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Power up: insurance-backed investment to fuel sustainable growth in Africa

Key takeaways

- Renewable energy sources are cost-competitive with fossil fuels.
- This will drive development of the renewable energy technologies (RETs) sector in Africa.
- Investment in RETs will help close the existing power gap and underpin sustainable economic growth on the continent.
- With a regulatory environment that encourages private-sector involvement, we estimate total investments in RETs in Africa of USD 180-400 billion up to 2030.
- The RET sector represents a USD 6-8 billion premium opportunity for insurers over the same time span, or USD 500-700 million per year.

About Economic Insights
Analysis of key economic developments and their implications for the global re/insurance industry.

Managing Editor
Jérôme Haegeli
Swiss Re Group Chief Economist

Author
Daniel Staib
Senior Economist

We welcome your feedback. For any comments or questions, please contact: institute@swissre.com

In a nutshell

Investments in renewable energy technologies will play a key role to fill the existing power void in Africa. Given now low costs, the sector can kick-start recovery and sustainable growth after this year's recession. Insurance will be a key facilitator for investments.

We estimate this year's pandemic will lead to a contraction in full-year real gross domestic product (GDP) in Africa of 2.9%, the deepest recession on the continent in more than three decades. We project slow 2% recovery in 2021, with commodity-intensive producers in particular hit by low oil prices and well overdue economic reforms. We remain positive for the longer term: as in other emerging markets, infrastructure investments will be a key growth driver.[1] In Africa specifically, investment in renewable energy technologies (RETs) can help bridge the existing power gap and underpin sustainable economic growth. For example, it is estimated that an upgrading of RET productive capacity will create about 1 million new jobs by 2030.[2] Supporting transition to renewable energy is low cost: contrary to popular perception, RETs are cost-competitive. With a supportive regulatory environment, insurers can facilitate sector development as providers of risk capital and risk covers, including for volatility in revenue streams. This will make the RET sector a more attractive investment proposition. For the insurance industry at large, Swiss Re Institute estimates that RET-sector related covers in Africa will yield cumulative premiums of USD 6 billion to more-than USD 8 billion by 2030.

The future of Africa's power sector relies on RETs. Since 2010 modern technologies such as photovoltaic solar, wind and concentrated solar power have grown strongly, from a low base. Also, penetration is still below other emerging regions. The International Energy Agency (IEA) projects strong growth, with installed RET generation capacity in Africa set to triple to 150 GW by 2030.[3] To date hydro power has been a mainstay of the renewables sector but in the future, in excess of 85% of additional capacity will come from more modern varieties. In the IEA's more optimistic "sustainable development scenario", capacity is project to increase by a factor of five. On aggregate we estimate total investments in RETs will range from USD 180 billion to USD 400 billion (optimistic case) over the next 10 years.

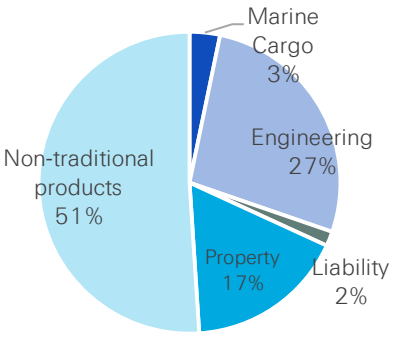
The main driver of the shift to renewable power in Africa is low cost. Mature RET such as hydro, bioenergy or geothermal power have been cost competitive with fossil fuel equivalents for many years already. And sharp cost reductions for photovoltaic solar have made this segment consistently less costly than new coal- or gas-fired powerplants.[4] Other RETs like wind and

[1] *sigma* 3/2020 - Power up: investing in infrastructure to drive sustainable growth in emerging markets, Swiss Re Institute.
[2] Global Renewables Outlook Edition 2020, IRENA, 2020.
[3] *World Energy Outlook 2020*, International Energy Agency, 2020.
[4] Ibid. Measured by levelized cost of electricity (LCOE) per unit of electricity.

concentrated solar power are also entering the fossil-fuel cost range.[5] The trend of cost declines will continue as photovoltaic solar panels and larger wind turbines become more efficient.[6] In this cost reality, building new or maintaining coal power plants no longer makes economic sense. Other factors are important too, including the ample availability of renewable resources in Africa and the global move to a low-carbon economy. There is pressure on business and corporates to reduce the greenhouse gas footprint of supply chains. This and digitisation are enabling new business models of decentralised production and integration of RETs with variable power output.

A notable feature of renewable energy projects is that they are more capital intense than fossil-fuel alternatives. To this end, private-sector finance, including insurance that helps financially de-risk RET projects are critical. In the past, investment in power in Africa has been mostly state funded, supported by development finance institutions. With government budgets at full stretch, the private sector needs to take on a bigger role. First, however, local national authorities will need to build on the progress made in the last 10 years in establishing the regulatory and institutional environment conducive to private-sector investment in renewable energy.[7]

Figure 1 Premium potential for RET in Africa by line of business (2020-2030)



The contribution of the insurance industry is twofold. As a provider of risk capital and in building local underwriting expertise. Traditional insurance such as for marine cargo, engineering, construction or property is well established in Africa. Such is not the case for innovative covers that offer protection against volatility in revenue streams due to weather or technology risks. By smoothing revenue volatility with associated indemnification through, for instance, parametric solutions, insurers can help lower the cost of capital for operators in the RET sector. That in turn will make the sector a more attractive investment proposition. However, that underwriting expertise is still in short supply in Africa and further evolution is needed. The potential will only be realised as financiers start to demand that operators buy such insurance covers as a pre-requisite for any investment in RET projects.

Transition to renewables in Africa is also a growth opportunity for insurers. Swiss Re Institute estimates that the cumulative premium potential by 2030 from RET projects in Africa – including from traditional and non-traditional innovative covers (see Figure 1) -- will range from USD 6 billion to more than USD 8 billion (the latter assuming the IEA's sustainable growth scenario).

[5] *Renewable Power Generation Costs in 2019*, International Renewable Energy Agency, Abu Dhabi.
[6] Wind speed increases with altitude. As turbines get taller, they allow to access higher wind speeds.
[7] *Renewable energy: new power for Africa's economy and insurance markets*, Swiss Re Institute, 2020.