

Key Energy – Ecomondo

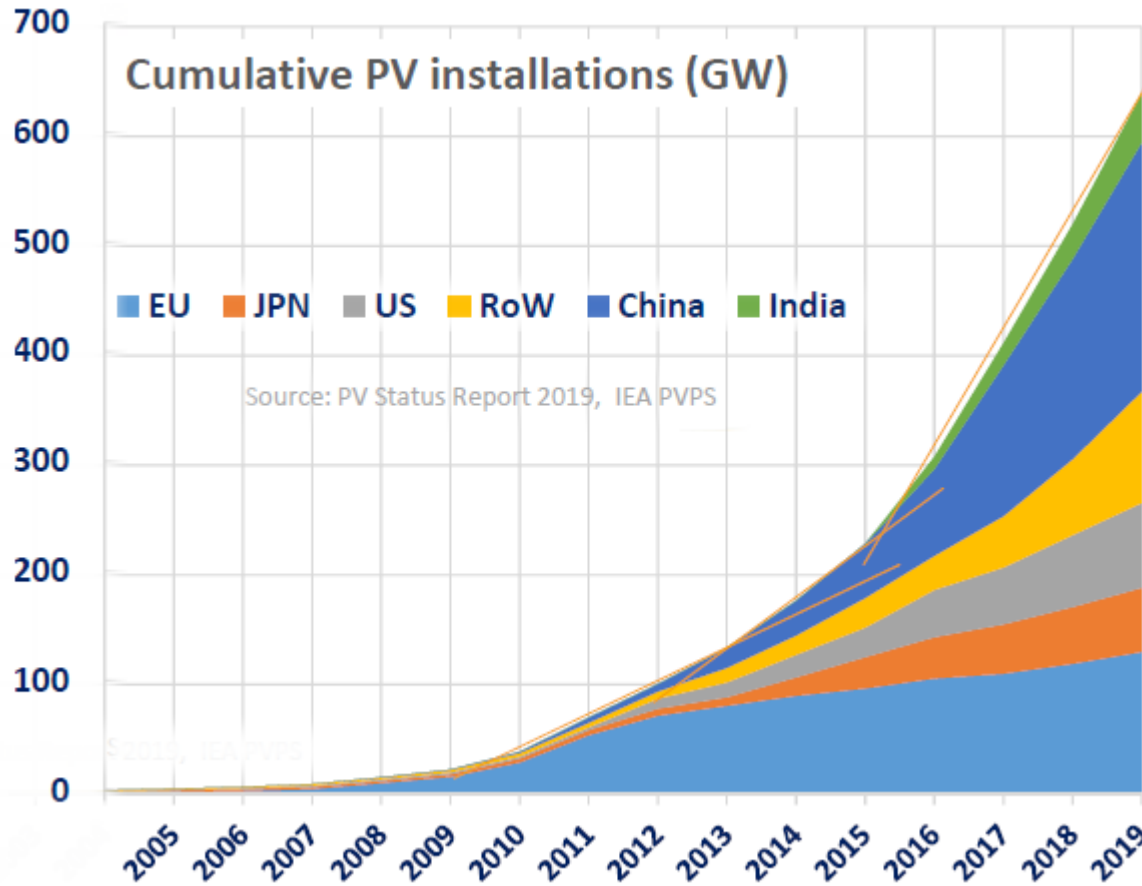
Opportunities and challenges for utility scale Photovoltaics

05 November 2020

Technology and Innovation in the Solar PV sector and its role for the Green Recovery *Debate*

