PV development is actively slowed down: Switzerland as an example

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Prof. Urs Muntwyler, PD Eva Schüpbach (Bern University of Applied Sciences BFH)

In the last 40 years PV and windenergy evolved to the most important new energy sources. But the world of fossil energies and energy monopoles are opposing the growing importance of renewable energy sources. Most of the studies about in Switzerland overestimate solar power energy prices in Switzerland. Several studies forecast prices in the range of 8–31 Rp./kWh for the year 2050. This leads politicians and the administration to slow down the deployment of PV power in big scales in order to wait for "cheap PV electricity". But: prices for PV power in Switzerland are already today below 8 Rp./kWh.

Introduction

Several studies of Swiss research institutions made forecasts for PV electricity prices which are very high. We analyzed several PV plants which have been realized in the past years in the Swiss lowlands and compared the resulting prices with forecasted prices in studies carried out by ETHZ and PSI.

PV price [Rp./ kWh]	2010	2013	2017	2018	2019	2020	2035	2050
ETHZ Study (2012)	35-55					20-30	10-15	6-10
PSI Study (2017)			18-31					8-19
PV Velostat. 16,6 kWp		15,6						
PV Burgdorf 1,2 MWp				<5				
PV Burgdorf 100 kWp					7,3			
Coop PV 4,9 MWp					4,7			
PV installations China		7			3,7			
PV CH 2035 (Urs Munt.)							3	

Table 1: PV prices forecasted by ETHZ and PSI as well as realized PV plants in the Swiss basin and China.

Methodology

The calculation for the prices per kWh of realized plants in Switzerland include an annuity of 0.054%, return on investment of 2.5%, a lifetime of the plant of 25 years and a production rate of 1'000 kWh/kWp.
We analyzed prices for PV plants built in Switzerland over the last few years.

We also analyzed the prices for PV in China: they are dropping from year to year. The data in figure 2 is from a presentation of the Chinese delegation hold on a meeting of the PVPS Task 17 in May 2019 in Munich.

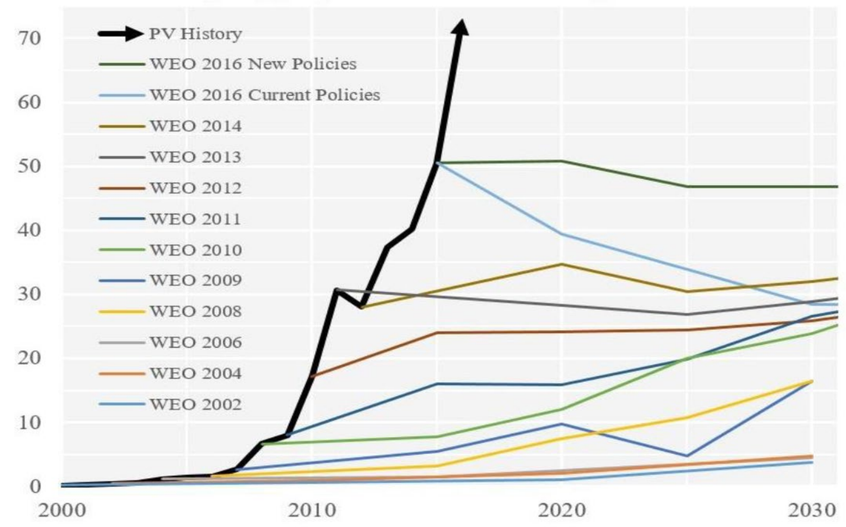

Figure 1: The IEA always forecasted a stagnating or even declining PV market – the reality proofs it wrong – since almost 20 years!

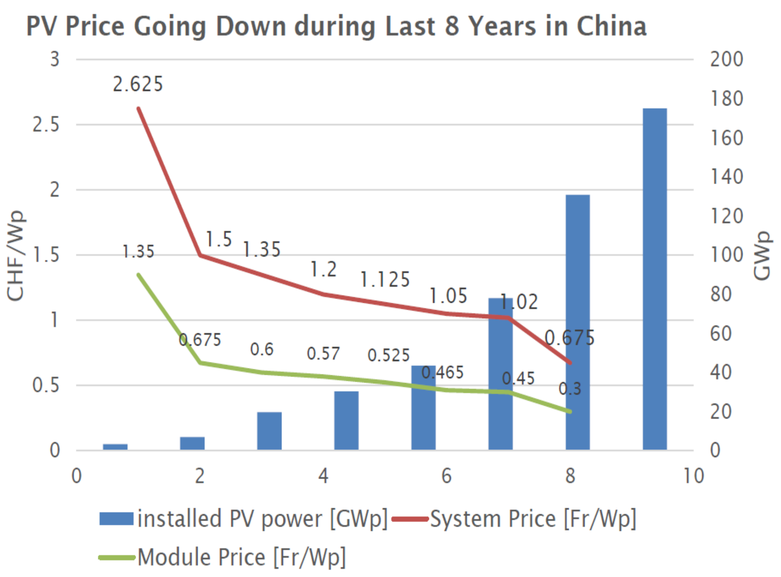

Figure 2: PV prices have been dropping in the past 8 years in China.

Conclusion

The development of PV prices in the past clearly proofs that the autors of the beforementioned studies are wrong. Even the studies carried out by international energy agency IEA are far from reality.
PV has developed far faster and better than expected. Already today prices are much lower than forecasted for 2050.

Outlook

The current price development will lead to disruptions in the power market which are not welcomed by the big energy monopolists. Prices for PV will continue to fall and cause PV to be even more competitive. Hopefully research institutions start to make more adequate price forecasts in order to enable politicians to take adequate decisions defining the energy policies of the future.

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Berner Fachhochschule

Technik und Informatik
Photovoltaik-Labor

Prof. Urs Muntwyler
Jlcoweg 1 | 3400 Burgdorf | Schweiz
www.pvtest.ch | iem.bfh.ch/photovoltaik | urs.muntwyler@bfh.ch