

Photovoltaic

Why Solar? Why Bergen?

Emerging technologies and their impact on
the society

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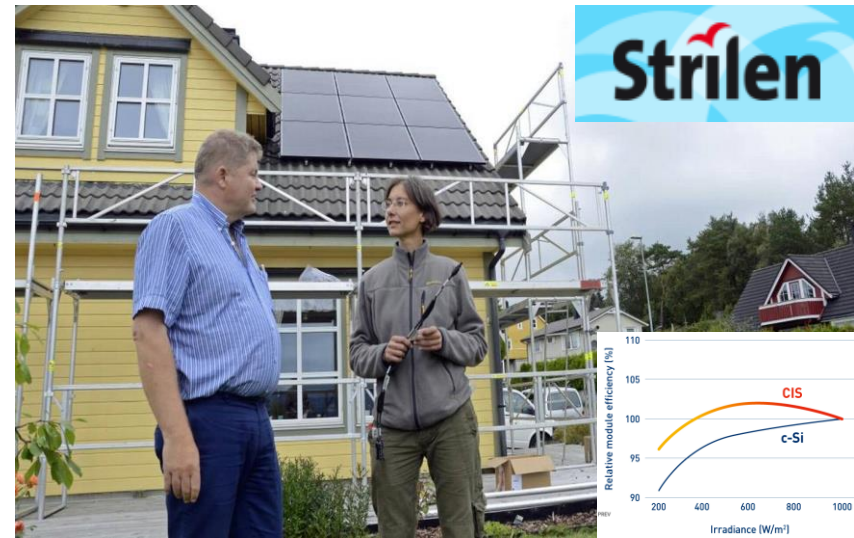
Use Solar Energy!

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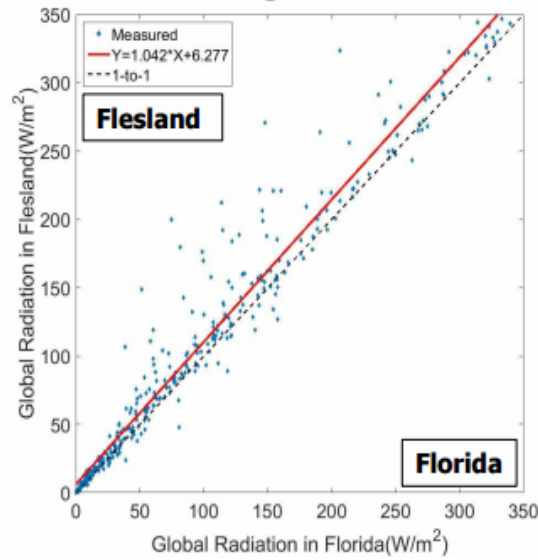


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Why Bergen?



Global radiation in Bergen Florida and Flesland



- Rainy
- Windy
- Cold
- Sunny ☺

	2015					2016							
	Aug	Sep	Okt	Nov	Des	Jan	Feb	Mar	Apr	May	Jun	Jul	Average
Flesland	141.6	95.8	44.9	15.8	4.9	10.0	36.5	80.4	160.4	212.7	219.5	145.6	97.3
Florida	113.7	90.1	40.3	13.6	3.8	7.8	33.3	74.2	142.2	202.1	204.4	125.9	87.6
Flesland higher than Florida	24.5 %	6.4 %	11.3 %	16.7 %	28.3 %	28.3 %	9.6 %	8.3 %	12.8 %	5.2 %	7.4 %	15.7 %	11.1 %
Flesland	94.1			9.8			92.4			192.6			
Florida	81.3			8.0			83.2			177.5			
Flesland higher than Florida	15.8 %			22.3 %			11.0 %			8.5 %			

