

Energy-saving solutions for communication sites in Angola



Overview

Unitel Angola angles for energy-effici. As part of its green initiatives, in total there are three solutions the two companies are deploying to drive more.

Key Takeaways

Angola's communication sites are increasingly adopting hybrid power, solar energy, smart lithium batteries, and digital energy management to reduce diesel use, cut OPEX, and improve sustainability.

Hybrid Power Systems

Telecom operators like Unitel Angola are deploying Advanced Hybrid Power solutions, combining solar panels, smart lithium batteries, and low-power backup systems to replace traditional diesel generators. This approach allows sites to achieve zero diesel operations, reducing generator operating time by up to 75% and lowering operational costs by 40%. Hybrid systems also enhance reliability in remote areas where grid access is limited.

Solar Energy Integration

Solar panels are being installed at backbone and remote sites to harness Angola's abundant clean energy resources. These installations reduce dependency on imported fuels and support low-carbon network operations. Solar energy, combined with intelligent energy storage, ensures continuous power supply even during grid outages.



Smart Lithium Batteries High-performance cycle lithium batteries are deployed to store energy efficiently and provide backup power. These batteries are managed through intelligent systems like CloudLi, which optimize charging, maintenance, and energy distribution. This reduces maintenance requirements, improves energy efficiency, and extends battery life.

Digital Energy Management

Digital tools such as NetEco enable operators to monitor, optimize, and schedule power usage across multiple sites. These systems provide remote inspection, fault diagnosis, and predictive maintenance, reducing unnecessary site visits and improving operational efficiency. Site digitalization also allows operators to track energy consumption per bit, supporting greener network operations.

Operational and Economic Benefits OPEX Savings: Energy-efficient solutions have led to more than 45% reduction in operational costs. Reduced Carbon Emissions: Transitioning from diesel to hybrid and solar power significantly lowers greenhouse gas emissions. Improved Reliability: Intelligent monitoring and predictive maintenance enhance site uptime and network stability.

Scalability for 5G and Broadband: Hybrid and digital energy solutions support the expansion of new services while controlling energy costs. **Future Directions** Angola's energy strategy emphasizes “more bits, less watts”, integrating digital technologies, power electronics, thermal management, and energy storage. Advanced solutions like grid-forming energy storage, intelligent distribution systems, and all-optical communication networks are being explored to further modernize telecom infrastructure and support sustainable growth.

By combining hybrid power, solar energy, smart batteries, and digital energy management, communication sites in Angola can achieve energy efficiency, cost reduction, and environmental sustainability, aligning with national goals for a clean and intelligent energy future.

Article Content

Unitel Angola angles for energy-effic...

As part of its green initiatives, in total there are three solutions the two companies are deploying to drive more energy-efficient networks: Advanced Hybrid Power; CloudLi and NetEco.

Angola's Unitel and Huawei partner for Green Energy solutions at

Angolan mobile phone company, Unitel is collaborating with Chinese technology giant Huawei for the deployment and integration of green energy solutions at select mobile sites.

Huawei and Angola Unitel Lead Green Site Energy Digitalization

Both companies have also committed to supporting further green energy modernization of existing sites, reducing the proportion of diesel generators used, and introducing solar energy, smart lithium

Huawei presents a solution that saves energy and increases efficiency ...

Sites that use third-party systems without an OSS risk communication failures between systems, inefficient operations and low return on equipment investment. An integrated, AI-based

Huawei and Angola Unitel lead green site energy digitalisation

Angola Unitel will be partnered up with Huawei to demonstrate green and smart digital energy solutions for mobile sites at MWC22 Barcelona. Angola Unitel has spent years continuously

Angola: Unitel entrusts Huawei with the deployment of green energy ...

As the climate crisis deepens, more and more telecom operators are rethinking their network to help protect the planet. Angolan mobile phone company Unitel is working with Chinese

Huawei and Angola's Ministry of Energy and Water ...

As a leading global provider of ICT infrastructure and smart devices, Huawei lays out an integrated energy transition solution in the white paper, covering power generation, transmission and

Green Energy Solutions : Angola's Unitel and Huawei Partner

Angolan mobile phone company, Unitel is collaborating with Chinese technology giant Huawei for the deployment and integration of green energy solutions at select mobile sites.

Huawei to provide green technology solutions to Angola's Unitel

Under the agreement, Huawei will install solar panels, smart lithium batteries and energy-efficient data centres at various Unitel sites. This shift to low-carbon technologies is aimed at

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Huawei and Angola's Ministry of Energy and Water ...

Looking ahead, with advanced solutions such as grid-forming energy storage systems, intelligent distribution systems, and all-optical communication networks, Angola's power grid will

Angola: Unitel entrusts Huawei with the deployment of green energy ...

Angola: Unitel entrusts Huawei with the deployment of green energy solutions at its telecom sites The energy transition in several economic sectors is currently at the heart of major

Angola: Towards an Energy Strategy – Analysis

Angola: Towards an Energy Strategy is the result of the team's work: an independent review of the major energy policy issues facing the country. Lessons in this analysis are applicable in

Empowering the Unlit Corners: Unveiling the Energy Challenge in

Today, the struggle for affordable and sustainable energy persists, impacting the lives of millions. In this two-part blog series, we delve into the challenges faced by rural communities and explore initiatives

Angola: Comprehensive Review of Energy Policy

Towards an Energy Strategy is an independent review that examines the key energy policy challenges facing the country. As Angola continues to expand its energy sector, this analysis

Angola boosts electrification and renewable energy | Article Page

Angola may be a hydrocarbon rich country in south-west Africa, but it is increasing its electrification rate and diversifying its energy sources to meet the United Nations' Sustainable Development Goals

Renewable energy in Angola

To further address SDG 7, Angola has been actively implementing solar energy solutions. They have been building hydro power plants, and solar power plants, as well as off-grid and micro-grid systems,

Angola's energy future: renewables and self-sufficiency

Fernando Prioste of COBA Group talks about Angola's potential for deploying pumped-storage hydroelectricity and hydrogen solutions.

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

