

Renewable energy adoption and integration in South Africa: an overview

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Abstract

The United Nations Sustainable Development Goal (SDG) 7 of ensuring access to affordable, reliable, sustainable, and modern energy for all is of critical importance to the development and growth of South Africa's economy. The ambition in SDG 7 is that by 2030 there should be universal access to affordable, reliable, and modern energy services. Electricity as energy is an essential enabler of economic development that can lift people out of poverty, therefore supporting sustainable development and industrialization. Improved access to energy in South Africa has the potential to alleviate poverty, promote industrialization and economic development. However, challenges with the state-owned energy utility company, Eskom, have resulted in the country experiencing regular power cuts. This article aims to provide a substantial review of the current renewable energy scenario in South Africa considering the faced challenges and their potential solutions for sustainable development. It will also highlight some of the progress on SDG7 integration, strategies, and innovations in support to expedite South Africa progress towards universal energy access. The discussion serves as a guide to further investigate the development of renewable energy projects and the barriers to the implementation.