

GEOPOLITICA E SCENARI EUROPEI

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—
L'ENERGIA
SPIEGATA
FESTIVAL
DELL'ENERGIA
—

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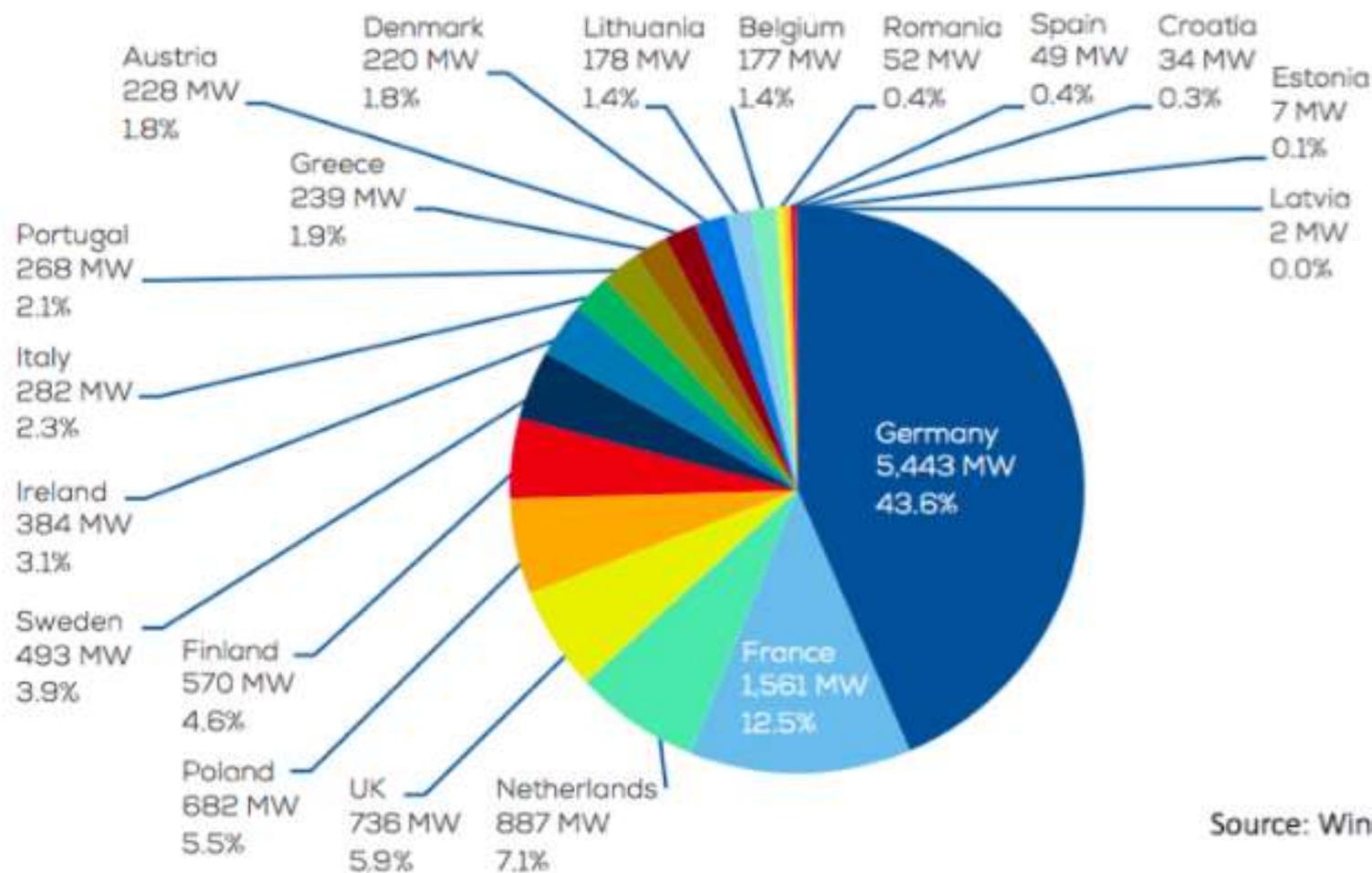
La *decarbonizzazione*
è un processo avviato
ormai in tutta Europa

Ma con differenze
geopolitiche...

