13 GWc

la puissance photovoltaïque connectée dans l'UE en 2010 / the on-grid photovoltaic capacity in the EU in 2010

Europe continued to lead photovoltaic plant installation with over 80% of global installed capacity, ahead of the other major markets which built up capacity in 2010. If we compare the 2009 installation data from the IEA Photovoltaic Power Systems Programme (IEA PVPS) national experts with the recent 2010 data estimation made by the EPIA (European Photovoltaic Industry Association), Japan installed just under one GW in 2010 having installed barely 483 MWp in 2009. The United States is expected to have added about 800 MWp in 2010 as against 473 MWp in 2009. China, until recently eclipsed by the Western markets, lifted the lid off its intentions... with at least 400 MWp in 2010 (compared to about 160 MWp in 2009) and when the provisional figures for the other major non-European markets (Australia, South Korea, India, etc.) are added, the 2010 installed capacity figure outside Europe should be around 3 GW, bringing the global total to over 16 000 MWp.

OVER 13 000 MWP INSTALLED IN THE EU IN 2010 THE EUROPEAN MARKET OVERHEATS

For the first time, Europe's photovoltaic sector installed more new capacity than any other renewable electricity source over the year. EurObserv'ER estimates that 13 023.2 MWp of photovoltaic modules were hooked up to the grid in the European Union, which is a 120.1%

Tabl. n° 1

Puissance photovoltaïque installée supplémentaire dans l'Union européenne en 2009 et 2010 (en MWc)*
Additional photovoltaic capacity installed in the European Union in 2009 and 2010 (in MWp)*

	2009			2010		
	Réseau *On-grid*	Hors réseau *Off-grid*	Total	Réseau *On-grid*	Hors réseau *Off-grid*	Total
Germany	3 935,000	5,000	3940,000	7 406,000	5,000	7 411,000
Italy	698,700	0,100	698,800	2 321,000	0,100	2 321,100
Czech Rep.	408,626	0,020	408,646	1 489,780	0,000	1 489,780
France	215,200	6,000	221,200	719,000	0,146	719,146
Spain	15,765	1,245	17,010	369,000	1,000	370,000
Belgium	503,109	0,000	503,109	213,425	0,000	213,425
Greece	36,200	0,300	36,500	150,300	0,100	150,400
Slovakia	0,116	0,010	0,126	143,567	0,050	143,617
Austria	19,961	0,248	20,209	50,000	0,000	50,000
United Kingdom	6,922	0,155	7,077	45,000	0,255	45,255
Netherlands	10,578	0,091	10,669	29,393	0,000	29,393
Portugal	34,153	0,100	34,253	28,545	0,100	28,645
Slovenia	6,858	0,000	6,858	27,332	0,000	27,332
Bulgaria	4,285	0,008	4,293	11,540	0,000	11,540
Cyprus	1,109	0,033	1,142	2,869	0,049	2,918
Denmark	1,200	0,100	1,300	2,300	0,200	2,500
Finland	0,000	2,000	2,000	0,000	2,000	2,000
Romania	0,000	0,190	0,190	1,100	0,200	1,300
Sweden	0,516	0,338	0,854	1,000	0,300	1,300
Hungary	0,180	0,020	0,200	1,050	0,050	1,100
Luxembourg	1,795	0,000	1,795	0,916	0,000	0,916
Poland	0,121	0,248	0,369	0,150	0,220	0,370
Malta	1,289	0,000	1,289	0,143	0,000	0,143
Estonia	0,000	0,038	0,038	0,000	0,030	0,030
Lithuania	0,000	0,015	0,015	0,020	0,010	0,030
Ireland	0,000	0,210	0,210	0,000	0,000	0,000
Latvia	0,003	0,001	0,004	0,000	0,000	0,000
Total EU 27	**5 901,7**	**16,5**	**5 918,2**	**13 013,4**	**9,8**	**13 023,2**

Estimation. Estimate. Les décimales sont séparées par une virgule. Decimals are written with a comma.* ***Source : EurObserv'ER 2011.*

2 % *la part du photovoltaïque dans la consommation d'électricité allemande en 2010 / the photovoltaic power share of German electricity consumption in 2010*

Tabl. n° 2

Puissance photovoltaïque cumulée dans les pays de l'Union européenne en 2009 et 2010 (en MWc)*
Cumulated photovoltaic capacity in the European Union countries at the end of 2009 and 2010 (in MWp)*

