



5th European Solar Thermal Conference
Marseille, 21 of October '201

THE POLISH APPROACH AND INCENTIVE SCHEMES FOR SOLAR THERMAL

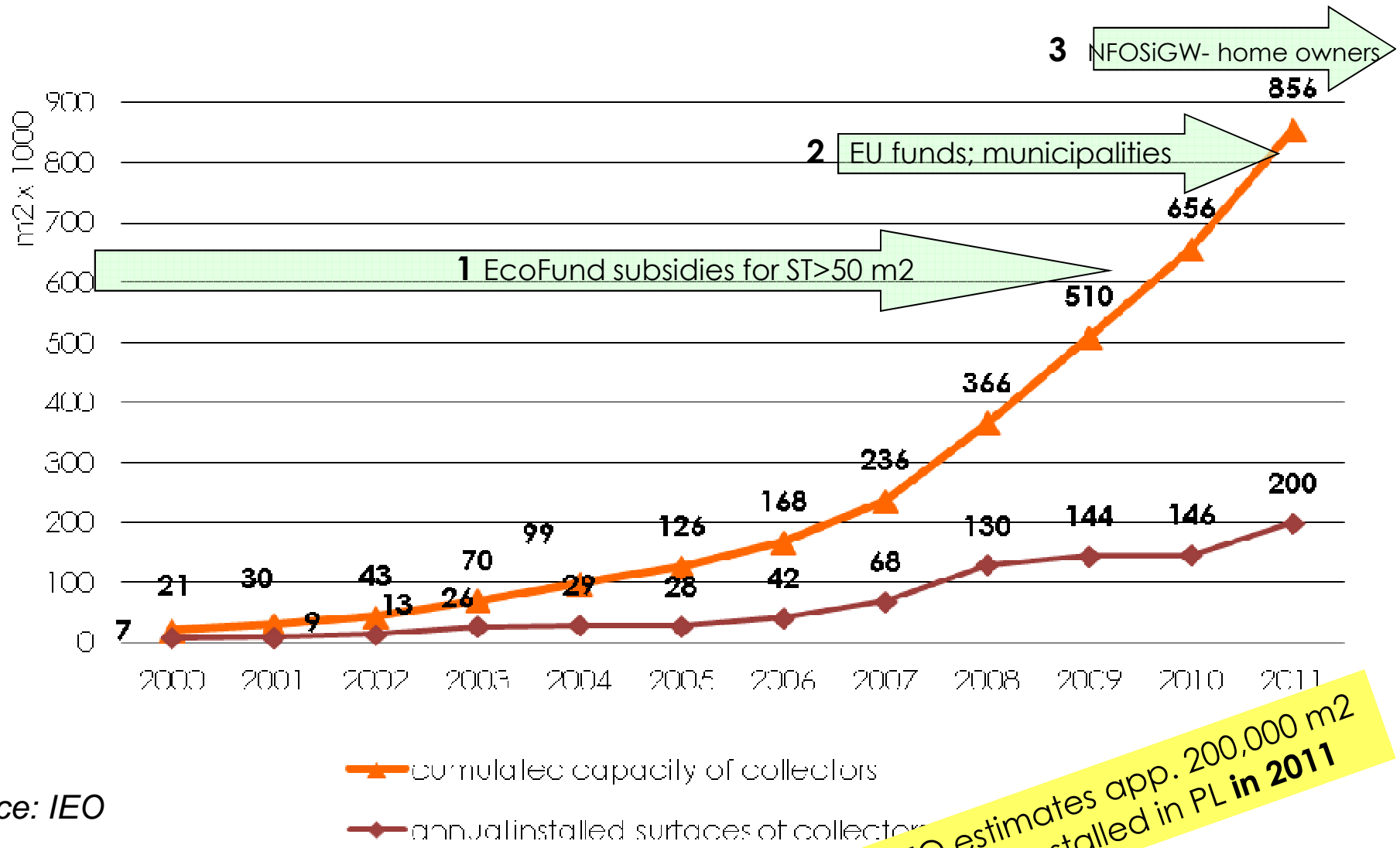
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Institute for Renewable Energy (EC BREC IEO)