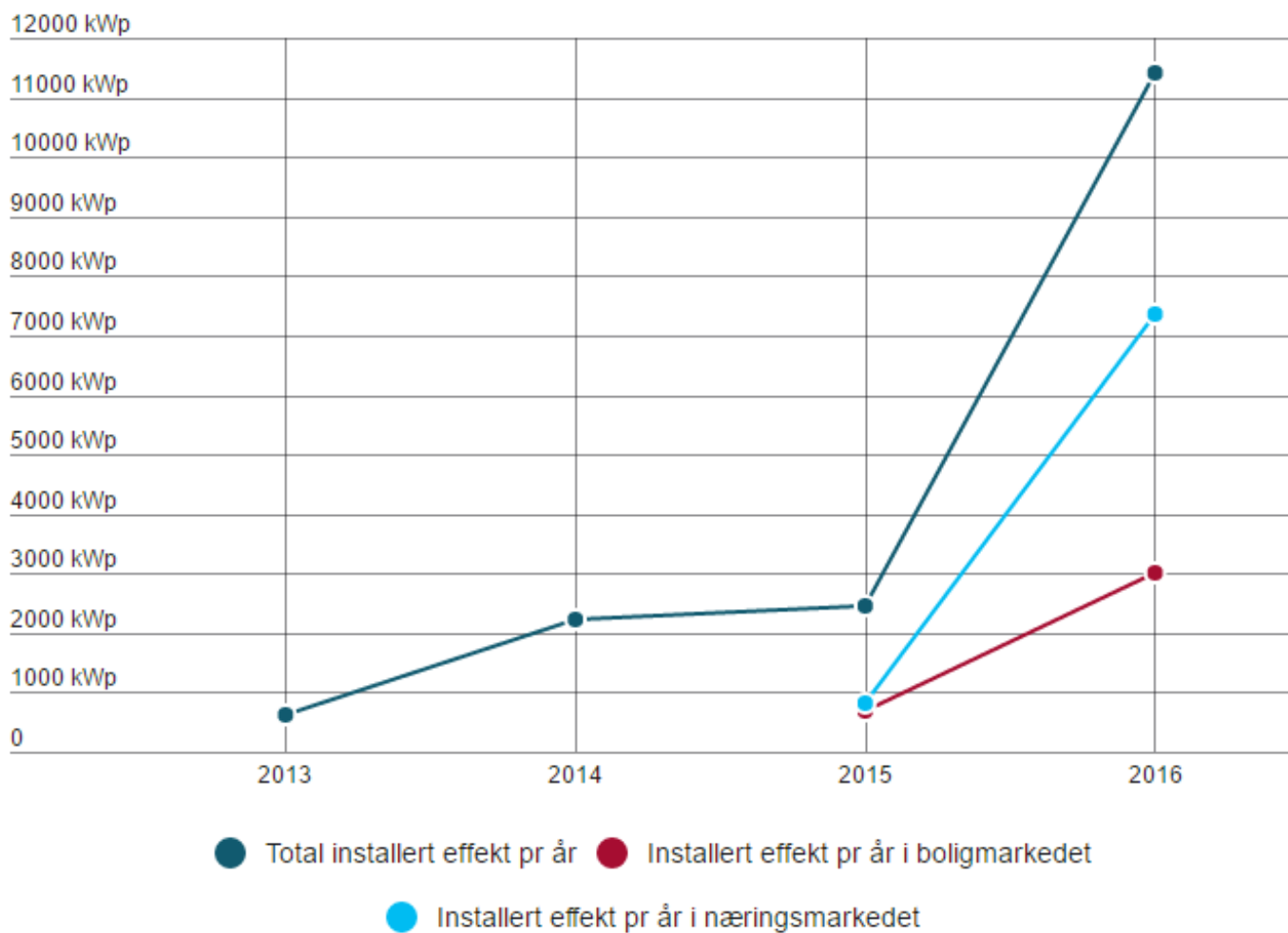
Global Radiation in each month and season



