

# **RENEWABLE CAPACITY STATISTICS 2019**

## **STATISTIQUES DE CAPACITÉ RENOUVELABLE 2019**

## **ESTADÍSTICAS DE CAPACIDAD RENOVABLE 2019**



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The International Renewable Energy Agency (IRENA) is an intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international co-operation, a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy. IRENA promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar and wind energy, in the pursuit of sustainable development, energy access, energy security and low-carbon economic growth and prosperity. [www.irena.org](http://www.irena.org)

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This report is available at: [www.irena.org/Publications](http://www.irena.org/Publications). Data can be downloaded from: [resourceirena.irena.org](http://resourceirena.irena.org).

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# TABLE OF CONTENTS

## TABLE DES MATIÈRES

## TABLA DE CONTENIDOS

Total capacity - Total capacité - Total capacidad

Total renewable energy Total énergies renouvelables Total energías renovables	2
Hydropower Hydroélectricité Hidroeléctrica	6
Renewable hydropower (including mixed plants) Hydroélectricité renouvelable (y compris les plantes mixtes) Hidroeléctrica renovable (incluidas las plantas mixtas)	9
Pure pumped storage Accumulation par pompage Hidroeléctrica de bombeo pura	12
Marine energy Énergie marine Energía marina	13
Wind energy Énergie éolienne Energía eólica	14
Onshore wind energy Énergie eolienne terrestre Energía eólica terrestre	17
Offshore wind energy Énergie eolienne maritime Energía eólica marina	20
Solar energy Énergie solaire Energía solar	21
Solar photovoltaic Solaire photovoltaïque Solar fotovoltaica	24
Concentrated solar power Solaire thermique à concentration Energía solar termoeléctrica	27
Bioenergy Bioénergie Bioenergía	28
Solid biofuels and renewable waste Biocombustibles solides et déchets renouvelables Biocombustibles sólidos y residuos renovables	31

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Bagasse	
Bagasse	33
Bagazo	
Renewable municipal waste	
Déchets municipaux renouvelables	34
Residuos municipales renovables	
Other solid biofuels	
Autres biocarburants solides	35
Otros biocombustibles sólidos	
Liquid biofuels	
Biocarburants liquides	37
Biocarburantes líquidos	
Biogas	
Biogaz	38
Biogás	
Geothermal energy	
Énergie géothermique	40
Energía geotérmica	
Off-grid capacity - Capacité hors réseau - Capacidad fuera de la red	
Total renewable energy	
Total énergies renouvelables	42
Total energías renovables	
Hydropower	
Hydroélectricité	44
Hidroeléctrica	
Solar photovoltaic	
Solaire photovoltaïque	45
Solar fotovoltaica	
Other renewable energy	
Autres énergies renouvelables	47
Otras energías renovables	

## NOTES TO THE TABLES

The renewable power capacity data shown in these tables represents the maximum net generating capacity of power plants and other installations that use renewable energy sources to produce electricity. For most countries and technologies, the data reflects the capacity installed and connected at the end of the calendar year. The data is presented in megawatts (MW) rounded to the nearest one megawatt, with figures between zero and 0.5MW shown as a 0.

Data has been obtained from a variety of sources, including: the IRENA questionnaire; official statistics; industry association reports; and other reports and news articles. Numbers followed by the letter “o” are figures that have been obtained from official sources such as national statistical offices, government departments, regulators and power companies. The letter “u” follows figures that have been obtained from unofficial sources, such as industry associations and news articles. The letter “e” follows figures that have been estimated by IRENA from a variety of different data sources. All data from the IRENA questionnaire is presented without any indicator.

Data are available for download at [www.irena.org/resource](http://www.irena.org/resource).

## NOTES À PROPOS DES TABLEAUX

Les données sur les capacités électriques renouvelables présentées dans ces tableaux représentent la capacité maximale nette de génération des centrales électriques et autres installations utilisant des sources d'énergie renouvelables pour produire de l'électricité. Pour la plupart des pays et technologies, les données reflètent la capacité installée et connectée à la fin de l'année civile. Les données sont exprimées en mégawatts (MW) arrondies à l'unité la plus proche ; les valeurs inférieures à 0,5 MW apparaissent comme 0.

Les données viennent de nombreuses sources incluant : le questionnaire IRENA ; les statistiques officielles ; des rapports d'associations de l'industrie ; et d'autres rapports et articles de presse. Les valeurs suivies de la lettre "o" ont été obtenues à partir de sources officielles (par exemple instituts statistiques nationaux, agences gouvernementales, régulateurs, compagnies d'électricité). La lettre "u" suit les valeurs venant de sources non officielles comme des rapports d'associations de l'industrie ou des articles de journaux. La lettre "e" suit les valeurs qui ont été estimées par l'IRENA à partir de sources diverses. Toutes les données venant du questionnaire IRENA sont présentées sans indication.

Les données sont téléchargeables sur le site [www.irena.org/resource](http://www.irena.org/resource).

## NOTAS A LAS TABLAS

Los datos de capacidad de generación eléctrica con energías renovables que se muestran en estas tablas representan la capacidad máxima de generación neta de las centrales eléctricas y otras instalaciones que utilizan fuentes de energías renovables para producir electricidad. Para la mayoría de los países y las tecnologías, los datos reflejan la capacidad instalada y conectada al final del año natural. Los datos se presentan en megavatios (MW) redondeados al megavatio entero más cercano, con cifras entre cero y 0.5MW representadas como un 0.

Los datos se han obtenido a partir de una variedad de fuentes, incluyendo: el cuestionario de IRENA; estadísticas oficiales; informes de las asociaciones industriales; y otros informes y artículos de noticias. Los números acompañados de la letra ""o"" son cifras que se han obtenido a partir de fuentes oficiales, como oficinas nacionales de estadística, departamentos gubernamentales, reguladores y compañías eléctricas. La letra ""u"" acompaña a cifras que se han obtenido a partir de fuentes no oficiales, tales como asociaciones industriales y artículos de noticias. La letra ""e"" acompaña a números que han sido estimados por IRENA a partir de diversas fuentes de datos. Todos los datos provenientes del cuestionario de IRENA se presentan sin ningún indicador.

Los datos están disponibles para su descarga en [www.irena.org/resource](http://www.irena.org/resource).



# COUNTRIES, AREAS AND REGIONS SHOWN IN THE TABLES

## PAYS, ZONES ET RÉGIONS FIGURANT DANS LES TABLEAUX

### PAÍSES, ZONAS Y REGIONES MOSTRADAS EN LAS TABLAS

Label/Étiquette/Rótulo	English	Français	Español
WORLD	WORLD	MONDE	MUNDO
AFRICA	AFRICA	AFRIQUE	ÁFRICA
Algeria	Algeria	Algérie	Argelia
Angola	Angola	Angola	Angola
Benin	Benin	Bénin	Benín
Botswana	Botswana	Botswana	Botsuana
Burkina Faso	Burkina Faso	Burkina Faso	Burkina Faso
Burundi	Burundi	Burundi	Burundi
Cabo Verde	Cabo Verde	Cabo Verde	Cabo Verde
Cameroon	Cameroon	Cameroun	Camerún
Cent Afr Rep	Central African Republic	République centrafricaine	República Centroafricana
Chad	Chad	Tchad	Chad
Comoros	Comoros	Comores	Comoras
Congo DR	Democratic Republic of the Congo	République démocratique du Congo	República Democrática del Congo
Congo Rep	Congo	Congo	República del Congo
Cote d'Ivoire	Côte d'Ivoire	Côte d'Ivoire	Côte d'Ivoire
Djibouti	Djibouti	Djibouti	Djibouti
Egypt	Egypt	Egypte	Egipto
Eq Guinea	Equatorial Guinea	Guinée équatoriale	Guinea Ecuatorial
Eritrea	Eritrea	Erythrée	Eritrea
Eswatini	Eswatini	Eswatini	Eswatini
Ethiopia	Ethiopia	Ethiopie	Etiopía
Gabon	Gabon	Gabon	Gabón
Gambia	Gambia	Gambie	Gambia
Ghana	Ghana	Ghana	Ghana
Guinea	Guinea	Guinée	Guinea
Guinea Bissau	Guinea-Bissau	Guinée-Bissau	Guinea-Bisáu
Kenya	Kenya	Kenya	Kenia
Lesotho	Lesotho	Lesotho	Lesoto
Liberia	Liberia	Libéria	Liberia
Libya	Libya	Libye	Libia
Madagascar	Madagascar	Madagascar	Madagascar
Malawi	Malawi	Malawi	Malawi
Mali	Mali	Mali	Malí
Mauritania	Mauritania	Mauritanie	Mauritania
Mauritius	Mauritius	Maurice	Mauricio
Mayotte	Mayotte	Mayotte	Mayotte
Morocco	Morocco	Maroc	Marruecos
Mozambique	Mozambique	Mozambique	Mozambique
Namibia	Namibia	Namibie	Namibia
Niger	Niger	Niger	Níger
Nigeria	Nigeria	Nigéria	Nigeria
Reunion	Réunion	Réunion	Reunión
Rwanda	Rwanda	Rwanda	Rwanda
Saint Helena	Saint Helena, Ascension and Tristan da Cunha	Sainte-Hélène, Ascension et Tristan de Cunha	Santa Helena, Ascensión y Tristán de Acuña
Sao Tome Prn	Sao Tome and Principe	Sao Tomé-et-Príncipe	Santo Tomé y Príncipe
Senegal	Senegal	Sénégal	Senegal
Seychelles	Seychelles	Seychelles	Seychelles
Sierra Leone	Sierra Leone	Sierra Leone	Sierra Leona
Somalia	Somalia	Somalie	Somalia
South Africa	South Africa	Afrique du Sud	Sudáfrica
South Sudan	South Sudan	Soudan du Sud	Sudán del Sur
Sudan	Sudan	Soudan	Sudán

