Realise Energy Services

SUMMER NEWSLETTER

REPOWERED TURBINES – MAKE SURE IT COMPLIES!

Realise Energy Services are wind energy specialists dedicated to delivering a comprehensive range of high-quality wind turbines and associated services to support the design, supply, installation and ongoing service and maintenance of your repowered turbine project.

We believe how you repower your site will depend on a number of factors and there are a range of options possible as turbines with larger rotors are constrained to operate consistently at 225 or 250kW. It must be remembered that most NIE connections are 415V whilst some larger turbines operate at 690V. These will either need to be capable of being reconfigured to operate at 415V (e.g. Vestas V39) or a 690V/415V step-down transformer situated in the base of the tower will be required (e.g. Vestas V47 & V52).

In order to continue to comply with NIE G59 requirements, the turbine's generator will need to be modified to have a maximum capacity of either 225 or 250kW, depending on the site capacity. This requires re-distribution of the generator's internal copper windings and will be carried out prior to installation. Realise Energy Services have partnered with Northern Ireland's leading NIE-approved specialist to provide this service as part of our repowered turbine solution to customers. This will ensure your turbine meets NIE's G59 requirements whilst maintaining the original main components within the turbine.

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Realise Energy Services are also a NIE-verified supplier and installer of the SCADA and reactive power control solutions needed to comply with NIE SSG SCADA and grid code compliance obligations. As well as being able to offer this solution separately to our customers whether you are repowering or not, we can also include it as part of the repowered turbine solution if needed.

With significant interest and demand for larger turbines to repower existing operational sites across Northern Ireland, post installation support is crucial for maintaining high investment returns and ongoing compliance. Locally-based service and maintenance support and turbine monitoring, and an All Inclusive O&M contract which acts as both a warranty and service contract in one, is therefore an important part of any repowered offering. Such a package results in a "wrap-around" service ensuring a secure and reliable turbine solution that will ensure ongoing compliance with all necessary parties.

If you would like to speak to the Realise team about repowered turbine options or SCADA and reactive power control solutions, please contact us on 0800 042 0251 or email at enquiries@realise-energy.co.uk or simply fill out the enquiry form on our website www.realise-energy.co.uk

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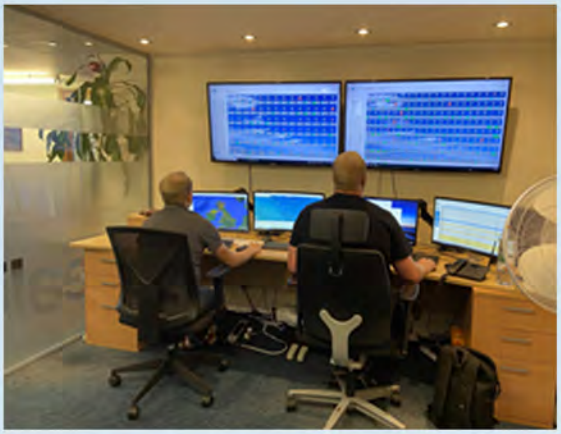
Northern Ireland – New Premises

With the acquisition of Optinergy NI earlier this year, Realise Energy Services now have a new office and store in Omagh, Northern Ireland. While our technicians are still located across Northern Ireland, ensuring we can respond quickly to any unscheduled events at our customer's sites, the new premises mean we can manage and store a wider range of parts and consumables improving efficiency and performance.

Omagh



Perth

New Operational Control centre in Perth HQ

As the Realise fleet continues to grow rapidly, the Company has recently invested in a new operational control centre in our Perth HQ. Our dedicated operational control staff are able to monitor and control turbines across the UK from the centre enabling us to identify and respond to any issues quickly to minimise downtime and optimise performance of our customers' assets.

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NIE SCADA and Reactive Power Control Installation

In 2019, NIE began to roll out a programme of changes to the electricity network in order to meet changing power quality requirements and deliver a stable grid for Northern Ireland. The first stage was designed to address the SONI grid frequency requirements and affected small scale generators of all sizes. Following the onsite adjustments to individual generators' G59 relays throughout 2019/2020, this has now been completed.

However, the second and third stages (the NIE Supervisory Control and Data Acquisition (SCADA) Implementation Programme and, where necessary, the installation of reactive power control equipment) are now underway, and all generators of capacity greater than 200kW will have received recent information from NIE in relation to this programme.

In January 2021 NIE required turbine owners to confirm that they had received the SSG SCADA Implementation Letter and had engaged and appointed a Verified SCADA Installer (such as Realise Energy Services).