Warsaw, Poland

www.ieo.pl

Recent solar thermal growth & 3 main public policy instruments in Poland



Source: IEO

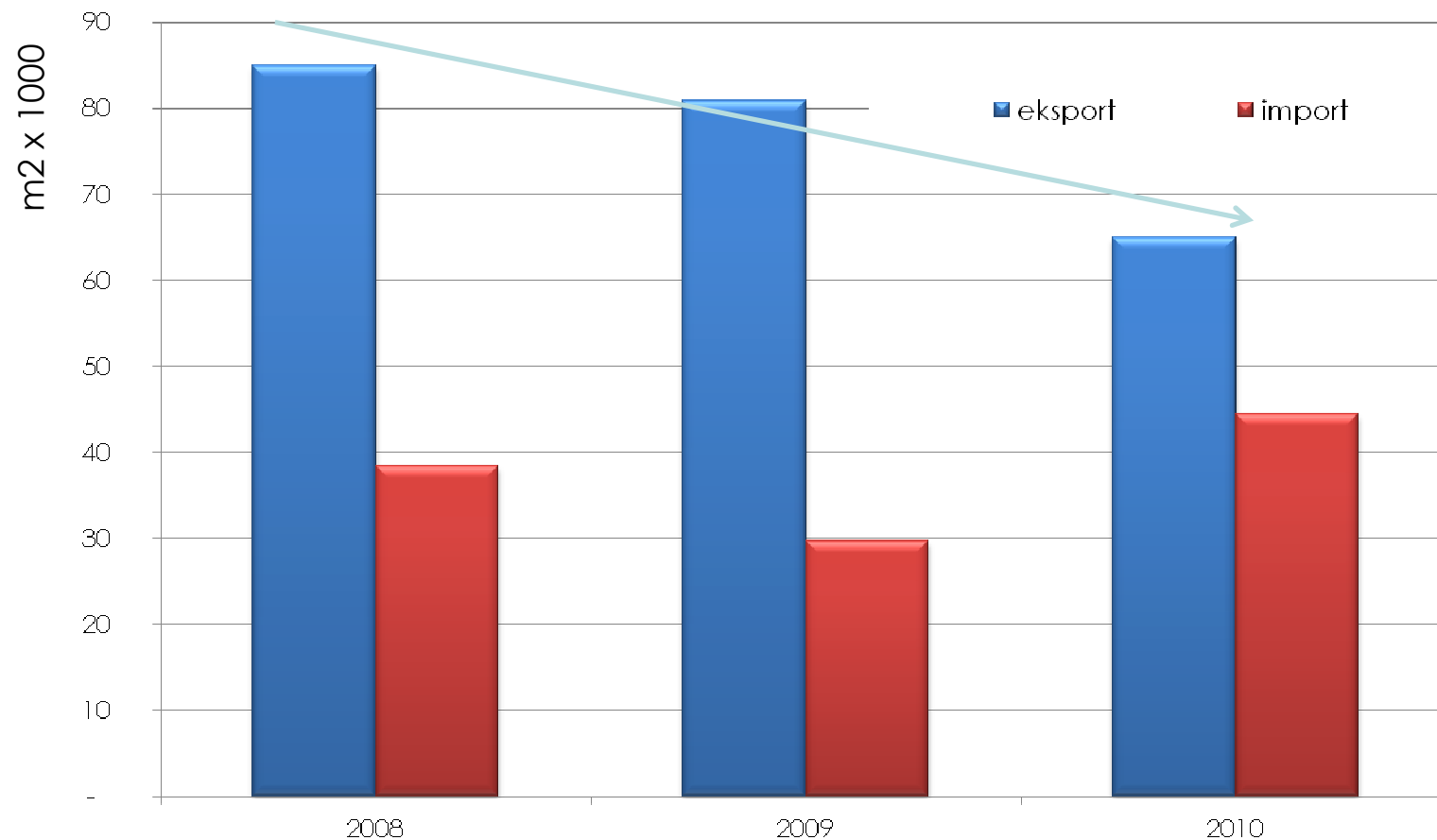
IEO estimates app. 200,000 m² to be installed in PL in 2011



e c b r e g

Export/import solar collectors in Poland

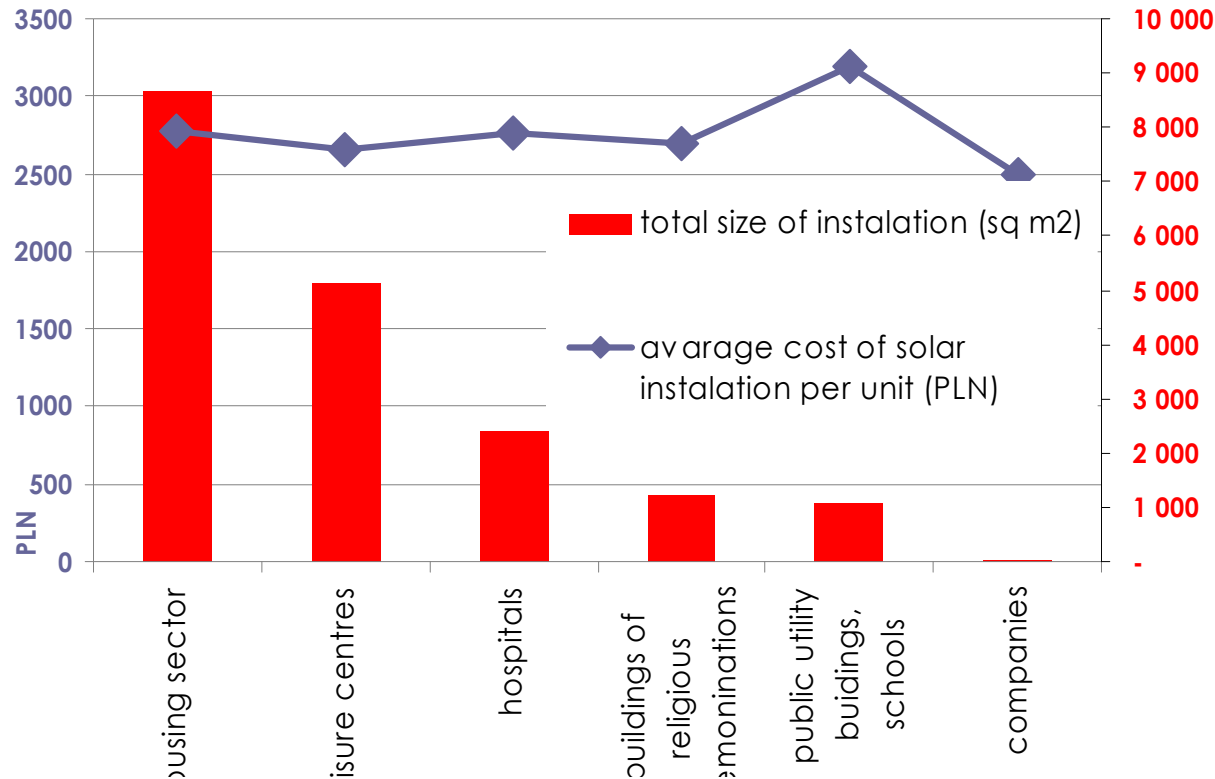
4th instrument to support green industry – export initiative



GreenEvo: promotion of green technology export

www.ieo.pl

Ecofund 1997-2009



■ Average per-unit cost of solar installation per different types of buildings [PLN], **left** axis

