

Bird & Bird

Solar Finance & Investment Europe

The Italian Market

Index of the Presentation

Index

- The Public Incentives Regime
- Small PV Plants – Large PV Plants and Secondary Market
- Geographical Distribution
- The National Energy Strategies (NES)
- Grid Parity for Large PV Plants
- Long Term PPA and Bankability
- Italian PV Plants in the Next Future

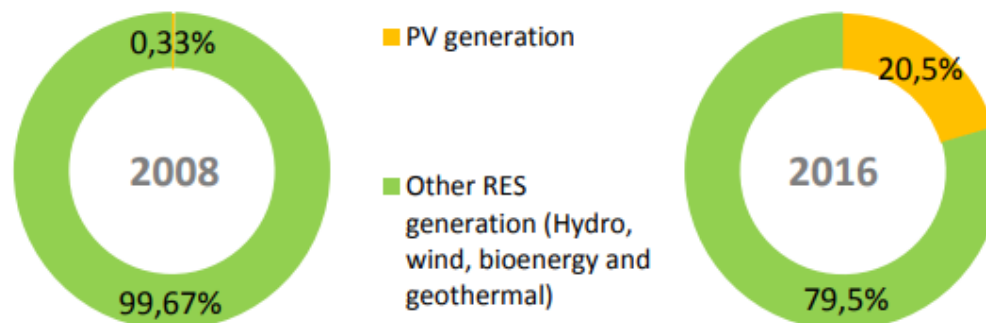


Italian Photovoltaic Market

The Public Incentives Regime – "Conto Energia"

- Over the last to decades, the Italian photovoltaic market has experienced a considerable growth.
- This was due not only to the country's favourable climate but also, and mainly, to a legal framework known as "Conto Energia" which provided economic support to the photovoltaic energy sector through the "feed-in tariffs" scheme ensuring a guaranteed payment for the electricity generated by the PV plants and transferred to the national grid.
- Such favourable incentive regime has helped the photovoltaic market growing fast in Italy and attracted small, medium and large investors. Moreover, the stability in revenues ensured by the public aids, has allowed lenders to draw more sustainable business plans when structuring financing tailored on the life-cycle of the PV plant.
- Such favourable incentive regime has come to end on 6 July 2013 when GSE (the state owned company managing the energy incentives) declared that the maximum amount established for the incentives (6.7 billions) were reached and new PV plants would have not benefited of incentives.

PV SHARE IN RENEWABLE ENERGY SECTOR: 2008 VS 2016



Italian Photovoltaic Market

Small PV plants – Large PV Plants and Secondary Market

- Considering the absence of public incentives since 2013, the secondary market on large PV plants has taken the lead over the last 5 years.
- It is also worth noting that, starting from 2012 (Italian Law Decree No.1/2012), the number of PV plants eligible for incentives has been further restricted due to the fact that access to incentives is no longer permitted for ground mounted PV plants installed over agricultural lands.

PV by size

- **91% PV plants have size below 20 kW**, with average capacity of 6 KW (668.600 plants, 3,7 GW, 20% of overall capacity)
- **60% PV capacity refers to plants with size above 200 kW** (11.780 plants, 11,4 GW, 1,6% of total number)

2016

Size (kW)	n°	MW
1<=C<=3	245.293	671
3<C<=20	423.307	3.107
20<C<=200	51.673	4.032
200<C<=1.000	10.638	7.297
1.000<C<=5.000	958	2.343
C>5.000	184	1.834
Total	732.053	19.283

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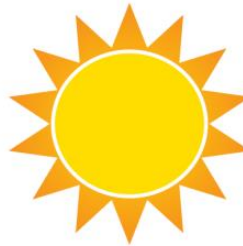
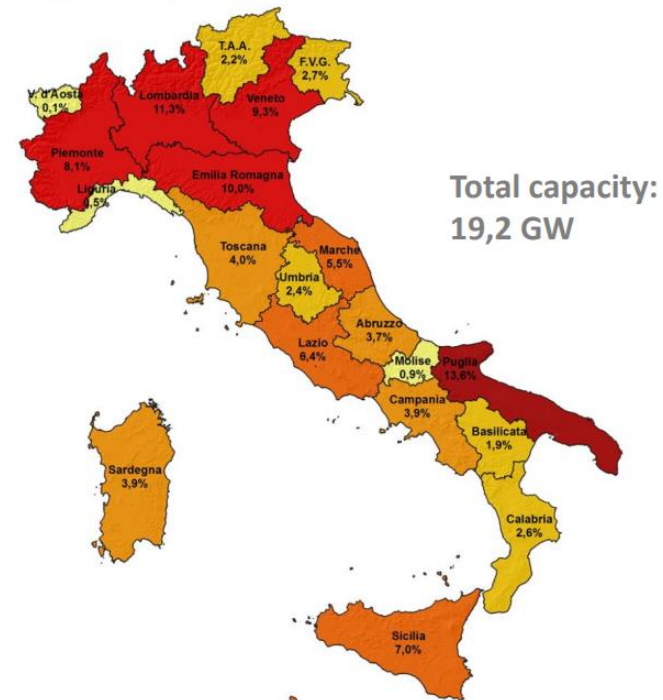
Geographical Distribution

