

## PV Modules and DC Cables Revamping

### Rooftop solar PV plants - Total power 1,52 MWp

*The LT Group, through its subsidiaries LT and LT Enerray, has been operating in the renewable energy field since 2001 offering ordinary and extraordinary maintenance services, remote monitoring, diagnostics and performance analysis for rooftop and ground-mounted photovoltaic systems, with a particular focus on safety issues.*

*Over the years, the company has grown steadily, focusing its resources on services with greater added value and investing in technology and innovation.*

*Our Case Studies are the demonstration of our transparency towards customers and the proof of the ability to obtain important results.*

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LT worked on two photovoltaic plants with specific producibility and performance (PR) values lower to the expected standards.

#### PV Plant 1 - 905 kWp

Annual estimated yield	~ 1.326 kWh/kWp
Real production in 2018	940 kWh/kWp
PR 2018	71 %

#### PV Plant 2: 622 kWp

Annual estimated yield	~ 1.350 kWh/kWp
Real production in 2018	1.085 kWh/kWp
PR 2018	76 %

From checks carried out in the field, like for example Thermographic analyses, Electrical Insulation tests, IV Curves and Induced Electroluminescence, it was possible to know the cause of the problem in the advanced state of degradation of the photovoltaic modules after only 10 years of operation.

LT has therefore decided to completely replace the photovoltaic modules with Thin Film technology with new Polycrystalline ones, that have stable performance in the long term. The smaller footprint with the same power output (higher conversion efficiency) also allows to reinstall the PV modules in areas best exposed to solar radiation.

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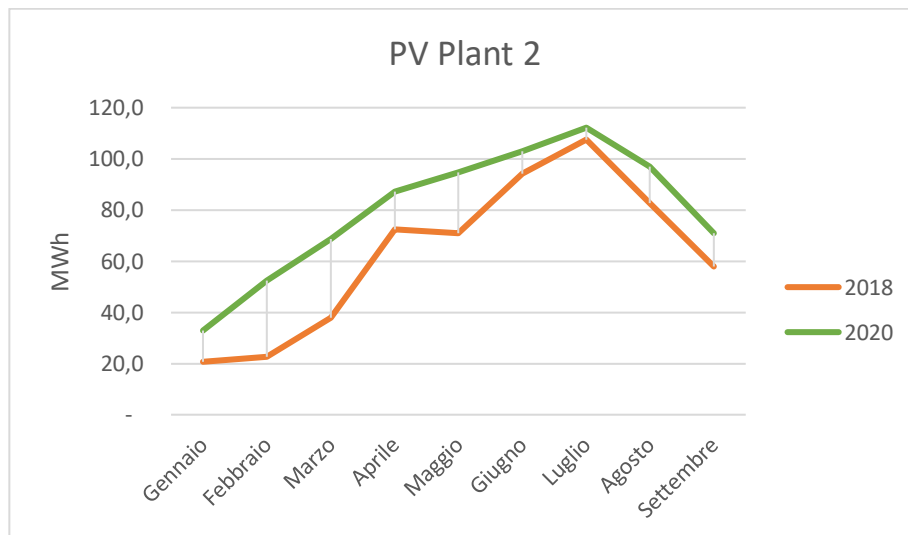
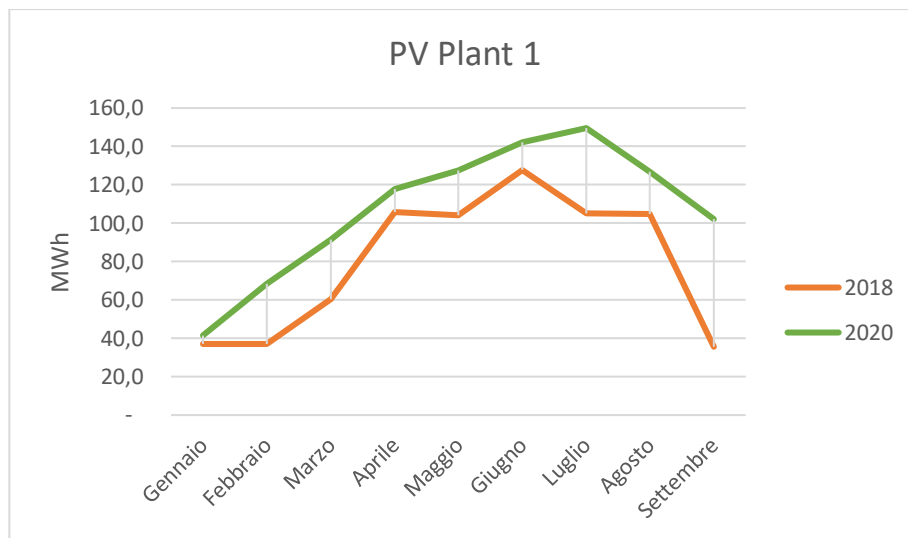
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The intervention, which also involved the replacement of DC cables, was carried out in the summer of 2019 with the following benefits on the performance of the plants:

**PV Plant 1:  $\Delta$ Production: + 250 MWh -  $\Delta$ PR: + 11%**

**PV Plant 2:  $\Delta$ Production: + 152 MWh -  $\Delta$ PR: + 13%**



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Status before the intervention



Status after the PV Modules substitution

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LT, thanks to the experience acquired on **over 500 MWp under management** and over 100 MWp realized by the same through EPC, Revamping and Retrofitting activities, can carry out specialist analysis on any type of photovoltaic system.

We offer our customers immediately relationships based on trust and transparency, with the belief that the human quality of professional relationships can make the difference.

For any information and a non-binding evaluation, you can contact us at the following addresses:

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