IEA-TASK 13: PERFORMANCE AND RELIABILITY OF PHOTOVOLTAIC SYSTEMS IEA-PVPS Workshop on Photovoltaic Performance and Reliability PJJ, Berlin, Gernany, September 25-26, 2008



Industry interest in PV Performance and Reliability

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Comparison of the experimental energy and photovoltaics sectors for the solar thermal energy and photovoltaics sectors in the solar thermal energy and photovoltaics sectors for a worldwide sustainable energy supply provided by solar energy CATIVITIES Lobbying, political advice, public relations, market observation, standardization TIME Over 25 years of activity in the solar energy sector MEMBERS More than 600 solar producers, suppliers, wholesalers, installers and other companies active in the solar business TEADQUARTERS Berlin

Industry Interest in PV Performance and Reliability I

- Most of the support schemes are based on the electricity production of the PV system => Customers satisfaction is depending on real solar output over the expected lifetime of 20 years
- PV module producers are usually offering a power guarantee over 25 years and have to build up reserves for it – reserves depending on the risk not to fullfill the guarantee
- The argumentation pro PV is build on the long life time of the PV systems, the PV image would be damaged if there are life time problems

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Industry Interest in PV Performance and Reliability II

- PV manufacturers are interested in having serious and comparable data on the PV output in different countries and climates since the PV business is more and more globalized
- Competition in the PV business will grow strongly due to the expected oversupply, PV companies have to prove their quality by demonstrating high PV output within PV performance benchmark tests
- PV industry need data about the performance in order to further improve their products, only serious and reliable data are comparable
- Technological development of PV is accelerating, more and more new PV technologies are on the market. PV industry has a strong need to know the output and reliability of new PV technologies in order to guarantee a fair ranking and assessment

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	Past	Future					
Demand-supply	Under-supply	Over-supply					
Industry focus	Building up production capacity	Building up markets					
Technologies	aSi, cSi – Modules	More thin film technologies, PV concentrator, tracking, metallurgical Si,					
Actors	PV producers, whole saler, institutes	New: project developers, system integrators, monitoring companies, investors					









Share of Solar Electricity in Germany						
Share of PV electricity						
- of electricity consumption 2007:	0.6% (2006: 0.44%)					
- of renewable energy electricity 2007:	3.5% (2006: 3.1%)					
Distribution of Renewable Energy Electricity Production in Germany 2007						
	Photo voltaics 3.0 TWh; 4%					
Wind energy	Bio energy solid					
38.5 TWh; 48%	6.6 TWh; 8%					
	Bio gas					
	8.9 TWh: 11%					
l otal RES electricity	- F					
production	Bio energy liquid					
2007: 86.7 TWh	1.2 TWh; 2%					
RES share of	Geothermal					
electricity	0.1 TWh; 0.1%					
consumption: 14.3%	Source: BEE, Jan 2008					
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Support Programs of Important European PV Markets

		Feed in Tariffs 2008 [€ct/kWh] Support programm	Market size 2007	Market size 2008 estimated			
	Germany	35.49 – 51.75	1100 MWp	1350 MWp			
	Spain	23 – 44	518 MWp	1250 MWp			
	Italy	36 – 49	50 MWp	150 MWp			
	France	31.19 – 57.19 50% tax reduction, max 8000/16000 €	45 MWp	150 MWp			
	EU	Draft of the directive of the European Commission was published on 23 January 2008, target: 20% renewables until 2020, PV: continuation of national support schemes					
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