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Following completion of this, there is now a period of time to carry out the installation of the required SCADA and, Reactive Power Control equipment which, once installed by a verified installer, will be signed off by NIE following the process below:

- Verified SCADA Installer to supply and install the Scada/Remote Telemetry Unit (RTU) and Reactive Power Control equipment in the substation in conjunction with NIE and in line with the NIE SSG SCADA Setting Schedule.

- Once installed, the SCADA Installer will contact NIE Networks to establish a communications link to NIE Networks SCADA Control System and liaise with NIE Networks to perform a SCADA Site Acceptance Test (SAT). This will determine if SCADA has been installed correctly at your generator. The SAT will ensure all required data and control signals are successfully communicated.

- On confirmation of successful installation and that the equipment meets the required reactive power control specifications/performance, a SAT Certificate will be issued to each generator following successful SCADA Implementation.

NIE will allow up to 2 years for generators to install SCADA and Reactive Power Control equipment due to the sheer number of sites involved and the practicalities of all generators being able to meet these obligations and NIE to sign off on them being compliant in a reasonable timeframe.

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As a Verified SCADA Installer, Realise Energy Services are pleased to offer SCADA and Reactive Power Control solutions to suit turbine and site-specific requirements which is set out in the following quotation.

The solution offered by Realise Energy Services has been in development since 2011 and over the years different configurations have been tested to find the most effective and efficient solution. There are already quite a number these of units fitted and tested with NIE Networks, some of which have been operating for an extended period of time. We are not aware of any system which has been as extensively and successfully deployed to date.

If you would be interested in a quotation for the supply, installation and commissioning of the NIE approved SCADA and Reactive Power Control solution, please get in touch on 0800 042 0251 or email at enquiries@realise-energy.co.uk or simply fill out the enquiry form on our website www.realise-energy.co.uk

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Accelerated Loss of Mains Change Programme (GB)

The National Grid have become concerned about the way in which a small disturbance on an individual generator can have a large effect on the surrounding grid, they therefore have instigated an industry-led programme to reduce the risk of inadvertent tripping and reduce system balancing issues by giving National Grid greater latitude with regards to system RoCoF limits. This programme is called the Accelerated Loss of Mains Change Programme (ALoMCP) and is being driven by the National Grid and the DNOs across Scotland, England and Wales.

To date, many generators will have had the settings of their G59 relay changed in order to modify the RoCoF limits. It is a requirement of the Distribution Code that all owners of generation installed prior to February 2018, and where the generation equipment is not type-tested, comply with new setting requirements. Owners of generation have to comply with the Distribution Code and have until 31 August 2022 to comply with these modified interface protection requirements.

If you have not yet had your G59 relay setting changed to comply, Realise Energy Services are able to offer a full turnkey service to customers. This includes registering the generator under the ALoMCP scheme, applying for the necessary funding to carry out the works, carrying out the on-site adjustments with an experienced team of electrical engineers and supplying records of completion once the works have been completed.

Over the next few years it is expected that the ALoMCP programme will follow similar to that of Northern Ireland, where SCADA connection to the generating station (by the DNO) and reactive power control measures may be required. Realise Energy Services are monitoring the situation closely and will update our customers when further information becomes available.

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Employee Spotlight

Conor Cassidy –
Wind Turbine Technician - Omagh

Conor recently joined our growing engineering team based out of our new premises in Omagh. Prior to joining Realise, Conor worked for a large wind farm operator, with particular focus on the older Micon and Vestas turbine platforms which Realise specialise in. Conor's all round knowledge of mechanical and electrical systems means he has fitted in well with our existing multi-skilled engineering teams.

Craig Rice –
Wind Turbine Technician - Perth

Craig joined one of our Perth based teams of technicians at the end of 2020. Having completed an apprenticeship at Michelin in Dundee, Craig has a solid theoretical and practical understanding of electrical control systems as well as mechanical and hydraulic components, all of which have proved transferable into the wind industry.

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Industry News

Turbine Replacement under the Feed-in Tariff (FiT) Scheme

Ofgem have recently launched a consultation regarding the treatment of replacement generators on the FiT scheme.

Under the current rules, if all generating equipment is removed or replaced, this may impact the FiT accreditation. In cases where the installation is considered decommissioned following replacement, Ofgem will at present withdraw the FiT accreditation. This consultation recognises that as generators get older, the likelihood of complete repair or replacement increases. Therefore, through this consultation, Ofgem propose to now clarify their approach to the replacement of generating equipment and provide additional guidance to FiT generators on what equipment may be replaced without affecting accreditation.

