

PV Energy Community Case Study:

Collegepark Zwijsen Veghel, Netherlands



Collegepark Zwijsen, located in Veghel Netherlands is the result of the renovation and redevelopment of a former school into 115 apartments.

A private grid has been piloted, enabling smart supply of central solar PV and solar thermal production for apartment heating and warm water supply.

All apartments in the Collegepark Zwijsen Grid Connected PV E.CO have a mechanical ventilation with heat recovery system, an air-to-air heat pump and hot fill facilities for dishwashers and washing machines. Owners were guaranteed a zero-energy bill for the first three years.

The project has been given experimental exemption of the Electricity Law. As the project is built under local architectural rules, it has to take care of visual and architectural limitations regarding the application of solar panels and collectors.



The project has chosen to apply thin film panels that are made of glass and can be placed on the walls above the windows as solar screens. In summer the solar panels will keep the sun out of the apartment as opposed to winter, where it will allow the sun to enter the apartment for warming.

All solar PV installations are connected to the private grid, as are all of the apartments. Due to the Mandeligheid legal regulation, net metering is claimed for each apartment with its share of the central produced electricity. A demand side management system controls the main appliances in each apartment.

Additionally, a solar thermal system of 250 kWth installed on south-east and south-west oriented facades provides the additional heat for heating and warm water.

Batteries are not installed at the site and any electricity which is generated and not used by the PV E.CO is exported onto the local distribution network. The PV inverters are installed in line with the orientation and position of the solar panels. As the solar panels are placed on the buildings in different positions and locations, multi-string PV Inverters with several MPP trackers have also been installed. This allows all PV strings to be controlled individually by dedicated MPP trackers, minimizing the negative effects due to their varying orientation and inclination.