Label/Étiquette/Rótulo English

Français

Español

Tanzania	United Republic of Tanzania	République Unie de Tanzanie	República Unida de Tanzania
Togo	Togo	Togo	Togo
Tunisia	Tunisia	Tunisie	Túnez
Uganda	Uganda	Ouganda	Uganda
Westn Sahara	Western Sahara	Sahara occidental	Sahara occidental
Zambia	Zambia	Zambie	Zambia
Zimbabwe	Zimbabwe	Zimbabwe	Zimbabue
ASIA	ASIA	ASIE	ASIA
Afghanistan	Afghanistan	Afghanistan	Afganistán
Bangladesh	Bangladesh	Bangladesh	Bangladesh
Bhutan	Bhutan	Bhoutan	Bután
Brunei Darsm	Brunei Darussalam	Brunei Darussalam	Brunei Darussalam
Cambodia	Cambodia	Cambodge	Camboya
China	China	Chine	China
China HK SAR	China, Hong Kong Special Administrative Region	Chine, Hong Kong Région Administrative Spéciale	China, Hong Kong, Región Administrativa Especial
China Mac SAR	China, Macao Special Administrative Region	Chine, Macao Région Administrative Spéciale	China, Macao, Región Administrativa Especial
Chinese Taipei	Taiwan, Province of China	Taiwan, Province de Chine	Taiwan, Provincia de China
India	India	Inde	India
Indonesia	Indonesia	Indonésie	Indonesia
Japan	Japan	Japon	Japón
Kazakhstan	Kazakhstan	Kazakhstan	Kazajstán
Korea DPR	Democratic People's Republic of Korea	République démocratique populaire de Corée	República Popular Democrática de Corea
Korea Rep	Republic of Korea	République de Corée	República de Corea
Kyrgyzstan	Kyrgyzstan	Kirghizistan	Kirguistán
Lao PDR	Lao People's Democratic Republic	République démocratique populaire Lao	República Democrática Popular de Lao
Malaysia	Malaysia	Malaisie	Malasia
Maldives	Maldives	Maldives	Maldivas
Mongolia	Mongolia	Mongolie	Mongolia
Myanmar	Myanmar	Myanmar	Myanmar
Nepal	Nepal	Népal	Nepal
Pakistan	Pakistan	Pakistan	Pakistán
Philippines	Philippines	Philippines	Filipinas
Singapore	Singapore	Singapour	Singapur
Sri Lanka	Sri Lanka	Sri Lanka	Sri Lanka
Tajikistan	Tajikistan	Tadjikistan	Tayikistán
Thailand	Thailand	Thaïlande	Tailandia
Timor Leste	Timor-Leste	Timor-Leste	Timor-Leste
Turkmenistan	Turkmenistan	Turkménistan	Turkmenistán
Uzbekistan	Uzbekistan	Ouzbékistan	Uzbekistán
Viet Nam	Viet Nam	Viet Nam	Viet Nam
C AMERICA + CARIB	CENTRAL AMERICA AND THE CARIBBEAN	AMÉRIQUE CENTRALE ET CARAÏBES	CENTROAMÉRICA Y EL CARIBE
Anguilla	Anguilla	Anguilla	Anguila
Antigua Barb	Antigua and Barbuda	Antigua-et-Barbuda	Antigua y Barbuda
Aruba	Aruba	Aruba	Aruba
Bahamas	Bahamas	Bahamas	Bahamas
Barbados	Barbados	Barbade	Barbados
Belize	Belize	Belize	Belize
BES Islands	Bonaire, Sint Eustatius and Saba	Bonaire, Saint-Eustache et Saba	Bonaire, San Eustaquio y Saba
Br Virgin Is	British Virgin Islands	Îles Vierges britanniques	Islas Vírgenes Británicas
Cayman Is	Cayman Islands	Îles Caïmans	Islas Caimán
Costa Rica	Costa Rica	Costa Rica	Costa Rica
Cuba	Cuba	Cuba	Cuba
Curacao	Curacao	Curaçao	Curacao
Dominica	Dominica	Dominique	Dominica
Dominican Rep	Dominican Republic	République dominicaine	República Dominicana



## Label/Étiquette/Rótulo English

## Français

## Español

El Salvador	El Salvador	El Salvador	El Salvador
Grenada	Grenada	Grenade	Granada
Guadeloupe	Guadeloupe	Guadeloupe	Guadalope
Guatemala	Guatemala	Guatemala	Guatemala
Haiti	Haiti	Haïti	Haití
Honduras	Honduras	Honduras	Honduras
Jamaica	Jamaica	Jamaïque	Jamaica
Martinique	Martinique	Martinique	Martinica
Montserrat	Montserrat	Montserrat	Montserrat
Nicaragua	Nicaragua	Nicaragua	Nicaragua
Panama	Panama	Panama	Panamá
Puerto Rico	Puerto Rico	Porto Rico	Puerto Rico
St Barth	Saint Barthélemy	Saint Barthélemy	San Bartolomé
St Kitts Nevis	Saint Kitts and Nevis	Saint-Kitts-et-Nevis	Saint Kitts y Nevis
St Lucia	Saint Lucia	Sainte-Lucie	Santa Lucía
St Maarten	Sint Maarten	Saint Martin (partie néerlandaise)	San Martín (parte neerlandesa)
St Martin	Saint Martin	Saint Martin (partie française)	San Martín (parte francesa)
St Vincent Gren	Saint Vincent and the Grenadines	Saint-Vincent-et-les Grenadines	San Vicente y las Granadinas
Trinidad Tobago	Trinidad and Tobago	Trinité-et-Tobago	Trinidad y Tabago
Turks Caicos	Turks and Caicos Islands	Îles Turques-et-Caïques	Islas Turcas y Caicos
US Virgin Is	United States Virgin Islands	Îles Vierges américaines	Islas Vírgenes Estadounidenses
EURASIA	EURASIA	EURASIE	EURASIA
Armenia	Armenia	Arménie	Armenia
Azerbaijan	Azerbaijan	Azerbaïdjan	Azerbaiján
Georgia	Georgia	Géorgie	Georgia
Russian Fed	Russian Federation	Fédération de Russie	Federación de Rusia
Turkey	Turkey	Turquie	Turquía
EUROPE	EUROPE	EUROPE	EUROPA
Albania	Albania	Albanie	Albania
Andorra	Andorra	Andorre	Andorra
Austria	Austria	Autriche	Austria
Belarus	Belarus	Bélarus	Belarús
Belgium	Belgium	Belgique	Bélgica
Bosnia Herzg	Bosnia and Herzegovina	Bosnie-Herzégovine	Bosnia-Herzegovina
Bulgaria	Bulgaria	Bulgarie	Bulgaria
Croatia	Croatia	Croatie	Croacia
Cyprus	Cyprus	Chypre	Chipre
Czechia	Czech Republic	République tchèque	República Checa
Denmark	Denmark	Danemark	Dinamarca
Estonia	Estonia	Estonie	Estonia
Faroe Islands	Faroe Islands	Îles Féroé	Islas Feroe
Finland	Finland	Finlande	Finlandia
France	France	France	Francia
Germany	Germany	Allemagne	Alemania
Gibraltar	Gibraltar	Gibraltar	Gibraltar
Greece	Greece	Grèce	Grecia
Holy See	Holy See	Saint-Siège	Santa Sede
Hungary	Hungary	Hongrie	Hungría
Iceland	Iceland	Islande	Islandia
Ireland	Ireland	Irlande	Irlanda
Italy	Italy	Italie	Italia
Kosovo*	Kosovo*	Kosovo*	Kosovo*
Latvia	Latvia	Lettonie	Letonia
Liechtenstein	Liechtenstein	Liechtenstein	Liechtenstein
Lithuania	Lithuania	Lituanie	Lituania
Luxembourg	Luxembourg	Luxembourg	Luxemburgo
Malta	Malta	Malte	Malta
Moldova Rep	Republic of Moldova	République de Moldova	República de Moldavia
Monaco	Monaco	Monaco	Mónaco

Label/Étiquette/Rótulo English

Français

Español

Montenegro	Montenegro	Monténégro	Montenegro
Netherlands	Netherlands	Pays-Bas	Países Bajos
North Macedonia	North Macedonia	Macédoine du Nord	Macedonia del Norte
Norway	Norway	Norvège	Noruega
Poland	Poland	Pologne	Polonia
Portugal	Portugal	Portugal	Portugal
Romania	Romania	Roumanie	Rumania
San Marino	San Marino	Saint-Marin	San Marino
Serbia	Serbia	Serbie	Serbia
Slovakia	Slovakia	Slovaquie	Eslovaquia
Slovenia	Slovenia	Slovénie	Eslovenia
Spain	Spain	Espagne	España
Sweden	Sweden	Suède	Suecia
Switzerland	Switzerland	Suisse	Suiza
UK	United Kingdom of Great Britain and Northern Ireland	Royaume-Uni de Grande-Bretagne et d'Irlande du Nord	Reino Unido de Gran Bretaña e Irlanda del Norte
Ukraine	Ukraine	Ukraine	Ucrania

MIDDLE EAST

MIDDLE EAST

MOYEN-ORIENT

MEDIO ESTE

Bahrain	Bahrain	Bahreïn	Bahréin
Iran IR	Iran (Islamic Republic of)	République islamique d'Iran	Irán (República Islámica del)
Iraq	Iraq	Iraq	Iraq
Israel	Israel	Israël	Israel
Jordan	Jordan	Jordanie	Jordania
Kuwait	Kuwait	Koweït	Kuwait
Lebanon	Lebanon	Liban	Líbano
Oman	Oman	Oman	Omán
Qatar	Qatar	Qatar	Qatar
Saudi Arabia	Saudi Arabia	Arabie saoudite	Arabia Saudita
Palestine	State of Palestine	l'État de Palestine	Estado de Palestina
Syrian AR	Syrian Arab Republic	République arabe syrienne	República Árabe Siria
United Arab Em	United Arab Emirates	Emirats arabes unis	Emiratos Árabes Unidos
Yemen	Yemen	Yémen	Yemen

