



TAKING POWER BACK: REMOTE CONTROL OF GENSETS WITH FUEL MONITORING SOLUTIONS

Diesel generator sets (gensets) supply regular and emergency electrical power across many industries and situations, from factories to field hospitals. Interruptions to power can mean the difference between profit and loss, or even life and death. Increasingly, genset operators are using sophisticated remote solutions to monitor fuel usage, control generators in inaccessible locations and optimize performance.

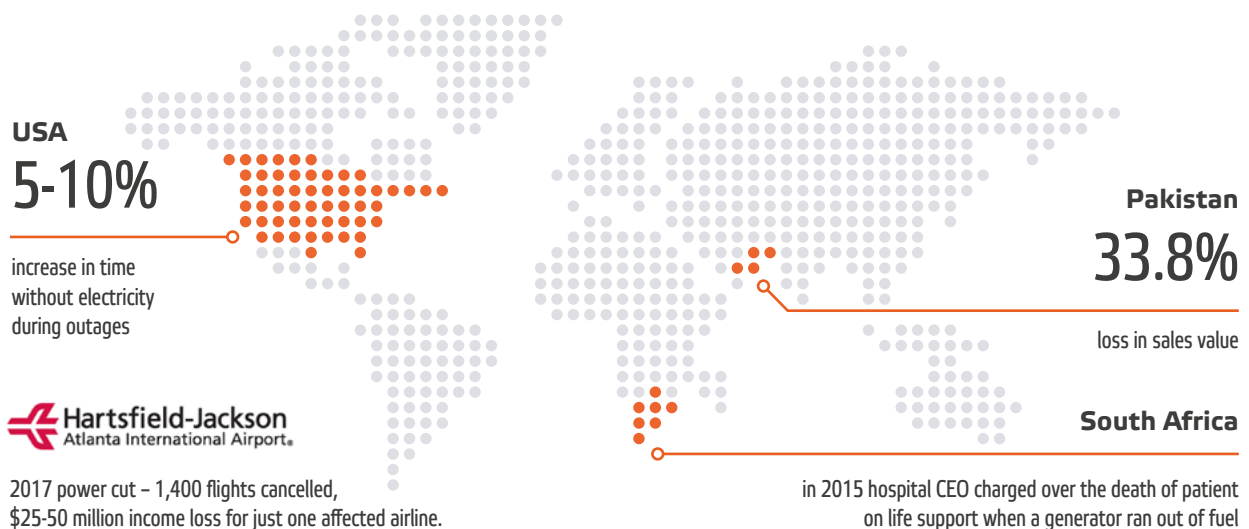


KEEPING THE LIGHTS ON

As higher demand for power puts pressure on outdated grids, particularly in emerging economies¹, backup generators are critical in supporting industry and infrastructure.

In Pakistan, businesses experience a staggering **33.8% loss in sales value** annually because of rolling blackouts². A study of power outages in the USA from 2000 to 2012 concluded that the amount of time customers are left without electricity during outages has **increased by 5 -10%**³. Blackouts are **predicted to increase in severity** worldwide due to electricity supply and demand patterns.⁴

Power outages can have devastating effects. In 2017, a power cut at the busiest airport in the world, Hartsfield-Jackson Atlanta International Airport, caused **1,400 canceled flights** and an estimated **\$25-50 million income loss** for just one affected airline.⁵ In 2015, a hospital CEO in South Africa faced charges over the **death of a patient on life support** when a generator ran out of fuel during a power outage.⁶



1. Byrd, Hugh and Matthewman, Steve. *Lights out: The dark future of electric power*. *New Scientist*, 7 May 2014.
2. Wee, Rolando Y. *Countries Most Prone to Power Outage Financial Losses*. *World Atlas*, 25 April 2017.
3. Larsen, Peter H., Kristina Hamachi LaCommare, Joseph H Eto & James L Sweeney. *Assessing Changes in the Reliability of the U.S. Electric Power System*. *Electricity Markets & Policy Group*, 2015.
4. Byrd, Hugh and Matthewman, Steve. *Lights out: The dark future of electric power*. *New Scientist*, 7 May 2014.
5. Jansen, Bart. *Delta: Atlanta airport power outage cost \$25M - \$50M in income*. *USA Today*, 3 Jan 2018.
6. *SA hospital CEO charged over power outage death*. *Medical Brief Africa's Medical Media Digest*. 30 September 2015.

ACCURATE GENSET MONITORING
IS CRUCIAL IN MANY SCENARIOS,
INCLUDING:



TELECOMMUNI- CATIONS

Remote mobile base stations often do not have a mains electricity connection and rely entirely on gensets to function. Gensets are also used as an emergency solution for power outages.