The consultation can be found by googling: Consultation on FiT replacement generating equipment Ofgem. Ofgem invites stakeholders to provide feedback on the proposed changes with the closing date for providing comment being the 4th August 2021.

If you are interested in replacing your turbine without affecting your accreditation, please do get in contact.

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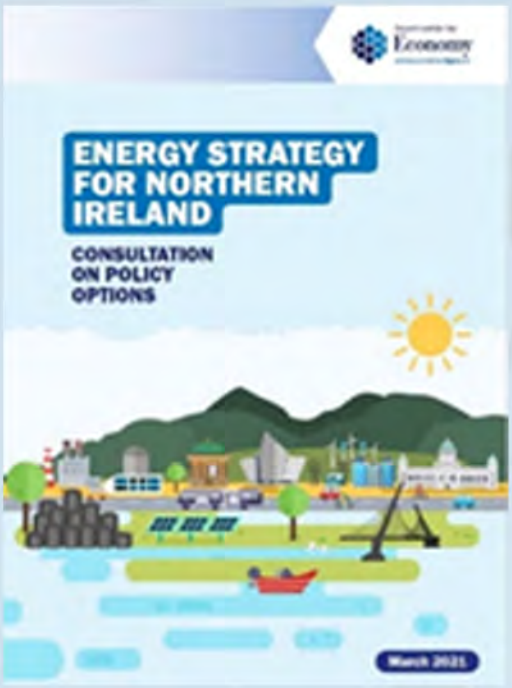
NI Energy Strategy Consultation



In March 2021, the Department for the Economy ("DfE"), published a consultation paper on the options for an updated energy strategy for Northern Ireland. The consultation sought the views on a number of aspects of the energy landscape, including decarbonisation pathways for transport, residential heating, and power generation.

In response to this consultation, Realise has supported the preparation of a report entitled: "An analysis on the future role of Distributed Generation in Northern Ireland". This independent report was commissioned by Renewable NI and written by KPMG on behalf of the distributed renewables sector in Northern Ireland1 to support the Renewable NI Energy Strategy response to the consultation.

The report's findings support continued engagement between industry and policy makers, highlight the benefits of distributed generation, the opportunity to optimise existing assets and provides an economic argument for the development of further distributed assets in the region.In addition, the Renewable NI Energy Strategy response itself also highlights how the distributed generation sector can play an important role in achieving several policy objective including decarbonisation, diversified generation risk, rural job diversification, grid optimisation and reduction in fuel import reliance.

The Energy Strategy consultation is now closed, and a final draft is expected to be published in November 2021. Realise will highlight any key implications for induvial NI medium scale wind generators following publication in its next newsletter.

1 Distributed renewables comprise a large number of individual smaller generators that are geographically spread across the NI energy network, such as medium scale wind turbines

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Unique PPA offer for Realise Energy Services customers

Renewable Exchange enables Realise Energy Services clients to gain the best value via their digital platform.

Renewable Exchange is the leading UK marketplace for renewable generators wanting to gain maximum income for their exported power. Generators in GB can use Renewable Exchange to tender to over 30 PPA offtakers. Generators would have the option of taking a Market PPA or the Enhanced FIT Export Rate.

The Renewable Exchange platform allows you to track the value of your PPA inclusive of Power price forecast, Transmission and Distribution benefits. Allowing generators to run tenders independently at a time of your choosing using the simple platform functionality. Evaluate all bids received transparently. Then execute a PPA contract digitally via the platform with a supplier of your choice. Renewable Exchange provides a simple and intuitive platform for you to efficiently assess your options and make the best decision for your business.

Currently, Power prices are at a record level and many Generators are locking in early via the platform to secure business income.

Under the agreement, all Realise GB customers holding a valid service and maintenance contract can approach Renewable Exchange and will receive an automatic additional uplift to the power price offered. To find out more, Renewable Exchange can be contacted on:
0117 405 7931, or **contact@renewableexchange.co.uk**. Just mention Realise when speaking to them to receive the uplift.

For turbine owners in Northern Ireland, our sister company, Farm Energy Northern Ireland can offer competitive ROCs trading and Power Purchase Agreements.
Please contact the team at FENI on 028 7930 0606 or email **info@farmenergyni.co.uk** and mention Realise.

renewable exchange