Power Saving Advisor

It won't take much energy to save energy

POWER SAVING ADVISOR
Save energy without impacting network quality

Power Saving Advisor (PSA) is an AI-powered solution designed to optimize network energy efficiency using RAN vendors' Power-Savings-Features (PSFs) while maintaining high-quality user experience.

Leveraging advanced machine learning algorithms, PSA proactively adjusts power-saving features based on subscriber behavior, traffic patterns, and key network performance indicators.

By aligning with client-defined performance standards, PSA reduces operational costs without compromising service quality. It integrates Tupl's MLOps capabilities with an Action Manager component to ensure automated responses to changing network conditions.

PSA continuously monitors energy consumption across multiple aggregation levels and tracks configuration changes alongside performance metrics to ensure sustained optimization.

While most operators already use RAN vendors´ PSFs, these settings are typically applied uniformly across regions or clusters, with limited insight into their impact on customer experience.

As a result, the configuration tends to be conservative and fails to maximize potential energy savings.

TUPL

Operations made simple with AI

KEY BENEFITS

Intelligent Power Savings Orchestration

PSA goes beyond basic vendor-deployed features by orchestrating a comprehensive, zero-touch power-saving strategy—optimizing energy use cell- by- cell for maximum efficiency.

Energy Efficiency Without Compromise

Achieve substantial energy savings while preserving a seamless customer experience, with no degradation in service quality.

Scalable and Cost-Effective Flexibility

Adapt and expand effortlessly—PSA's ML models can be modified and scaled in a cost-efficient manner to meet evolving network demands.

AI-Enhanced Operational Expertise

Leverage AI to scale engineering knowledge and automate decision-making as operations grow, improving consistency and operational performance.

Knowledge Digitalization

Capture and digitalize expert knowledge, transforming it into actionable intelligence that powers smarter, automated network management.

KEY FEATURES

KPI and Energy monitoring
Automatically monitors key performance indicators and network energy consumption trends at the per-cell level over time.

Multi-level energy savings measurement
Automatically calculates energy savings from individual cells up to the entire network, ensuring visibility at every level.

Per-Cell Level Actuation
Optimizes Power Saving Feature (PSF) settings down to each cell, maximizing savings while adapting to changing traffic patterns.

Automated Intelligent Analysis
Detects KPI degradations and correlates them with power-saving changes using automated deviation analysis, ensuring timely corrective actions.

ML-Driven Action Recommendation
Proactively suggests the next best actions to optimize KPIs and energy efficiency, powered by a Machine Learning core.

Closed-loop automation
Monitors KPIs and energy trends, proposes optimal actions, and automatically executes them — enabling a fully automated optimization loop without manual intervention.

Respecting quality standards
Recommends energy-saving actions that align with network quality KPIs, ensuring performance is never compromised.

White Box Transparency
Every decision and action are fully traceable, providing clear context and rationale — making the system easy to validate and audit.

Customizable insights for fast validation
Offers tailored, transparent views for quick analysis and validation of recommended actions.

Respecting and Dashboards
Delivers detailed dashboards and reports across multiple network aggregation levels (Cell, Site, TAC, Region, Network).

BUSINESS IMPACT

2x more energy savings:
optimize energy efficiency – achieving up to 2.5 times more savings compared to standard solutions – without compromising customer experience.

100% quality standard compliance:
maintains Quality of Service (QoS) for subscribers, ensuring consistent customer experience even during energy savings operations.

100% automation for energy efficiency:
fully automates energy-saving processes, eliminating error-prone manual scripting and ensuring operational consistency.

100% energy management transparency:
provides operators with full control and visibility over the energy-saving process, enabling insourcing of managed services with confidence.