

## One of the largest floating solar parks powers 600 Dutch households



Located in a Netherlands irrigation water basin, the 1.845MW Lingewaard Floating Solar Park took an expanse of water and, in conjunction with SolarEdge, turned it into a green energy power source. Installed by Tenten Solar, the field produced 1 million kWh of energy from 6,150 panels, barely five months after installation on 31 August 2018.

The groundbreaking project was financed through crowdfunding together with funds from the province, green-energy initiatives and ING Bank. The power is distributed through a larger distributor under a local brand name; Lingestroom.

SolarEdge's commercial PV solution was proposed by the turnkey installer Tenten Solar because it is suitable for floating PV installations, which can sometimes be hampered by module ageing and module mismatch. The SolarEdge DC optimized solution overcomes these issues, working to maximize energy generation over the system lifetime.

### Key points

With the SolarEdge solution, Cooperation Lingewaard Energie benefitted from:

- SafeDC™ that reduces the DC voltage to 1V per panel\* to protect installers, maintenance personnel, and emergency responders from electrocution
- Remote module-level monitoring to track production and reduce O&M costs
- The ability to increase the energy yield over the lifetime of the floating solar system

\*Certified in Europe as a DC disconnect According to IEC/EN 60947-1 and IEC/EN 60947-3, VDE AR 2100-712, and OVE R-11-1

/"This innovation can be applied in many places in our country. For us this is the first and certainly not the last project and we are actually now setting up a second solar park on a lake in Lingewaard. As its floating commercial PV solution was so effective at the Lingewaard Floating Solar Park, we hope to work with SolarEdge again at this new location."

Pieter Siekman – Project Manager

## Pushing PV boundaries on land and now on the water

Floating solar installations are becoming more popular in The Netherlands and across Europe, as the open environment means that every ray of sunlight is captured, no valuable farming land is needed and solar panels stay cool for greater efficiency. In addition, because these installations are not land based, no erosion occurs, the panels block out sunlight so that less water evaporates and the protection of direct sunlight reduces algae growth to ensure improved quality of irrigation water.

For this project, one of the largest floating solar parks on Europe's mainland, Cooperation Lingewaard Energie, used 56 SolarEdge SE27.6K three phase inverters and 3,075 P600 power optimizers, which helped increase the energy yield by 1.5-2% and decreased string count by 50%.

The SolarEdge P600 power optimizer is specifically designed to work with SolarEdge's inverters, deliver far greater energy output and also mitigate all types of module mismatch-loss often caused by birds nesting and fouling the modules. Furthermore, the smallest-in-class SE27.6K three phase inverter delivers superior efficiency, built-in module-level monitoring and an optional integrated DC Safety Unit.



## Bringing sunshine to local waters

In The Netherlands more than 7,000,000 square meters of inland water is still available in the form of sedimentation or irrigation water basins. By setting up floating solar parks at those locations, many will continue to benefit from this viable PV option that comes at less cost to people, property, and the environment.

With that in mind, the vision of Lingewaard Energie is to ensure that current and future residents of the area should become less dependent on increasingly scarce fossil fuels and large-scale traditional energy production. To turn that vision into reality, Lingewaard Energie is looking to produce at least 20% of private energy consumption in Lingewaard (approx. 14 million kWh) by 2020 in a sustainable and collective manner and at a competitive price.

SolarEdge looks forward to supplying more of its viable floating PV systems to these future projects. For more information on SolarEdge's SE27.6K three phase inverters and P600 power optimizers, visit the SolarEdge website.



DZL project team from left to right: Stefan Peelen, Frans van Herwijnen and Pieter Siekman