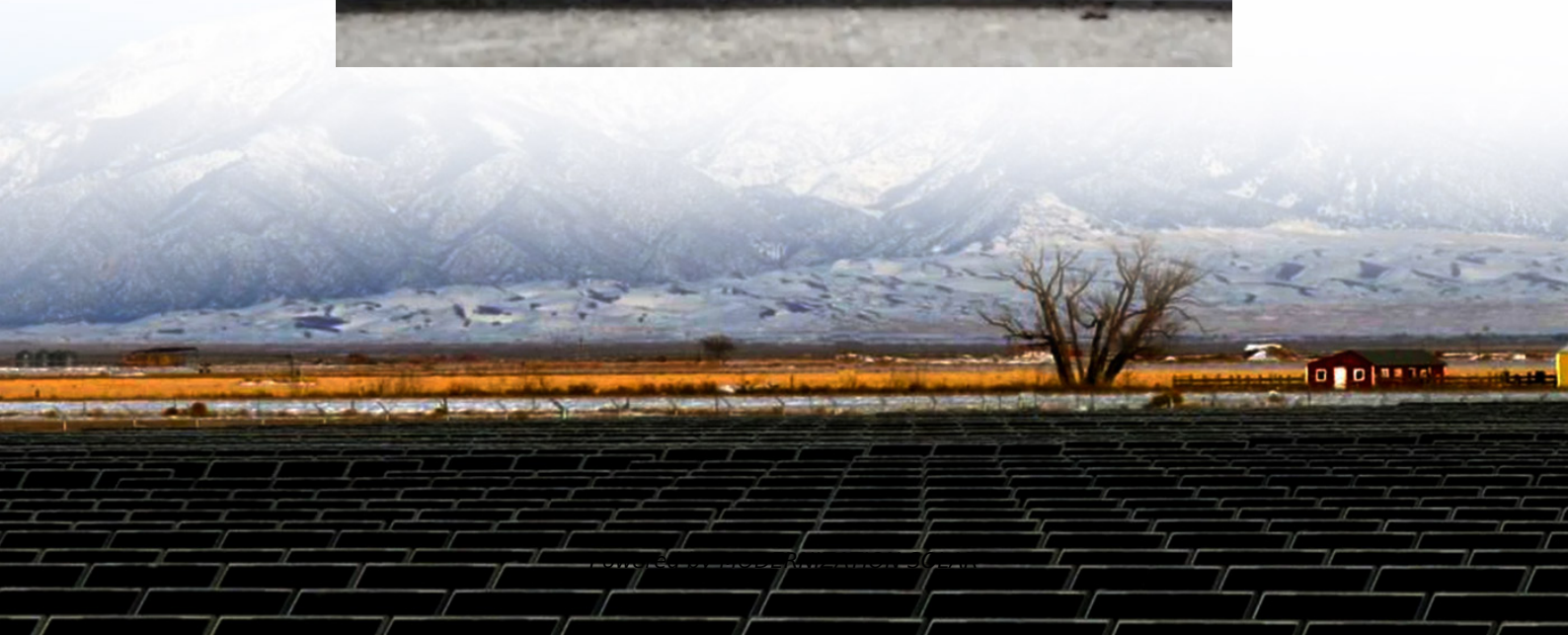


# **Tiraspol 5g base station daily power consumption**





## Overview

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How does mobile data traffic affect the energy consumption of 5G base stations?

The explosive growth of mobile data traffic has resulted in a significant increase in the energy consumption of 5G base stations (BSs).

What is a minimal 5G BS energy consumption optimization model?

Therefore, the problem can be formulated as a minimal 5G BS energy consumption optimization model, i.e., the energy consumption reduced by reasonably switching off the idle or lightly loaded BSs and reasonably associate UEs with BSs (i.e., the BS switching state and BS-UE association state scheme).

How can we improve the energy efficiency of 5G networks?

To improve the energy efficiency of 5G networks, it is imperative to develop sophisticated models that accurately reflect the influence of base station (BS) attributes and operational conditions on energy usage.

Does a balanced dataset improve energy prediction of 5G base stations?

For energy prediction of 5G base stations, this thesis finds that using a more balanced dataset, in terms of the number of samples for each product, has a positive impact for the ANN and the Gradient Boosted Trees model while the linear regression performs worse.



## Tiraspol 5g base station daily power consumption

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