

ARTICOLO di PV MAGAZINE

Revamping Italian PV

Italy regulations: As one of PV's pioneers, Italy dove headfirst into murky solar waters without any points of reference and often under strict installation deadlines. Coupled with first generation PV components, it is hardly surprising that vast portions of the nation's installed solar capacity are less than optimum. Now, though, the authorities have introduced clear regulations designed to enable a total PV revamp.

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Since Italy closed its fifth and final FIT scheme for solar, the Conto Energia, in 2013, the domestic solar market began to naturally slow down as a result, prompting several players operating within the country's solar sector to begin eyeing the secondary market. Because Italy was a pioneer in PV adoption, this market is large and comprises all activities related to the acquisition, sale, and refinance of PV assets, as well as opportunities to improve developers' performance and as a catalyst for further opportunities to do more business.

After all, Italy had installed more than 18.2 GW of PV systems under the five Conto Energia schemes, and a good portion of this capacity was probably deployed too hastily due to the tight deadlines often imposed by the program, which ran from 2005 to 2013.

In other cases, the abrupt or anticipated closing of the schemes themselves also placed pressures on developers to rush their installations. Italy was, together with Germany, a ground-breaker in developing solar at large scale, and installers had at the time rather limited experience and skills to optimally manage all those gigawatts of solar being deployed so quickly across the country. Additionally, PV components were much less refined and advanced as they are today. The incentives granted by the first three Conto Energia schemes, on the other hand, were extremely generous, and so to secure them ahead of their expiration (or depression) date was understandably more important than having the best project planning or the maximum optimal performance in place.

Solar standards

It is still not uncommon to drive across the Italian countryside and occasionally come across a rooftop or ground-mounted PV installation that has evidently been shabbily installed, often with irregular mounting or attached under unfavorable conditions, such as in locations prone to shading or at a less than optimal inclination. Aside from these extreme cases, of course, there is also a huge number of installations that were no doubt installed properly and under good conditions, however too hastily, and thus require tightening up or optimizing – a process made that much easier and swifter due to technological developments and new planning standards. These were introduced in order to provide better power production.

In Italy, ultimately, there is a lot of work out there for specialists active in the field of revamping and repowering PV installations (and PV product providers). Over the past four years, very little was done in this field due to the lack of clear and favorable rules. Uncertainty, which is the main enemy of all good business, was really the only reason that prevented this market segment from flourishing, discouraging PV system owners from planning to restore their installations to original performance standards (through revamping) or to increase the array's power production through repowering. In fact, even attempting to improve the performance of a PV system ran the risk of a system owner seeing the cancellation of their FIT contract. The rules issued by the Italian energy agency Gestore dei Servizi Energetici (GSE) in 2015 were largely considered to be too rigid, punitive and unclear.

Liberalizing the rules

In late February this year, however, the GSE filled what for many observers was a regulatory vacuum with the publication of the [final rules for the technological improvement of existing PV installations](#) that were installed under the five Conto Energia incentive schemes.

It is interesting to note that GSE's document specifies that revamping interventions may be necessary for many PV projects due to the premature degradation of their components, but also because of inadequate design characteristics evident nationwide.

The GSE guide provides clear instructions on how to shift or replace modules and inverters, to change the regime of power sale, and to change the point ID number for grid-connection. Furthermore, the new regulation discloses that both revamping and repowering can be carried out through ordinary and extraordinary maintenance activities. Ordinary maintenance does not include the alteration of a PV system's features, while extraordinary maintenance comprises the removal and replacement of its components. Single inverters and modules or groups thereof can be exchanged or repowered in accordance with the requirements of the fifth Conto Energia. Moreover, the new rules allow PV system owners to move an array to another location, although within the site of first installation.

As for the repowering business, the GSE has allowed a 5% capacity increase for PV installations up to 20 kW, and of 1% for PV systems with a capacity over 20 kW, with the additional capacity having access to the FIT scheme. For repowering interventions that exceed these limits, a kind of intervention that has also been allowed and encouraged by the GSE in the new regulation, there will be no access to the FIT program, but there will be the chance to take advantage of the "Ritiro dedicato," a regulatory system that enables the sale of a PV system's power output on the free market by the GSE.

According to the international law firm Orrick, which has published several contributions on this matter, repowering in Italy will probably start achieving higher margins in a 5 – 8 year period. "Considering that the governments are realizing that the existing portfolios are not performing as much as they expected, and that there is an actual need to increase the energy production from renewable sources, there could still be interesting opportunities for an 'early' repowering," said Orrick in a paper published in March.

All Italian renewable energy and solar associations have welcomed the long-awaited rule change, claiming that it provides a stable regulatory framework for both revamping and repowering the sector.

Italian renewables association Anie Rinnovabili told pv magazine that GSE's new rules have finally brought clarity for this market segment, eliminating all uncertainties surrounding their business and imposing a limit to the capacity increase for the installations under the Conto Energia. The latter, the association finds, will push investments toward high technology standards because no limit has been imposed on a system's power production.

Anie Rinnovabili has also welcomed the simplified procedures to communicate with the GSE, and the "light" bureaucratic proceedings for PV systems up to 3 kW, for which no communication with the GSE is necessary. The association also praised the possibility of using spare parts (the so-called "muletti"), although only for a six month period, in the case of damage caused by fire or extended failures. According to the new rules, these spare components may also be provided by O&M companies.

Italian association Elettricità Futura has also praised the new rules, and the clarity they have brought to the Italian PV market – especially the possibility of non-incentivized repowering interventions (which exceed the limits imposed by the GSE), and of replacing modules and inverters with contemporary products.

Although the two associations and the organization Italia Solare, which represents mostly small and medium-sized solar enterprises, are currently in talks with the GSE to discuss a few critical aspects of the new regulation, everybody in the Italian solar sector seems to agree that, on this occasion, there is the chance to enjoy good business opportunities for all of the industry's players, including module and inverter manufacturers