**PRESS RELEASE**

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RES, ZX LIDARS AND KK WIND SOLUTIONS DEVELOP PRODUCT TO UPGRADE PERFORMANCE OF EXISTING WIND FARMS

ReLACS (Retrofit Lidar Assisted wind farm Control System) retrofits cutting-edge technology to existing wind farms and has been piloted on a TRIG project  
  
RES, the world’s leading renewable energy company, alongside ZX Lidars and KK Wind Solutions, has developed a Retrofit Lidar Assisted wind farm Control System (ReLACS) which will improve the performance of existing wind farms.

The product will be trialled by TRIG, the British investment trust dedicated to investing in renewable assets, at several of its onshore wind farms across the UK, starting with Altahullion Wind Farm in Northern Ireland.   
  
The benefits of ReLACS, which combines the expertise of the three partners in their respective fields, include modernising the wind turbine controllers and site monitoring processes and resulting in increased Annual Energy Production (AEP) whilst also reducing turbine loads, allowing for increased life expectancy. By extending the life of existing assets, there is an added sustainability benefit in keeping wind turbines operable for longer and delaying the need to replace them.

The product consists of three distinct upgrades to each wind turbine on site:

1. Turbine controller retrofit – retrofitting state of the art controllers onto existing operating models enables access to modern algorithms that can optimise turbine performance, reduce loads and enable advanced control and monitoring systems to be added.
2. Wind Farm Control, Wake Steering – yawing the turbine deflects the wind flow and provides overall energy gain.
3. Lidar Assisted Turbine Control (LAC) – Turbine-mounted Lidar can preview wind speeds and turbulence ahead of the turbine, providing optimised feedback that can ultimately reduce turbine loads.

**Peter Stuart, Technical Director at RES, commented:** *“Given the importance of wind power to meeting climate targets, we are proud to have supported in the development of a product that can upgrade the performance of existing wind farms. RES’ Wind Farm Control technology provides overall energy gain for turbines and optimises performance, which alongside the capabilities delivered by our partners will help to maximise the performance and lifetime of existing operating turbines.”*  
  
**Alex Woodward, Commercial Director at ZX Lidars, said:** *“This product is an exciting development for optimising existing wind farms. The Lidar capability of ReLACS provided by ZX Lidars not only optimises feedback that can reduce turbine loads, but it can also measure and validate and benchmark turbine performance. Lidars on every turbine will become commonplace and we are excited to have helped drive this ground-breaking project for the industry with RES and KK Wind Solutions.”*

**Kim Wichmann-Hansen, Chief Service Officer at KK Wind Solutions, added:** *“Retrofitting existing wind farms with the latest technology in order to increase their life expectancy is both an economical and sustainable decision. Wind power technology has come a long way, and the KK WTC6 model that is retrofitted through ReLACS gives access to state-of-the-art algorithms that deliver multiple benefits for operators of existing operating wind turbines – from rotor imbalance cancellation to optimum yaw control.”*

**Chris Sweetman, TRIG Operations Director at RES, said of the announcement:** *“TRIG is proud to be piloting this innovative product at some of our wind farms across the UK, helping to both optimise performance and extend the asset life. This is an exciting development that helps to boost wind power’s contribution within the energy mix as well as reduce the cost of production, demonstrating the benefits of an ongoing innovation within the portfolio.”*

**ENDS  
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Notes to editors:

**About RES**

RES is the world’s largest independent renewable energy company active in onshore and offshore wind, solar, energy storage, transmission and distribution. At the forefront of the industry for 39 years, RES has delivered more than 18GW of renewable energy projects across the globe and supports an operational asset portfolio exceeding 6GW worldwide for a large client base.  Understanding the unique needs of corporate clients, RES has secured 1.5GW of power purchase agreements (PPAs) enabling access to energy at the lowest cost. RES employs more than 3,000 people and is active in 10 countries.

**About TRIG**The Renewables Infrastructure Group Limited (“TRIG”) is a member of the FTSE 250. It is a closed-ended investment company which invests in renewable energy infrastructure and related technologies, with a portfolio of wind farms, solar PV parks and energy storage assets in the UK, France, Germany, Republic of Ireland, Sweden and Spain. Since its listing in 2013, TRIG has invested over £2.5bn in renewable energy generation projects. TRIG owns stakes in 83 assets across Europe, with a total net capacity of over 2GW. TRIG is managed by InfraRed Capital Partners (“InfraRed”), as Investment Manager, and Renewable Energy Systems Ltd (“RES”), as Operations Manager. TRIG’s Purpose is to ‘generate sustainable returns from a diversified portfolio of renewables infrastructure that contribute towards a zero-carbon future.’ **About ZX Lidars**ZX Lidars provides industry-leading wind lidar products, ZX 300, ZX 300M and ZX TM for wind energy and meteorological applications. These Lidars deliver accurate wind measurements in both onshore and offshore applications at measurement heights / ranges across the full swept area of the blades of modern wind turbines, and beyond. With more than 30 million hours of operation in the field and over 7000 deployments (and counting), ZX Lidars has pioneered the use of Lidar in the wind industry. The company is proud of the many world firsts it has achieved with customers including: upwind measurements from a turbine nacelle, turbine wake studies, offshore deployments of both fixed and floating wind lidar, an industry-accepted validation process, re-financing and re-powering of a wind farm, successful demonstration of measurement accuracy in a wind tunnel and total wind project financing from a lidar without need for a met mast.

**About KK Wind Solutions**

Since our founders developed one of the world’s first control systems for a wind turbine in the 1970s, KK Wind Solutions has been a leader in the wind power industry. Our hardware and software solutions are used in more than 65% of offshore wind turbines worldwide. The capabilities of KK Wind Solutions span development of state-of-the-art technologies, high quality lean manufacturing, flexible aftermarket solutions and advanced turbine monitoring services. Today, KK Wind Solutions is a part of the A.P. Moller Maersk Group as we continue to lead the green energy transition.