.
- **The sub-Saharan power system expands rapidly, with generation capacity quadrupling to 385 GW.** Almost half of the growth in electricity generation to 2040 comes from renewables. Total power sector investment averages around $46 billion per year, with just over half of it in transmission and distribution.
- **Over the period to 2040, 950 million people are projected to gain access to electricity in sub-Saharan Africa.** Urban areas experience the largest improvement in the coverage and reliability of centralised electricity supply. Elsewhere, mini-grid and off-grid systems provide electricity to 70% of those gaining access in rural areas. Cumulative investment of more than $200 billion lowers the total without access by 15%: a major step forward, but not far enough, as it still leaves 530 million people in the region, primarily in rural communities, without electricity in 2040.
- **Bioenergy use outweighs demand for all other forms of energy combined, a picture that changes only gradually even as incomes rise.** However, the share of bioenergy in the energy mix declines from above 60% today to below half in 2040. Policy actions and wood scarcity accelerate the switch in some regions to alternative fuels and technologies, notably to LPG and to more efficient cookstoves. Nonetheless, 650 million people (more than one-third of the population), mainly in rural areas, still cook with biomass in an inefficient and hazardous way in 2040.
- **Nigeria is the richest resource centre of the oil sector, but regulatory uncertainty, militant activity and oil theft in the Niger Delta are deterring investment and production.** The value of the estimated 150 thousand barrels lost to oil theft each day – amounting to more than $5 billion per year – would be sufficient to fund universal access to electricity for all Nigerians by 2030.
- **A host of smaller producers (such as South Sudan, Niger, Ghana, Uganda and Kenya) see rising output; but, by the late 2020s, production in most countries – with the exception of Nigeria – is in decline.** Additions and upgrades to refining capacity mean that more of the region's crude supply is processed locally. With regional production falling back from above 6 million barrels per day (mb/d) in 2020 to 5.3 mb/d in 2040, but demand for oil products doubling to 4 mb/d – an upward trend amplified in some countries by subsidised prices – the result is to squeeze the region's net contribution to the global oil balance.
- **Gas production rises to 230 bcm in 2040, led by Nigeria and the expansion of output from Mozambique (60 bcm in 2040), and Angola and Tanzania (each 20 bcm).** East coast LNG export from Mozambique and Tanzania is helped by relative proximity to Asian markets. Alongside the benefits from an estimated $150 billion in fiscal revenue to 2040 – both of these countries are also determined to promote domestic gas markets, which will need to be built from a very low base.
- **Coal supply grows by 50% to reach 325 Mtce, still concentrated in South Africa but joined increasingly by Mozambique and others.** Coal is overtaken by oil as the second-largest fuel in the sub-Saharan energy mix. Development of new coal resources is hindered in many cases by their remoteness and the lack of suitable railway and port infrastructure. But coal's relatively low cost remains an asset in societies concerned about the affordability of electricity.
- **Sub-Saharan Africa makes only a small contribution to global energy-related $CO_2$ emissions, accounting for merely 3% of the total in 2040, but is on the front line when it comes to the potential impacts of a changing climate.** In particular, hydropower prospects can be affected by changing patterns of rainfall and run-off. The fuelwood and charcoal sectors operate largely outside the formal economy, meaning that policymakers have few levers to promote more sustainable forestry.