Energy and Development in Africa: insights from the World Energy Outlook

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The African energy context

- GDP is rising, but almost half of a fast-growing population lives in extreme poverty: energy is vital to the prospects for development
- Region accounts for 13% of global population, but only 4% of its energy demand: half of this is biomass causing severe health impact
- Poor electricity infrastructure is a key impediment to economic growth and development
- Large resource base, exploited only in part in the case of oil, gas & coal, largely untouched in renewables
- Domestic energy reforms gaining speed, but the continent attracts less than 1% of global energy investment
Around 600 million people do not have access to electricity in sub-Saharan Africa, but in 2014 the population without access declined for the first time.
Biomass remains central

Total primary energy demand in Africa

Reliance on fuelwood & charcoal remains high, even as incomes grow; 700 million people still cook with biomass in an inefficient & hazardous way in 2040
Installed power generation capacity by fuel in Africa

2014 capacity: 185 GW

- Coal: 23%
- Oil: 19%
- Gas: 39%
- Nuclear: 1%
- Hydro: 15%
- Solar: 1%
- Other renewables: 2%

2040 capacity: 563 GW

- Gas: 40%
- Coal: 14%
- Oil: 8%
- Hydro: 19%
- Nuclear: 1%
- Solar: 12%
- Other renewables: 6%

Power supply expands and diversifies: renewables, mainly solar and hydro, and natural gas drive the expansion
New technologies can help unlock access

Cost reductions for low-carbon technologies, 2030

Sources of generation for achieving universal access to electricity in Africa, 2040

Technology cost decline, increased digitalization and new business models can unlock greater energy access, with negligible impact on global emissions
In a reversal of current trends, 2 out of 3 future investment dollars produce energy for sub-Saharan consumers, but this is still not enough to meet their needs in full.
Conclusions

- Energy is at the heart of strategies for economic growth, job creation and poverty eradication
- Improvements in energy sector governance, regional co-operation, and capacity building key to bring in new energy investors
- A unique alignment of international political will, technology cost reductions and new business models can accelerate energy access
- Sub-Saharan Africa has the potential to leapfrog to a new development path fuelled by renewables and natural gas
- IEA to continue to focus on Africa, including WEO special focus on energy and development (October 2017)