DATA CENTERS

The foundation of our digital world. Data centers cannot afford to stop, as outages would cause chaos across online systems worldwide.

They are usually surrounded by farms of gensets to mitigate the risks of power outages.



BANK BRANCHES

Banks cannot afford to close their doors when there is no electricity, as many customers access banking services in bank branches.



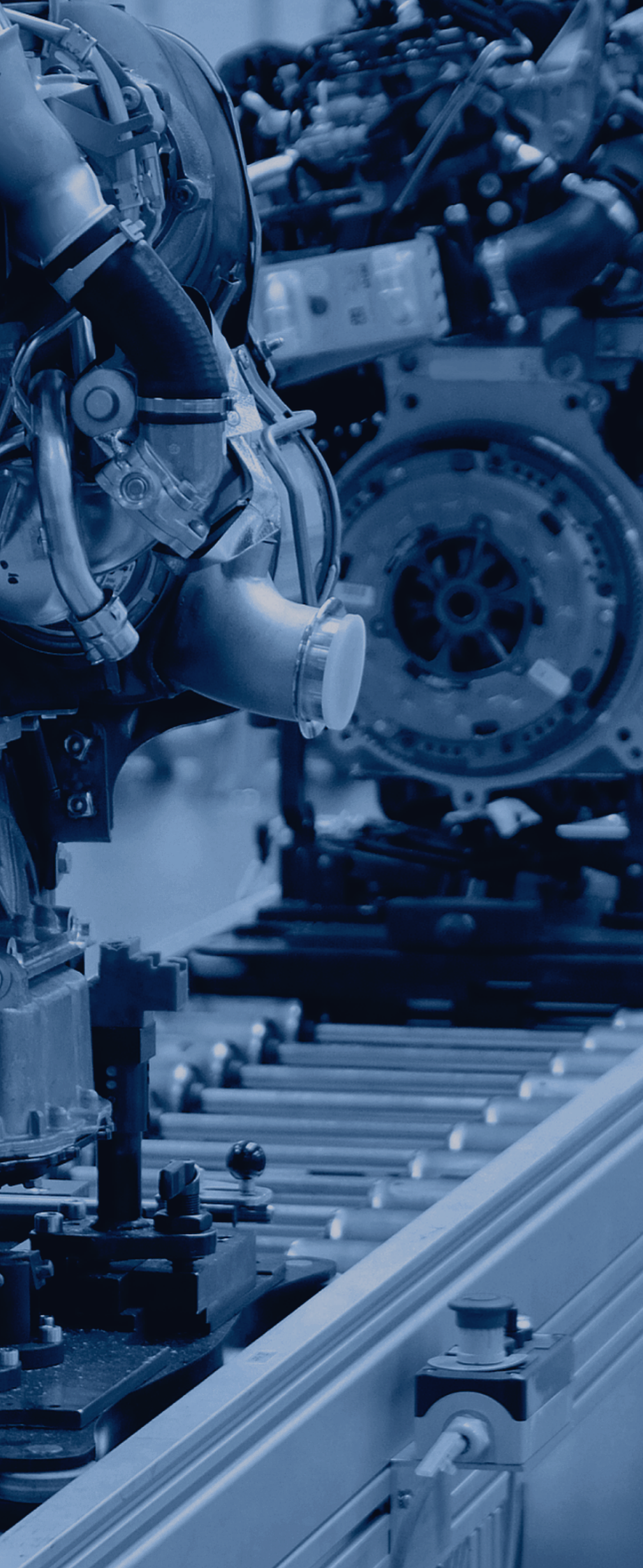
FUEL STATIONS

Keeping power flowing to the pumps is critical for fuel stations. Without electricity, pumping fuel for customers is impossible.

The image features a dark blue background with silhouettes of several construction cranes. One crane is prominently shown in the foreground on the left, with its long jib extending towards the right. Another crane is visible in the background on the right, and a third, smaller one is on the left. A hook with a load is suspended from the jib of the foreground crane. The overall scene is a construction site at dusk or dawn.

CONSTRUCTION SITES

Gensets are sometimes used as single source of power supply, especially when construction is taking place in a far-flung location.



MANUFACTURING FACILITIES

Power outages stop assembly lines in their tracks, which leads directly to loss of revenue.



HOSPITALS

Emergency gensets power medical equipment during power outages and are also used to power field hospitals. The consequences of respirators shutting down or outages during surgeries can be truly catastrophic.