- Despite the difference in solar radiation (+ 20% in South than North), the PV plants are located all over the country:
 - North: 54% of installation, 44% of capacity (average size 21 kW)
 - Centre: 18% of installation, 18% of capacity (average size 27 kW)
 - South: 28% of installation, 38% of capacity (average size 35 kW)

PV plants regional distribution



PV capacity regional distribution

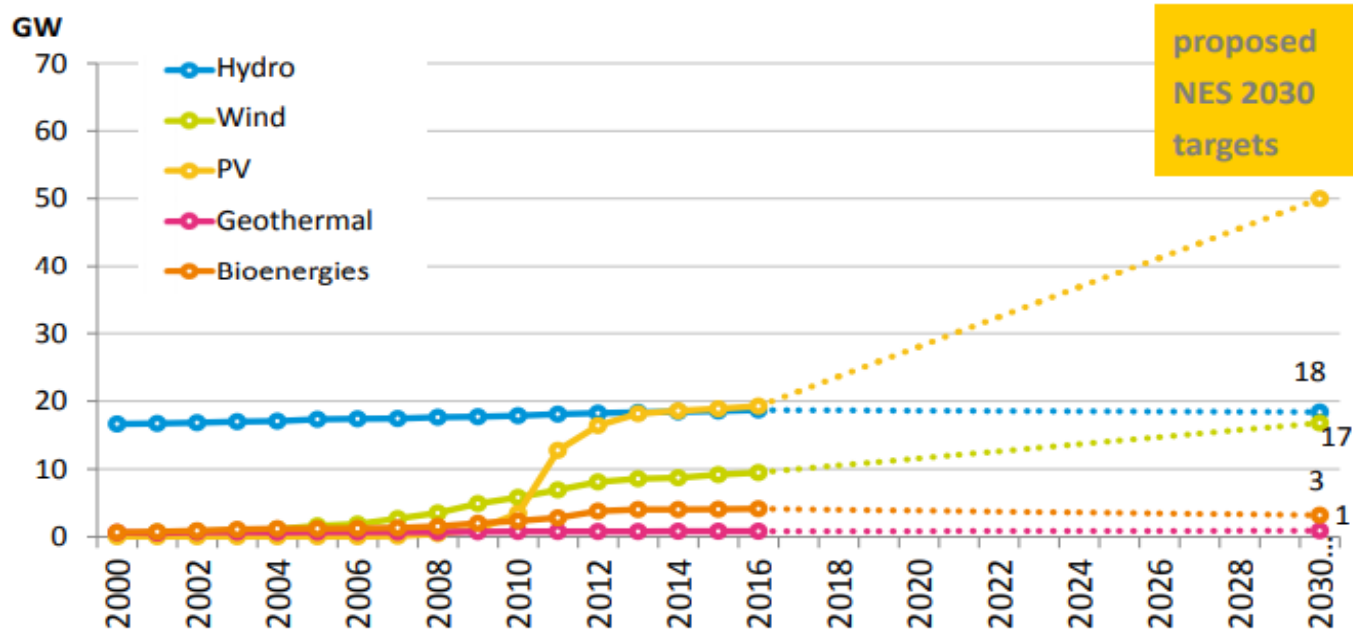


Italian Photovoltaic Market

The National Energy Strategy (NES)

- On November 2017, Italy has defined its 2030 renewable energy targets in the National Energy Strategy (NES) aiming to reach and increase the renewable energies share up to 55% in electricity sector consumptions. PV capacity is expected almost to triple by 2030.
- Meeting such growth goal would require the construction of new large PV plants in the next years and new sustainable business models based only on the capacity of the new PV plants without any sustain by public incentives.

Evolution of PV capacity (GW) and future trends



NES

The National Energy Strategy is the ten-year plan that the Italian Government drew up to anticipate and manage the change of the national energy system: a document looking beyond 2030, and laying the groundwork for building an advanced and innovative energy model.