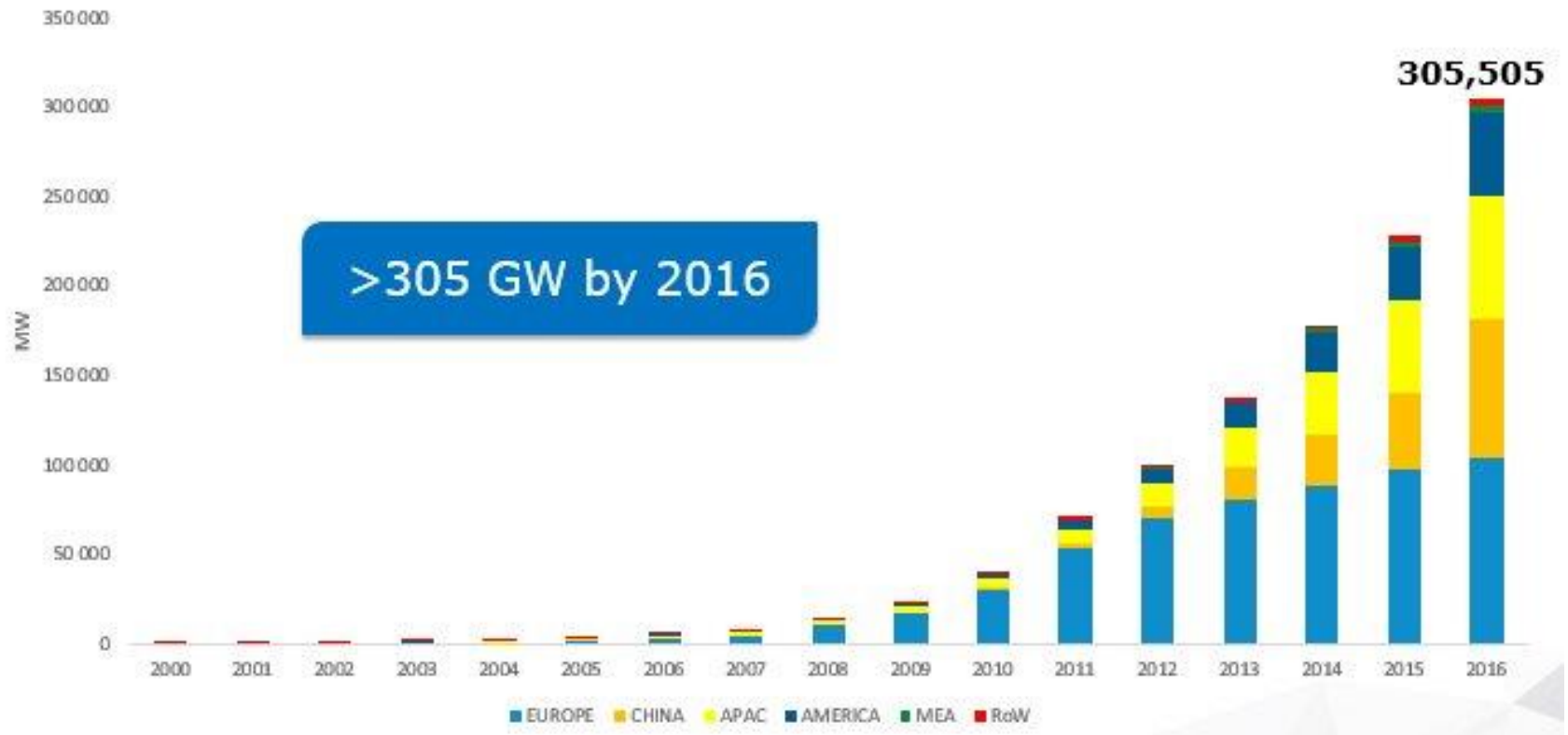
Kilde: Meng-Chieh Yang, Geofysisk Institutt, UiB, Solenergikveld i Bergen 01.11.16

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Solkraft - installert effekt pr år i Norge