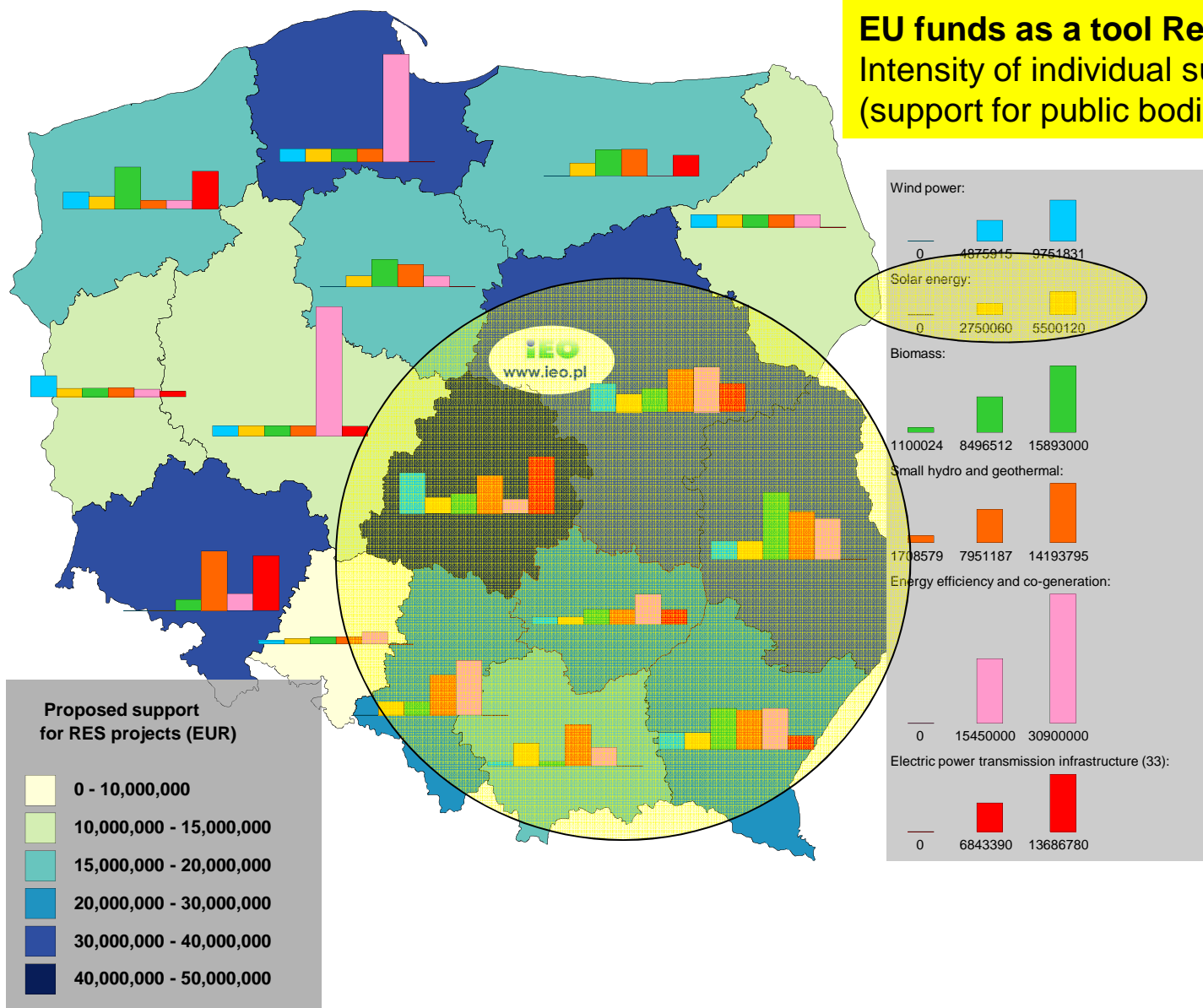
┌ Total active surface of solar collectors installed in buildings in 2008–2009 [m2], **right** axis

- Total Ecofund supported investments (subsidies) – 40.000 m²
- Intensity of support – 50% of the investment cost
- Typical size of solar system > 50m²
- Ecofund share in the market – 50%
- The average cost of solar installation – 3.000 PLN (750 EUR)

