



# PRESS RELEASE

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## **Ricardo supports world's first solar-connected railway**

**An innovative project delivered by Riding Sunbeams Ltd, has enabled a solar array located near Aldershot, Hampshire, UK, to become the first in the world to be connected to directly supply electricity to an adjacent railway line**

Comprising around 100 solar panels, the 30kWp solar test unit is connected to an ancillary transformer on Network Rail's Wessex Route's traction system, with energy from the array set to power signalling and lights. Electricity demand data is also being gathered from six potential community solar sites in the south of England. Putting all this real-world data together, will enable analysis of how to plug in much larger solar arrays to power trains. By the end of 2020, Riding Sunbeams hopes to build and connect the world's first ever full-scale community- and commuter-owned solar farm to the UK rail network.

Ricardo's energy experts supported Riding Sunbeams Ltd, through their experience in power generation research and in connecting and monitoring renewable energy technologies into existing infrastructure. The Ricardo team is managing monitoring equipment at multiple sites, working with Birmingham University to commission and review the energy model simulating this system. The work carried out by Ricardo will enable an in depth understanding of the energy production and use from the solar array, which will be used to establish the success of the Aldershot based test unit and forecast the opportunities for application on other parts of the rail network.

Funded by the Department for Transport through a competition delivered by InnovateUK, the 'First Light' project was born out of an earlier study by 10:10 Climate Action and Imperial College London's Energy Futures Lab, which showed that connecting solar panels directly to rail, tube and tram networks could meet a significant share of their electricity needs. Crucially, the research also found that this clean, renewable power could be supplied at a lower cost than electricity supplied via the grid today - without the need for public subsidy.



Leo Murray, director of Riding Sunbeams, said "Helping to get the railways off fossil fuels in this way will cut running costs and benefit local communities at the same time as helping to tackle the climate crisis."

Stuart Kistruck, director of route asset management for Network Rail's Wessex Route, said: "We have ambitions to roll this technology out further across the network should this demonstrator project prove successful, so we can deliver a greener, better railway for our passengers and the wider public."

Colin McNaught, project director for Ricardo commented: "This is an extremely exciting project and opens up opportunities to utilize renewable energy technologies in ways not previously possible. The project has the potential to provide significant opportunities in enabling rail infrastructure operators and governments to deliver the environmental changes needed for a 'net zero' future."

The project for Riding Sunbeams Ltd, compliments Ricardo's work on integrating renewable technologies into transport, and specifically the rail sector, through a number of projects across the UK including London, Sussex, Hampshire and across South Wales.

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## NOTES TO EDITORS:

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**Ricardo Energy & Environment** is a leading sustainability consultancy, helping clients to respond to environmental challenges and opportunities around the world. Its team of over 450 staff draws on an impressive heritage supporting governments and businesses for over 40 years. The consultancy is an operating division of Ricardo plc.

**Riding Sunbeams** is a joint enterprise by charity 10:10 Climate Action and Community Energy South, set up to provide Britain's rail networks with a direct supply of community owned renewable energy. [www.ridingsunbeams.org](http://www.ridingsunbeams.org)

**10:10** is a UK based charity that brings people together to take positive, practical action on climate change. We engage citizens and communities in finding solutions that benefit the climate and their own lives too [www.1010uk.org](http://www.1010uk.org)

**Community Energy South** is a not-for-profit company set up in 2013 to support the network of community energy groups in the South East of England. [www.communityenergysouth.org](http://www.communityenergysouth.org)

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