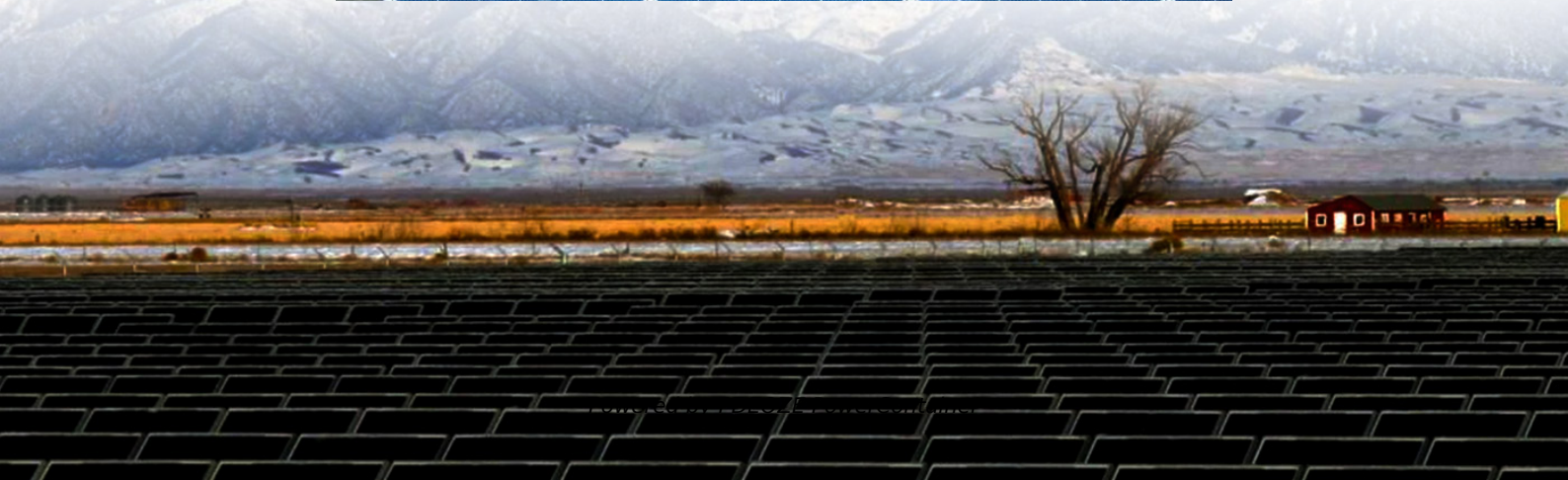


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Power consumption of communication base stations in Botswana



Overview

Why does Botswana need a secure electricity supply?

There is need to improve the security of power supply to support higher productivity. The country's national electricity access rate increased from 62.6% in 2017 to 81.5% in 2020, in line with Vision 2036 that targets universal access by 2030. The average electricity demand for Botswana is at 850 megawatts (MW), against a generation capacity of 893 MW.

How much electricity does Botswana need?

The average electricity demand for Botswana is at 850 megawatts (MW), against a generation capacity of 893 MW. Demand of electricity is projected to grow to over 1200 MW by 2030. Additional energy is imported from South Africa. Botswana generates 48% of its power and imports 52% from the Southern African Power Pool (SAPP).

How does the electricity sector work in Botswana?

The sector combines the local generation and imported electricity to come up with electricity that is available for distribution in Botswana. This does not take into account electricity used for auxiliary services, pumping, network losses as well as the production of electricity through incineration of waste.

Where does Botswana's electricity come from?

Prior to this period, most of Botswana's electricity was imported from South Africa's power utility, Eskom. In 2008 South Africa's electricity demand started to exceed its supply, resulting in the South African government restricting power exports.

Is there a direct relationship between base station traffic load and power consumption?

The real data in terms of the power consumption and traffic load have been obtained from continuous measurements performed on a fully operated base

station site. Measurements show the existence of a direct relationship between base station traffic load and power consumption.

Do base stations dominate the energy consumption of the radio access network?

Furthermore, the base stations dominate the energy consumption of the radio access network. Therefore, it is reasonable to focus on the power consumption of the base stations first, while other aspects such as virtualization of compute in the 5G core or the energy consumption of user equipment should be considered at a later stage.

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This statistical brief is intended to apprise on Electricity Generation, Importation and Distribution by presenting Monthly, Quarterly and Yearly Volumes as well as Indices for Electricity ...

However, importation and distribution volumes, and their percentage changes are included as well. This indicates Botswana's progress over time, towards generating adequate electricity to ...

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