Country	Bioenergy	Geothermal energy	Hydropower	Solar	Wind energy - Onshore	Wind energy - Offshore	Others	Total [MWh]
Austria	2.504.233	384	1.767.079	37.219	3.639.875	-	-	7.948.790
Belgium	3.639.114	-	271.289	2.830.705	2.330.567	2.221.311	1.223	11.294.209
Bulgaria	-	-	-	-	-	-	-	-
Croatia	149.093	-	9.005	35.174	729.970	-	-	923.242
Cyprus	37.461	-	-	90.854	182.418	-	-	310.733
Czech Republic	4.150.226	-	1.042.700	2.094.953	469.699	-	-	7.757.579
Denmark	3.355.416	-	-	112.302	4.775.227	7.792.560	3.850.000	19.885.505
Estonia	600.700	-	22.400	538	489.100	-	-	1.112.738
Finland	6.724.407	-	-	-	757.733	-	-	7.482.140
France	2.978.303	-	5.427.690	5.395.154	16.255.814	-	2.421.294	32.478.255
Germany	39.917.871	98.132	5.158.229	32.991.921	55.279.202	1.449.429	-	134.894.784
Greece	207.000	-	701.000	3.829.000	3.689.000	-	-	8.426.000
Hungary	1.471.861	-	289.926	6.810	623.638	-	-	2.392.236
Ireland	263.476	-	6.649	-	3.781.095	-	-	4.051.220
Italy	16.767.794	1.857.028	14.863.986	21.152.455	14.636.749	-	-	69.278.011
Latvia	530.830	-	66.640	-	87.785	-	-	685.255
Lithuania	333.258	-	71.357	72.817	628.162	-	-	1.105.594
Luxembourg	80.049	-	2.202	93.631	71.332	-	-	247.215
Malta	-	-	-	57.596	-	-	-	57.596
Netherlands	-	-	-	-	-	-	-	-
Norway	-	-	1.306.203	-	217.638	-	-	1.523.841
Poland	5.418.203	-	2.181.136	4.515	7.640.802	-	4.462.168	19.706.823
Portugal	1.358.769	-	1.507.710	361.679	11.809.805	3.610	1.846.995	16.888.567
Romania	685.541	-	1.298.680	1.319.028	4.556.231	-	-	7.859.481
Slovakia	-	-	-	-	-	-	-	-
Slovenia	229.412	-	156.737	244.645	4.209	-	-	635.003
Spain	4.511.171	-	3.016.406	13.091.392	37.544.434	-	-	58.163.403
Sweden	4.812.324	-	1.376.114	10.771	11.023.759	-	-	17.222.968
United Kingdom	18.832.030	-	2.878.813	3.867.003	18.190.938	13.286.680	1.422	57.056.886
Total	119.558.541	1.955.545	43.421.952	87.700.161	199.415.182	24.753.590	12.583.102	489.388.074

Table 3: Total renewable electricity produced that received support in 2014, by MS and technology, in [MWh]

Nuovo record per l'energia rinnovabile in Europa: nel 2016 si tocca quasi quota 90% per la nuova energia prodotta nel continente.



Source: WindEurope

Grafico delle quote di mercato dell'Unione Europea per la nuova capacità di energia eolica installata nel 2016, per un totale di 12.490 MW, via WindEurope

In Germania

Con l'adozione del programma governativo "Energiewende", si fissano obiettivi di produzione di energetica tramite l'utilizzo di tecnologie a bassa emissione di CO2 del 35-40% entro il 2025 e 55-60 % entro il 2035

In Francia

Con il PPE, Programmation Pluriannuelle de l'Énergie, si impone il miglioramento dell'efficienza energetica, dei nuovi obiettivi per lo sviluppo delle diverse fonti rinnovabili, la riduzione dei consumi dei trasporti, il lancio dei green bond statali, l'introduzione della carbon tax nazionale e il progressivo abbandono del Nucleare.

FER IN ITALIA

Grafico 1 - Quota dei consumi finali lordi di energia coperta da FER
(Overall target fissato dalla Direttiva 2009/28/CE)