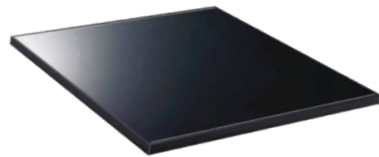
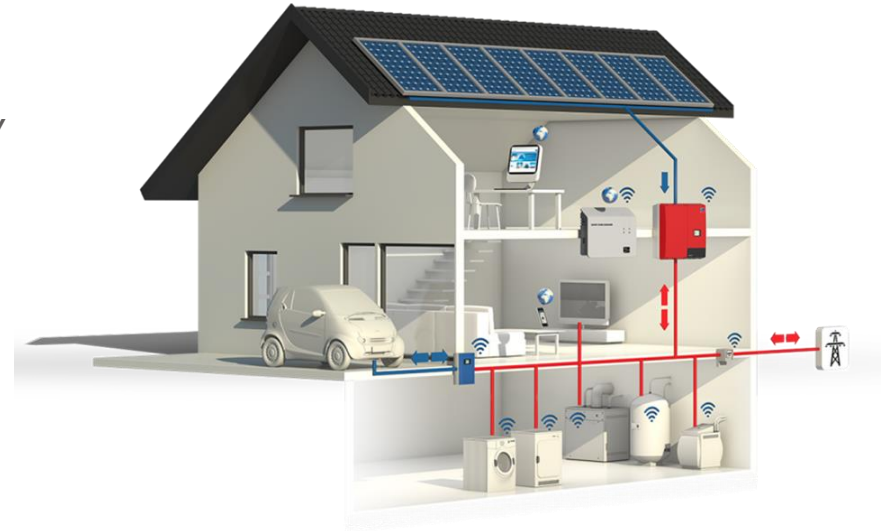
GLOBAL SOLAR PV TOTAL GRID CONNECTIONS 2000 - 2016



Solar Power Europe

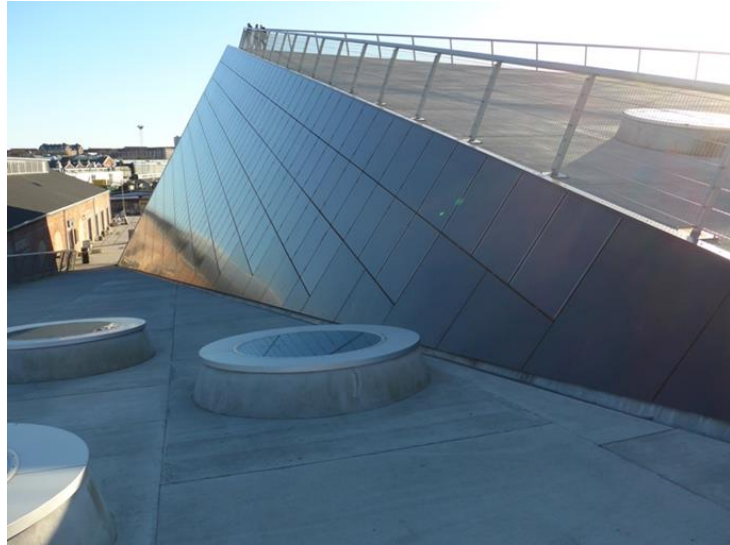
Photovoltaic

- Free, clean and local electricity
- Reduce CO₂-emissions
- Functional and Aesthetical




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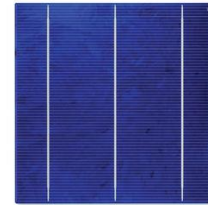
Aestetical