Salvatore Guastella

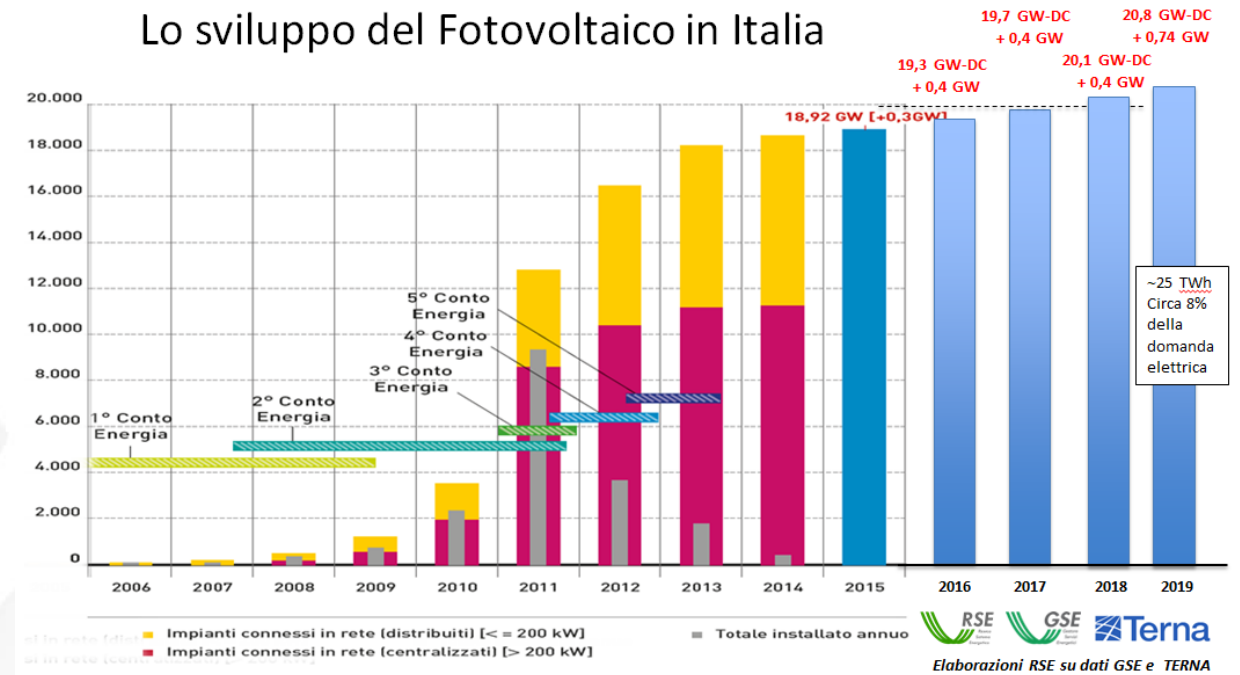




120 GW/y 2019 PV installations

Trend: 10 times more in 2050 also to achieve national ECP targets

Lo sviluppo del Fotovoltaico in Italia



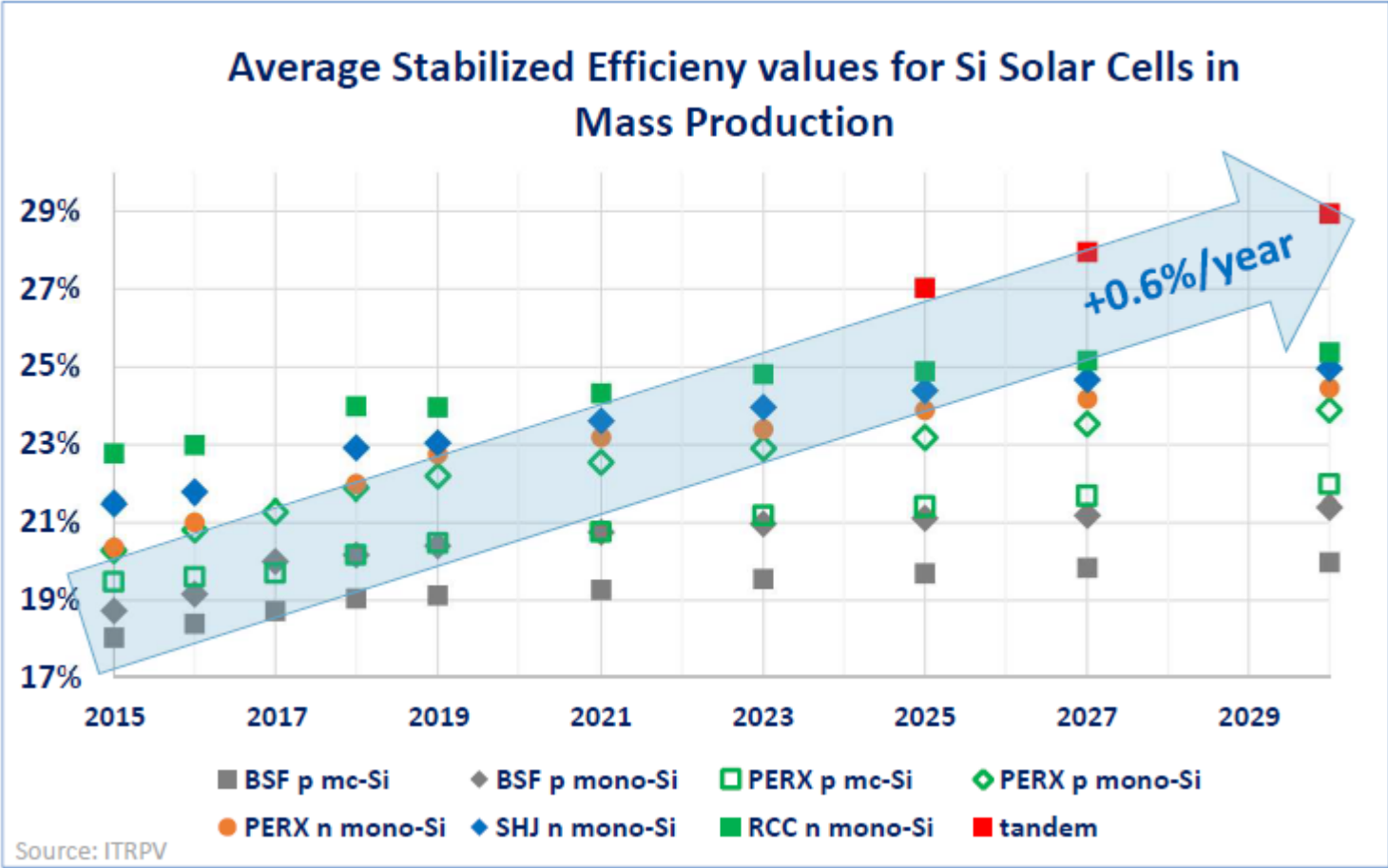
Italy: 21 GW 2019 cumulative installations

< 1 GW/y 2019 PV installations

55 GW 2030 NECP target

→ average 3 GW/y + substitutions

Efficiency of cells is increasing

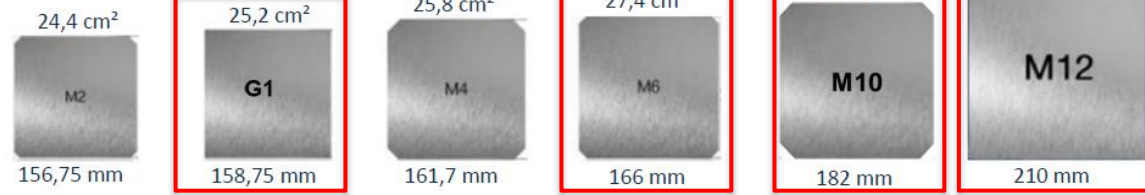


Silicon- based cells are very prevailing over thin-film ones

PV technological trends

Size of Cells is increasing
(trend 2019 -2020)

source: PV Tech



Size and power of Modules are increasing
→ 3+ m² and 600+ W

Bifacial Cells and Modules
- Same production cost

One-axis sun tracking
- Energy Yield increase

One-axis sun tracking plus Bifacial Modules
- Energy Yield increase by 27%
(Note!! It is strongly depending on local irradiation and albedo)

System operating voltage is increasing to reduce loss energy in connection lines

Distributed inverter equipped with several MPPTs is increasingly accepted