N AMERICA

NORTH AMERICA

AMÉRIQUE DU NORD

NORTEAMÉRICA

Bermuda	Bermuda	Bermudes	Bermudas
Canada	Canada	Canada	Canadá
Greenland	Greenland	Groenland	Groenlandia
Mexico	Mexico	Mexique	México
St Pierre Mq	Saint Pierre and Miquelon	Saint-Pierre-et-Miquelon	San Pedro y Miquelón
USA	United States of America	Etats-Unis	Estados Unidos de América

OCEANIA

OCEANIA

OCÉANIE

OCEANÍA

Amer Samoa	American Samoa	Samoa américaines	Samoa americana
Australia	Australia	Australie	Australia
Christmas Is	Christmas Island	Île Christmas	Isla de Navidad
Cocos Is	Cocos (Keeling) Islands	Îles Cocos	Islas Cocos
Cook Is	Cook Islands	Îles Cook	Islas Cook
Fiji	Fiji	Fiji	Fidji
Fr Polynesia	French Polynesia	Polynésie française	Polinesia francesa
Guam	Guam	Guam	Guam
Kiribati	Kiribati	Kiribati	Kiribati
Marshall Is	Marshall Islands	Îles Marshall	Islas Marshall
Micronesia	Micronesia (Federated States of)	Micronésie (États fédérés de)	Micronesia (Estados Federados de)
Nauru	Nauru	Nauru	Nauru
New Caledon	New Caledonia	Nouvelle-Calédonie	Nueva Caledonia
New Zealand	New Zealand	Nouvelle-Zélande	Nueva Zelandia
Niue	Niue	Niue	Niue
Norfolk Is	Norfolk Island	Ile Norfolk	Isla Norfolk
Nth Mariana Is	Northern Mariana Islands	Îles Mariannes du Nord	Islas Marianas del Norte
Palau	Palau	Palaos	Palau

Label/Étiquette/Rótulo English

Français

Español

Papua N Guin	Papua New Guinea	Papouasie-Nouvelle-Guinée	Papua Nueva Guinea
Pitcairn	Pitcairn	Pitcairn	Pitcairn
Samoa	Samoa	Samoa	Samoa
Solomon Is	Solomon Islands	Îles Salomon	Islas Salomón
Tokelau	Tokelau	Tokelau	Tokelau
Tonga	Tonga	Tonga	Tonga
Tuvalu	Tuvalu	Tuvalu	Tuvalu
Vanuatu	Vanuatu	Vanuatu	Vanuatu
Wallis Fut Is	Wallis and Futuna Islands	Wallis-et-Futuna	Wallis y Futuna
S AMERICA	SOUTH AMERICA	AMÉRIQUE DU SUD	SUDAMERICA
Argentina	Argentina	Argentine	Argentina
Bolivia	Bolivia (Plurinational State of)	Bolivie (État plurinational de)	Bolivia (Estado Plurinacional de)
Brazil	Brazil	Brésil	Brasil
Chile	Chile	Chili	Chile
Colombia	Colombia	Colombie	Colombia
Ecuador	Ecuador	Equateur	Ecuador
Falklands Malv	Falkland Islands (Malvinas)	Îles Falkland (Malvinas)	Islas Malvinas (Falkland Islands)
Fr Guiana	French Guiana	Guyane française	Guayana Francesa
Guyana	Guyana	Guyana	Guyana
Paraguay	Paraguay	Paraguay	Paraguay
Peru	Peru	Pérou	Perú
Suriname	Suriname	Suriname	Surinam
Uruguay	Uruguay	Uruguay	Uruguay
Venezuela	Venezuela (Bolivarian Republic of)	Venezuela (République bolivarienne du)	La República Bolivariana de Venezuela

Source: UN Standard Country or Area Codes for Statistical Use (M49 List)  
<http://unstats.un.org/unsd/methods/m49/m49.htm>.

Note: (\*) Throughout this publication, the designation Kosovo\* is without prejudice to positions on status and in line with the United Nations Security Council Resolution 1244 (1999).

Total capacity

Total capacité

Total capacidad

Total renewable energy  
Total énergies renouvelables  
Total energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	1 136 226	1 224 050	1 329 202	1 441 393	1 563 122	1 693 254	1 848 157	2 007 996	2 179 448	2 350 755
Africa	26 097	27 338	27 784	28 755	30 944	33 032	35 305	37 934	42 677	46 269
Algeria	228	253	253	253	253	264	312	482	663	673
Angola	777	779	779	867	948	1 016	1 017	1 749	2 429	2 763
Benin	1	1	1	1	2	2	6	9	9	9
Botswana	0	0	0	2	2	2	2	3	3	3
Burkina Faso	35	36	38	38	38	39	40	42	79	94
Burundi	55	55	56	56	57	58	58	59	57	57
Cabo Verde	2	7	21	32	32	32	32	32	32	34
Cameroon	720	724	731	731	736	738	740	742	744	746
Cent Afr Rep	19	19	19	19	19	19	19	19	19	19
Chad		0	0	0	0	0	0	1	1	1
Comoros	1	1	1	1	1	1	1	1	1	1
Congo DR	2 514	2 514	2 514	2 514	2 515	2 516	2 529	2 551	2 566	2 750
Congo Rep	74	74	74	194	194	194	194	201	214	214
Cote d'Ivoire	605	606	606	606	607	608	609	609	887	887
Djibouti				0	0	0	0	0	0	0
Egypt	3 354	3 483	3 503	3 503	3 503	3 503	3 713	3 736	3 857	4 813
Eq Guinea	6	6	6	126	126	126	126	126	126	126
Eritrea	1	1	1	1	1	1	1	1	3	3
Eswatini	124	124	186	186	186	169	169	169	169	169
Ethiopia	1 443	1 903	2 081	2 082	2 235	2 301	2 641	2 646	4 302	4 351
Gabon	172	172	172	172	332	332	333	333	333	333
Gambia	2	2	2	3	3	3	3	3	3	3
Ghana	1 187	1 187	1 187	1 187	1 590	1 593	1 623	1 629	1 634	1 659
Guinea	129	129	129	129	132	132	382	382	382	382
Guinea Bissau							0	0	0	1
Kenya	949	1 040	1 041	1 095	1 107	1 278	1 592	1 638	1 659	2 016
Lesotho	73	73	73	75	75	75	75	75	75	75
Liberia	4	4	4	4	4	4	4	26	94	95
Libya	3	4	4	5	5	5	5	5	5	5
Madagascar	122	131	131	165	167	170	173	175	177	197
Malawi	300	300	301	302	305	371	375	376	383	398
Mali	193	195	199	204	231	240	241	241	243	243
Mauritania	30	30	30	30	70	71	101	117	167	168
Mauritius	164	164	154	142	145	161	171	183	191	192
Mayotte	2	8	12	13	13	13	13	13	15	15
Morocco	1 520	1 560	1 595	1 597	1 837	2 143	2 304	2 406	2 530	3 263
Mozambique	2 198	2 198	2 198	2 201	2 205	2 207	2 211	2 214	2 233	2 235
Namibia	244	245	248	342	345	347	357	384	394	431
Niger	1	2	3	4	5	6	7	8	9	20
Nigeria	2 087	2 089	2 119	2 134	2 136	2 138	2 140	2 143	2 143	2 143
Reunion	222	282	323	345	349	359	380	383	384	386
Rwanda	41	51	56	58	62	77	109	118	127	130
Sao Tome Prn	2	2	2	2	2	2	2	2	2	2
Senegal	72	88	90	91	82	110	111	143	213	234
Seychelles					6	7	7	8	9	9
Sierra Leone	29	54	54	54	55	90	90	91	99	99
Somalia				2	2	2	3	7	10	11
South Africa	975	993	997	1 003	1 500	2 710	3 429	4 650	5 587	6 065
South Sudan				0	0	0	0	0	0	0
Sudan	1 681	1 682	1 684	1 791	1 791	1 791	1 794	1 796	2 131	2 136
Tanzania	605	616	632	638	641	652	659	665	675	679
Togo	67	67	67	67	67	68	69	69	70	70
Tunisia	120	120	122	244	275	315	332	348	358	358
Uganda	390	495	496	647	788	805	807	809	844	861
Zambia	1 723	1 937	1 937	1 944	2 304	2 304	2 314	2 434	2 445	2 446
Zimbabwe	834	835	854	854	860	861	878	882	887	1 192
Asia	349 146	386 908	433 579	478 216	552 725	631 745	721 119	810 802	918 661	1 023 533
Afghanistan	213	241	245	289	294	299	303	349	355	355
Bangladesh	251	266	267	291	330	358	382	393	438	439
Bhutan	1 488	1 488	1 489	1 489	1 489	1 489	1 615	1 615	1 615	1 615
Brunei Darism		1	1	1	1	1	1	1	1	1
Cambodia	22	22	218	253	704	962	964	968	1 138	1 438
China	205 232	233 260	267 903	302 108	359 519	414 653	479 106	540 999	620 857	695 865
Chinese Taipei	2 734	2 888	3 090	3 286	3 498	3 750	3 990	4 428	4 961	5 823
India	48 304	52 329	58 127	60 489	63 421	71 742	78 407	90 183	104 969	117 919
Indonesia	6 702	6 856	7 147	7 489	8 261	8 417	8 514	8 870	9 142	9 471
Japan	34 485	36 392	37 786	39 035	46 116	56 181	67 539	75 960	83 370	90 154
Kazakhstan	2 357	2 364	2 514	2 665	2 680	2 734	2 807	2 851	2 898	3 088
Korea DPR	3 919	3 959	3 962	4 263	4 287	4 299	4 475	4 711	4 772	4 772
Korea Rep	2 608	2 819	3 322	3 687	4 330	5 716	7 214	8 675	10 200	12 641
Kyrgyzstan	2 944	3 064	3 072	3 072	3 572	3 672	3 676	3 677	3 680	3 680
Lao PDR	1 836	2 551	2 555	2 964	3 010	3 296	4 398	4 857	5 052	5 118
Malaysia	2 836	2 801	3 899	4 245	5 674	6 367	7 568	7 938	7 999	8 157

