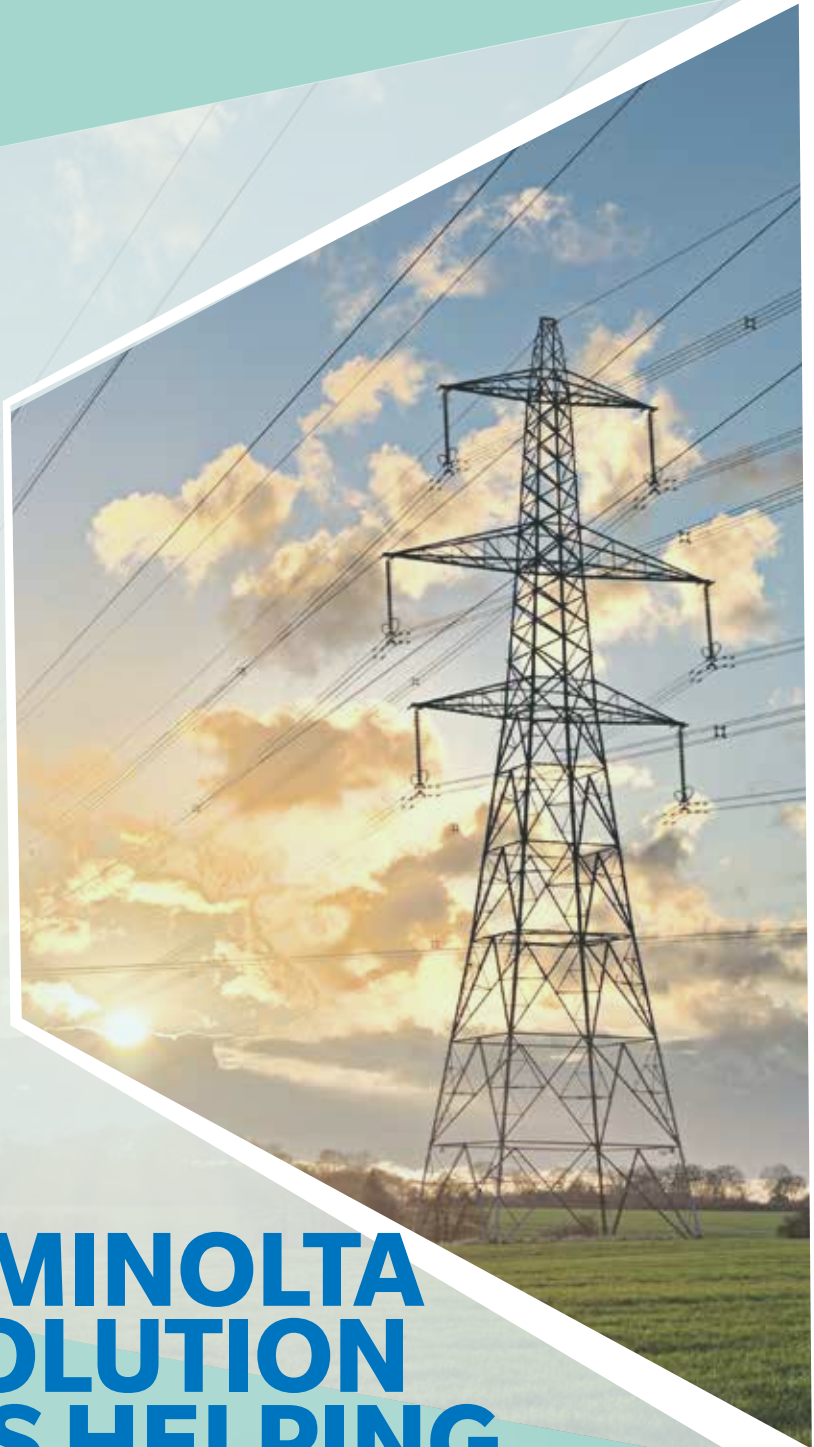




KONICA MINOLTA



**KONICA MINOLTA  
VIDEO SOLUTION  
SERVICES HELPING  
POWER GRID  
OPERATORS CUT  
COSTS AND IMPROVE  
POWER NETWORK MANAGEMENT AND  
ENERGY TRANSMISSION**

Giving Shape to Ideas



## EXECUTIVE SUMMARY

Power grid operators are set to save time and money with new surveillance technology for overhead power lines, using a new monitoring system developed by a European power company and using Konica Minolta Video Solution Services. For the first time, operators will have live, real-time video images of critical infrastructure from surveillance devices attached to power lines.



## CUSTOMER PROFILE

A power company in Europe, providing grid operators with world-class solutions for monitoring, analysing and optimising grid infrastructure.

## CHALLENGES

As society switches from fossil fuels to more electricity, demand on power infrastructures increases significantly, so power grid operators need to maximise network capabilities. But protection against threats like fire, line icing and extreme environmental conditions in remote areas make monitoring network integrity challenging. Surveillance and security operations are based on regular visual inspections – sometimes requiring helicopter fly-bys - which are costly and time consuming. Spotting instant threats like fire are particularly difficult. Using

video surveillance technology has, until now, been almost impossible because of power requirements in areas where there is no access to electricity. Installing diesel, solar or wind generators is costly and only for the most challenging locations. Even then, such systems do not produce enough power to ensure optimum CCTV performance. Often existing monitoring and CCTV equipment used in harsh environments does not last very long.



