

# UNEF Annual Report 2017

## “The global solar boom”

### Executive summary

- In the past five years the Spanish PV sector has suffered the consequences of the moratorium imposed by the Government in 2012. Since only a few new projects have been carried out during these years, the Spanish PV companies decided to expand their business and go international, opening up to new markets especially in America, Africa and the Middle East.
- In Spain the PV sector has maintained a stable activity, mainly related to the projects that were already in place before 2012. In 2015, the direct contribution of the PV sector to the national GDP was € 2,511.5 million, 0.2% of the total, while the GDP contribution of PV-related activities was € 289.8 million. Therefore, the total contribution of the PV sector was € 2.801,3 million in 2015.
- In 2015, there were a total of 7.165 jobs in the PV sector, 42% of which were performed by university graduates. In addition, 83.6% of direct employment was long-term.
- In addition to the jobs created directly, the PV sector pays taxes and social charges to the State. The balance between the amount the industry pays in taxes, and the subsidies it receives, is positive, therefore it is clear that the PV sector makes a real contribution to the national fiscal balance. Thanks to the R&D investments carried out in the PV sector, in 2015 the R&D contribution to the national GDP was 3%, while in other industries it was 1.2%.
- The situation of the PV industry in Spain can only improve in the years to come. The extent to which it will improve is determined by the regulation that will be adopted in Spain. By 2025, between 160 to 1.300 MW may be installed and there could be a total of between 12.500 and 17.000 cumulative jobs, with a contribution to the GDP of up to more than 4.000 M €.
- PV technology has increased its technological and economic efficiency in a dramatic way in recent years. The cost of electricity (LCOE) of solar PV energy has decreased by 20% in the last five years, according to the World Economic Forum. In addition, the costs of photovoltaics have fallen by 85% in the last five years. By 2020, PV solar energy is expected to have a lower LCOE than coal or natural gas worldwide.
- As for self-consumption, many projects are characterized by a level of economic and energy efficiency that is very similar to that of large-scale projects. Self-consumption has a great development potential in Spain, thanks to the cost reduction and the commitment of many regional governments to support it.

- 2016 was a very important year for the EU energy policy. The European Commission published its Winter Package "Clean Energy for All Europeans", a set of measures aimed at laying the foundations for the energy transition that should lead Europe to a fossil fuel-free economy by 2050. The key pillars of this transition include: giving priority to energy efficiency, increasing the percentage of renewable energies in the energy mix and transforming consumers into active agents of the electricity market.
- UNEFA has been participating, together with the Spanish TSO (REE) and other industry associations, to the Generators Working Group, to define the technical requirements that are needed to address the issues related to the three connection network codes.
- In 2016, several regional governments supported the development of PV self-consumption by means of subsidies to PV installations, deductions for investments in renewable energy installations for self-consumption, or tax deductions.
- The current legislation and the lack of a stable legal framework have a key impact on the development of the PV sector. According to the data published by REE, in 2016 14 MW of PV power were connected to the grid. This amount, however, does not include part of self-consumption and the off-the-grid power. As UNEFA, we estimate that a total of 55 MW were installed in 2016. This amount shows a small increase of installed power compared to 2015, even if far from the levels that are registered in other EU countries.
- Despite the challenges that exist in Spain with regards of self-consumption, many industries are already making the most of the benefits of self-consumption to save on their energy consumption costs. The regional governments that are leaders in self-consumption are Catalonia, Galicia and Andalusia.
- PV has a great potential for development with regards to hybridization, storage and integration in buildings, as well as new materials. The progress of R&D will contribute to further reduce costs and increase the efficiency of both the materials and the technology.
- Spain boasts a well-established PV industry. Micro-SMEs account for about 90% of the total companies, followed by small companies with up to 49 employees, that represent 8%. The Spanish PV companies are mainly installation companies, material distributors, engineering, consultancy and other associated services that complete the entire value chain of the sector.