OMNICOMM: SMART GENSET MONITORING SOLUTIONS

OMNICOMM is a leading global developer of complete fuel and fleet management solutions, offering **turnkey, best-in-class solutions for remote genset monitoring and management**. OMNICOMM products are distributed to 108 countries on five continents, working with over 3,000 trusted partners to deliver first-class service. OMNICOMM solutions ensure gensets are **always ready to perform**, avoiding loss of business or even loss of life due to power outages.

OMNICOMM LLS fuel-level sensors :

The industry's most reliable high-precision capacitive fuel-level sensors, including heavy-duty and explosion-proof options. OMNICOMM sensors have the highest possible ingress protection rating, enabling operation in the most extreme conditions. Sensors are installed in the genset fuel tank(s).

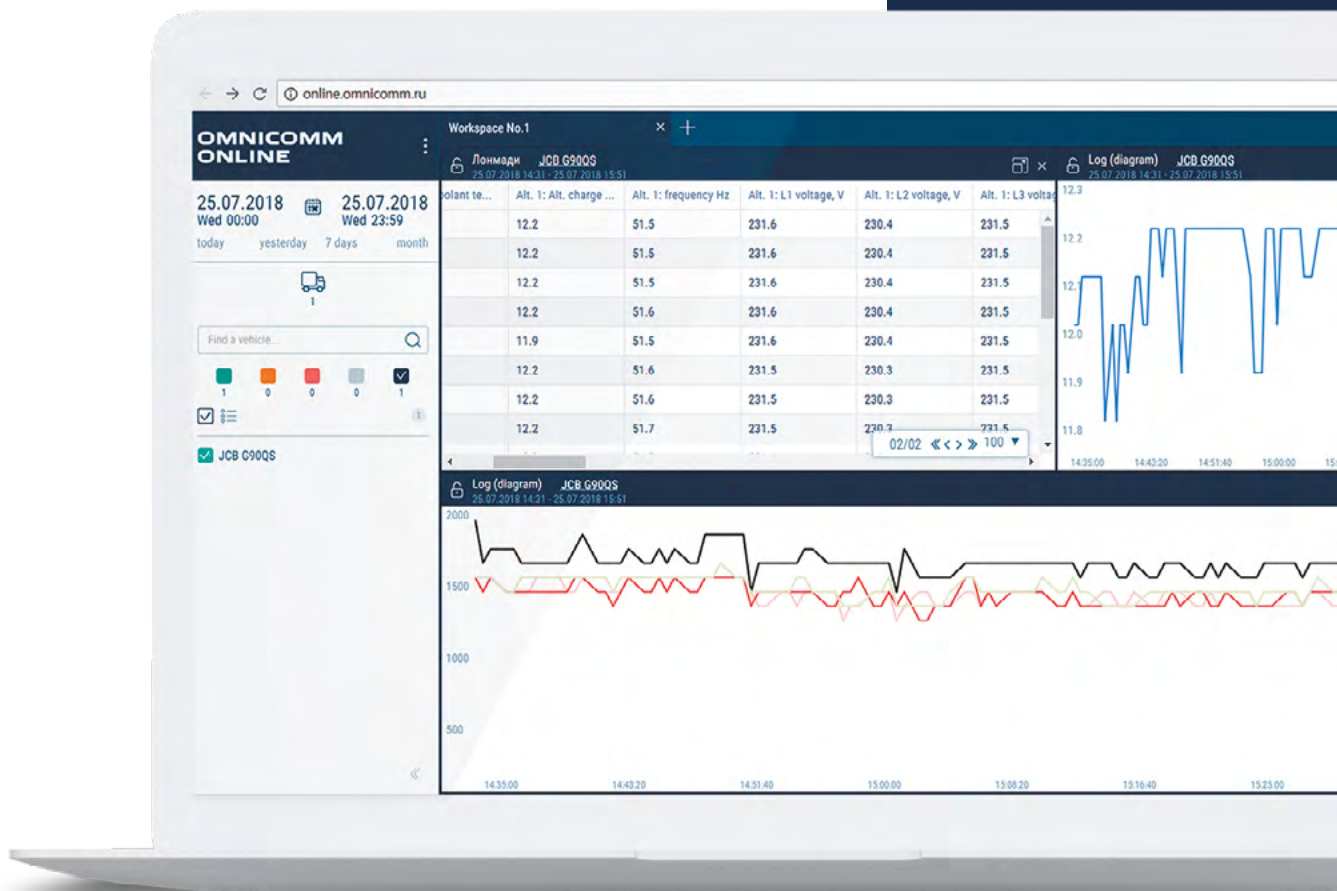


OMNICOMM Optim on-board terminal:

Collects data from the genset administration panel and OMNICOMM's fuel-level sensors, then sends it to the fuel management system for processing. OMNICOMM terminals are fully tested for resistance to extreme temperatures, humidity, dust and vibrations.

