

Distributed energy systems bissau

By 2030, the World Bank Group will work to connect 250 million people in Sub-Saharan Africa to electricity through distributed renewable energy systems or the distribution grid. In Eastern and Southern Africa, the target is 150 million people, which will be financed through the Accelerating Sustainable and Clean Energy Access Transformation (ASCENT) Program (100 million), and through existing financing (50 million).

The pace of electrification in the region needs to triple to achieve universal electricity access by 2030. Otherwise, there will still be more than 300 million people without electricity access in the Eastern and Southern Africa region by 2030, just marginally fewer than there are today.

Rwanda, Kenya, and Ethiopia are among the world's fastest electrifying countries, leading the way in taking integrated approaches that combine grid with distributed renewable energy (DRE) technologies. They are host to innovations in planning, in business models, and in financing that have revolutionized energy access provision.

The depth of the challenge requires faster and coordinated action on an exponential scale, which is why we have launched the Accelerating Sustainable and Clean Energy Access Transformation (ASCENT) Program, a multi-year, multi-billion-dollar program that will provide a platform for governments, development partners, and private sector to work together more effectively.

ASCENT's focus is on delivering the downstream part of energy access, notably grid and DRE connections and access to clean cooking technologies and fuels - reliable, sustainable and affordable access also requires investments in generation and transmission. In parallel, the Bank is developing the Regional Energy Transmission, Trade, and Decarbonization (RETRADE) platform to address the challenges of regional energy integration to achieve energy security, affordability, and access.

Energy must stop being the binding constraint and become an engine of green, resilient and inclusive development that can unlock job creation, ensure food security and climate resilience, enable a digital transformation, and contribute to delivering critical education and health services.

The World Bank invites all stakeholders to join this fight against energy poverty because together, we can achieve universal access to affordable, reliable, and modern energy services in Eastern and Southern Africa by 2030.

This review of distributed renewable energy (DRE) entrepreneurship analyzes the market demand and unique market characteristics in sub-Saharan Africa (SSA) that drive technology-enabled DRE entrepreneurial solutions through innovative business models. It further examines how policy and regulatory challenges need to be overcome for scale and impact.

The unmet energy demand in SSA provides significant opportunities for DRE entrepreneurs to complement and/or substitute grid-based systems through renewable energy solutions. The characteristics of DRE solutions such as affordability, modularity, flexibility, and sustainability endow competitive advantages in small-scale price-sensitive market segments especially in rural and remote settings. The viability and scalability of business models in the DRE sectors are highly dependent on a conducive policy and regulatory-enabling environment.

DRE entrepreneurs are disrupting energy markets by combining technologies in renewable energy, energy efficiency, mobile payment, and data management systems to meet energy demand especially in price-sensitive, rural and remote markets.

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