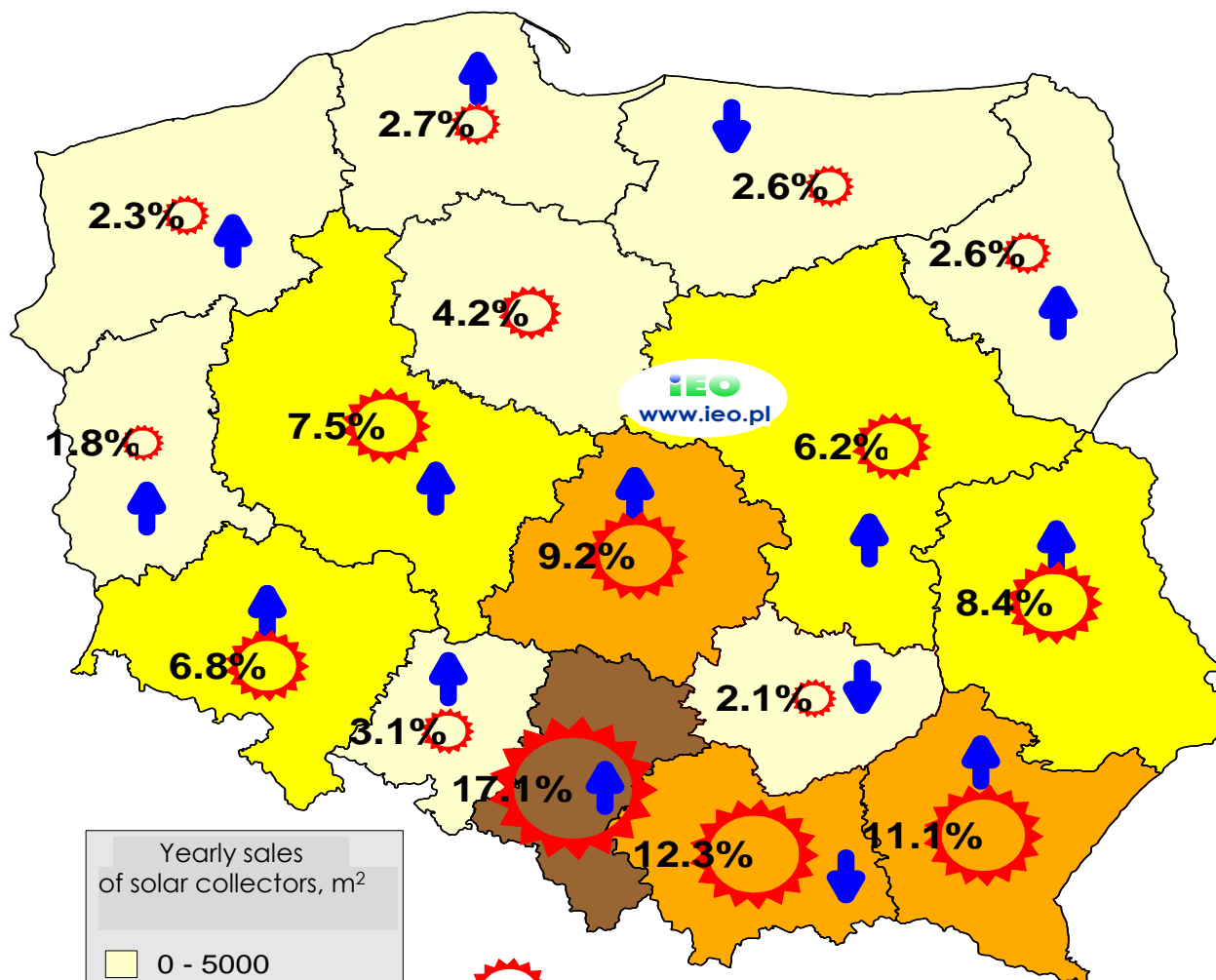
Allocation of EU funds 2007-2013 dedicated to renewable energy [EUR million]

	Cohesion funds	ERDF funds	Total
Solar energy	59	51	110
Hydro power and others	149	86	235
Wind power	228	48	276
Biomass	339	70	409
Total	776	254	1 030

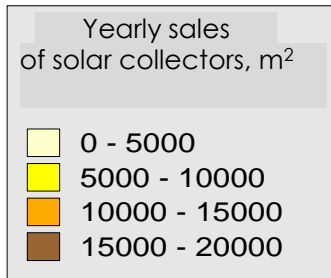
EU funds as a tool Regional public policy:
Intensity of individual support: 30-90%
(support for public bodies prevailing)



Solar market '2011 distribution in 16 regions



Results of the regional public policy



10% Share of the province in national market of solar collectors
 ↑ ↓ Increase/decrease in sales compared to previous year



ec bre c

1 EUR = 4 PLN

Influence of subsidies for prices prices of solar collectors in 2010 (2009)

Collector type	Prices per m ² of the active area in 2010 [EUR]			
	Maximum	Minimum	Average	Median
FLAT-PLATE	1 082	87	253	232
<i>sharp-shaped</i>	1 082	87	241	222
<i>meander-shaped</i>	550	137	295	275
VACUUM	1 078	169	500	465
<i>"flow-type"</i>	1 078	169	556	540
<i>"heat pipe"</i>	967	199	435	383

- 2009-2010 decrease of cost solar installation app. 10-15%

- flat-plate collectors cheaper than vacuum collectors on average twice

- average cost of solar installation (SDHW): 2300 PLN/m² (575 EUR)



New financial support for solar thermal 2010-2013 e c b r e d **National Fund for Environmental Protection (NFOŚiGW)**

National (central) ecological subsidy offered with the bank loan

In August 2010 a new program of national environmental fund NFOŚiGW started for solar collectors in the form of **subsidies of up to 45% to capital cost**

Subsidies distributed by **6 commercial banks** (new banks are coming) are accompanied with bank loans (up to 100% of the total investment cost).