Total renewable energy  
Total énergies renouvelables  
Total energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Maldives	1	1	2	2	2	5	6	8	11	11
Mongolia	22	34	34	35	85	85	85	95	178	248
Myanmar	1 464	1 938	2 570	2 706	2 867	2 923	3 101	3 160	3 315	3 315
Nepal	691	702	712	718	755	771	827	848	992	1 112
Pakistan	6 929	7 012	7 024	7 141	7 563	7 913	8 089	8 623	9 304	13 049
Philippines	4 732	4 815	4 823	4 834	4 861	5 283	5 622	6 246	6 374	6 482
Singapore	130	131	133	136	140	154	174	225	245	279
Sri Lanka	1 403	1 440	1 464	1 686	1 732	1 844	1 873	1 963	2 058	2 091
Tajikistan	4 759	4 759	4 766	4 768	4 771	4 991	4 990	4 989	4 989	5 631
Thailand	4 130	4 214	4 466	5 103	6 115	6 826	7 432	8 897	9 698	10 411
Timor Leste	0	0	0	0	1	1	1	1	1	1
Uzbekistan	1 630	1 746	1 746	1 746	1 747	1 762	1 762	1 797	1 844	1 844
Viet Nam	7 323	8 813	10 240	13 712	14 900	15 252	16 196	17 474	18 202	18 523
Turkmenistan	1	1	1	1	1	1	1	1	1	1
C America + Carib	7 384	7 671	8 488	9 319	9 648	10 342	11 936	13 531	14 108	14 888
Anguilla				0	0	1	1	2	2	1
Antigua Barb	0	0	0	0	0	0	3	4	4	8
Aruba	30	30	30	31	32	37	38	38	38	38
Bahamas	0	0	0	1	1	1	1	1	1	1
Barbados	1	1	2	2	3	7	9	19	19	24
Belize	63	63	82	83	83	84	86	102	110	110
BES Islands	11	11	11	11	11	11	11	13	16	16
Br Virgin Is		1	1	1	1	1	1	1	1	1
Costa Rica	1 844	1 889	2 045	2 120	2 150	2 307	2 496	2 920	2 984	3 070
Cuba	612	618	621	594	555	596	629	610	638	669
Curacao	9	9	9	30	33	38	40	47	65	65
Dominica	5	7	7	7	7	7	7	7	7	7
Dominican Rep	524	537	571	714	719	730	741	870	905	1 017
El Salvador	794	785	754	827	840	844	929	1 057	1 150	1 250
Grenada	0	0	0	0	1	1	1	2	2	3
Guadeloupe	87	100	106	138	144	141	148	148	153	158
Guatemala	1 206	1 311	1 341	1 515	1 646	1 775	2 178	2 667	2 753	2 995
Haiti	56	57	57	57	58	58	58	58	59	81
Honduras	621	622	773	751	789	897	1 362	1 469	1 597	1 692
Jamaica	76	95	95	96	103	105	108	189	217	217
Martinique	19	32	53	65	67	68	71	72	73	113
Nicaragua	357	381	382	556	562	604	622	679	690	690
Panama	899	957	1 382	1 500	1 548	1 715	2 053	2 164	2 227	2 261
Puerto Rico	160	154	154	208	281	296	316	361	369	369
St Kitts Nevis		2	2	2	3	4	4	4	4	4
St Lucia	0	0	0	0	0	0	1	1	1	4
St Martin					1	2	3	2	0	0
St Vincent Gren	6	6	6	6	6	6	6	7	7	7
Trinidad Tobago	2	3	3	3	3	3	3	3	3	3
Turks Caicos							0	0	0	0
US Virgin Is			0	1	1	5	9	9	5	5
Cayman Is								3	9	10
Eurasia	67 626	69 570	71 358	76 557	80 713	83 700	87 642	90 733	95 865	100 007
Armenia	1 098	1 127	1 152	1 253	1 292	1 301	1 289	1 315	1 332	1 353
Azerbaijan	989	997	999	1 024	1 125	1 120	1 154	1 184	1 189	1 389
Georgia	2 718	2 702	2 703	2 710	2 705	2 380	2 378	2 451	2 744	2 826
Russian Fed	47 292	47 375	47 418	49 384	50 041	50 959	51 304	51 338	51 854	52 224
Turkey	15 529	17 369	19 086	22 186	25 551	27 940	31 516	34 446	38 746	42 215
Europe	295 798	322 579	361 476	395 648	420 241	440 673	465 130	489 177	512 774	536 392
Albania	1 459	1 475	1 509	1 629	1 782	1 726	1 799	2 012	2 048	2 133
Austria	15 676	15 989	16 511	16 425	16 957	17 597	18 198	19 336	19 596	20 026
Belarus	31	91	96	113	131	136	186	293	431	457
Belgium	2 011	3 040	4 198	5 122	5 766	5 978	6 364	6 732	7 440	8 205
Bosnia Herzg	1 569	1 699	1 701	1 702	1 703	1 719	1 734	1 784	1 813	1 891
Bulgaria	2 481	2 707	2 950	4 021	4 076	4 120	4 137	4 143	4 294	4 294
Croatia	2 170	2 229	2 285	2 343	2 486	2 589	2 727	2 807	2 929	2 952
Cyprus	12	97	153	173	192	221	244	252	277	280
Czechia	2 046	3 399	3 681	3 998	4 096	4 171	4 215	4 212	4 272	4 284
Denmark	4 435	4 916	5 124	5 950	6 577	6 753	7 106	7 389	7 756	8 084
Estonia	171	256	334	441	519	561	594	608	611	633
Faroe Islands	36	36	36	47	47	58	59	58	58	58
Finland	5 047	5 127	5 282	5 329	5 632	5 863	6 256	6 859	7 618	7 867
France	29 293	31 717	34 903	37 126	38 773	40 424	42 759	44 921	47 972	50 504
Germany	47 235	56 546	67 424	78 164	83 766	90 320	98 013	104 746	112 719	120 014
Greece	4 458	4 756	5 521	6 570	7 672	8 010	8 138	8 424	8 686	9 006
Hungary	766	862	890	724	749	1 024	1 077	1 048	1 192	1 522
Iceland	2 452	2 458	2 549	2 542	2 651	2 652	2 654	2 651	2 695	2 840
Ireland	1 521	1 664	1 867	1 999	2 312	2 592	2 760	3 101	3 671	3 890



# Total renewable energy

## Total énergies renouvelables

### Total energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	25 772	29 507	40 822	46 721	48 857	49 526	50 417	51 195	52 128	53 290
Kosovo*	40	43	44	44	44	44	44	81	121	140
Latvia	1 575	1 622	1 642	1 701	1 761	1 778	1 782	1 778	1 796	1 797
Lithuania	238	278	351	451	527	545	693	768	787	832
Luxembourg	116	126	139	187	211	225	239	301	318	354
Malta	1	1	8	19	31	58	77	98	117	132
Moldova Rep	64	64	64	64	65	66	69	72	72	72
Montenegro	676	677	659	659	652	653	654	654	727	775
Netherlands	3 355	3 562	3 748	4 038	4 547	4 837	5 808	7 185	7 942	9 753
North Macedonia	553	555	558	599	624	682	716	720	731	740
Norway	30 082	30 250	30 632	31 365	32 002	32 256	32 394	32 814	33 251	34 333
Poland	1 751	2 178	3 019	4 094	5 116	5 638	6 919	7 881	7 978	8 233
Portugal	8 958	9 607	10 548	10 955	11 143	11 573	12 153	13 208	13 541	13 787
Romania	6 389	6 791	7 410	8 354	10 098	11 152	11 212	11 162	11 145	11 148
Serbia	2 276	2 295	2 325	2 359	2 326	2 415	2 432	2 454	2 472	2 866
Slovakia	1 741	1 803	2 301	2 335	2 359	2 380	2 384	2 397	2 385	2 388
Slovenia	1 124	1 133	1 184	1 275	1 369	1 405	1 421	1 411	1 480	1 489
Spain	39 711	42 246	43 920	46 413	47 676	47 711	47 742	47 776	47 899	48 277
Sweden	22 123	22 817	23 573	24 393	24 744	25 636	26 989	27 903	28 226	29 067
Switzerland	13 504	13 645	13 789	14 064	14 409	14 637	15 040	16 259	16 774	17 134
UK	8 236	9 627	12 783	15 902	20 026	24 895	30 823	35 488	40 311	43 460
Ukraine	4 647	4 691	4 945	5 241	5 769	6 048	6 105	6 199	6 494	7 389
European Union	238 856	265 161	303 214	335 937	358 766	378 323	402 020	423 910	445 876	466 403
Middle East	11 351	12 133	12 556	13 218	14 090	15 592	16 953	17 788	18 705	20 026
Bahrain	1	1	1	1	1	6	6	6	6	6
Iran IR	7 808	8 588	8 850	9 858	10 380	10 955	11 452	11 824	12 263	12 675
Iraq	2 274	2 274	2 274	1 865	1 895	1 902	2 311	2 311	2 311	2 311
Israel	50	99	219	266	453	706	813	934	1 037	1 138
Jordan	17	17	17	17	17	17	163	495	610	1 071
Kuwait			0	0	0	2	3	31	41	41
Lebanon	282	282	282	285	288	292	298	318	301	307
Oman					1	1	2	2	8	8
Palestine			0	1	1	3	12	25	35	36
Qatar			39	39	40	42	42	43	43	43
Saudi Arabia	0	2	3	14	22	24	74	74	92	142
Syrian AR	907	857	857	857	857	1 501	1 579	1 501	1 501	1 503
United Arab Em	10	11	13	14	132	137	137	144	357	596
Yemen	1	1	1	1	2	5	60	80	100	150
N America	220 266	232 125	242 940	262 799	272 069	284 700	307 332	331 580	347 766	366 500
Canada	79 587	80 816	82 820	83 999	85 990	88 945	95 046	97 210	98 169	99 035
Greenland	54	69	69	91	91	91	91	91	91	91
Mexico	13 207	13 515	13 480	14 770	15 176	16 568	17 296	18 853	19 462	22 128
St Pierre Mq	1	1	1	1	1					
USA	127 418	137 725	146 571	163 939	170 812	179 096	194 899	215 427	230 043	245 245
Oceania	17 712	18 389	19 674	21 382	22 201	23 797	24 694	25 178	27 071	31 870
Amer Samoa				2	2	2	2	4	4	4
Australia	10 513	11 125	12 399	13 874	14 594	15 937	16 729	17 183	19 006	23 749
Cook Is	0	0	0	0	1	2	2	3	3	5
Fiji	147	147	147	191	191	191	193	195	209	212
Fr Polynesia	51	51	60	62	66	70	74	77	82	82
Guam	0	0	0	0	1	1	32	35	35	35
Kiribati	0	0	0	0	1	1	2	3	3	3
Marshall Is	0	0	0	0	1	1	1	2	2	2
Micronesia	1	1	1	1	1	1	1	1	1	3
Nauru	0	0	0	0	0	0	0	1	1	1
New Caledon	116	118	119	119	119	120	123	125	144	149
New Zealand	6 573	6 627	6 627	6 800	6 890	7 131	7 170	7 179	7 196	7 241
Niue	0	0	0	0	0	0	0	0	0	0
Palau	0	0	1	1	1	1	1	1	1	1
Papua N Guin	293	301	301	313	314	314	333	333	333	334
Samoa	13	13	13	9	9	13	14	17	27	27
Solomon Is	0	0	1	1	1	2	2	3	3	3
Tokelau	0	0	0	1	1	1	1	1	1	1
Tonga	0	0	0	1	2	2	3	3	6	6
Tuvalu	0	0	0	0	0	0	2	2	2	2
Vanuatu	4	4	4	4	7	8	8	9	10	10
S America	140 846	147 337	151 348	155 499	160 491	169 672	178 047	191 273	201 823	211 270
Argentina	9 655	9 649	9 720	9 835	9 899	9 950	9 948	10 013	11 555	11 935
Bolivia	584	584	590	591	592	628	638	669	796	914
Brazil	84 929	89 558	92 912	96 112	99 827	106 439	112 616	121 320	128 269	135 674

