

Power Saving Advisor

It won't take much energy to save energy



Save energy without impacting network quality

Tupl's Power Saving Advisor (PSA) solution is designed to **maximize efficiency** of RAN Vendor's Power Saving features in the network while minimizing impact on the end-users by using advance machine learning (ML) algorithms.

PSA **leverages Tupl's MLOps capabilities** together with an Action Manager component to minimize time-to-action. It constantly **computes energy consumption** at multiple aggregation levels and **tracks changes in the PSA configuration**.

"I needed a transparent system where my engineers can verify the AI based decisions, a system to provide anomaly detection on any deviations on KPIs and customer experience, and automatic actuation scripts for activation/deactivation of the PS features. One key part of the process was to enable a monthly benchmarking, when for one day all Power Savings are off, providing logical baselining for KPIs and Power usage".

Mr. Valentin Neacsu

Former CTO at Kyivstar (VEON Ukraine)

Key benefits

- Achieve a **significant amount of energy savings** while maintaining a positive customer experience.
- **Flexible and easy to expand**, ML model can be modified in a cost-effective fashion.
- Digitalizes your **expert knowledge**.
- Scales and enhances engineering knowledge through AI as operations grow.
- **Go beyond vendor's energy-savings fixed rules**: Power saving management is generally operated by one vendor as a black-box process.

POWER SAVING ADVISOR

Designed for **Subject Matter Experts**; with advanced capabilities available for Data Science profiles too.



Key features

- **Automatically monitors** Key Performance Indicators and network energy consumption evolution over time **at cell level**.
- Automatic **measurement of energy savings** at cell levels and its aggregations up to network level.
- **Automatic Anomaly Detection: Identifies KPI degradations** and correlates with Power Saving Features changes by detecting any deviations on KPIs.
- **Automatically proposes next best action** to improve KPIs and energy consumption **based on a Machine Learning** core.
- **Automates script creation** for recommended actions (Open Loop).
- Provides **customized views for quick analysis & validation** on recommended actions.
- **Provides dashboards and Energy Consumption reports** at multiple network elements aggregations (Cell, Site, TAC, Region, Network).

Business impact

- **25% more Energy Savings** compared to Vendor's managed service, resulting in a 6-10% reduction of the electricity bill.
- **100% Customer Experience:** Maintain Quality of Service (QoS) for your subscribers with energy savings actions.
- **90% Manual effort reduction:** Utilizes operators MOPs to generate scripts automatically reducing errors and manual efforts.
- **100% Control:** Operators maintain full control over the energy savings process and allows insourcing of managed services.
- **100% Consistency:** Eliminating manual script creating processes that are prone to errors.