The program is dedicated to **individuals and homeowners associations.**

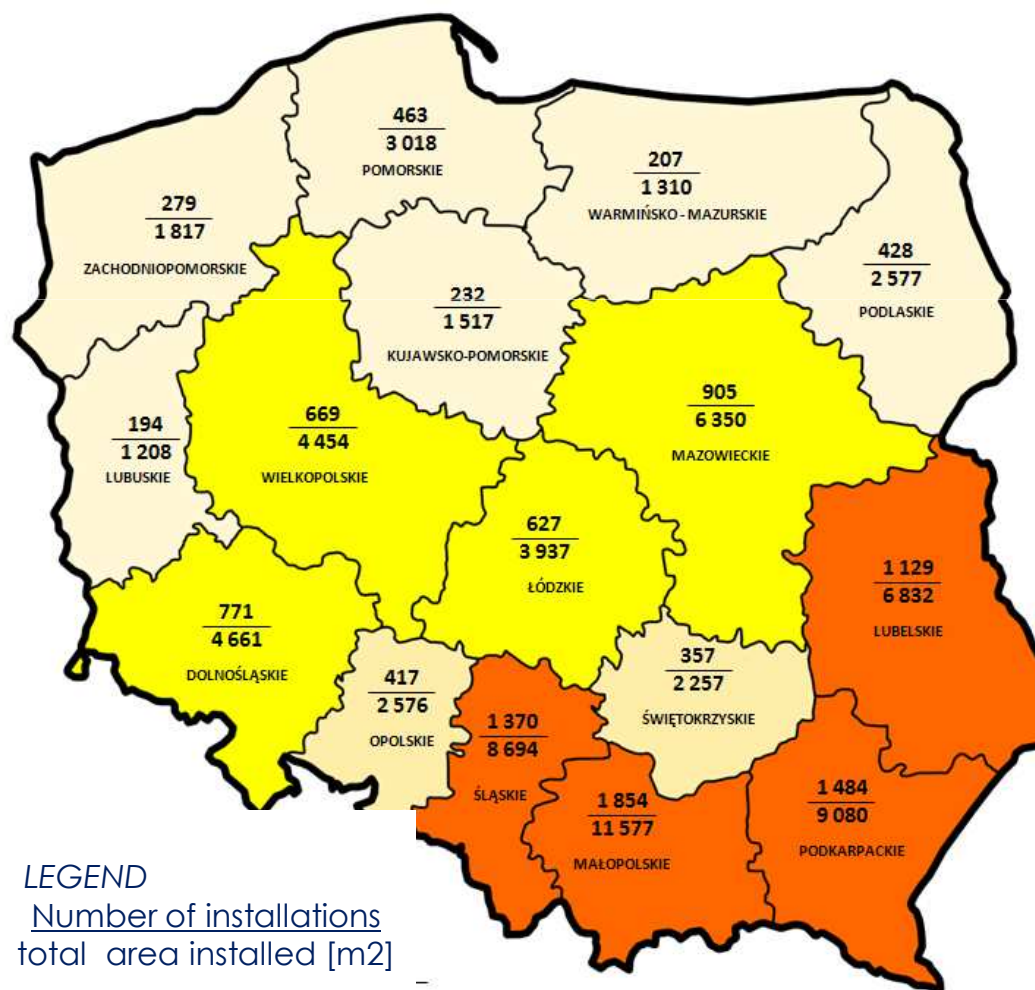
The maximum amount of the loan with the subsidy are restricted to solar systems with the **total price not exceed 2,500 PLN/m²** (625 EUR/m²).

The amount of **300 million PLN (80 mln EUR)** for the period 2010-2013 was *initially* earmarked for the programme.

Results of one year operation of the NFOSiGW „solar fund”

„Solar program” of NFOSiGW awarded *Best Practice Certificate EPSA ‘2011* (for public bodies)

Main results	avarage	total
Total surface of solar collectors (m²) including		
-housing	6,31	71 866
-communities	51,97	727
period of loan (months)	35,3	-
commissions loan (%)	3,2%	-
interest credit (%)	9,5%	-
the height of the credit for eligible costs (PLN)		161 189
- including housing	14 157	736
communities	109 876	1 538 262
the amount of subsidy (PLN) for		
-home owners	6 371	72 535 382
- housing communities	49 444	692 218
the unit eligible cost (PLN)	2 290	-



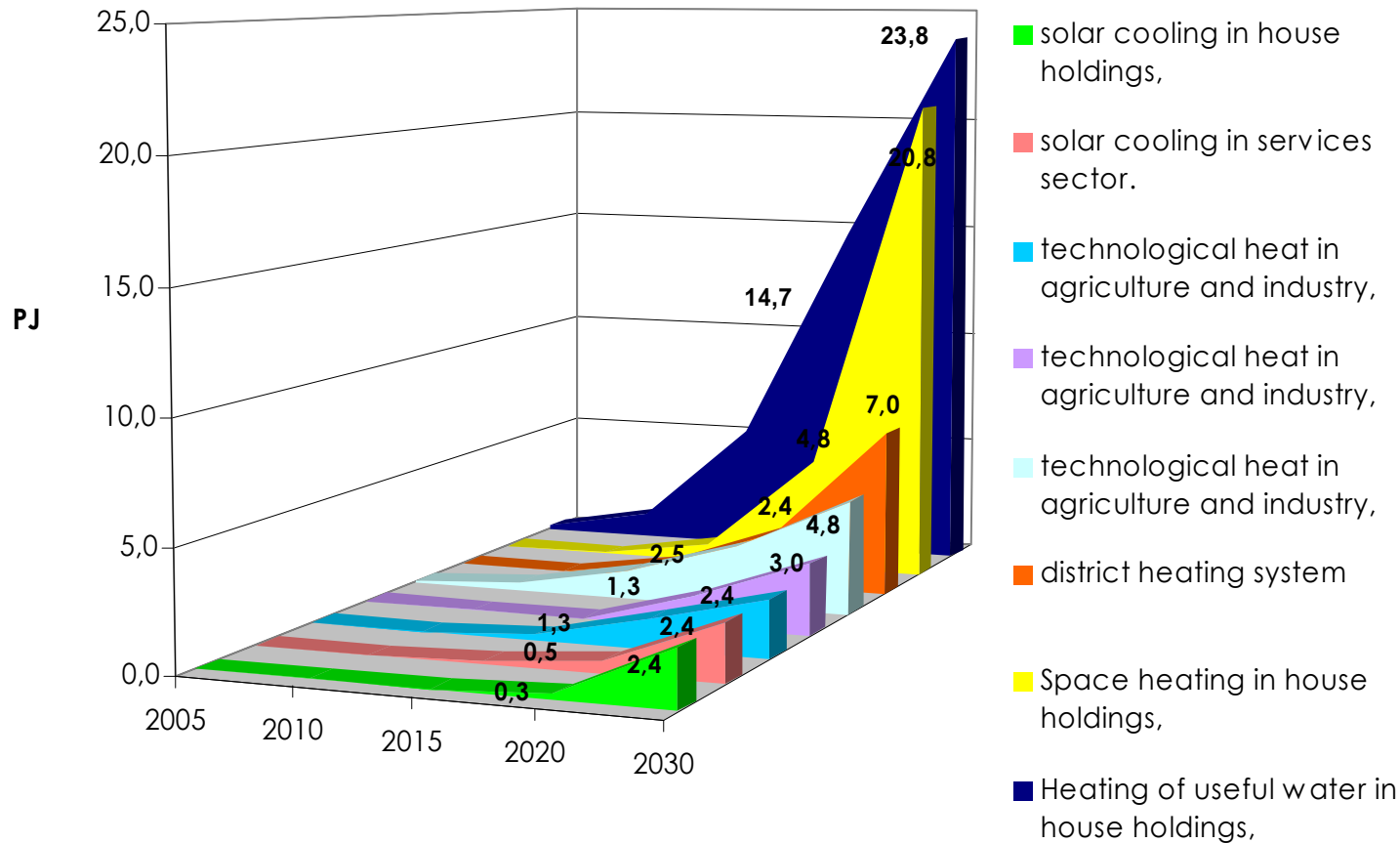
LEGEND
 Number of installations
 total area installed [m²]

