

RENEWABLE ENERGY SECTOR PORTFOLIO OF SERVICES

Designed, delivered and supported by EMR Integrated Solutions



KEY SERVICES

- In-depth telecoms audits
- Telecoms infrastructure design
- Best-in-class hardware and software deployment
- Microwave, satellite, fibre and GSM connectivity
- Cybersecurity
- Full managed services with pro-active network management and monitoring

RESILIENT UTILITY NETWORKS

High availability data from your wind and solar farm assets is critical for trading floors and grid management.

Having a trusted telecommunications partner that can deliver your mission-critical comms infrastructure projects on time, on budget and to stated operational objectives is invaluable. That's what we do at EMR across onshore wind, offshore wind and solar.

Secure, robust and resilient utility networks are in our DNA and we have a strong track record of working with clients, both large and small, in the renewable energy sector.

From the design and build of secure network infrastructure to the management and monitoring of critical field assets, we cover every aspect of the service lifecycle, giving you peace of mind that your generation assets are delivering the critical data you need to keep your energy business running, around the clock.

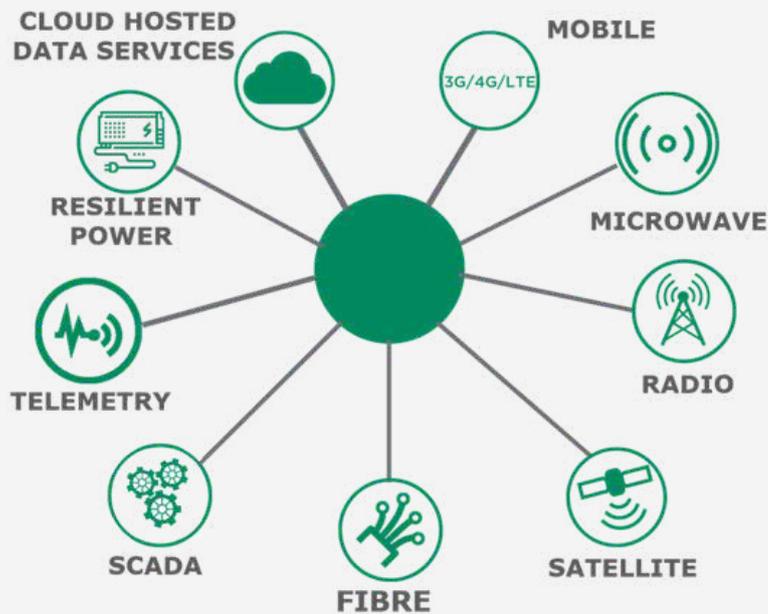
NETWORK DESIGN SERVICES

Underpinned by principles of resiliency and security

Our project engagements typically begin with a full, on-site telecommunications audit. Here we analyse communications connectivity and perform a gap analysis.

A detailed set of recommendations follows with a structured migration pathway that enhances security posture and minimises network downtime.

Network design is conducted by our senior architects, professionally accredited and suitably trained to the highest industry standards.



Standardisation of devices across the estate is often a key requirement. To achieve this, we deploy best-in-class hardware and software solutions that enhance cybersecurity, deliver reliable connectivity with automatic failover and reduce IT administration overhead.

We have strong relationships with telecoms service providers and will recommend best bearer networks for each site. We also deploy satellite and/or microwave connectivity for the most remote locations.

Assets can be controlled remotely without the need for on-site intervention and this allows energy providers to participate in optional downward flexibility management programs such as those currently running in the UK.

Customer Success

The EMR team has completed network infrastructure upgrades at windfarms across the UK and Ireland for Greencoat.

The service involves auditing and upgrading windfarm communications infrastructure to ensure that Greencoat has full visibility and control over its assets in the field.

"I have confidence in EMR as a trusted partner. We're an investment house, not an IT company and so we have to rely on a network of trusted partners who are our eyes and ears on IT issues. Our success is based on EMR's ability to understand our needs and the agility to execute on those needs."

Javier Serrano, Asset Manager, Greencoat UK Wind



Customer Success

EMR was selected by Enerco Energy to upgrade the communications infrastructure at its portfolio of windfarms nationwide. The upgrade provides a secure, robust and resilient communications network allowing Enerco's energy trading desk to have 'always on' access to reliable windfarm data and meet its regulatory reporting requirements to grid operator, EirGrid.

Stretching from Mayo to Cork along the western seaboard, the EMR team performed a discovery exercise at each windfarm and issued a set of network design recommendations, based on telecoms availability at each site.

Licensed microwave radio and fully redundant satellite backup links with automatic failover were deployed, mitigating the risk of network downtime.

A multi-layered information security solution was configured, protecting the integrity of sensitive trading data as it traverses the internet.



NEXT GENERATION UNIFIED THREAT MANAGEMENT

As the sophistication of cyber threats increases, so too does our effort to protect the integrity of your mission-critical data. Our secure, firewalling solutions identify thousands of applications inside network traffic for deep inspection and granular policy enforcement.

They protect against malware, exploits, and malicious websites in both encrypted and non-encrypted traffic.

"With every project engagement, mitigating cyber risk through improved security posture is a core objective for us."

