Current Status and Prospects of Photovoltaic Power Generation in Italy

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• Strong Growth in Italy’s PV Market in 2007 and 2008
• Expected growth of 33% in 2009 despite the financial crisis
Incentive scheme in Italy

• Incentives were first endorsed in 2005, then updated in 2007
• The support scheme consists of:
  – a tariff (premium) for the electricity produced by PV plant (35-48 c€/kWh) fixed for 20 years
  – the value of electricity produced (selfconsumed or sold to the grid).
  – a further increase up to 30% in case of improving the energy efficiency of the annexed building
• The goal of cumulative power installed is 3 GW within 2016
• Maximum power supported: 1,2 GW + the power installed in the next 14 months
Supported power

Cumulative power (MW)

Maximum power supported
1700-2000 MW

1200 MW

14 months

?
Granted incentives

- The cost of the incentive is covered by a component of the electricity tariff structure to be paid by all consumers

<table>
<thead>
<tr>
<th>kind of plant</th>
<th>number of plant</th>
<th>MW</th>
<th>GWh</th>
<th>incentives (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>net metering</td>
<td>26851</td>
<td>137</td>
<td>177</td>
<td>79</td>
</tr>
<tr>
<td>energy sold</td>
<td>2865</td>
<td>234</td>
<td>290</td>
<td>132</td>
</tr>
<tr>
<td>total</td>
<td>29716</td>
<td>371</td>
<td>467</td>
<td>211</td>
</tr>
</tbody>
</table>

- Incentives to be granted from the end of this phase (1.8 GW): 1,000 M€/year
  - Cost increase per consumer: + 7 €/year (+ 1.3%)
  - Total investment: 8,000 M€
  - Labour places: 35,000 units
Monitoring results

• High interest of
  – Citizen: 80 % of feed in tariff beneficiary
  – Private company: 65% of the total power

• Substantial regional differences
  – less sunny northern part of the country had the most solar PV installations (50%).
  – In the south and islands only 30%

• Positive exploitation of surfaces not differently utilised
  – 75% of plants have been realized on roofs (industrial structures, private houses, schools, farmhouses)
  – Ground mounted: only 25%

• High share of imported components (85% of modules)
PV Industry in Italy

Main national producer
• Modules: 12
• Cells: 4
• Polysilicon: 3 initiatives announced (10,000 tons/year)
• Inverter: 5
Installed power and module production

![Graph showing installed power and module production from 2006 to 2009. The x-axis represents the years 2006 to 2009, and the y-axis represents power in MW. The graph displays the cell produced, module produced, and installed plants.](image-url)
Business value in Italy

- Installed plants
- Export of PV products
- Import of PV products
- Net value of PV business
Barriers in the Italian PV market

• Italian market is not booming although attractive incentives, low module prices, brief return on investment
  – Difficulties to find a way to finance the project (economic conjuncture not favorable)
  – Long times between the construction and the actual payment of incentives
  – Authorization process not uniform on the territory
  – Complicate procedures for connection to the grid
  – Grid not adequate
Barriers in the Italian PV market

Status of MV and HV grid in South Italy
- Requests of connection of large PV Plants: 11.7 GW
- Peak load: 12 GW
- Wind power installed: 4.2 GW + 3.5 GW (already authorized)

TERNA Plan for grid development
- Increase of transmission South-Nord
- International Interconnection
- Interconnection with islands
Barriers in the Italian PV market

- Low presence of energetic and environmental aspects in urban planning and in building design
- Lack of skilled workers for the design of PV plants
- Ineffective information campaigns
- Plant decommissioning (CdTe)
- Uncertainty in the medium term on
  - tariffs
  - degression rate
  - supported power
Market perspectives

• The Italian Government estimated in 2007
  – an intermediate target of 3 GW by 2016
  – a potentiality of 8.5 GW by 2020
• At present, the market is growing so fast that
  – the target of 3 GW could be reached by 2012
  – the 8.5 GW goal could be reached long before 2020 even
    with a low average growth (10%)
• A new decree (under preparation) will redefine
  – maximum power supported
  – tariffs of the PV plants commissioned after 2010
Incentive scheme proposal
(by GIFI)

• Maximum power supported: 7 GW (2011-2015)
• ongoing tariff reduction of 20%
  – ground mounted: 27 c€/kWh
  – on buildings: 30-40 c€/kWh +25% for BIPV
• Annual degression rate: 5-20%/year
• Same incentive scheme (no changing law) including
  – a fixed tariff (premium) for the electricity produced by PV plant
  – the value of electricity produced (self consumed or sold to the grid)
• PV concentration admitted
Conclusion

• With very attractive incentive scheme, Italy is today the world’s second largest PV market
• Nevertheless, the Italian market is not booming (barriers)
• In order to ensure a sustainable development of the market the future incentive scheme should:
  – be based on simplified procedures
  – guarantee an acceptable PBT
  – avoid huge windows of opportunity
  – drive price down
  – create job opportunities
Thank you for your attention