OMNICOMM Online :

A cloud-based SaaS fuel and fleet management solution that includes dedicated reports for gen-set monitoring and allows access to historical and real-time information any time operators are online – including on mobile.



POWERFUL BENEFITS

// OMNICOMM gives your business a foundation for enhanced decision-making, efficiency and growth



Remote control enables operators to **turn generators on/off remotely** without being present at the genset's physical location.



Monitor fuel volumes at all times to see when refilling is necessary and detect fuel wastage or theft.



Ensure **uninterrupted operations (no dry panes)** with notifications when the fuel level dips below a specified threshold, and optimize fuel delivery planning.



Access **real-time data about genset performance** according to a wide range of pre-defined parameters, making it easier to schedule maintenance or replacements.



Find out immediately when monitored parameters change, enabling **predictive maintenance**. Operators can fix minor issues before an emergency happens.



Monitoring makes it possible to **analyze the genset load** and pinpoint low-performing generators that are increasing the load on others.



Streamline maintenance planning with notifications (monitoring of engine hours and alerts when next maintenance is due).



Genset manufacturers can install OMNICO MM equipment in generators directly from the assembly line to offer customers added value and convenience.

Almost any parameter can be monitored with OMNICO MM solutions, according to the customer's specific requirements. These are just some of the parameters that have been monitored using OMNICO MM equipment in real cases:

- Fuel levels
- Coolant temperature
- Charging voltage
- Charging current of batteries
- Output frequency
- Phase-to-ground voltage
- Line voltage
- Generator current
- Active power
- Gross output
- Reactive power
- Power factor
- Engine hours
- Total power generation
- RPM (load)



THE OMNICOMM EDGE

- **Integration with existing infrastructure.** Sensors and terminals can be added to gensets that already have another monitoring solution in place, and the OMNICOMM Optim terminal can transmit information to two systems simultaneously. MOD-BUS protocol support enables connection of the terminal to the genset administration panel.
 - **Accurate monitoring of gensets from a remote position.** Data is translated directly from the genset administration panel to the OMNICOMM Online interface, so genset operators do not need to physically go to the genset location to check it.
 - OMNICOMM Online is available **any time and anywhere** genset operators have an internet connection, including on mobile apps for iOS and Android.
 - Developed in-house by specialized R&D telemetry experts, our best-in-class data smoothing/filtration algorithm filters out data 'noise' and delivers **meaningful data**.
 - **High-precision fuel-level sensors** provide fuel level data with over 99% accuracy. Premium quality ensures a long product life with exceptionally rare failure incidents. Sensors work reliably in extreme temperatures and have a five-year warranty.
 - OMNICOMM partners get **full product training, certification, and comprehensive lifetime support**, with a dedicated technical manager for large scale projects.
 - The results achieved by OMNICOMM partners and customers speak for themselves, with satisfied customers **saving millions of USD annually**.
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REFERENCE CASES



Galooli Group



Leading vendor of telematics solutions for remote control, monitoring and security

Operates in Africa and Latin America

Commercial solutions deployed in 22 countries for over 1,500 corporate clients

Fitted 2,000 diesel generators with OMNICOMM LLS fuel level sensors to prevent power outages and identify fuel theft at remote mobile base stations in Uganda.

- Cut fuel consumption by 34% over two years, resulting in a decrease in average fuel costs of 30-40%, with a total of 5 million USD annual savings.
- Fuel theft decreased by more than 30% after installing OMNICOMM sensors, due to increased ability to identify incidents, methods and persons responsible.
- Co-location billing from OMNICOMM provides a higher and more efficient revenue stream, and makes it easier to identify fuel fraud due to false invoicing.

REFERENCE CASES



Silver Spark Apparel, Ltd.

Garment manufacturer in India serving export markets

4 garment manufacturing plants across Bangalore

Subsidiary of Raymond, Ltd., making formal clothing

Equipped generators at a manufacturing plant with OMNICO MM sensors to eliminate machine downtime due to outages and satisfy audit requirements for fuel monitoring.

- Reliable reports on fuel levels available at all times in cloud-based software, reducing monitoring time of operators from 40 minutes to under 10 minutes.
- Fuel-related downtime to be eliminated. The cost of installing OMNICO MM fuel-level sensors can be recovered by avoiding just one such incident.
- Accurate low fuel warnings optimize the holding of safety fuel stocks, allowing Silver Spark to reduce overhead fuel storage tanks from two to one.




OMNICOMM enables remote control of high-value commercial assets to transform your business.

Want to see how OMNICOMM can work for you?

**SCHEDULE A DEMO WITH
ONE OF OUR LOCAL PARTNERS TODAY.**

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