Solar Cell

- **Crystalline**

- Mono
- Poly



- **Thin Film**

- CIGS/CIS
- CdTe
- Amorfe-Si

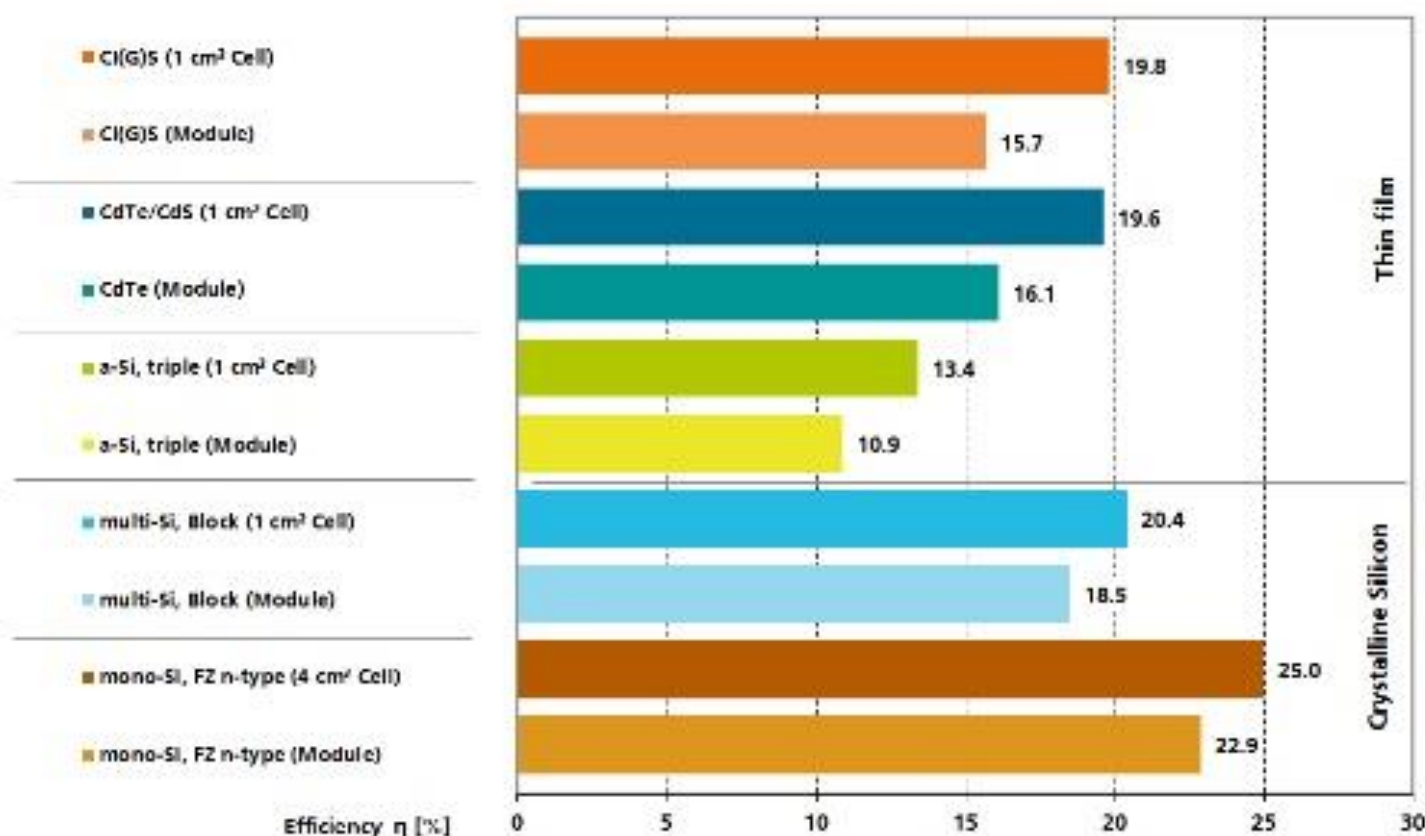


- **3. -4. generation**

- OPV
- DSSC- Dye Sensitized
- Nanoteknologi

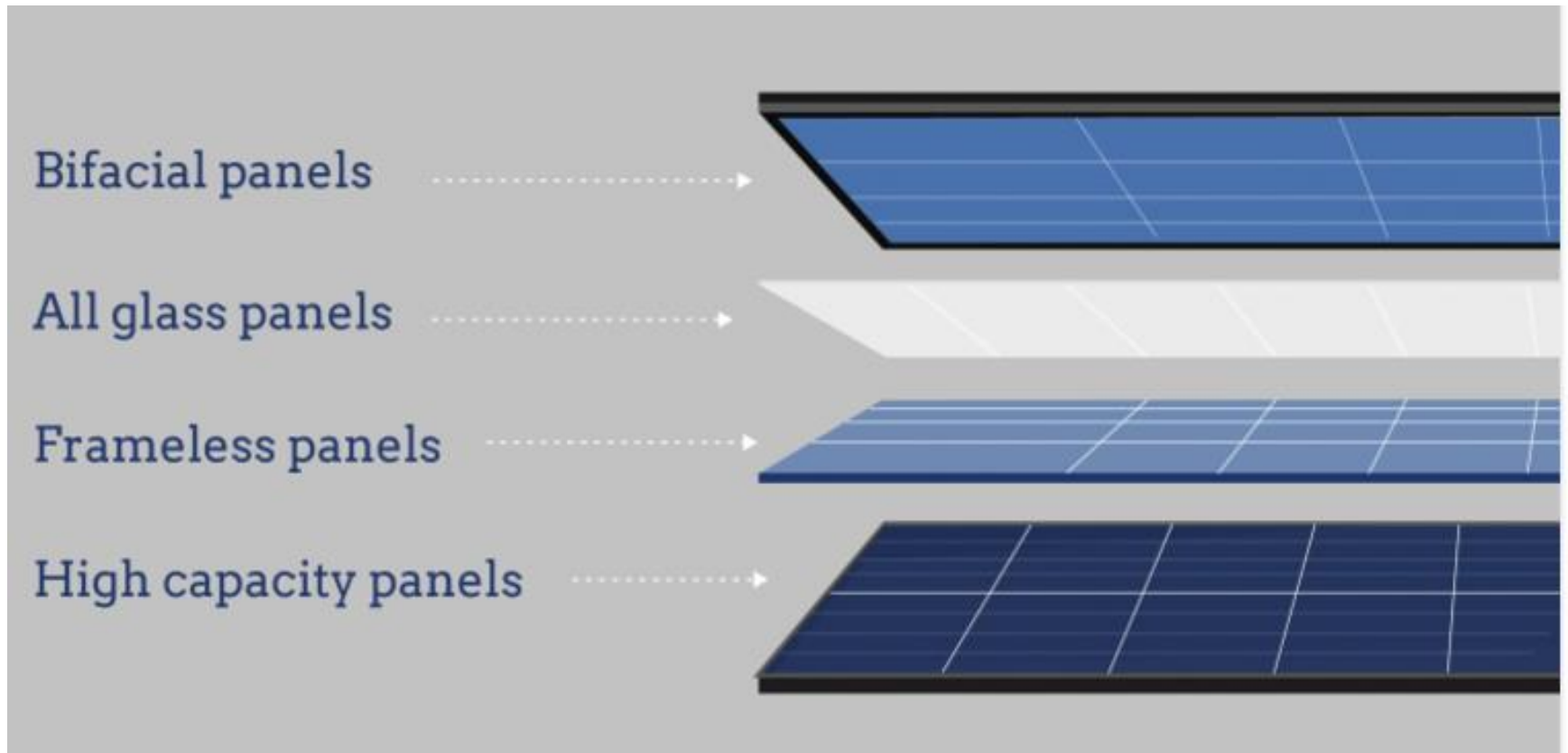


Efficiency Comparison of Technologies: Best Lab Cells vs. Best Lab Modules



Data: Green et al.: Solar Cell Efficiency Tables (Version 1-40), Progress in PV: Research and Applications 2012. Graph: PSE AG 2014

New solar panels: what's coming to market in 2017?



Energysage

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Thank You For Your Attention!

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