Total renewable energy  
Total énergies renouvelables  
Total energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Chile	6 105	6 158	6 697	7 055	7 677	8 328	8 451	9 298	10 288	10 903
Colombia	9 143	9 913	9 917	9 979	10 081	11 153	11 756	11 882	12 057	12 243
Ecuador	2 168	2 345	2 337	2 367	2 388	2 439	2 601	4 640	4 714	5 164
Falklands Malv	1	2	2	2	2	2	4	4	4	4
Fr Guiana	117	138	148	155	155	159	160	165	165	167
Guyana	41	41	41	42	42	47	47	48	50	51
Paraguay	8 130	8 810	8 810	8 810	8 849	8 849	8 849	8 849	8 849	8 849
Peru	3 363	3 516	3 539	3 698	3 841	4 098	4 701	5 730	5 972	6 252
Suriname	180	180	180	181	181	186	188	188	188	189
Uruguay	1 806	1 816	1 827	2 016	2 024	2 460	2 896	3 276	3 724	3 734
Venezuela	14 624	14 626	14 626	14 656	14 933	14 934	15 192	15 192	15 192	15 192

# Hydropower

## Hydroélectricité

## Hidroeléctrica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	991 872	1 025 937	1 056 643	1 089 457	1 135 533	1 173 802	1 209 864	1 243 874	1 271 388	1 292 595
Africa	25 987	26 877	27 015	27 674	28 841	28 957	29 481	31 405	34 837	35 681
Algeria	228	228	228	228	228	228	228	228	228	228
Angola	772	772	772	857	937	953	953	1 684	2 365	2 699
Benin	1	1	1	1	1	1	1	1	1	1
Burkina Faso	32	32	32	32	32	32	32	32	32	32
Burundi	50	50	51	51	51	51	51	51	48	48
Cameroon	719	723	729	729	733	733	733	733	732	732
Cent Afr Rep	19	19	19	19	19	19	19	19	19	19
Comoros	1	1	1	1	1	1	1	1	1	1
Congo DR	2 514	2 514	2 514	2 514	2 515	2 515	2 528	2 548	2 559	2 740
Congo Rep	74	74	74	194	194	194	194	201	214	214
Cote d'Ivoire	604	604	604	604	604	604	604	604	879	879
Egypt	2 851	2 851	2 851	2 851	2 851	2 851	2 851	2 851	2 851	2 851
Eq Guinea	6	6	6	126	126	126	126	126	126	126
Eswatini	63	63	62	62	62	62	62	62	62	62
Ethiopia	1 415	1 875	1 972	1 972	1 972	1 972	2 159	2 159	3 817	3 817
Gabon	170	170	170	170	330	330	330	330	330	330
Ghana	1 180	1 180	1 180	1 180	1 580	1 580	1 584	1 584	1 584	1 584
Guinea	128	128	128	128	128	128	368	368	368	368
Kenya	753	769	769	814	822	822	828	829	834	837
Lesotho	73	73	73	75	75	75	75	75	75	75
Liberia	4	4	4	4	4	4	4	26	92	92
Madagascar	121	129	129	162	162	163	164	164	164	164
Malawi	287	287	287	287	287	351	351	352	352	364
Mali	157	157	157	157	184	184	184	184	184	184
Mauritania	30	30	30	30	48	48	48	48	48	48
Mauritius	59	60	60	60	61	61	61	61	61	61
Morocco	1 749	1 770	1 770	1 770	1 770	1 770	1 770	1 770	1 770	1 770
Mozambique	2 184	2 184	2 184	2 186	2 186	2 186	2 187	2 187	2 204	2 204
Namibia	240	240	240	330	330	330	330	347	347	347
Nigeria	2 080	2 080	2 110	2 110	2 110	2 110	2 111	2 111	2 111	2 111
Reunion	121	133	133	133	134	134	134	133	133	133
Rwanda	40	50	55	57	60	66	94	98	99	99
Sao Tome Prn	2	2	2	2	2	2	2	2	2	2
Senegal	60	60	60	60	50	75	75	75	75	75
Sierra Leone	29	54	54	54	54	56	56	56	61	61
South Africa	2 121	2 135	2 135	2 135	2 135	2 132	2 147	3 146	3 479	3 479
Sudan	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 928	1 928
Tanzania	567	567	567	571	571	571	576	576	583	583
Togo	67	67	67	67	67	67	67	67	67	67
Tunisia	66	66	66	66	66	66	66	66	66	66
Uganda	328	432	432	582	691	695	695	695	708	723
Zambia	1 679	1 893	1 893	1 900	2 260	2 260	2 268	2 388	2 398	2 398
Zimbabwe	752	753	753	753	758	758	773	777	781	1 081
Asia	342 753	367 330	391 318	414 305	451 250	479 353	499 752	515 531	530 788	543 887
Afghanistan	213	241	245	273	277	280	284	329	333	333
Bangladesh	230	230	220	220	230	230	230	230	230	230
Bhutan	1 488	1 488	1 488	1 488	1 488	1 488	1 614	1 614	1 614	1 614
Cambodia	13	13	207	225	683	929	930	930	1 080	1 380
China	196 290	216 057	232 980	249 470	280 440	304 860	319 530	332 070	343 775	352 261
Chinese Taipei	4 539	4 579	4 643	4 683	4 683	4 683	4 691	4 691	4 691	4 691
India	39 548	40 651	42 417	43 035	44 173	45 407	47 103	47 613	49 520	50 066
Indonesia	3 708	3 741	3 953	4 156	5 177	5 242	5 275	5 397	5 451	5 548
Japan	47 243	47 736	48 418	48 934	48 932	49 597	50 034	50 117	50 117	50 117
Kazakhstan	2 357	2 364	2 514	2 664	2 675	2 675	2 678	2 696	2 726	2 756
Korea DPR	3 918	3 958	3 960	4 260	4 283	4 293	4 467	4 701	4 761	4 761
Korea Rep	5 515	5 525	6 418	6 447	6 452	6 467	6 471	6 485	6 494	6 494
Kyrgyzstan	2 944	3 064	3 072	3 072	3 572	3 672	3 676	3 677	3 680	3 680
Lao PDR	1 836	2 551	2 555	2 964	2 970	3 254	4 355	4 813	5 006	5 072
Malaysia	2 118	2 130	3 116	3 444	4 524	4 762	5 743	6 108	6 108	6 128
Mongolia	18	29	29	29	29	29	29	29	29	29
Myanmar	1 463	1 936	2 568	2 702	2 862	2 914	3 074	3 104	3 255	3 255
Nepal	688	697	704	709	744	759	814	834	939	1 059
Pakistan	6 657	6 734	6 737	6 777	7 088	7 218	7 218	7 248	7 400	9 900
Philippines	3 522	3 569	3 575	3 585	3 585	3 600	3 617	3 627	3 627	3 708
Sri Lanka	1 382	1 387	1 406	1 590	1 622	1 670	1 689	1 728	1 738	1 741
Tajikistan	4 759	4 759	4 766	4 768	4 771	4 991	4 990	4 989	4 989	5 631
Thailand	3 488	3 488	3 500	3 508	3 524	3 500	3 573	3 575	3 575	3 603
Timor Leste	0	0	0	0	0	0	0	0	0	0
Turkmenistan	1	1	1	1	1	1	1	1	1	1
Uzbekistan	1 630	1 746	1 746	1 746	1 746	1 761	1 761	1 794	1 839	1 839
Viet Nam	7 185	8 653	10 080	13 552	14 718	15 069	15 905	17 131	17 809	17 989