	2009			2010		
	Réseau *On-grid*	Hors réseau *Off-grid*	Total	Réseau *On-grid*	Hors réseau *Off-grid*	Total
Germany	9 914,000	45,000	9 959,000	17 320,000	50,000	17 370,000
Spain	3 418,000	20,081	3 438,081	3 787,000	21,081	3 808,081
Italy	1 144,000	13,400	1 157,400	3 465,000	13,500	3 478,500
Czech Rep.	462,920	0,400	463,320	1 952,700	0,400	1 953,100
France	306,000	29,200	335,200	1 025,000	29,346	1 054,346
Belgium	573,979	0,053	574,032	787,404	0,053	787,457
Greece	48,200	6,800	55,000	198,500	6,900	205,400
Slovakia	0,162	0,030	0,192	143,729	0,080	143,809
Portugal	99,194	3,000	102,194	127,739	3,100	130,839
Austria	48,991	3,605	52,596	98,991	3,605	102,596
Netherlands	62,507	5,000	67,507	91,900	5,000	96,900
United Kingdom	27,845	1,745	29,590	72,845	2,000	74,845
Slovenia	8,904	0,100	9,004	36,236	0,100	36,336
Luxembourg	26,357	0,000	26,357	27,273	0,000	27,273
Bulgaria	5,660	0,040	5,700	17,200	0,040	17,240
Sweden	3,595	5,169	8,764	4,595	5,469	10,064
Finland	0,170	7,479	7,649	0,170	9,479	9,649
Denmark	4,025	0,540	4,565	6,325	0,740	7,065
Cyprus	2,695	0,633	3,328	5,564	0,682	6,246
Romania	0,230	0,410	0,640	1,330	0,610	1,940
Poland	0,300	1,080	1,380	0,450	1,300	1,750
Hungary	0,450	0,200	0,650	1,500	0,250	1,750
Malta	1,527	0,000	1,527	1,670	0,000	1,670
Ireland	0,100	0,510	0,610	0,100	0,510	0,610
Lithuania	0,000	0,070	0,070	0,020	0,080	0,100
Estonia	0,000	0,050	0,050	0,000	0,080	0,080
Latvia	0,003	0,005	0,008	0,003	0,005	0,008
Total EU 27	**16 159,8**	**144,6**	**16 304,4**	**29 173,2**	**154,4**	**29 327,7**

Estimation. Estimate. Les décimales sont séparées par une virgule. Decimals are written with a comma. **Source : EurObserv'ER 2011.*

L'ALLEMAGNE RESTE SEREINE ET ASSUME SES CHOIX

L'Allemagne a fait le choix de développer à grande échelle sa filière de production d'électricité solaire et elle l'assume. Selon le ZSW (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg), l'Allemagne a connecté au réseau pas moins de 7 406 MWc durant l'année 2010, portant la puissance solaire cumulée à 17 320 MWc. Toujours selon cette même source, le photovoltaïque a permis la production de 12 TWh (6,6 TWh en 2009), soit 2 % de la consommation d'électricité du pays. Vu la puissance installée en fin d'année et celle prévue en 2011 (au minimum 6 GWc), la production photovoltaïque devrait largement dépasser la barre des 3 % en 2011.

L'objectif de l'industrie allemande dans sa feuille de route est d'installer entre 52 000 et 70 000 MWc d'ici à 2020, soit de quoi assurer 10 % de la consommation d'électricité du pays en 2020. Selon elle, ce niveau d'installation devrait permettre de diviser au moins par deux le prix des systèmes par rapport à 2010. L'industrie allemande estime également que l'électricité solaire sera largement compétitive en Allemagne avant la fin de l'année 2020, lui permettant enfin d'achever son indépendance par rapport au système d'incitation sur certains marchés. Selon la feuille de route, la parité réseau pourrait être atteinte dès 2013. L'industrie estime également possible de limiter l'impact du coût supplémentaire dû à l'électricité solaire sur la facture d'électricité à environ deux centimes

