Solar array feeds railway route in the UK

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How well is the UK doing to seal a future of solar powered trains? Will connecting solar power directly to rail networks help meet a good enough share of electricity needs? Eyes are on a pilot scheme going on now and it is designed to plug into the track near Aldershot,

A solar farm set up to power a railway line directly is making news. It's a 30kW pilot scheme, said *The Guardian*, on Network Rail's Wessex route. As of Friday, about 100 solar panels at a trackside site were to supply electricity for signaling and lights on that route.

As Gary Cutlack wrote in *Gizmodo*, this was a first in that it running trains on electricity generated specifically for the job, being solar energy , sourced from a trackside installation of panels—cutting out the electricity grid entirely.

Network Rail's resolve to adopt a greener railway is ambitious; plans are to involve spending "billions of pounds electrifying rail lines to avoid running trains on diesel," said Jillian Ambrose, *The Guardian*. Stuart Kistruck, a director for Network Rail's Wessex route, was quoted: "We have ambitions to roll this technology out further across the network should this demonstrator project prove successful."

Ambrose said the Aldershot project marked the first time a solar array was to bypass the electricity grid "to plug directly into a railway's 'traction' system."

Cutlack on Friday reported that the panel installation of about 100 in total generated 30kW of power, enough for local signalling and lighting, "as long as workmen don't start boiling any kettles."

As for solar farms supporting trains, by next year's end, a team of researchers called Riding Sunbeams has got involved. Priyanka Shrestha, *Energy Live News*: Their mission is "to explore the potential of connecting solar panels directly into electrified rail routes to power the trains." Their idea for the farm calls for one that is full-scale community- and commuter-owned.

They have been hooking up with community energy groups for

feasibility studies on six potential solar sites in the south east of England.

"Direct supply of solar power to rail traction systems has never been done. But it has huge potential—from metros, trams and railways in the UK and around the world," said the group.

Riding Sunbeams estimates solar could power around 20 percent of the Merseyrail network in Liverpool and 15 percent of commuter routes in Kent, Sussex and Wessex, said Shrestha.

India is already home to 250 trains powered by solar panels attached directly to the roof of the train, but it plans to develop its own trackside solar farms. said Ambrose.

As for the researchers behind Riding Sunbeams, they are going by their own findings that solar traction power can work and without the onus of subsidies. "Our research found that solar traction power could provide around one tenth of the energy needed to power trains on the UK's dc electrified routes every year. Not only that, but it also makes sense financially for solar farms and rail operators right now, with no need for public subsidy support. And there's huge potential to make this happen in the UK, and around the world."

Cutlack translated what Friday's pilot run meant for some commuters in the real world: "Trains running on this Wessex route leave from London Waterloo, connecting London to the south west commuter belt, so a tiny, tiny little bit of green energy has been helping trundle people into work from today [Friday], when the system went live."

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