# Hydropower

## Hydroélectricité

## Hidroeléctrica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
C America + Carib	5 156	5 365	5 912	6 216	6 317	6 632	6 978	7 820	7 882	8 197
Belize	35	35	53	53	53	54	54	54	54	54
Costa Rica	1 510	1 553	1 644	1 700	1 725	1 834	1 935	2 328	2 328	2 373
Cuba	58	63	65	62	63	63	63	66	66	66
Dominica	5	7	7	7	7	7	7	7	7	7
Dominican Rep	524	524	524	613	614	617	617	617	617	617
El Salvador	486	487	487	487	488	490	497	575	575	575
Guadeloupe	9	9	9	9	9	9	9	9	11	11
Guatemala	778	885	902	986	997	1 001	1 087	1 392	1 438	1 621
Haiti	56	56	56	56	56	56	56	56	56	78
Honduras	527	527	529	539	558	624	656	671	676	706
Jamaica	23	23	23	23	30	30	30	30	30	30
Nicaragua	105	105	105	106	120	120	138	142	142	142
Panama	879	937	1 352	1 469	1 494	1 623	1 725	1 769	1 777	1 812
Puerto Rico	156	150	150	100	99	99	99	99	99	99
St Vincent Gren	6	6	6	6	6	6	6	6	6	6
Eurasia	66 534	67 953	69 331	73 901	77 335	79 108	81 634	82 544	83 908	85 157
Armenia	1 094	1 123	1 148	1 249	1 289	1 298	1 287	1 311	1 327	1 333
Azerbaijan	987	995	998	1 023	1 084	1 078	1 103	1 105	1 106	1 249
Georgia	2 718	2 702	2 703	2 710	2 705	2 380	2 378	2 430	2 723	2 805
Russian Fed	47 182	47 301	47 344	49 310	49 968	50 709	50 998	51 017	51 478	51 478
Turkey	14 553	15 831	17 137	19 609	22 289	23 643	25 868	26 681	27 273	28 291
Europe	204 529	205 968	207 719	209 080	210 992	211 713	214 216	218 086	219 164	220 219
Albania	1 459	1 475	1 508	1 628	1 781	1 725	1 798	2 011	2 047	2 132
Austria	12 446	12 707	12 981	13 078	13 148	13 290	13 375	14 116	14 150	14 194
Belarus	13	14	14	32	32	33	34	74	95	95
Belgium	1 417	1 425	1 426	1 427	1 429	1 431	1 422	1 425	1 423	1 424
Bosnia Herzg	1 989	2 118	2 120	2 121	2 122	2 131	2 137	2 180	2 207	2 232
Bulgaria	3 001	3 048	3 108	3 181	3 203	3 219	3 219	3 223	3 372	3 372
Croatia	2 092	2 141	2 141	2 141	2 190	2 193	2 208	2 205	2 206	2 206
Czechia	2 184	2 196	2 197	2 212	2 252	2 252	2 260	2 262	2 265	2 261
Denmark	9	9	9	9	9	9	7	9	9	9
Estonia	7	6	5	8	8	5	6	6	7	7
Faroe Islands	32	32	32	38	38	38	38	38	38	38
Finland	3 145	3 155	3 196	3 196	3 224	3 248	3 249	3 250	3 272	3 274
France	25 208	25 425	25 642	25 657	25 641	25 573	25 552	25 621	25 706	25 695
Germany	11 238	11 218	11 436	11 257	11 240	11 234	11 399	11 300	11 120	11 120
Greece	3 201	3 215	3 224	3 236	3 238	3 389	3 392	3 392	3 392	3 392
Hungary	53	53	55	56	57	57	57	57	57	57
Iceland	1 875	1 883	1 884	1 877	1 984	1 984	1 986	1 985	1 984	2 084
Ireland	526	237	237	529	529	529	529	529	529	529
Italy	21 371	21 520	21 737	21 880	22 009	22 098	22 220	22 298	22 426	22 516
Kosovo*	40	42	43	43	43	43	43	78	80	96
Latvia	1 536	1 576	1 576	1 576	1 587	1 588	1 588	1 564	1 564	1 564
Lithuania	876	876	876	876	876	877	877	877	877	877
Luxembourg	1 134	1 134	1 134	1 134	1 134	1 330	1 330	1 330	1 331	1 331
Moldova Rep	64	64	64	64	64	64	64	64	64	64
Montenegro	676	676	658	658	651	651	651	651	652	653
Netherlands	37	37	37	37	37	37	37	37	37	37
North Macedonia	553	555	556	595	617	630	658	661	671	674
Norway	29 539	29 693	29 969	30 509	31 033	31 240	31 372	31 817	31 912	32 502
Poland	2 338	2 342	2 346	2 351	2 355	2 364	2 370	2 385	2 390	2 392
Portugal	5 091	5 106	5 535	5 712	5 661	5 715	6 168	6 960	7 226	7 248
Romania	6 450	6 474	6 483	6 548	6 610	6 613	6 730	6 734	6 692	6 692
Serbia	2 889	2 907	2 936	2 966	2 931	3 017	3 022	3 030	3 038	3 081
Slovakia	2 487	2 516	2 523	2 522	2 523	2 523	2 522	2 524	2 523	2 523
Slovenia	1 070	1 254	1 253	1 254	1 299	1 296	1 295	1 293	1 347	1 347
Spain	18 505	18 535	18 540	18 550	19 185	19 223	20 053	20 080	20 079	20 098
Sweden	16 652	16 732	16 577	16 414	16 494	15 996	16 329	16 466	16 502	16 506
Switzerland	13 521	13 723	13 769	13 802	13 817	13 743	13 815	14 806	15 079	15 099
UK	4 384	4 391	4 423	4 437	4 452	4 474	4 522	4 579	4 618	4 622
Ukraine	5 421	5 458	5 469	5 470	5 489	5 851	5 883	6 167	6 177	6 177
European Union	146 702	147 585	148 954	149 539	150 651	150 825	152 977	154 783	155 381	155 554
Middle East	11 429	12 151	12 410	13 001	13 521	14 685	16 705	16 927	17 269	17 415
Iran IR	7 714	8 486	8 745	9 745	10 265	10 785	12 318	12 618	12 989	13 135
Iraq	2 514	2 514	2 514	2 105	2 105	2 105	2 514	2 514	2 514	2 514
Israel	7	7	7	7	7	7	7	7	7	7
Jordan	12	12	12	12	12	12	12	12	12	12
Lebanon	282	282	282	282	282	282	282	282	253	253
Syrian AR	900	850	850	850	850	1 494	1 572	1 494	1 494	1 494

# Hydropower

## Hydroélectricité

## Hidroeléctrica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
N America	186 893	187 768	188 157	188 360	188 850	190 254	193 973	195 720	196 273	196 589
Canada	74 687	75 078	75 573	75 537	75 537	75 537	79 420	80 259	80 574	80 747
Greenland	54	69	69	91	91	91	91	91	91	91
Mexico	11 474	11 597	11 571	11 626	11 633	12 464	12 223	12 580	12 642	12 642
USA	100 678	101 024	100 944	101 106	101 589	102 162	102 239	102 790	102 965	103 109
Oceania	15 077	15 168	15 183	15 304	14 556	14 567	14 596	14 616	14 621	14 621
Australia	9 295	9 449	9 464	9 466	8 713	8 724	8 724	8 724	8 725	8 725
Fiji	95	95	95	139	138	138	138	138	138	138
Fr Polynesia	47	47	47	47	47	47	47	47	48	48
Micronesia										
New Caledon	78	78	78	78	78	78	78	78	78	78
New Zealand	5 325	5 254	5 254	5 324	5 329	5 329	5 340	5 360	5 360	5 360
Papua N Guin	222	230	230	240	240	240	258	258	258	258
Samoa	13	13	13	9	9	9	9	9	12	12
Solomon Is	0	0	0	0	0	0	0	0	0	0
Vanuatu	1	1	1	1	1	1	1	1	1	1
S America	133 515	137 358	139 599	141 616	143 871	148 532	152 529	161 225	166 647	170 829
Argentina	10 024	10 025	10 025	10 032	10 034	10 044	10 041	10 104	11 598	11 292
Bolivia	496	496	501	501	501	494	495	495	620	674
Brazil	78 610	80 703	82 457	84 294	86 019	89 193	91 650	96 929	100 319	104 195
Chile	5 452	5 467	5 946	5 992	6 094	6 445	6 499	6 671	6 684	6 727
Colombia	9 010	9 721	9 718	9 778	9 875	10 920	11 501	11 607	11 731	11 842
Ecuador	2 059	2 242	2 234	2 263	2 263	2 248	2 410	4 447	4 516	4 966
Fr Guiana	114	114	114	119	119	119	119	118	118	118
Guyana										
Paraguay	8 130	8 810	8 810	8 810	8 810	8 810	8 810	8 810	8 810	8 810
Peru	3 277	3 438	3 451	3 484	3 556	3 662	4 148	5 189	5 395	5 349
Suriname	180	180	180	180	180	180	180	180	180	180
Uruguay	1 538	1 538	1 538	1 538	1 538	1 538	1 538	1 538	1 538	1 538
Venezuela	14 624	14 624	14 624	14 624	14 881	14 881	15 138	15 138	15 138	15 138