Incentivi alle rinnovabili: *quattro strumenti*

1. Feed-in Tariff (FIT),
2. Feed-in Premium (FIP),
3. Certificati Verdi,
4. Contributi per gli investimenti.

CEER MEMBER	Support scheme	RES TECHNOLOGIES							
		Solar-PV	Solar - CSP	Wind Offshore	Wind Onshore	Bioenergy	Hydropower	Geothermal	Other*
Austria	Feed-in-tariffs	✓			✓	✓	✓	✓	
	Investment grants	✓					✓		
Belgium	Green Certificates	✓		✓	✓	✓	✓		✓
Bulgaria	Feed-in-tariffs	✓							
Croatia	Feed-in-tariffs	✓			✓	✓	✓		
Cyprus	Feed-in-tariffs	✓			✓	✓			
Czech Republic	Feed-in-tariffs	✓			✓	✓	✓		
	Feed-in-Premium	✓			✓	✓	✓		
Denmark	Feed-in-tariffs	✓		✓	✓				
Estonia	Feed-in-tariffs	✓			✓	✓	✓		
Finland	Investment grants**	✓	✓	✓	✓	✓	✓	✓	
	Feed-in-Premium				✓	✓			
France	Feed-in-tariffs	✓			✓	✓	✓		✓
	Other (call for tender/ PPA)***	✓			✓	✓			
Germany	Feed-in-tariffs	✓		✓	✓	✓	✓	✓	
	Feed-in-Premium	✓		✓	✓	✓	✓	✓	
Greece	Feed-in-tariffs	✓			✓	✓	✓		
Hungary	Feed-in-tariffs	✓	✓****		✓	✓	✓	✓	✓
Ireland	Feed-in-tariffs				✓	✓	✓		✓
Italy	Feed-in-tariffs	✓			✓	✓	✓		
	Green Certificates	✓			✓	✓	✓	✓	
	Feed-in-Premium	✓			✓	✓	✓	✓	
Latvia	Feed-in-tariffs				✓	✓	✓		
Lithuania	Feed-in-tariffs	✓			✓	✓	✓		
Luxemburg	Feed-in-tariffs	✓			✓	✓	✓		
	Investment grants	✓			✓	✓	✓		
Malta	Feed-in-tariffs	✓							
	Investment grants	✓							
Netherlands	Feed-in-Premium	✓		✓	✓	✓	✓	✓	
Norway	Green Certificates				✓		✓		
Poland	Green Certificates	✓			✓	✓	✓	✓	✓
Portugal	Feed-in-tariffs	✓		✓	✓	✓	✓		✓
Romania	Green Certificates	✓			✓	✓	✓		
Slovenia	Feed-in-tariffs	✓			✓	✓	✓		
Spain	Other*****	✓	✓		✓	✓	✓		
Sweden	Green Certificates	✓		✓	✓	✓	✓		
	Investment grants	✓							
UK	Feed-in-tariffs	✓			✓	✓	✓		
	Green Certificates	✓		✓	✓	✓	✓		✓
	Feed-in-Premium (Contract for Difference)	✓	✓		✓	✓	✓		

*e.g. ocean energy, RES CHP, waste.

**Based on case specific evaluations.

*** Calls for tender are used to determine the level of support, which is conceived as FIT up to 2016.

****FIT are set for Solar CSP though no such plants have started operation yet.

*****Investment return + operation return for existing plants, calculated in accordance to a reasonable Internal Rate of Return.

