

Energy Saving Solution **NetZero**

Extract greater efficiency from the Network



Introduction

Energy consumption has been an important topic for operators, not only due to the weight it puts on the operational expenditure but also on the focus the telecoms industry is putting on reducing their emissions due to the impacts of climate change.

This is even more challenging because of **increased data consumption and related 4G expansions and 5G deployments** that are putting even more demand on energy consumption.



Moreover, the **current energy crisis is not only increasing energy costs**, with operators paying more for each KWH, as **governments are actively taking measures to lower or restrict energy consumption** across multiple industries including telecommunications.

While network **vendors have introduced features to manage energy** more efficiently, the **actual savings are limited**, and attempts to increase them **often conflict with performance goals**.

With its deep vendor-independent network technology knowledge, and heritage in developing real-time energy efficiency solutions, **NEC Aspire Technology** developed **NetZero** – a **software-based intelligent solution to reduce energy consumption by multiplying the vendor feature savings by 3 to 6-fold**.



NetZero supports operators to deliver:

- **Continuous reduction** of energy consumption and its drivers, managing anomalies, and rectifying issues as they arise,
- Focusing on **extracting greater efficiencies** from existing infrastructure and facilities.

GSMA identifies 3 levels of energy-saving methods in the [Mobile Net Zero 2022 report](#):

1. Site level
2. **Radio access network (RAN) equipment**
3. Network Planning

NEC Aspire Technology has deep-rooted experience in energy management, from the **development of carrier-grade energy solutions**, and **optimization of vendor energy management features** to **providing strategic consultation on energy management**.

Energy Efficiency in RAN

The Radio Access Network (RAN) equipment contributes to the significant energy consumption of the overall network. These systems are always transmitting on the available frequencies. The different RAN equipment vendors have developed power-saving features for the different radio access technologies (2G, 3G, 4G, and 5G), but these features are generally static and not optimized for fluctuating traffic profiles.

NetZero is a **predictive energy-saving solution** that consistently collects standard reporting feeds on traffic characteristics from the RAN and applies Machine Learning (ML) to profile and deploy tailored energy parameter settings to individual sectors. The results have been impressive resulting in **3 to 6 times more savings than the original power saving feature**.

Results from a recent Proof of Concept (PoC) across LTE sites provided a **saving that was between 6 and 10 times more than with the standard vendor feature without impacting the customer experience**.



A further benefit is that **NetZero** works with **2G, 3G, and 4G technologies** and is vendor agnostic including **Ericsson, ZTE, Huawei, and Nokia** networks. An extended feature is developed for **hybrid-powered sites**, where the times for carrier switch-off are aligned with the battery cycle to **extend the battery run-time**.

Start saving today with NetZero

We are running a **NetZero time-limited campaign** for operators that want to start reducing their energy bills ASAP. For those who subscribe until the **end of December 2022, NetZero is free of charge for the first 3 months**.

Get an estimation of your savings (in kWh and OPEX) with **NetZero** by using our [online calculator](#).