Alan Feenan, Sales Director, EMR



Full visibility into users, devices, applications across the entire attack surface and consistent security policy enforcement irrespective of asset location



Application aware routing with in-built SD-WAN capabilities to achieve consistent application performance and the best user experience



Built-in advanced routing capabilities to deliver high application performance with encrypted IPSEC tunnels at scale



INSTALLATION AND COMMISSIONING

EMR's fully trained and certified installation and commissioning team are adept at delivering communications solutions to remote utility sites in the harshest of environments.

Connectivity solutions include high speed WAN links via fibre, microwave radio, and resilient satellite connectivity.



As part of our tailored build packages, our team have also delivered firewall technology, switches/routers, SIP telephony, GSM boosting and monitored UPS back-up power to numerous renewable sites.

Our skilled team have extensive experience working on renewable energy projects throughout the UK and Ireland, which include Ireland's largest wind farm, and some of the largest offshore wind farms and solar sites in the UK.

"Our team works in some of the harshest environmental conditions. Yet our culture of stringent health and safety underpins everything we do."

Derek Glynn, COO, EMR



Customer Success

The EMR team recently completed a communications project for the Greater Gabbard offshore transmission assets, located off the coast of Suffolk in the UK.

The upgrade involves the deployment of 100 Mb resilient microwave radio links, specifically designed for marine applications. The links, located at two offshore substations will transport vital plant information, including wind turbine data, ensuring uninterrupted operational data to the onshore transmission SCADA system.

EMR recommended the use of Advanced Space Diversity technology which uses fewer antennas for microwave connectivity than traditional Space Diversity.

Three antennas, rather than the traditional four provide a hybrid system with two separate paths. If one path is degraded due to tidal effects, the system immediately switches to the second path without any alarm or interruption. This provides reliable traffic pass-through of data as well as quicker deployment and more cost-effective project costs.





Professional project management delivered by our dedicated PMO

Our formal project management office (PMO) with dedicated management and team handles project delivery for our utility customers across Ireland, UK and Europe.

Our PMO provides a blend of overarching project direction and ongoing control. It serves as the central communications hub between senior management, supervisors, engineering, sales, finance, service, logistics and the customer.

"Our multi-project management processes closely tie into EMR's existing ISO quality, environment and health and safety procedures, generating significant reductions in project cycle times."

Mchael Quinn, Head of PMO, EMR

Strong industry partnerships that bring you best-in-class technology

The team at EMR will always recommend the best strategic fit for your technology project. We work with best-in-class software, hardware, cybersecurity and connectivity vendors, whose solutions we have rigorously tested in the field.

Our strong industry partnerships give you preferred access to pre- and post-sales technical resources, where required.

We also continually invest in the technical skills of our staff, and detailed training plans for individual staff members ensure continuous professional development, giving you anytime access to the experience and expertise required for project completion.

FORTINET

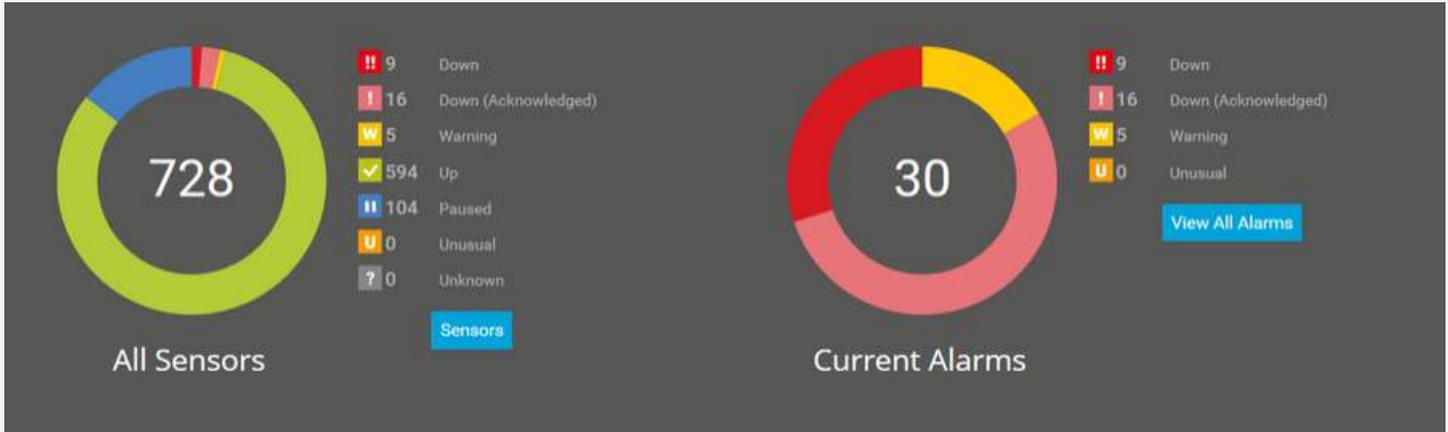


NEC

TELESPAZIO
a LEONARDO and THALES company

MANAGED SERVICES

Proactive network monitoring and escalation



- ✓ Proactive managed service designed to pre-empt technical issues and ensure swift resolution
- ✓ Promotes maximum network uptime of field assets
- ✓ Advanced threat management to enhance the security of utility networks
- ✓ Liaison with third-party providers to provide speedy problem escalation
- ✓ Detailed incident reporting for compliance and governance requirements

"Customers appreciate our NOC services, as it gives them the confidence and assurance that operationally their assets are running as required. Any system outages are immediately responded to and escalated to the relevant third parties as required."

Alan Feenan, Sales Director, EMR