

PV Energy Community Case Study:

Rudamina PV station

Vilnius, Lithuania



Rudamina PV station is located in the suburbs of Vilnius, 20 km from the city center.

The station was built privately in 2012 by the landowner to make the most of the opportunities offered by feed-in tariff (FIT) system for commercial purposes. FIT was implemented in Lithuania back in 2009.

Legislation at that time allowed developing solar power stations up to 30 kW in very good conditions. Network grid companies were obligated to connect these stations without any fees and obstacles. FIT was guaranteed for 12 years and was an attractive option with the prospect of making the return of investment (ROI) period as short as 5-6 years.

Many private people and small companies took advantage of this solar initiative and installed power stations on the roofs of residential houses and on some commercial buildings.

The price of PV modules dropped dramatically during 2011-2012, but Lithuanian Government did not reduce the feed-in-tariffs in accordance with the change. Due to this, the so called solar "bubble" started to evolve, but the arrival of a new Government brought the development of solar to a halt.

Hundreds of small (up to 30 kW) power stations are still in operation and Rudamina's PV plant is an example of this. This station still has guaranteed feed-in-tariff for the next six years, but the owners are hoping to continue producing PV electricity after the tariff has ended.

Rudamina's PV station has 120 solar modules produced by E-Ging Company with a total power of 29.4 kWp. The modules are ground mounted with 180 degrees orientation (facing South) and tilted by 40 degrees.

Every year the plant produces nearly 29 000 kWh of energy. This capacity is common for Lithuanian weather conditions. The system is equipped with multi-string inverters, irradiance and temperature sensors with effective monitoring system. This enables data of the plant performance to be easily received and makes reporting on possible malfunctions straightforward.