



## ABB drive powers irrigation system for orchard near Stara Zagora

ABB's ACS355 solar pump drive secures electricity for an orchard with an environmentally friendly solution, replaces an inefficient petrol generator.

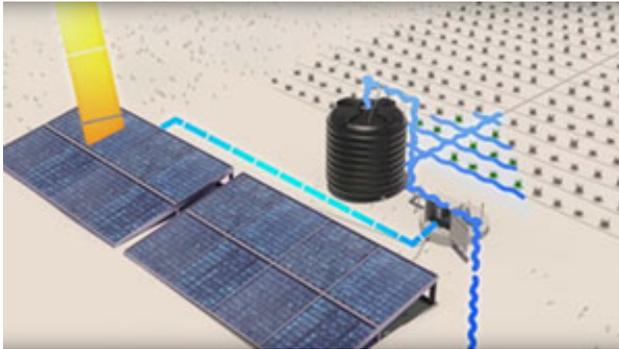


The remote location and the lack of power grid connection to the 20 acres orchard urge the owner to look for a reliable solution to power the irrigation system in its garden. The initial solution used to power the water pump with petrol generator, running 24/7 for four months every year, consuming over ten liters of petrol every day and sending approximately 718 kg of CO<sub>2</sub> into the atmosphere every month.

The solution delivered by ABB and installed by the Green Future Ltd. is replacing the obsolete petrol generator with the modern solar system, capable of delivering the necessary power to the water pump and securing the smooth operation of the garden. The ACS355 solar pump drive is monitoring the voltage level collected by the solar panels, and when the minimum required power is available, the drive provides power to AC pump motor based on available power from solar panels. Additionally, the drive has an embedded features for dry run protection and pump cleaning in reversing method to keep the pump in a healthy state. Auto Start/Stop feature eliminates the need for any human intervention and guarantees the effective powering the of the irrigation system in the orchard.

“The ACS355 drive provides extra agility and secures the irrigation of the orchard. The installation near Stara Zagora can be easily applied in other remote areas with no grid connection, where a reliable power connection is needed, “ said Gatyo Gatev, General Manager of Green Future LTD.

ABB solar pump drive, ACS355 ensures the reliable power supply throughout the day with on and off-grid compatibility, providing an environmentally friendly pumping without producing any CO2 emissions. The drives can be further equipped with remote monitoring options to reduce maintenance trips, while the maximum power point tracking functionality ensures that the customer gets the most power output possible from the solar panel and maximises the performance of the pump throughout the day.



Working principle

“The solar pump drive isn’t only a fancy piece of technology that provides remote monitoring and control. Based on the initial results from the operation of the pump, the return of this investment will be under two years,” said Georgi Popov, Application Sales Engineer at ABB Bulgaria.

The solar pump drive can operate in ranges from 0.37 to 18.5 kW/0.5 to 25 hp and has an optimized design to fit perfectly in cabinets with minimum installation time. The integrated vector control is securing the work with both asynchronous and permanent magnet motors, while the simple and visual sequence programming is making independent and repeatable operation sequences.

[Click here learn How to commission the ACS355 machinery drive.](#)



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