

# Case Study

## SOLARCLARITY BV

### Industrial Rooftop - Biddinghuizen



Their ammonium resistance allows the Solar Frontier PowerModules to perform without any restriction in an agricultural environment, too. (Image: Solarclarity)

#### Site Overview

|                           |                              |
|---------------------------|------------------------------|
| Location                  | Biddinghuizen, Netherlands   |
| Coordinates               | 52.43 N, 5.63 E              |
| Average global irradiance | 1,026 kWh/m <sup>2</sup> /yr |
| Average temperature       | 10.5 °C, 50.9 °F             |
| Average precipitation     | 800 mm/yr, 31.50 in/yr       |

#### Technical Overview

|                            |                                  |
|----------------------------|----------------------------------|
| Date onstream              | June 2014                        |
| System capacity            | 223.2 kWp                        |
| Panel type                 | SF155-S (155 W)                  |
| Number of installed panels | 1,440                            |
| Tilt angle, orientation    | 15° / 20°, 140°                  |
| Expected output            | 176,068 kWh/yr                   |
| CO <sub>2</sub> reduction  | 117,357 kg/yr,<br>258,728 lbs/yr |
| Inverter                   | Samil Power - SolarLake 17000TL  |

#### Financing Bank

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*"As the Solar Frontier PowerModules absorb a wider spectrum of light than crystalline panels and so demonstrate better low light behaviour, they were an excellent choice for achieving the desired output on a northwest facing roof."*

*Klaas Krijgsman,  
Installer at HG Montage*

Based in Weesp in the Netherlands, Solarclarity BV is a rapidly growing, international distributor specializing in PV products, supplying installers and resellers throughout Europe and the Caribbean. Solarclarity is actively developing its profile as a partner with extensive product knowledge and industry experience. The company's main objective is to take care of the entire purchasing and supply process of PV materials for its customers, so that they can focus on selling and installing solar energy systems.

A Solar Frontier installation with a capacity of 223.2 kWp was recently put in place on the roof of this turkey farm in Biddinghuizen, the Netherlands. The owner of the farm building, which accommodates 18,000 turkeys, had the roof renovated previously and want to take the opportunity to switch to solar power for his energy needs. Consequently, 1,440 Solar Frontier PowerModules based on the CIS technology have been producing green energy since their connection to the grid in June 2014.

The farmer was especially impressed by the low light behaviour of the Solar Frontier PowerModules: the roof of the building faces northwest. For polycrystalline modules, this is often seen as a factor that reduces the yield of a solar plant. This is not the case with Solar Frontier PowerModules, which are highly sensible to light and thus able to use lower levels of radiated light, yielding more hours of operation and high yields. Thanks to the ammonia resistance of the CIS modules, the customer can also rest assured that energy production will not be affected by the keeping of animals and the conditions on site associated therewith.

#### About Solar Frontier

Solar Frontier is committed to creating the world's most ecological, economical solar energy solutions. Our proprietary CIS technology (denoting key ingredients copper, indium, and selenium) has the best overall potential to set the world's most enduring standard for solar energy. For more information visit [www.solar-frontier.com](http://www.solar-frontier.com) and [www.solar-frontier.eu](http://www.solar-frontier.eu)