

SOLAR-TRAIN is an innovative project focused on durability and life time assessment of photovoltaic modules. As part of the H2020 Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks (ITN) SOLAR-TRAIN invites applications for 14 Marie Skłodowska Curie fellowships starting in March 2017. The successful candidates will join the project as early stage researchers (ESRs) for three years with the possibility to write a PhD thesis.

Kenergia Sviluppo ([www.kenergiasviluppo.com](http://www.kenergiasviluppo.com)), part of the BayWa r.e group (<http://www.baywa-re.com/en/>) is a leading provider of monitoring, management, maintenance and engineering services for PV plants in Italy. With a staff of about 50, mainly engineers and specialized technicians, we support many international clients maintaining their plants and optimizing performance and production.

As of **March 1<sup>st</sup>** the following Marie Skłodowska Curie fellowship will be assigned:

### **Causes of Degradation and Performance Improvement in a Complete PV System**

Research activities shall be focused on the analysis of data from PV systems in order to identify the most relevant effects causing degradation and reduction in plant performance, and to develop optimized methods to improve O&M activities. The research will cover the following topics:

- ✓ Theoretical study on the different causes of performance degradation and possible solutions during life time of PV systems, taking into account the set of connected things or parts forming the plant, such as photovoltaic panels, inverters, cables, transformers, connectors, sensors, ups, grid connection, etc.
- ✓ Elaboration of suitable data analysis processes for the identification of the relevant parameters out of PV plant monitoring data sets
- ✓ Case studies about the performance of PV plants, to be achieved mainly from remote through data analysis and data mining procedures, having access to a huge database of hundreds of PV plants monitored and maintained by Kenergia Sviluppo since 2009
- ✓ Setup of remote and on the field effective diagnostic methods for reducing operational costs and production losses based on the results of the above mentioned studies
- ✓ Market and technical analysis about new technologies and their effectiveness for performance improvement in PV systems

### **Your profile**

- ✓ Compliance with the mobility rules laid out in the [MSCA ITN guidelines](#): At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years
- ✓ Willingness to move countries for ESR placement and temporary secondments and to visit PV plants if needed
- ✓ Fluency in English and willingness to travel. Basic Italian would be appreciated but not required
- ✓ Higher degree in Engineering. The academic courses should have included the following courses or equivalent: (i) Electrical Engineering, (ii) Electrical Safety, (iii) Industrial plants, (iv) Renewable Energies principles, design and economics, in particular PV, (v) Basic Economics Principles and Methods (budgeting, business plan, etc.)
- ✓ Good knowledge and skills in spreadsheets and database software (ex.: Excel and Access) and familiarity with Visual Basic, MatLab, Data Mining software, SQL and Java programming. Familiarity with PV monitoring systems will also be appreciated
- ✓ Open minded, team working attitude, flexible approach
- ✓ Openness for interdisciplinary collaboration and topics

### **Application**

Please apply till **11 December 2016** according to the instructions on project website [www.solar-train.eu](http://www.solar-train.eu)