Italian Photovoltaic Market

Grid Parity for Large PV Plants

- Without the support of the public incentives, the PV plants (especially large PV plants) must rely only on their technological capacity to produce revenues. Now that modules and inverters are technological advanced enough to ensure the Grid Parity, interest in new PV plants has risen again.
- Growth of the “grid parity” market (i.e. unsubsidised projects) is enhancing the development of long term PPAs as they represent the main source of revenues.
- In January 2018, Octopus Group and MPS completed the financing of the first large scale grid parity project in Italy which may open up a large-scale market of green projects not backed by government subsidies.

Italian Photovoltaic Market

Grid Parity for Large PV Plants

Case Study – Montalto di Castro 2018

The Montalto di Castro project, consisting of five photovoltaic plants, is a turning point for the photovoltaic scenario in Italy and Europe. The plants, with a total capacity of 64 MW, are the first project of this size with grid parity in Italy and among the largest power plants in Europe.



The Montalto di Castro Project has been structured including a long a term PPA of 5 years (a milestone in Italy)

Italian Photovoltaic Market

Long Term PPA and Bankability

- From a bankability side, Grid Parity could not be sufficient to attract lenders and investors. These players need stability above all in the business model and real chance to rely on realistic projected revenues. Long term power purchase agreements (PPA) are the way to go if medium and long term financings are what the PV plant needs.
- In this respect, banks tend to require the owner of the PV plant/borrower to execute a PPA with reliable off-taker having a minimum tenor of 7/10 years.
- In the wind sector, 10-years PPAs should soon represent a milestone for stabilizing the grid parity market on RES less programmable than PV.
- Although traders mainly offer short-term PPAs, the Italian market, starting from the experience of other EU markets and as consequence of the changes to the incentive schemes, is currently experiencing long-term PPA having a tenor up to 5 years.
- Differently from short-term PPAs, long-term PPAs allow the seller to actually transfer to, or partially share with, the buyer both the volume risk and the price risk linked to the volatility of the market.

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Long Term PPA and Bankability

- As of today, price risk is one of the main impediments to long-term PPAs. In this respect, it should be remembered that power prices in Italy climbed up to an average price of Euro 75.48/MWh in 2012 but have since fallen to a record low of Euro 42.78/MWh in 2016.
- Despite the volatility of the power pricing, the market is progressing towards longer-term power purchase agreements and both traders and electricity producers are confident that power purchase agreements with a duration of up to 10 years will be proposed to the market in the coming months (a first one was closed in December 2018 with untested provisions from a bankability perspective).
- Traders off-takers dominate the Long Term PPA Italian market and are each proposing their different PPA structures to generators and banks and in order to address price risk, off-takers offer fixed price solutions as well as indexed price or option granting the producers a certain floor. From a bankability stand point, lenders would prefer lower price and less aggressive approach (fixed floor price) in exchange of higher financial stability in the long period (no change in law provisions, clear calculation of CCT and imbalances risks).

Italian Photovoltaic Market

Long Term PPA and Bankability

- Long Term PPAs with off-taker are spreading in Italy whilst corporate PPAs are not yet common.
- Challenge on long term PPA is to ensure a pre-determined range of electricity price and, at the same time, balance the security and covenants usually requested by off-takers and lenders.

<i>Opportunities</i>	<i>Threats</i>
<ol style="list-style-type: none">1. Generator can achieve a stable price over the long-term as the corporate consumer often has more appetite to hedge against forecast rising/fluctuating power price rises. This is particularly attractive for projects financed by listed yieldco funds and project finance2. The phasing out of renewable subsidies means that Long Term PPAs offer a new route to market for Generators	<ol style="list-style-type: none">1. The price off-takers are willing to pay sets the floor and may not be sufficient to bank the project2. Creditworthiness/bankability of off-taker – a bigger issue for unsubsidised projects as the Long Term PPA will represent almost 100% of total project revenues3. The deal will need to be bankable. There is not yet a "standard" Long Term PPA – more complex to get a Long Term PPA approved by banks/investors?

Italian Photovoltaic Market

Italian PV Plants in the Next Future

How many ready to build projects for 2019-2020?

What should the Italian Government finally propose to boost Long Term PPAs to be signed and corporations to take part to the play?

Larger PV Plants trend is coming to quickly reach certain targets and returns.

Sustainability of the Grid and balancing of the reference prices are the key for choosing the right project in a development phase.

Expected IRR and type of players

SOLAR TAKES OVER

Thank you & Bird & Bird



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