## SOLUTION

A new grid monitoring technology using Konica Minolta Video Solution Services (VSS) has been developed by a power company in Europe, to dramatically improve access and cut surveillance costs by over 90 percent. For the first time, it gives power grid operators real-time surveillance images from equipment located directly on overhead power lines.

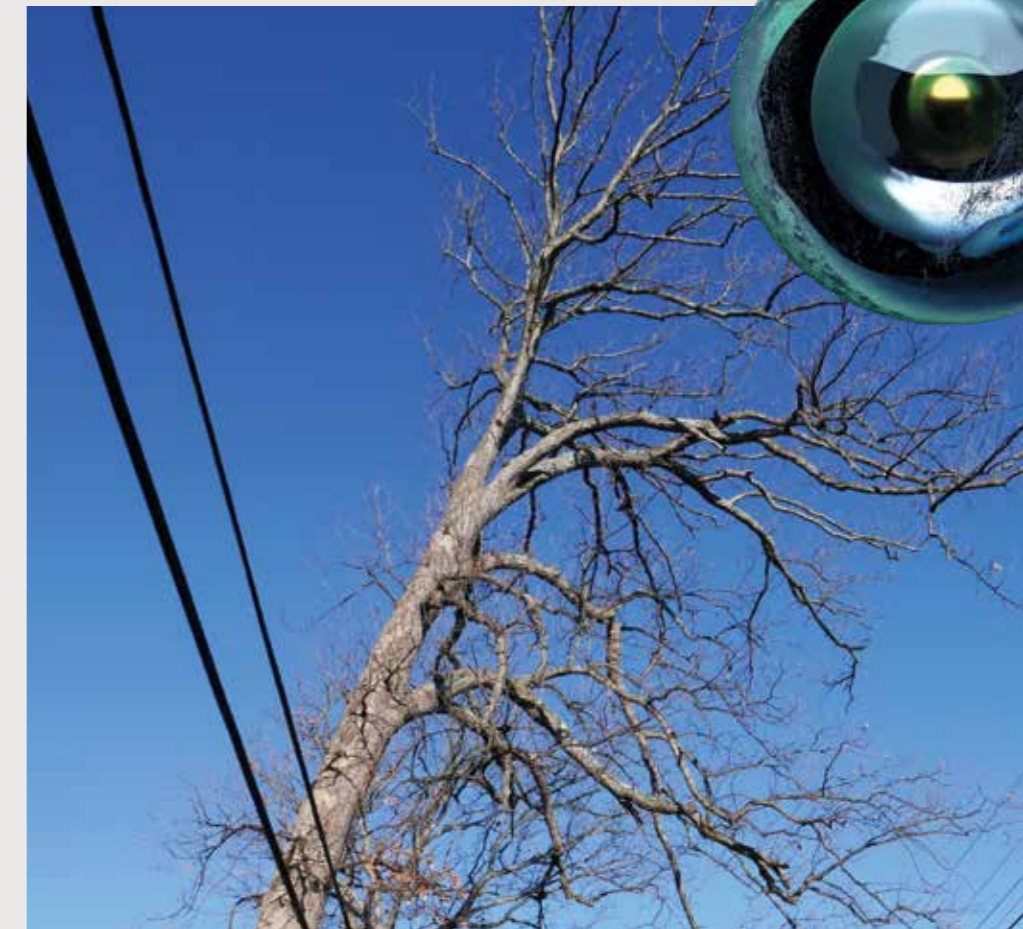
The solution is designed to withstand the high-voltage and electromagnetic fields that prevail on power lines. It uses Konica Minolta VSS cameras and other sensors to monitor power cables, pylons and the immediate environment for damage and threats like fire, ice or fallen trees.

Besides image quality and clarity, Konica Minolta VSS cameras are very durable especially in harsh conditions. The cameras are fibreglass, so do not corrode or interfere with conduction and, with other components, cut the number

of moving parts making the system less likely to fail. It has camera heaters which mitigate freezing and lens fogging due to moisture.

Regular visual inspection can be with remote, 24/7 video surveillance, making costly and difficult onsite visits redundant. If an on-site inspection is required, real-time video can check if conditions are safe. Video data is also used to review incidents for future prevention and proactive rather than reactive maintenance. Depending on application, the system uses several Konica Minolta VSS cameras including high-resolution, 360-degree ones with night vision and fish-eye lenses. The company is also testing thermal cameras for fire event detection.

Significantly, the system generates power from the electromagnetic field surrounding the power line using induction. This removes the need for a separate power source.



## BENEFITS, RESULTS, ROI, FUTURE

With Konica Minolta VSS, the company is helping power grid operators cut costs and improve power network management and energy transmission rates. Alongside trial projects with European grid operators, the company is working with multiple other operators around the world to test the system.

It has also established an ongoing partnership with Konica Minolta to develop and enhance the system with advanced capabilities such as thermal imaging cameras, to detect wildfire risks and helping operators leverage big data and video images for intelligent, AI-based network management.

The company estimates that the system can last for up to ten years before it may need replacing and according to estimates from grid operators, the solution saves over 90 percent of installation costs compared to current solutions.



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## LET'S TALK

Contact us to find out how we can support, protect and optimise your business today and in the future:

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