# Renewable hydropower (including mixed plants)

## Hydroélectricité renouvelable (y compris les plantes mixtes)

## Hidroeléctrica renovable (incluidas las plantas mixtas)

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	890 606	925 148	952 609	982 798	1 027 635	1 064 227	1 097 189	1 126 060	1 150 450	1 171 612
Africa	24 123	25 013	25 151	25 810	26 977	27 093	27 617	28 542	31 641	32 485
Algeria	228	228	228	228	228	228	228	228	228 e	228 e
Angola	772	772	772	857	937	953	953 e	1 684 e	2 365 e	2 699 e
Benin	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Burkina Faso	32 o	32 o	32 o	32 o	32 o	32 o	32 o	32 e	32 e	32 e
Burundi	50 o	50 o	51 o	51 o	51 o	51 o	51 o	51 o	48 e	48 e
Cameroon	719 e	723 e	729 e	729 e	733 o	733 e	733 e	733 e	732 e	732 e
Cent Afr Rep	19 e	19 e	19 e	19 e	19 e	19 e	19 e	19 e	19 e	19 e
Comoros	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Congo DR	2 514 e	2 514 e	2 514 e	2 514 e	2 515 e	2 515 e	2 528 e	2 548 e	2 559 e	2 740 u
Congo Rep	74 e	74 e	74 e	194 e	194 e	194 e	194 e	201 u	214 u	214 u
Cote d'Ivoire	604 o	604 o	604 o	604 o	604 o	604 o	604 o	604 o	879 u	879 e
Egypt	2 851	2 851	2 851	2 851	2 851	2 851	2 851	2 851	2 851	2 851
Eq Guinea	6 o	6 o	6 o	126 o	126 o	126 o	126 o	126 o	126 e	126 e
Eswatini	63	63	62	62	62	62	62	62 e	62 e	62 e
Ethiopia	1 415	1 875 e	1 972 e	1 972 e	1 972 e	1 972 e	2 159 e	2 159	3 817	3 817 e
Gabon	170 e	170 e	170 e	170 e	330 e	330 e	330 e	330 e	330 e	330 e
Ghana	1 180 o	1 180 o	1 180 o	1 180 o	1 580 o	1 580 o	1 584 o	1 584 o	1 584 o	1 584 e
Guinea	128 o	128 o	128 o	128 o	128 o	128 o	368 o	368 o	368 e	368 e
Kenya	753 o	769 o	769 o	814 o	822 o	822 o	828 o	829 o	834 e	837 e
Lesotho	73	73	73	75	75	75	75 e	75 e	75 e	75 e
Liberia	4 e	4 e	4 e	4 e	4 e	4 e	4 e	26 e	92 e	92 e
Madagascar	121 o	129 o	129 o	162 o	162 o	163 o	164 o	164 o	164 e	164 e
Malawi	287 e	287 e	287 e	287 e	287 e	351 e	351 e	352 e	352 e	364 e
Mali	157 o	157 o	157 o	157 o	184 o	184 o	184 o	184 o	184 o	184 e
Mauritania	30 u	30 u	30 u	30 u	48 u	48 u	48 u	48 e	48 e	48 e
Mauritius	59	60	60	60	61	61	61	61 o	61 e	61 e
Morocco	1 285	1 306	1 306	1 306	1 306	1 306	1 306	1 306	1 306	1 306
Mozambique	2 184 e	2 184 e	2 184 e	2 186 e	2 186 e	2 186 e	2 187 e	2 187 e	2 204 e	2 204 e
Namibia	240	240	240	330	330	330	330	347	347 o	347 o
Nigeria	2 080 o	2 080 o	2 110 o	2 110 o	2 110 o	2 110 o	2 111 o	2 111 o	2 111 o	2 111 o
Reunion	121 o	133 o	133 o	133 o	134 o	134 o	134 o	133 o	133 o	133 e
Rwanda	40 o	50 o	55 o	57 o	60 o	66 o	94 o	98 o	99 e	99 e
Sao Tome Prn	2 o	2 o	2 o	2 o	2 o	2 o	2 o	2 e	2 e	2 e
Senegal	60 o	60 o	60 o	60 o	50 o	75 o	75 e	75 e	75 e	75 e
Sierra Leone	29 e	54 e	54 e	54 e	54 e	56 e	56 e	56 e	61 e	61 e
South Africa	721 e	735 e	735 e	735 e	735 e	732 e	747 e	747 e	747 e	747 e
Sudan	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 928	1 928 e
Tanzania	567 e	567 e	567 e	571 e	571 e	571 e	576 e	576 e	583 e	583 e
Togo	67 o	67 o	67 o	67 o	67 o	67 o	67 o	67 o	67 o	67 o
Tunisia	66 u	66 u	66 u	66 u	66 u	66 e	66 e	66 o	66 e	66 e
Uganda	328 o	432 o	432 o	582 o	691 o	695 o	695 o	695 o	708 o	723 u
Zambia	1 679 o	1 893 o	1 893 o	1 900 o	2 260 o	2 260 o	2 268 o	2 388 o	2 398 o	2 398 o
Zimbabwe	752	753	753	753	758	758	773 e	777 e	781 e	1 081 e
Asia	296 185	317 532	338 368	358 934	394 680	421 664	440 944	453 062	465 620	478 718
Afghanistan	213 e	241 e	245 e	273 e	277 e	280 e	284 e	329 e	333 e	333 e
Bangladesh	230 o	230 o	220 o	220 o	230 o	230 o	230 o	230 o	230 o	230 e
Bhutan	1 488 e	1 488 e	1 488 e	1 488 e	1 488 e	1 488 e	1 614 e	1 614 e	1 614 e	1 614 e
Cambodia	13 o	13 o	207 o	225 o	683 o	929 o	930 o	930 o	1 080 e	1 380 e
China	182 590	199 127	214 598	229 138	258 908	282 750	296 500	305 380	314 385	322 871
Chinese Taipei	1 937 o	1 977 o	2 041 o	2 081 o	2 081 o	2 081 o	2 089 o	2 089 o	2 089 o	2 089 e
India	34 762 e	35 866 e	37 631 e	38 250 e	39 388 e	40 621 e	42 317 e	42 827 e	44 735 e	45 280 e
Indonesia	3 708 e	3 741 e	3 953 e	4 156 e	5 177 e	5 242 e	5 275 e	5 397 e	5 451 e	5 548 e
Japan	27 494	27 987	27 769	27 815	27 813	27 873	28 110	28 193	28 193 e	28 193 e
Kazakhstan	2 357	2 364	2 514	2 664	2 675	2 675	2 678	2 696	2 726	2 756 o
Korea DPR	3 918 o	3 958 o	3 960 o	4 260 o	4 283 o	4 293 o	4 467 o	4 701 o	4 761 o	4 761 e
Korea Rep	1 615	1 625	1 718	1 747	1 752	1 767	1 771	1 785	1 794 o	1 794 o
Kyrgyzstan	2 944	3 064	3 072	3 072	3 572	3 672	3 676	3 677	3 680 o	3 680 o
Lao PDR	1 836 u	2 551 u	2 555 u	2 964 u	2 970 u	3 254 u	4 355 u	4 813 u	5 006 u	5 072 e
Malaysia	2 118 e	2 130 e	3 116 e	3 444 e	4 524 e	4 762 e	5 743 e	6 108 e	6 108 e	6 128 e
Mongolia	18 e	29 e	29 e	29 e	29 e	29 e	29 e	29 e	29 e	29 o
Myanmar	1 463 e	1 936 e	2 568 e	2 702 e	2 862 e	2 914 e	3 074 e	3 104 e	3 255 o	3 255 e
Nepal	688 o	697 o	704 o	709 o	744 o	759 o	814 o	834 o	939 o	1 059 o
Pakistan	6 657 e	6 734 e	6 737 e	6 777 e	7 088 e	7 218 e	7 218 e	7 248 e	7 400 e	9 900 e
Philippines	2 786 o	2 833 o	2 839 o	2 849 o	2 849 o	2 864 o	2 881 o	2 891 o	2 891 o	2 972 o
Sri Lanka	1 382 e	1 387 e	1 406 e	1 590 e	1 622 e	1 670 e	1 689 e	1 728 e	1 738 e	1 741 e
Tajikistan	4 759	4 759	4 766	4 768	4 771	4 991	4 990 o	4 989 o	4 989 o	5 631 e
Thailand	2 393	2 393	2 405	2 413	2 429	2 469	2 542	2 544	2 544	2 572 o
Timor Leste	0 o	0 o	0 o	0 o	0 o	0 e	0 e	0 e	0 e	0 e
Turkmenistan	1	1	1	1	1	1	1	1	1	1
Uzbekistan	1 630	1 746	1 746	1 746	1 746	1 761	1 761	1 794	1 839 u	1 839 o
Viet Nam	7 185 e	8 653 e	10 080 e	13 552 e	14 718 e	15 069 e	15 905 e	17 131 e	17 809 e	17 989 e