1 EUR = 4 PLN,

source: NFOSiGW

Main results of the

„Solar Alliance 20x2020” study ‘2009



Solar heating energy input in covering supply requirements for heat and cool is equal almost 28 PJ in 2020 (almost 20 mln m2 solar collectors area)

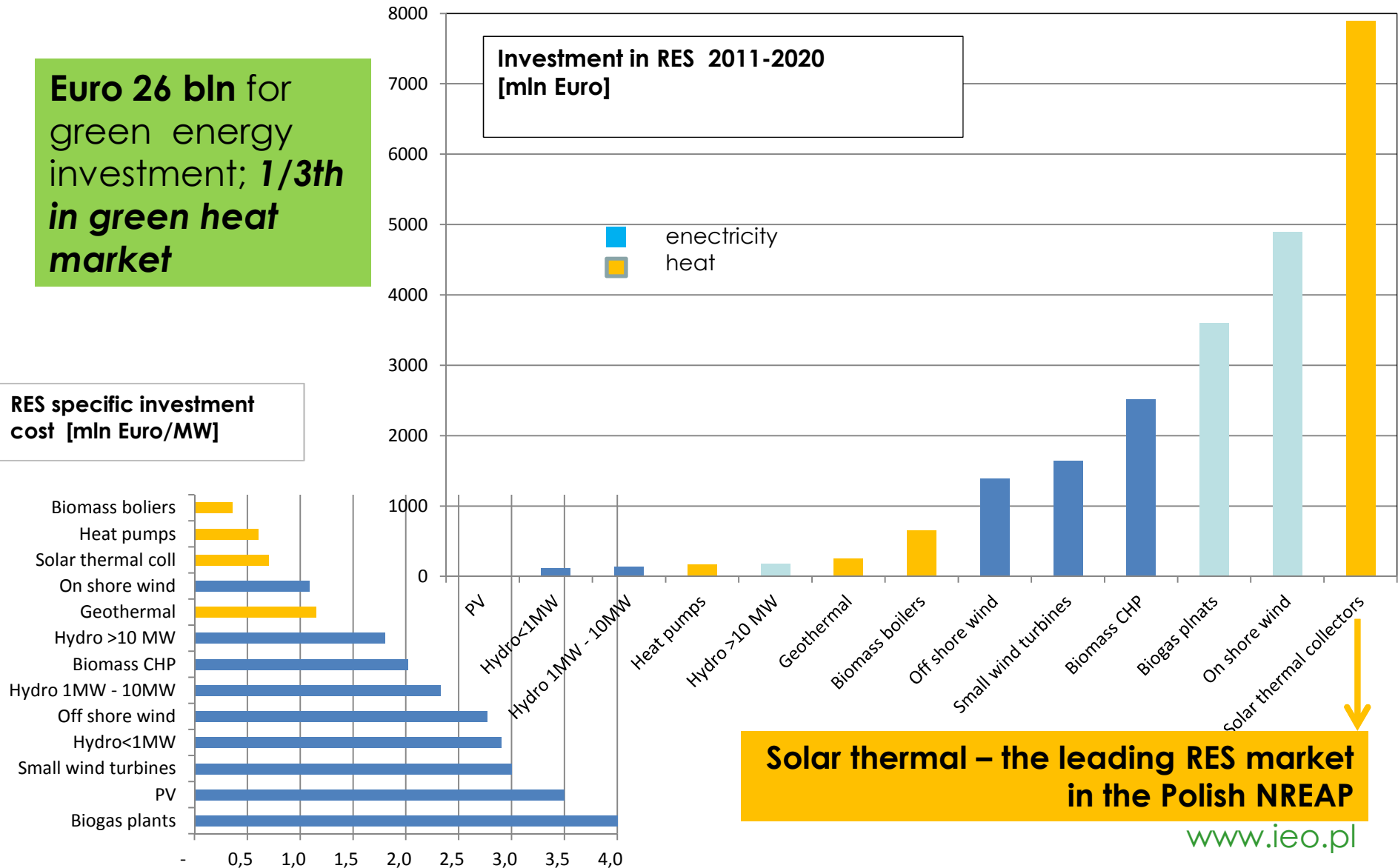
Share of solar energy in:	2005	2010	2015	2020	2030	2040
green energy total consumption	0,1%	0,7%	2,9%	7,5%	14,1%	23,0%
Heat total consumption	0,1%	0,4%	1,5%	4,4%	7,9%	11,5%
Final energy gross consumption	0,0%	0,1%	0,5%	1,8%	4,2%	8,3%

Green investment in Poland by 2020

Source: **Polish National Renewable Action Plan up to 2020**
(NREAP'2010, IEO assessment '2011)