year-on-year rise (from 5 918.2 MWp in 2009) ***(table 1)***. These new plants raise the European Union's photovoltaic capacity to 29 327.7 MWp ***(table 2)***. The figure quoted excludes installed systems waiting to be connected to the grid, reckoned to be in the region of several thousand additional megawatts-peak if we include data coming out of a few countries like Italy. In the off-grid segment, a mere ten megawatts-peak or so were pinpointed in 2010, although some plants may have been overlooked. Lastly, per capita photovoltaic capacity in 2010 stands at 58.5 Wp compared to 32.6 Wp in 2009 ***(table 3)***. Further significant installation cost reductions came after two consecutive years of cost slashing and provide the explanation for this growth, which confounded all expectations. If we look at the benchmark market, Germany, the installation costs of <100 kWp roof-mounted systems dropped from a mean of just under € 4 000/kWp early in 2009 to just under € 3 000/kWp early in 2010, and to € 2 546/kWp early in 2011 according to the German Solar Industry Association (BSW). This year's trend points to even lower costs, despite the fact that the German market's installation costs are the lowest in Europe because of its size and organisational structure. Now these cost reductions apply right across the board to all photovoltaïc markets and have persuaded EPIA that in many countries where electricity generating costs are relatively high, it is a matter of few years before parity between the grid and residential systems is achieved (namely when the cost of producing one photovoltaic kWh equals the retail electricity purchase price).

These plummeting costs caught most of the national incentive systems completely unprepared for the disparity between installation costs and incentive levels. The situation sparked off a number of frenetic markets, leaving speculation and wanton expense to consumers as fallout. This mishandling is likely to be extremely debilitating and hamper future growth of the European market because it has prompted many member countries to follow the example set by Spain two years ago which implemented swingeing control measures on its market's development.

GERMANY REMAINS UNRUFFLED AND ACCEPTS ITS CHOICES

The country has opted for grand-scale solar power-production development and is championing the sector. According to ZSW (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg), Germany connected a massive 7 406 MWp during 2010 raising its accumulated solar capacity to 17 320 MWp. The ZSW also claims that the 12 TWh (6.6 TWh in 2009) produced by photovoltaic provided 2% of Germany's power consumption. On the basis of the capacity installed at the end of 2010 and the new installation forecasts for 2011 (at least 6 GWp), photovoltaic production should easily provide 3% of national electricity demand in 2011.

The German roadmap sets its photovoltaic industry a target of 52-70 GWp of new capacity by 2020... enough to meet 10% of the country's electricity needs. The industry reckons that the price of photovoltaic systems should be driven down by at least 50% on their 2010 level and also believes that solar power's competitiveness will allow the country to wean itself off the incentive mechanism in certain markets before the end of 2020. The roadmap grid parity targets should be achieved by 2013. The industry also reckons that the additional cost incurred by recourse to solar power on national electricity expenditure should fall to about 2 euro cents/kWh by 2020, costing the average family € 2 per month per head.

