Electricity big data analysis of base station electricity consumption

Overview

What is a base station power consumption model?

In recent years, many models for base station power con-sumption have been proposed in the literature. The work in proposed a widely used power consumption model, which explicitly shows the linear relationship between the power transmitted by the BS and its consumed power.

What are the applications of data analytics in the electricity sector?

Then, we qualitatively review over 200 high-impact studies to present an in-depth analysis of the most prominent applications of Data Analytics in each of the electricity sector's areas: generation, trading, transmission, distribution, and consumption. For each area, we review the state-of-the-art Data Analytics applications and methods.

How are data analytics results presented in the electricity sector?

The results are presented in two ways: Section 4 presents a quantitative analysis, delivering a high-level overview of the landscape of Data Analytics research in the electricity sector. Section 5 then provides a structured in-depth review of the most influential studies.

How much energy does a radio network use?

Importantly, more than 70% of this energy has been estimated to be consumed by the radio access network (RAN), and in more details, by the base stations (BSs) .

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      Oct 4, 2021 · Smart energy saving of 5G base stations: Based on AI and other emerging technologies to forecast and optimize the management of 5G wireless network energy ...

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