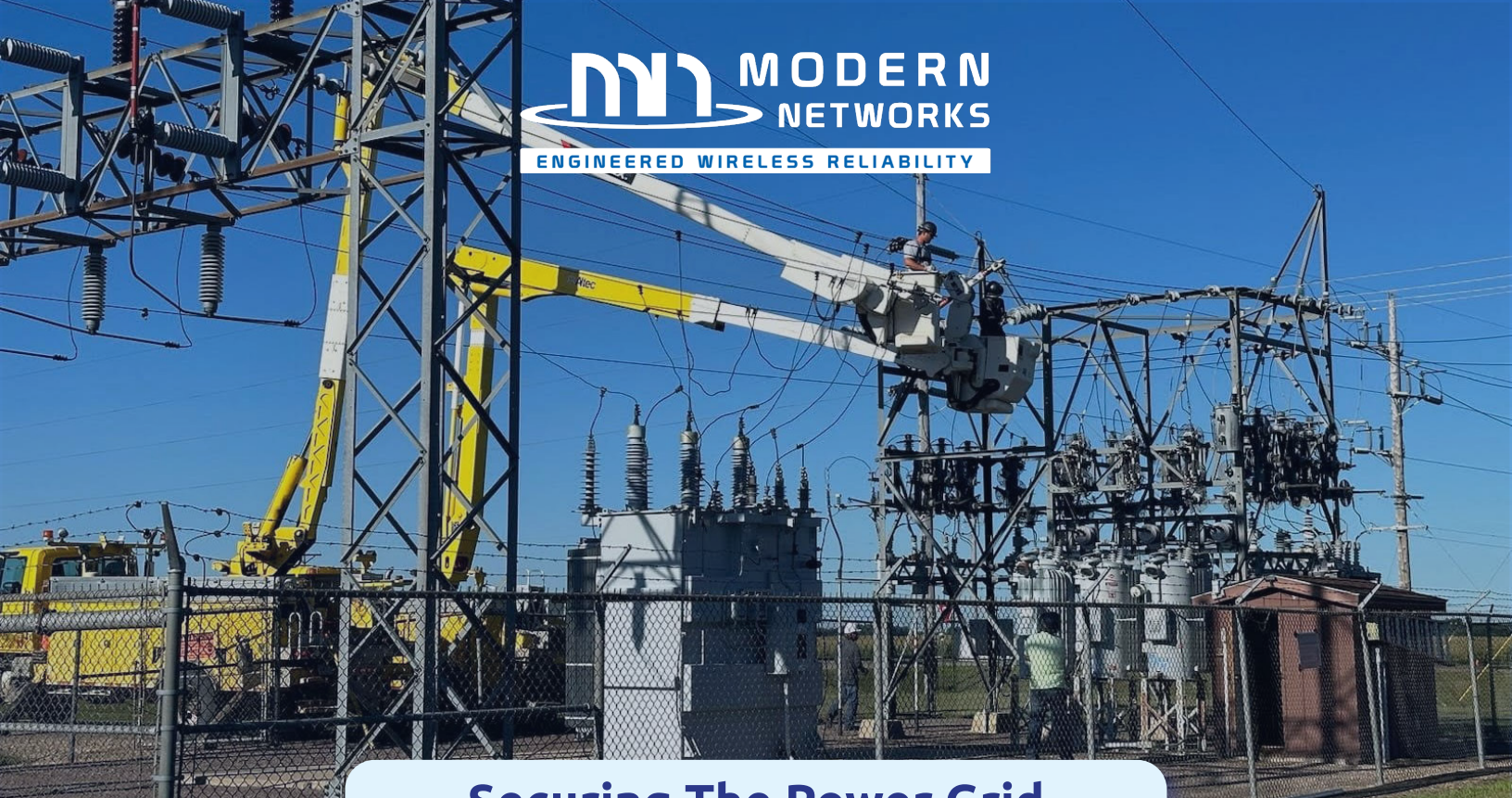




Securing The Power Grid

BACKGROUND

Minnesota Valley Cooperative Light and Power (MVCLP), a small but critical utility provider, is a member owned rural electric cooperative. With about 5,500 members, MVCLP services three counties in West Central Minnesota. As a critical service that delivers the only power to its area, robust security is a necessity. MVCLP initially contacted AT&T FirstNet, which is a network dedicated to emergency services and utilities, to replace an older communication system for its smart metering and control systems. FirstNet recommended Sierra Wireless' (now Semtech) AirLink RV55 routers to provide industrial-grade wireless communications, but MVCLP needed help designing and implementing a highly secure network that combined hardware, software, connectivity, and security to expand its smart city initiatives.

THE CHALLENGE

MVCLP worked with the professional services team at Sierra Wireless to design and deploy AirLink routers on the FirstNet network to its power meter systems and remote substations, forming the backbone for its smart city infrastructure. However, as a small utility with limited manpower, it was a struggle to continually optimize and maintain its network. When Sierra Wireless' professional services division disbanded, MVCLP was left without the necessary technical support to securely maintain and expand its network.

"Normally, I like to get into the nuts and bolts, but with Modern Networks, I don't have to. I know that they have it handled. We have never had a failed communications line or outage, but even if I did, I know the team at Modern Networks would be there to get us going again. It is a true partnership with white glove service."

– Don Snell, Minnesota Valley Cooperative Light and Power



THE SOLUTION

Upon discovering that the core team from Sierra Wireless' professional services had formed Modern Networks, MVCLP turned to them for expert guidance. Modern Networks:

- Designed and implemented a virtual private network (VPN) using the IPsec protocol.
- Leveraged the AirLink Connection Manager on RV55 AirLink routers to enhance security and simplify operations.
- Identified and resolved security gaps, ensuring MVCLP's network remained resilient against potential cyber threats.
- Streamlined installation procedures, making future deployments more efficient and scalable.
- Assigned a team to co-manage the network and provide critical maintenance and deployment services.

RESULTS

The partnership with Modern Networks transformed MVCLP's network security and operational efficiency. Through Modern Networks efforts:

- MVCLP's secure deployment process was simplified, allowing it to confidently expand its network.
- Improved security measures were put in place that completely isolated the network from the Internet, bringing peace of mind to MVCLP and its members.
- The utility's router installations have grown by over 5x, with several new routers deployed every month.
- Ongoing network maintenance and support is expanded, ensuring MVCLP remains positioned for future growth.

CONCLUSION

By partnering with Modern Networks, MVCLP overcame critical networking challenges, fortifying its infrastructure for long-term success. With a simplified, scalable, and highly secure network in place, MVCLP is well-equipped to continue its expansion and further enhance its smart city capabilities.

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