



BULGARIAN
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ASSOCIATION

Case Study of Bulgaria: PV Market Overview

Miroslav Toshkin – MBA

**Solar Entrepreneur, Advisor in the Parliamentary Energy Commission in the
Bulgarian Parliament, Member of BPVA**



The natural source of electricity!

www.bpva.org



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Onset of the PV industry in Bulgaria

- **First Feed-In Tariff voted in March 2008**
- **First Renewable Energy Law, voted in May 3th, 2011**
- **Very high interest from domestic and international PV developers**
- **National Electricity Company signed more than 11 000 MW in preliminary connection contracts**
- **Changes in the Law for the Protection of the Arable Agricultural Land**
- **Program for 10 000 Solar Rooftops of the Bulgarian Photovoltaic Association, goal not achieved**
- **EU Rural Development Program, subsidies PV projects on land in rural areas, high interest more than 700 projects applied, installed more than 330 projects of 0,1 MWp**



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PV Construction Boom, Preconditions

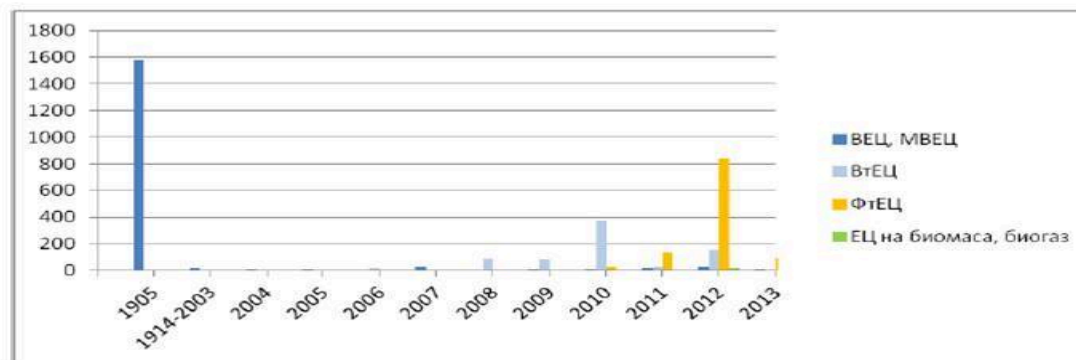
- Affordable projects pricing, high IRR, initial generous FIT
- High irradiation levels, North – 1345 kWh/sq.m./year, South 1550-1600 kWh/sq.m./year
- Weaknesses of the Renewable Energy Law – right for price change once per year
- Drop of the PV installation costs in the Spring of 2012, combined with late and inadequate reaction of the KEVR – (Bulgarian Energy Commission)
- 14% electricity price increase, lead to Political Instability and Government resignation
- PV



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Инсталирани ВЕИ мощности по години:

	Hydro	Wind	PV	Boimass
Years	MW	MW	MW	MW
1905	1581.855			
1914-2003	21.983			
2004	11.832	1.575		
2005	10.995	1.01		
2006	8.575	16.875	0.02	
2007	23.839	7.15		0.285
2008	6.469	90.385	0.48	
2009	12.684	83.81	7.1	
2010	14.946	376.405	23.5	
2011	21.594	22.8	135	5.523
2012	22.1384	153.5	843.8	15.83
2013	14.039	2.9	2.1	
TOTAL	1750.9494	756.41	1012	21.638



Инсталирани ВЕИ мощности:

	MW
ВЕЦ, МВЕЦ	1750.9494
ВтЕЦ	756.41
ФтЕЦ	1011.976
ЕЦ на биомаса и биогаз	21.638

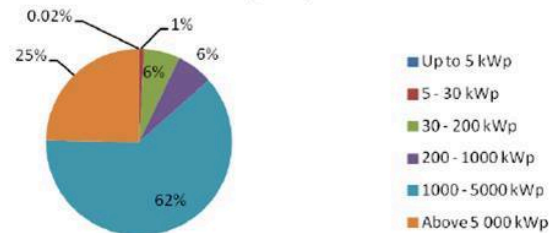


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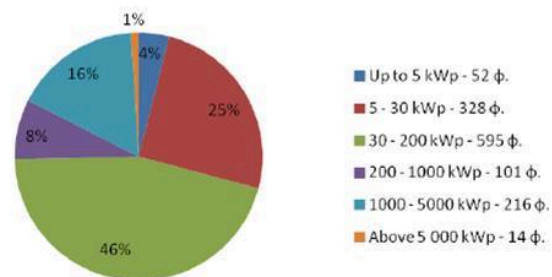
Сегментация на фотоволтаичния сектор:

	Total MWp	Number of plants	Number of companies
Up to 5 kWp	0.2	52	52
5 - 30 kWp	8.6	328	328
30 - 200 kWp	63.5	595	586
200 - 1000 kWp	63.8	101	95
1000 - 5000 kWp	625.7	216	204
Above 5 000 kWp	250.1	13	13
TOTAL	1012.0	1305	1278

Сегментация по капацитет на централите



Сегментация по брой фирми





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Future Prospective of the Bulgarian PV industry

- **16 % share of the RE in the total electricity production (2020 goal)**
- **FIT ban voted in 2015, free market pricing for PV, Independent Bulgarian Energy Exchange, commencement of the trading sessions; for more info: www.ibex.bg**
- **Market for Balancing Energy commencement in 2015**
- **Trained engineering, construction and installation personnel – more than 3000 qualified workers**
- **High irradiation, abundance of non-arable land with good conditions, affordable land pricing,**
- **Good connectivity of the Bulgarian Electrical grid, traditional electricity exporter in the area**
- **Law for investment protection, low corporate taxations, good fiscal frame**
- **Low penetration of rooftop projects for families and SME**

THANK YOU FOR YOUR ATTENTION!



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For contact: miroslav.toshkin@solarenterprise.bg