Empowering Telecommunications Through Sustainable Energy Solutions

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Enercap x Etisalat Afghanistan

etisalat

Etisalat Afghanistan – Network Power Profile

Operational Footprint:

1,800 telecom sites across Afghanistan

50% grid-connected

50% dependent on diesel generators

Challenges with Diesel Dependence

Logistics & Storage Complexity
Transporting and storing fuel across difficult terrain

Rising Diesel Costs
Increasing operational expenditure due to fuel price volatility

Maintenance Burden
Higher frequency of generator servicing and site visits

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The Solution: Deploying Enercap's Supercapacitor based Energy Storage to Optimize Diesel Generator Operations

Enercap's supercapacitor energy storage

Targeted deployment across 10% of Etisalat's most critical off-grid sites

Strategy overview:

DG runs **1.5 hours** to power load + charge batteries

Supercap energy storage discharges for **4–5 hours**, fully powering the site

Cycles repeated **4x per day**

Operates **without degradation or cooling** in harsh climates

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Why Enercap's Supercapacitor Energy Storage Technology?

10-YEAR WARRANTY WITH NO DEGRADATION OPERATING 4 CYCLES PER DAY

HIGH ROUND-TRIP EFFICIENCY

NO THERMAL MANAGEMENT REQUIRED (-30°C TO +70°C AMBIENT OPERATING RANGE)

PERFECT FOR RUGGED, OFF-GRID TELECOM ENVIRONMENTS

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Measurable Impact
Operational & Environmental Transformation

Over 20% Reduction in Energy Expenses:
Deployment of efficient power solutions led to significant savings in fuel and operational costs.

Extended Generator Lifespan
Lower runtime hours reduced mechanical stress, resulting in longer equipment life and better ROI.

Reduced Maintenance Costs
Optimized energy systems minimized breakdowns and maintenance frequency, saving time and resources.

Lower Carbon Emissions
Decreased reliance on diesel generators led to a measurable drop in greenhouse gas emissions.

Performance Sustained Despite 4G Load Growth
Efficiency improvements were maintained even as the network expanded and demand increased.

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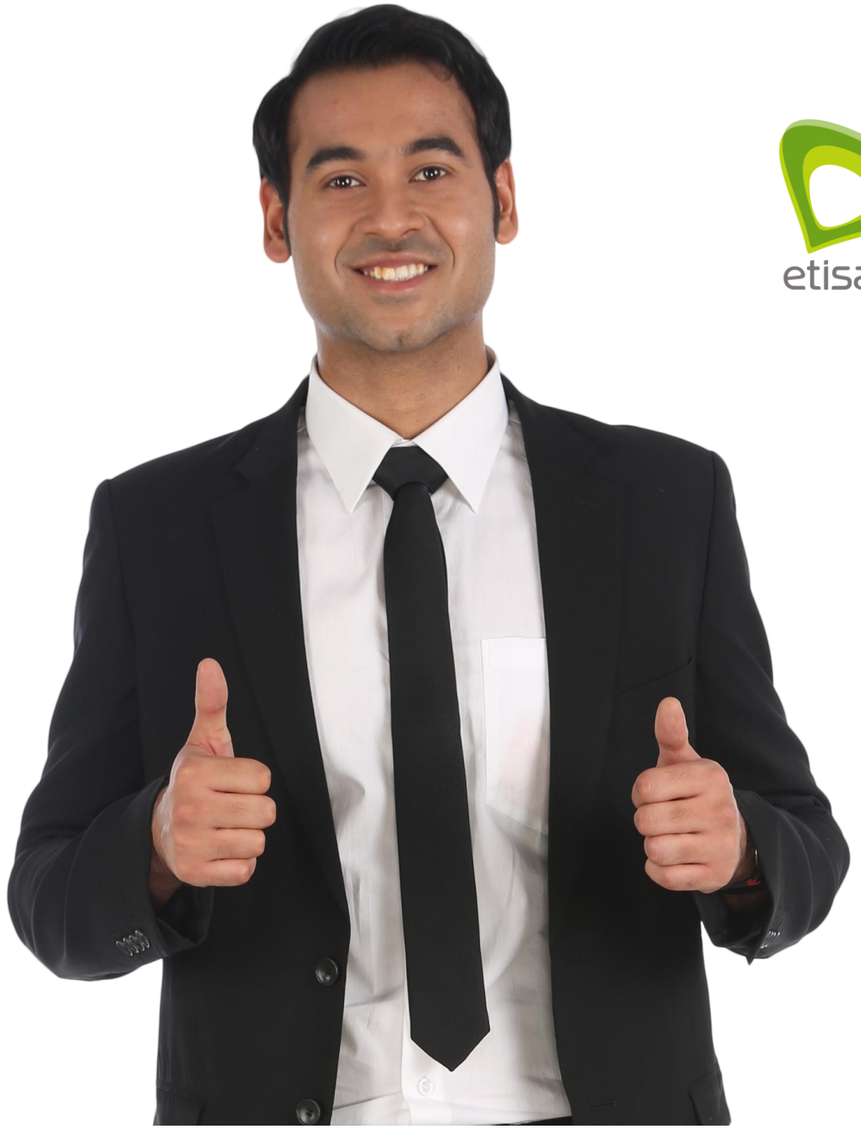

Customer Testimonial

Etisalat Afghanistan’s CTO Testimonial:

“Despite our network load increasing due to the 4G upgrade and Enercap ESS deployed on only 10% of the network, we’ve achieved more than a 20% reduction in energy expenses. This solution has dramatically lowered costs, improved our reliability and efficiency, and enabled us to deliver a significantly better service to our customers.”

Hany Bedair, CTO, Etisalat Afghanistan

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A Model for Scalable Telecom Energy Transformation

Strategic site selection and DG integration are key to success

Supercapacitor energy storage provides unmatched cycling and reliability

Even partial network deployment leads to significant savings

Ideal solution to significantly reduce costs for telecoms operating sites on diesel generators

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Enercap & Ehtisalat Overview

Etisalat Afghanistan

Industry: Telecommunications

Scope: Leading telecom provider in Afghanistan

Infrastructure: Operates **1,800+ active sites**

Highlights: Delivers nationwide mobile and data services, committed to expanding digital connectivity across the country

Enercap

Industry: Energy Storage Solutions

Specialty: Manufacturer of **next-generation supercapacitor-based storage systems**

Applications: Ideal for telecom, renewable energy, and industrial sectors seeking fast, durable, and clean energy storage

Edge: Provides sustainable and maintenance-free alternatives to traditional batteries

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Explore What Enercap Can Do for Your Network

- Ready to reduce diesel dependence?
- Want to extend the life of your generators?
- Need a rugged, high-cycling energy solution for telecom infrastructure?

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