

Five Fords, Welsh Water, UK

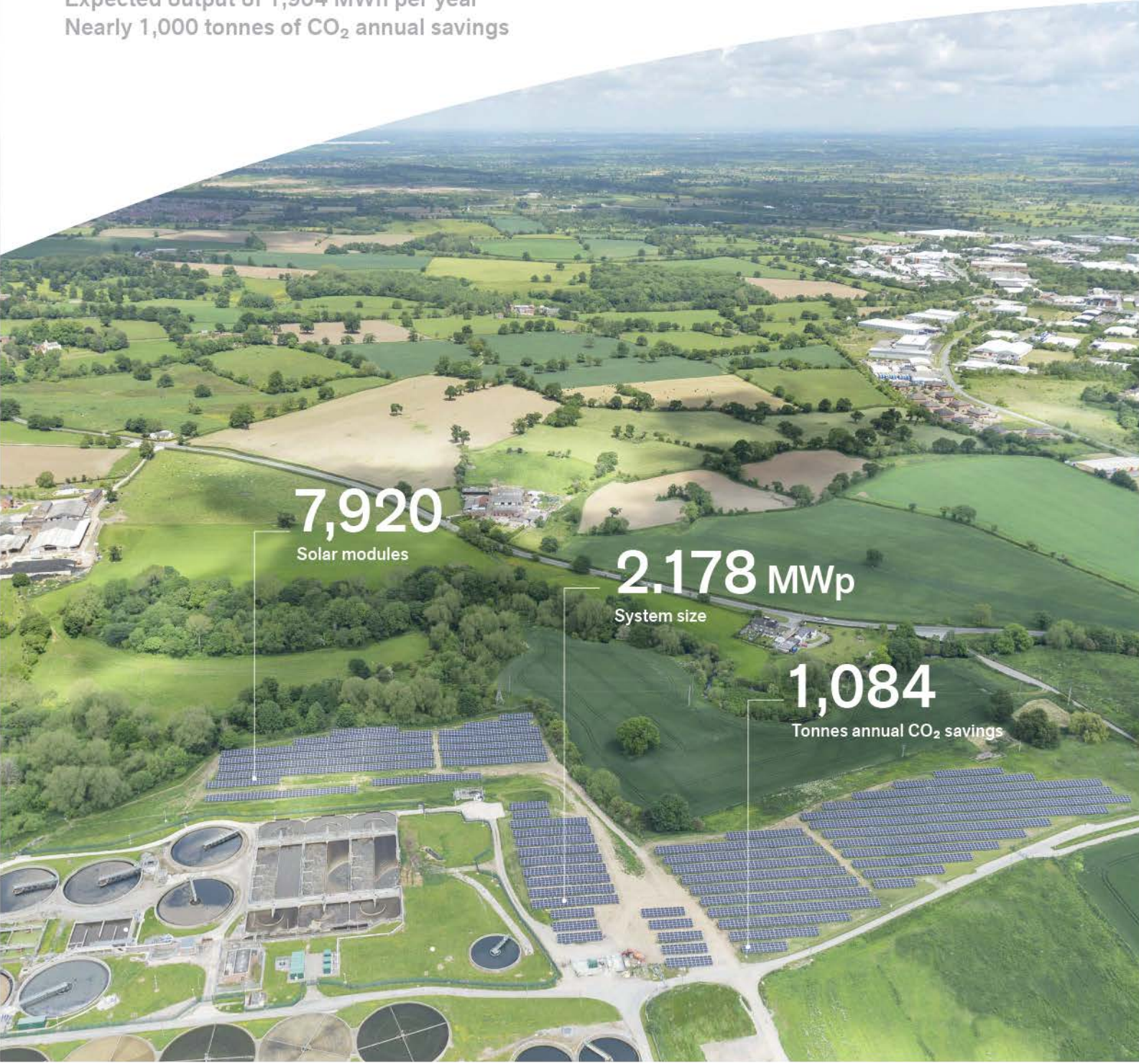
BayWa r.e. helps Welsh Water extend their green credentials

Welsh Water's largest solar PV project
Expected output of 1,904 MWh per year
Nearly 1,000 tonnes of CO₂ annual savings

7,920
Solar modules

2,178 MWp
System size

1,084
Tonnes annual CO₂ savings



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BayWa r.e. Solar Systems Ltd worked with Dŵr Cymru Welsh Water to generate solar power as part of their ambitious renewable energy plans for the Five Fords waste water treatment works near Wrexham, North Wales. The project involved BayWa r.e. supplying the whole PV system helping the company become more self-sufficient in energy generation, reducing their carbon footprint and lowering the overall operating costs for Welsh Water customers. Five Fords is Welsh Water's largest treatment works in North Wales and the solar arrays have been ground-mounted on otherwise redundant land within the works boundary. The site is a prime example of a brownfield PV development, making use of otherwise redundant land and should lead to many more similar installations across the UK. The PV installation is part of the vision to turn Five Fords into a 'Waste Water Energy Park' where it complements existing anaerobic digestion,

bio-methane injection to grid, combined heat and power generation and in future, wind and hydro power.

The combined output of the linked PV arrays will top 4.8 MW of energy generated as Welsh Water plan to extend the installation to a total of around 16,000 solar panels on other unused land within the boundary of the treatment works during 2015-16. The solar panels will have a minimum 20-year operational life and after this time will either be renewed or the land will be returned to pasture. Phase 1 of the project, which has been completed within budget, involved a 2.178 MW solar PV system supplied by BayWa r.e. Solar Systems and installed by Dulas Ltd. The current array consists of 7,920 JA Solar PV modules, 4 Fronius Agilo 460 central inverters and a heavy-duty mounting frame produced by Creotecc (a BayWa r.e. brand). This is the first Fronius Agilo 460 installation in Europe, BayWa r.e. are currently working on the second project.

"Welsh Water are leading the way in the delivery of integrated renewable energy projects. We are immensely proud of our involvement in this installation, which is part of a ground-breaking project leading the way for utility companies planning on-site power generation."

BEN ROBINSON
Business Development Manager,
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Contact

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FACTS AND FIGURES:

Industry sector:	Utilities
Customer:	Dŵr Cymru Welsh Water
Location:	Wrexham, North Wales
Installed capacity:	2.178 MWp
Module type:	JA Solar 275W PV Panels
Inverter type:	4 Fronius Agilo 460 Inverters
Mounting system type:	Creotecc Mounting Frame
Type of monitoring:	Fronius string level DC and inverter monitoring, sensor package (ambient temperature, module temperature, solar irradiation and wind)
Expected annual generation:	1,904 MWh
Expected annual CO₂ savings:	953 tons
Declared net capacity:	1,830 kW
Method of finance:	Self-financed