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The New World of Telco Power

How to increase your power reliability and reduce your carbon footprint

Access to affordable, reliable power can be a major challenge for telcos looking to lead the market in creating an interconnected, digital world. Gain greater control over how your organisation powers its future plans.

What's the future of telecommunications?

Opportunities like 5G adoption, edge computing, digital services, and data management.

Barriers to growth such as competition, costs, volatility, data security, and regulation.

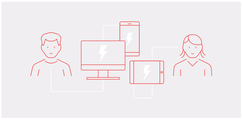
Global connectivity is growing…

71% of the globe will be mobile subscribers by 2023 (5.7 billion)[2]

The global 5G technology market is predicted to grow by **49%** to 2025[3]

Are you paying attention to the right things to leverage opportunities and mitigate risks?

A highly connected world is power hungry



The telecommunications industry spends hundreds of millions on electricity. 5-7% of telcos' operating expenditure is energy costs and that number is rising.[4]

Demand for connectivity requires new infrastructure and services

More assets and data processing requires additional power

Leads to increasing costs of innovation, capex, and power

Unreliable power supply also costs service providers

Electricity to multiple devices across thousands of sites brings enormous costs. Any loss of power due to supply issues, natural disasters, or damage is also expensive for service providers.

Power outages to critical asset networks causes:

- Loss of revenue
- Extra repair costs
- Unhappy customers
- Customer churn
- Reputation and brand damage

Controlling power consumption = strategic and competitive advantage

Power demand dilemmas for asset managers

3 factors that make power management difficult:

Mapping power usage—which equipment/locations use the most?

Dealing with heat generated, which affects systems and can contribute to failures.

Having reliable and cost-effective backup power sources in case of outages.

Reducing your carbon footprint and increasing power reliability

To reduce your power usage you could invest in:

- Tools to help identify where and when power is used
- Tools that help identify what is consuming power
- Sustainable energy supply into the grid, e.g. wind and solar
- Storage options to smooth power supply and demand mismatches
- Equipment that works effectively at higher temperatures
- Segregation of heat generating and power storage and passive equipment
- Efficient equipment and air-conditioning systems that use less power
- Backup off-grid power generation that can relied on when needed
- Systems that give you remote visibility and control of powered assets

Backup power is essential: what are your options?

Diesel or gas generators

- + Can generate power for longer periods
- + Relatively cheap equipment
- − High emission energy source (CO2)
- − High cost of fuel and gas to run

Batteries

- + Smaller footprint and greener option
- + Cheaper and more scalable for networks
- + Can be deployed very quickly in response to changes in grid demand
- + Rapidly advancing performance and affordability
- − Operational for shorter periods
- − Can degrade and lose charge over time
- − Need management safeguards to prevent damage

Fuel cells

- + Quiet, green, and last longer than batteries
- + More efficient than diesel and gas engines
- − Not highly available or cost-effective
- − Relatively untested and unsupported

More than a redundancy: ways to leverage backup power

Avoid outages
Switch to backups in peak electricity usage periods

Pay less
Use backups at other times when power demand and price is high

Save
Charge batteries in off-peak, store and feed excess power into grid

Reduce costs
Avoid grid infrastructure expansion costs as demand increases

HOW? Remote monitoring and management makes it possible

Systems that give you **remote visibility and control over distributed networks** of critical assets can allow you to:

Keep backup power in a reliable state and know its capacity at any given time

- ✓ Monitor heat through mapping tools
- ✓ Check battery health and charge
- ✓ Check fuel levels and generator condition

Cleverly control backup usage

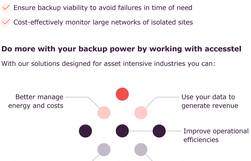
- ✓ Turn backup power on and off as needed
- ✓ Automate backup activation in emergency/unplanned outage
- ✓ Link backup power to respond to real-time changes in grid price
- ✓ Set backup batteries to charge in off-peak periods
- ✓ Link weather forecast data with backup capacity to increase reliability

Improve asset life and performance

- ✓ Test and monitor performance without field visits
- ✓ Proactively identify issues before they become big problems
- ✓ Ensure backup viability to avoid failures in time of need
- ✓ Cost-effectively monitor large networks of isolated sites

Do more with your backup power by working with accesstel

With our solutions designed for asset intensive industries you can:



1. '2020 Telecommunications Industry Outlook', The Wall Street Journal
2. 'Cisco Annual Internet Report (2018-2023) White Paper'
3. '5g technology market growth forecast from 2018 to 2025', marketwatch.com
4. The case for committing to greener telecom networks', McKinsey