Tabl. n° 3

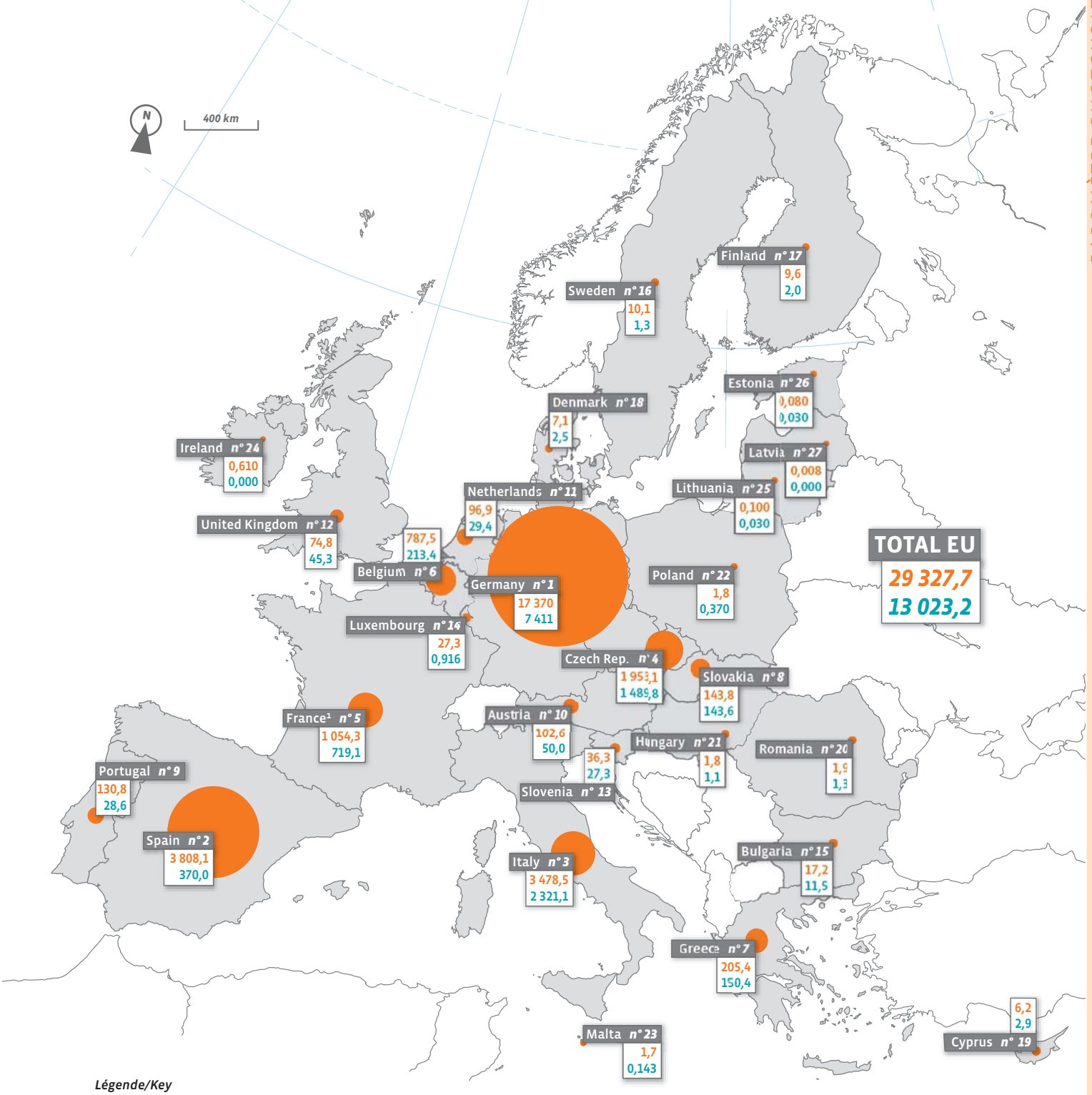
Puissance photovoltaïque par habitant des différents pays de l'Union européenne en 2010 (en Wc/hab)*
Photovoltaic power per inhabitant for each European Union country in 2010 (in Wp/inhab)*

	Wc/hab *Wp/inhab*
Germany	212,3
Czech Rep	185,9
Spain	82,8
Belgium	72,6
Italy	57,6
Luxembourg	54,3
Slovakia	26,5
Greece	18,2
Slovenia	17,8
France*	16,3
Portugal	12,3
Austria	12,2
Cyprus	7,8
Netherlands	5,8
Malta	4,0
Bulgaria	2,3
Finland	1,8
Denmark	1,3
United Kingdom	1,2
Sweden	1,1
Hungary	0,2
Ireland	0,1
Romania	0,1
Estonia	0,1
Poland	0,0
Lithuania	0,0
Latvia	0,0
Total EU 27	**58,5**

Estimation. Estimate. Les décimales sont séparées par une virgule. Decimals are written with a comma. **Source : EurObserv'ER 2011.*

The main challenge is to ensure that solar power's competitiveness is not dented by distorting compensation for its production. So industry and the German government are working hand-in-hand to keep the incentive system pegged as closely as possible to any falls in production costs.

*Puissance photovoltaïque installée dans l'Union européenne fin 2010**
Photovoltaic power capacity installed in the European Union at the end of 2010*



Légende/Key

90 *Puissance cumulée installée dans les pays de l'Union européenne fin 2010* (en MWc)*
Cumulated installed capacity in the European Union countries at the end of 2010 (in MWp)*

50 *Puissance installée durant l'année 2010 dans les pays de l'Union européenne* (en MWc)*
Installed capacity in the European Union countries during 2010 (in MWp)*

**Estimation. Estimate.*
1. DOM-COM inclus./French overseas Departments and Territories included.
Source : EurObserv'ER 2011.