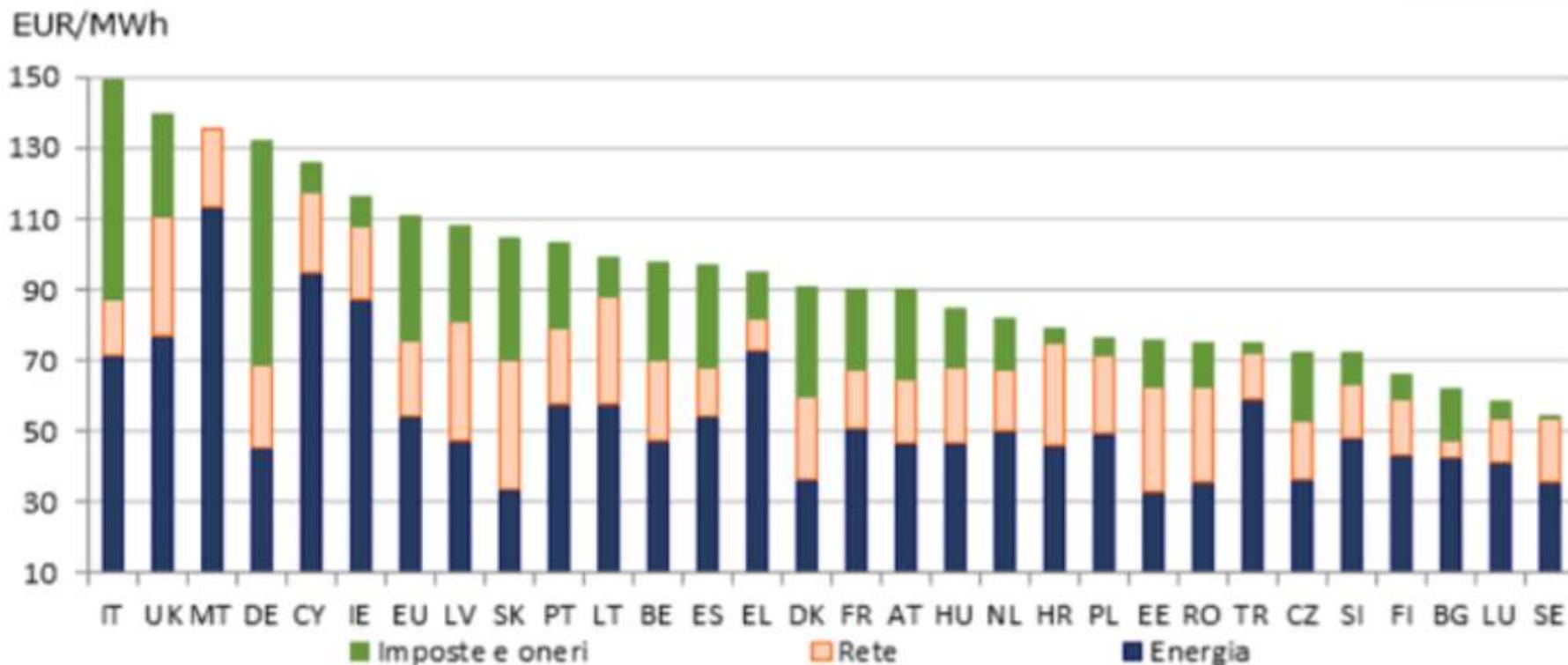
Fonte: CEER, 2016

Table 1: Overview of national support scheme in place by RES technologies in 2014 and 2015

Country	Bioenergy	Geothermal energy	Hydropower	Solar	Wind energy - Onshore	Wind energy - Offshore	Others	Total [€/MWh]
Austria	106,72	-0,59	12,68	19,67	51,33	-	-	60,04
Belgium	93,40	-	25,21	182,90	81,04	104,24	106,30	113,78
Croatia	134,93	-	83,83	267,21	52,39	-	-	74,21
Cyprus	125,00	-	-	141,91	166,60	-	-	154,37
Czech Republic	92,41	-	64,35	425,60	77,65	-	-	177,72
Denmark	34,36	-	-	138,65	41,57	41,39	68,37	46,02
Estonia	16,09	-	16,09	16,09	16,09	-	-	16,09
Finland	4,16	-	-	-	68,19	-	-	10,64
France	87,74	-	33,62	408,24	50,12	-	14,02	107,61
Germany	151,38	214,81	62,38	282,88	69,11	143,56	-	146,38
Greece	42,27	-	26,38	268,16	29,18	-	-	137,87
Hungary	70,21	-	30,79	64,58	70,64	-	-	65,53
Ireland	32,30	-	25,50	-	12,40	-	-	13,72
Italy	165,86	82,23	103,44	307,43	93,05	-	-	178,07
Latvia	129,42	-	130,03	-	57,17	-	-	120,22
Lithuania	41,76	-	24,67	119,21	31,00	-	-	39,64
Luxembourg	101,72	-	56,99	278,62	41,90	-	-	151,06
Malta	-	-	-	74,60	-	-	-	74,60
Norway	-	-	19,63	-	19,63	-	-	19,63
Poland	71,70	-	71,70	71,70	71,70	-	71,70	71,70
Portugal	68,92	-	56,91	270,57	55,48	132,24	60,94	61,91
Romania	50,11	-	50,11	50,11	50,11	-	-	50,11
Slovenia	82,85	-	6,57	201,57	20,57	-	-	109,35
Spain	64,83	-	26,06	281,28	33,39	-	-	91,24
Sweden	21,49	-	21,49	21,49	21,49	-	-	21,49
United Kingdom	56,43	-	64,95	231,88	63,31	54,67	54,67	70,53
Max. support	165,86	214,81	130,03	425,60	166,60	143,56	106,30	178,07
Min. support	4,16	82,23	6,57	16,09	12,40	41,39	14,02	10,64
Weighted average across 26 Member States								110,43
Arithmetic average across 26 Member States								83,98

Table 8: Weighted average support level in 2014, by technology, in [€/MWh]²⁰

Differenze nel costo dell'energia tra i paesi europei



Considerazioni conclusive sulla nuova Strategia Energetica Nazionale