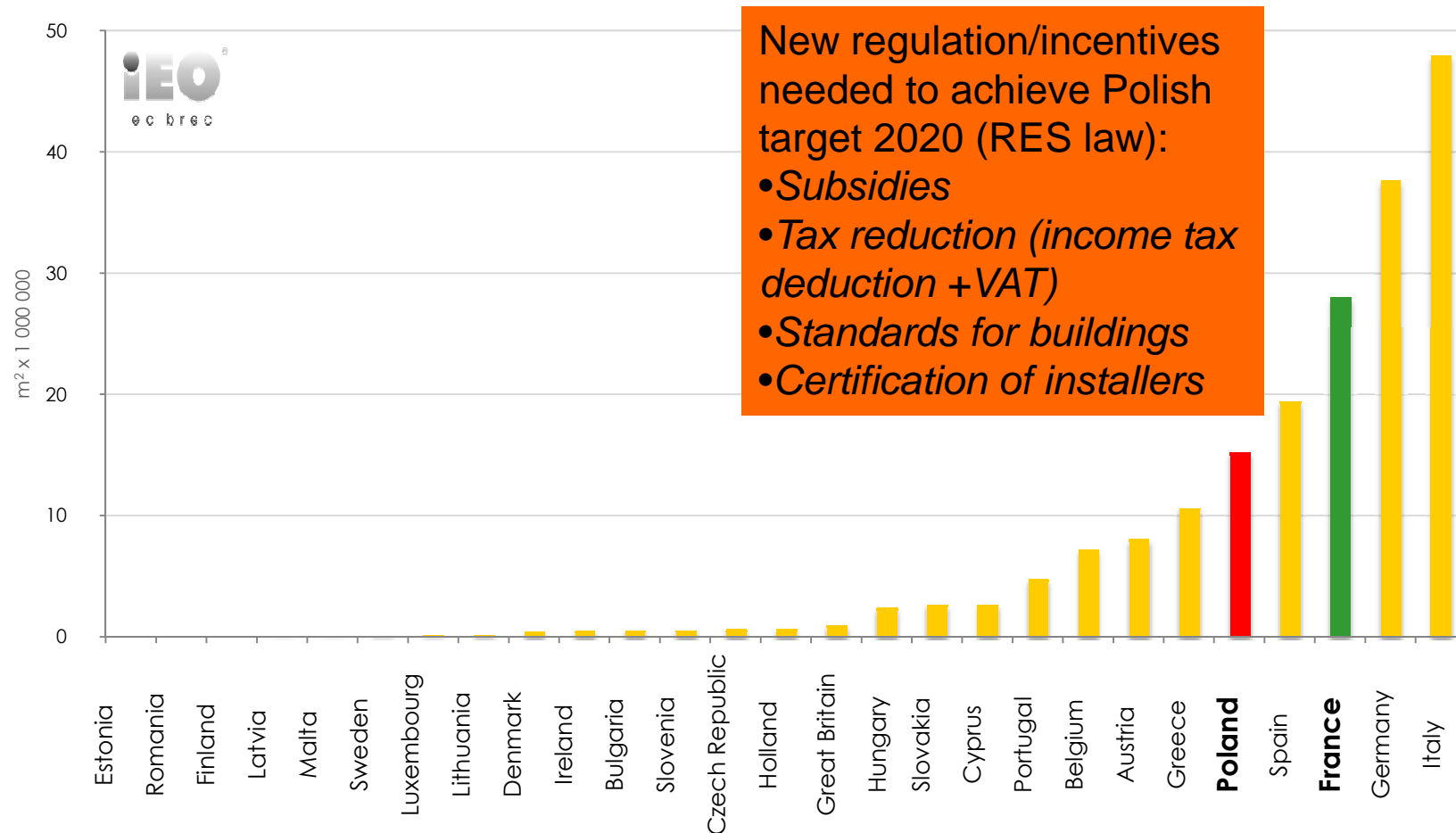
Euro 26 bln for green energy investment; **1/3th** in green heat market

RES specific investment cost [mln Euro/MW]



Solar thermal – the leading RES market in the Polish NREAP

Contribution of the solar thermal sector to the National Action Plan of various European countries in 2020





The Employers Organization "Renewable Energy Forum"

ecbrec

- Support for solar thermal in the new RES act

30.org.pl

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Związek Pracodawców Forum Energetyki Odnawialnej

Naszymi członkami są producenci urządzeń dla energetyki odnawialnej, słonecznej, wiatrowej i biomasy.

Cele ZP FEO

Podstawowym celem Związku jest ochrona praw i reprezentowanie interesów zrzeszonych w nim pracodawców oraz kształtowanie i tworzenie warunków do zwiększania udziału odnawialnych źródeł energii w bilansie energetycznym Polski i UE, a także rozwoju zielonych technologii

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O nas

Członkowie

Stanowiska i dokumenty

Związek Pracodawców Forum Energetyki Odnawialnej (ZP FEO) powstał w 2011 roku i przystąpił do PKPP Lewiatan, w okresie tworzenia w Polsce nowych podstaw prawnych rozwoju energetyki odnawialnej, w celu kształtowania warunków do zwiększania udziału odnawialnych źródeł energii w bilansie energetycznym Polski i UE i rozwoju zielonych technologii. Związek stanowi otwarte forum wymiany informacji służące budowaniu rzetelnego wizerunku energetyki odnawialnej i zielonej gospodarki oraz stanowi platformę ochrony interesów członków. Członkami Związku są m.in. producenci urządzeń dla energetyki odnawialnej, słonecznej, wiatrowej, biomasy oraz niezależni wytwórcy „zielonej”, rozproszonej energii, w większości małe i średnie przedsiębiorstwa, a także firmy otoczenia zielonego biznesu i innowacji.

