

Microgrids rome

We are building and testing solutions for the future widescale rollout of hybrid microgrids. Our aim is to enhance the reliability and resilience of decentralised renewables-based power systems.

Most renewables and modern electrical devices use direct current while most grid infrastructure works on alternating current. To tackle this, our experts are designing and setting up 2 pioneering hybrid microgrids in real-life conditions and will then deploy 2 use cases to ensure replicability of the solutions.

Struggling to keep pace with the growing share of renewables, the grid is turning into a bottleneck in the energy transition. From DC integration to hybrid microgrids, how emerging technologies are tackling the infrastructure challenge

The widespread diffusion of photovoltaics is the first of the essential prerogatives to achieve the energy goals set for 2030 by the United Nations. The second is the rapid spread of Energy Communities, starting from the low voltage network, thanks to the enabling of energy sharing through the SNOCU Regalgrid.

In Italy, the diffusion of photovoltaics began in the 1970s: the first system was installed in 1979 at the Mandriola Pass. However, we have to wait until the 90s for a massive diffusion of photovoltaics, which was then further facilitated by the first state incentives, the so-called Conto Energia, starting from the 2000s. The numbers acquired greater significance towards 2009, the year of the European Directive first objectives in terms of production and consumption of energy from renewable sources (2009/28 / EC).

Since then, the spread of solar panels has never stopped and the trend continues to be positive even after 15 years. This has thus become a decisive factor for the formation of the Energy Communities approved also in Italy last March 2020.

Regalgrid has always supported and believed in photovoltaics and, with a far-sighted look, in sharing energy. For this reason, while photovoltaics entered the homes of Italians, it worked incessantly on advanced algorithms and technologies that would allow a leap into the future of digital energy and the decentralized distribution model based on smart grids.

The diffusion of Energy Communities in Italy officially started on March 1, 2020, with the conversion into law of the Milleproroghe Decree, a first milestone on the road towards the implementation of the European Directive RED II which will take place by 2021.

But Italy has been attentive and active in the production and consumption of energy from renewable sources since much earlier. In the electricity sector, GSE data show in 2005 a share of energy from RES equal to 16.3% of gross domestic consumption, which reached 33.4% in 2014, the year in which Italy exceeded the

National Overall Target 2020 (which includes electricity, heat and transport consumption) 6 years in advance, reaching 17.1%.

Since that year, both overall and electrical consumption of energy from renewable sources have continued to grow. The latest official data of the GSE reports refer to 2018, the year in which 21.6 Mtoe (Mega ton of oil equivalent) of energy from renewable sources were consumed, in terms of CFL (gross final consumption), equal to 17.8% of total consumption. Exceeding Germany and France in this clean consumption, Italy is third in Europe behind Spain and the UK.

The renewable energy source that has contributed most to reaching this production quota of electricity is the normalized hydraulic one with 42% of the total energy produced by RES; this is followed by solar photovoltaics with 20%. Bioenergy (17%), wind (16%) and geothermal (5%) also contribute.

According to statistic data, Italy is the leading country in the world for the consumption of electricity produced by photovoltaic panels and the second in Europe for the size of the photovoltaic sector, behind Germany.

Contact us for free full report

Web: <https://sumthingtasty.co.za/contact-us/>

Email: energystorage2000@gmail.com

WhatsApp: 8613816583346