Mapa strony | Kontakt

Koordynator serwisu: Instytut Energetyki Odnawialnej, tel.: +48 22 825 46 52, e-mail: zpf eo@zpf eo.org.pl

Alliance of Solar Energy Equipment Producers and Installers (the Solar Alliance 20x2020) established in 2009 is officially transform in 2011 to **The Employers Organization "Renewable Energy Forum" (ZPFEO)** consisting of **solar collectors, PV moduls, small wind turbines and heat pumps manufacturers and installers.**



V Solar Thermal Energy Industry Forum in Poland 2012

- tool for solar industry integration

The next Polish Solar Energy Industry Forum will be 18th of April 2012



More info on public policy and market: Report – The solar collector in Poland in 2010

Database of manufactures and main distributors solar systems



Attachment base of solar collector 2010.xlsx - Microsoft Excel

Database of manufactures and main distributors solar systems

Manufacturer	No.	Region	Type of collector	Typ of heating factor	Model	Dimension	Gross area [m ²]	Aperture area [m ²]	Weight of empty collector [kg]	Absorber materials	Coat of absorber	Type of absorber	Isolation	Obudowa	Guaranty [years]	Certificate	Price of collector [PLN]	Price of aperture area [PLN/m ²]
Amsol-Technika Solarna Amsol - Koszalin 75-688 ul. Wopistów 17 Tel. (+48) 94 716 65 99 Amsol - Warszawa 02-775 Warszawa ul. Alternatywy 5/77 Tel. (+48) 22 379 70 20 e-mail: biuro@amsol.pl www.amsol.pl	1	Westpomerania/Mazovia	vacuum tube - heat pipe	fluid	Kolektor słoneczny 58 ET 10	2030 x 946 x 155	1,72	0,94	39,6	Cu/Al/SS/N2	AIN/SS-AIN/Cu	tubular	Poliuretan	aluminium	5	SOLAR KEYM	2290	2436
	2		vacuum tube - heat pipe	fluid	Kolektor słoneczny 58 ET 20	2030 x 1736 x 155	3,53	1,87	73	Cu/Al/SS/N2	AIN/SS-AIN/Cu	tubular	Poliuretan	aluminium	5	SOLAR KEYM	3890	2080
	3		vacuum tube - heat pipe	fluid	Kolektor słoneczny 58 ET 30	2030 x 2516 x 155	4,0	2,79	106	Cu/Al/SS/N2	AIN/SS-AIN/Cu	tubular	Poliuretan	aluminium	5	SOLAR KEYM	5100	1860
ATUT Spółka z o.o. Śląskie Przedsiębiorstwo Inwestycyjne ul.W.Korfantego 37 43- 400 Cieszyń tel. (0-33)857-90-33, 857-90-33 fax (0-33)857-90-33 biuro@atut.cieszyn.pl www.atut.cieszyn.pl	4	Silesia	flat plate	air	kolektor powietrzny SOLAIR	2330x1000 x90	2,33	2	12	copper	czarny lakier	harp-shapped	plyta izolacyjna „Alp”	plyta izolacyjna „Alp”	8	according to standard 12975	2300	1150
BACHUS P.P.H.U. ul. Nowiny 40 80-020 Gdańsk Telefon : (0-58) 306-65-90 oraz 0-502-513-736 (0-58) 301-21-21 Internet : www.bachus.com.pl kolektor@poczta.onet.pl	5	Pomerania	vacuum tube	fluid	Kolektor słoneczny KSP-12	2000 x 1000x 120	2	1,59	48	copper	AIN/AIN-SS/Cu	tubular	mineral wool	aluminium	6	Znak CE	1950	1226
	6		flat plate	fluid	Kolektor słoneczny KS	2001 x 1000x 120	2	1,87	38	copper	black chrome	harp-shapped	mineral wool + plyta poliuretanowa	aluminium	10	IBMER: Certyfikat zgodności znak CE	1100	588
	7		flat plate	fluid	Kolektor słoneczny KS-2005PM	2003 x 1000x 120	2	1,87	38	copper	black chrome	harp-shapped	mineral wool + plyta poliuretanowa	aluminium	10	znak CE	1150	615
BMK Solar Sp. z o.o. ul. Azotowa 21 41-503 Chorzów Tel: (0-32) 245 90 74 Fax: (0-32) 245 91 74 biuro@bmsolar.pl www.bmsolar.pl	8	Silesia	flat plate	fluid	BMKSolar 2.0	2007 x 1006 x 85	2,02	1,82	40	copper	blue tect eta plus	harp-shapped	mineral wool	aluminium	5	according to standard	1590	874
	9		flat plate	fluid	BMKSolar 2.65	2356 x 1120 x 84	2,65	2,46	43	copper	blue tect eta plus	harp-shapped	mineral wool	aluminium	5	according to standard 12975	1947	791
CENTROPOL Sp. J. 44-100 Gliwice ul. Zabrska 17 tel/fax +48 (32)2899057 Biuro Handlowe: 44-100 Gliwice ul.Zabrska 17 tel./fax +48 32 775-57-02, 775-57-04, 2899057 Biuro: info @ fotton.eu http://www.fotton.eu	10	Silesia	vacuum tube - heat pipe	fluid	FOTTON [®] SP 58/1800	2560x1990 x153	5,03	3,6	90	copper	AIN/AIN-SS/Cu	tubular	mineral wool	aluminium	5	mark certyfik	3990	1108
	11		vacuum tube - heat pipe	fluid	FOTTON [®] SP 58/1800	1970x1990 x153	3,92	2,88	72	copper	AIN/AIN-SS/Cu	tubular	mineral wool	aluminium	5	mark certyfik	3190	1108
	12		vacuum tube - heat pipe	fluid	FOTTON [®] SP 58/1800	1650x1990 x153	3,3	2,4	60	copper	AIN/AIN-SS/Cu	tubular	mineral wool	aluminium	5	mark certyfik	2699	1125

Baza producentów i kolektorów



**Thank you for
your attention**

Contact:

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