# Renewable hydropower (including mixed plants)

## Hydroélectricité renouvelable (y compris les plantes mixtes)

## Hidroeléctrica renovable (incluidas las plantas mixtas)

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
C America + Carib	5 156	5 365	5 912	6 216	6 317	6 632	6 978	7 820	7 882	8 197
Belize	35	35	53	53	53	54	54	54	54	54 e
Costa Rica	1 510	1 553	1 644	1 700	1 725	1 834	1 935	2 328	2 328	2 373 o
Cuba	58	63	65	62	63	63	63	66	66	66 e
Dominica	5	7	7	7	7	7	7	7	7	7 e
Dominican Rep	524 o	524 o	524 o	613 o	614 o	617 o	617 o	617 o	617 o	617 e
El Salvador	486 e	487 e	487 e	487 e	488 e	490 e	497 e	575 e	575 e	575 e
Guadeloupe	9	9	9	9	9	9	9	9	11	11 e
Guatemala	778	885	902	986	997	1 001	1 087	1 392 o	1 438 o	1 621 o
Haiti	56 e	56 e	56 e	56 e	56 e	56 e	56 e	56 e	56 e	78 u
Honduras	527 o	527 o	529 o	539 o	558 o	624 o	656 o	671 e	676 e	706 e
Jamaica	23	23	23	23	30	30	30	30	30	30 e
Nicaragua	105	105	105	106	120	120	138	142 o	142 o	142 o
Panama	879	937	1 352	1 469	1 494	1 623	1 725	1 769	1 777 o	1 812 o
Puerto Rico	156 o	150 o	150 o	100	99	99	99	99	99	99 e
St Vincent Gren	6	6	6	6	6	6	6	6	6	6 e
Eurasia	65 318	66 737	68 115	72 685	76 119	77 892	80 418	81 328	82 552	83 801
Armenia	1 094	1 123	1 148	1 249 o	1 289 o	1 298 o	1 287 o	1 311	1 327	1 333 o
Azerbaijan	987	995	998	1 023	1 084	1 078	1 103	1 105	1 106 u	1 249 u
Georgia	2 718	2 702	2 703	2 710	2 705	2 380	2 378	2 430	2 723	2 805 u
Russian Fed	45 966	46 085	46 128	48 094	48 752	49 493	49 782	49 801	50 122 e	50 122 o
Turkey	14 553	15 831	17 137	19 609	22 289	23 643	25 868	26 681	27 273 o	28 291 o
Europe	177 877	179 375	181 111	182 340	184 234	184 487	186 139	189 690	190 847	191 903
Albania	1 459	1 475	1 508	1 628	1 781	1 725	1 798	2 011	2 047	2 132 e
Austria	12 446	12 707	12 981	13 078	13 148	13 290	13 375	14 116	14 150	14 194 o
Belarus	13	14	14	32	32	33	34	74	95	95 o
Belgium	110	118	119	120	119	121	112	115	113	114 o
Bosnia Herzg	1 569 o	1 698 o	1 700 o	1 701 o	1 702 o	1 711 o	1 717 o	1 760 o	1 787 o	1 812 e
Bulgaria	2 137	2 184	2 244	2 317	2 339	2 355	2 355	2 359	2 508 e	2 508 o
Croatia	2 092	2 141	2 141	2 141	2 190	2 193	2 208	2 205	2 206	2 206 o
Czechia	1 037	1 049	1 050	1 065	1 080	1 080	1 088	1 090	1 093	1 089 o
Denmark	9	9	9	9	9	9	7	9	9	9 e
Estonia	7	6	5	8	8	5	6	6	7	7 e
Faroe Islands	32 o	32 o	32 o	38 o	38 o	38 o	38 o	38 o	38 e	38 e
Finland	3 145	3 155	3 196	3 196	3 224	3 248	3 249	3 250	3 272	3 274 o
France	23 400	23 617	23 835	23 849	23 833	23 845	23 824	23 893	23 978	23 967 o
Germany	5 340	5 407	5 625	5 607	5 590	5 580	5 733	5 760	5 627	5 627 u
Greece	3 201	3 215	3 224	3 236	3 238	3 389	3 392	3 392	3 392 e	3 392 o
Hungary	53	53	55	56	57	57	57	57	57 e	57 u
Iceland	1 875	1 883	1 884	1 877	1 984	1 984	1 986 o	1 985 o	1 984 o	2 084 o
Ireland	234	237	237	237	237	237	237	237	237 e	237 o
Italy	17 414	17 563	17 780	17 923	18 052	18 116	18 238	18 316	18 486	18 576 o
Kosovo*	40	42	43	43	43	43	43	78	80	96 o
Latvia	1 536	1 576	1 576	1 576	1 587	1 588	1 588	1 564	1 564	1 564 e
Lithuania	116	116	116	116	116	117	117	117	117 e	117 o
Luxembourg	34	34	34	34	34	34	34	34	35	35 e
Moldova Rep	64	64	64	64	64	64	64	64	64 e	64 e
Montenegro	676	676	658	658	651	651	651	651	652	653 u
Netherlands	37	37	37	37	37	37	37	37	37 e	37 e
North Macedonia	553	555	556	595	617	630	658	661	671	674 o
Norway	29 539	29 693	29 969	30 509	31 033	31 240	31 372	31 817 o	31 912 e	32 502 o
Poland	932	936	940	945	949	958	964	972	967	969 e
Portugal	5 091	5 106	5 535	5 712	5 661	5 715	6 168	6 960	7 226	7 248 o
Romania	6 358	6 382	6 391	6 456	6 518	6 521	6 638	6 642	6 600	6 600 o
Serbia	2 275	2 293	2 322	2 352	2 317	2 403	2 408	2 416	2 424	2 467 o
Slovakia	1 571	1 600	1 607	1 606	1 607	1 607	1 606	1 608	1 607	1 607 e
Slovenia	1 070	1 074	1 073	1 074	1 119	1 116	1 115	1 113	1 167	1 167 o
Spain	16 056	16 086	16 075	16 085	16 730	16 768	16 773	16 743	16 742	16 761 o
Sweden	16 652	16 732	16 577	16 414	16 494	15 996	16 329	16 466	16 502 e	16 506 o
Switzerland	13 205	13 267	13 313	13 346	13 361	13 287	13 346	14 279	14 552 e	14 572 e
UK	1 940	1 947	1 979	1 993	2 008	2 030	2 078	2 135	2 174 e	2 178 o
Ukraine	4 559	4 596	4 607	4 608	4 627	4 665	4 697	4 658	4 668 o	4 668 o
European Union	122 262	123 344	124 697	125 151	126 245	126 274	127 589	129 458	130 135	130 307
Middle East	11 189	11 911	12 170	12 761	13 281	14 445	15 425	15 647	15 989	16 135
Iran IR	7 714	8 486	8 745	9 745	10 265	10 785	11 278	11 578	11 949	12 095 e
Iraq	2 274 e	2 274 e	2 274 e	1 865 e	1 865 e	1 865 e	2 274 e	2 274 e	2 274 e	2 274 e
Israel	7	7	7	7	7 e	7 o	7 e	7 e	7 e	7 e
Jordan	12 o	12 o	12 o	12 o	12 o	12 o	12 o	12 o	12 e	12 e
Lebanon	282 o	282 o	282 o	282 o	282 e	282 e	282 e	282 e	253 o	253 e
Syrian AR	900 o	850 o	850 o	850 o	850 o	1 494 o	1 572 o	1 494 o	1 494 e	1 494 e

# Renewable hydropower (including mixed plants)

## Hydroélectricité renouvelable (y compris les plantes mixtes)

### Hidroeléctrica renovable (incluidas las plantas mixtas)

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
N America	164 556	169 080	169 391	169 521	169 990	171 304	174 933	176 519	177 042	177 313
Canada	74 510	74 901	75 396	75 363	75 363	75 363	79 246	80 085	80 400 e	80 573 e
Greenland	54 o	69 o	69 o	91 o	91 o	91 o	91 o	91 o	91 o	91 e
Mexico	11 474	11 597	11 571	11 626	11 633	12 464	12 223	12 580	12 642 o	12 642 o
USA	78 518	82 513	82 355	82 441	82 903	83 386	83 373	83 763	83 908 o	84 007 o
Oceania	13 661	13 752	13 767	13 888	13 140	13 151	13 180	13 200	13 205	13 205
Australia	7 879	8 033	8 048	8 050	7 297	7 308	7 308	7 308	7 309 e	7 309 e
Fiji	95 u	95 u	95 u	139 u	138 u	138 u	138 u	138 u	138 u	138 u
Fr Polynesia	47 o	47 e	47 o	47 e	47 e	47 e	47 e	47 e	48 e	48 e
Micronesia										
New Caledon	78 o	78 o	78 o	78 o	78 o	78 o	78 o	78 o	78 o	78 o
New Zealand	5 325	5 254	5 254	5 324	5 329	5 329	5 340	5 360	5 360 o	5 360 e
Papua N Guin	222 u	230 u	230 u	240 u	240 u	240 u	258 u	258 u	258 u	258 u
Samoa	13 o	13 o	13 o	9 o	9 o	9 o	9 o	9 o	12 o	12 o
Solomon Is	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u
Vanuatu	1 o	1 o	1 o	1 o	1 o	1 e	1 e	1 e	1 e	1 e
S America	132 541	136 384	138 625	140 642	142 897	147 558	151 555	160 251	165 673	169 855
Argentina	9 050 o	9 051 o	9 051 o	9 058 o	9 060 o	9 070 o	9 067 o	9 130 o	10 624 e	10 318 e
Bolivia	496 o	496 o	501 o	501	501	494	495	495	620 o	674 e
Brazil	78 610	80 703	82 457	84 294	86 019	89 193	91 650	96 929	100 319	104 195 o
Chile	5 452	5 467	5 946	5 992	6 094	6 445	6 499	6 671	6 684 e	6 727 e
Colombia	9 010	9 721	9 718	9 778	9 875	10 920	11 501 e	11 607 e	11 731 o	11 842 o
Ecuador	2 059 o	2 242 o	2 234 o	2 263 o	2 263 o	2 248 o	2 410 o	4 447 o	4 516 e	4 966 e
Fr Guiana	114	114	114	119	119	119	119	118	118	118 e
Guyana										
Paraguay	8 130	8 810	8 810	8 810	8 810	8 810	8 810	8 810	8 810	8 810 o
Peru	3 277	3 438	3 451	3 484	3 556	3 662	4 148	5 189	5 395 o	5 349 e
Suriname	180	180	180	180	180	180	180	180	180 e	180 e
Uruguay	1 538	1 538	1 538	1 538	1 538	1 538	1 538	1 538	1 538	1 538 o
Venezuela	14 624 o	14 624 o	14 624 o	14 624 o	14 881 o	14 881 u	15 138 u	15 138 e	15 138 e	15 138 e

# Pure pumped storage

## Accumulation par pompage

### Hidroeléctrica de bombeo pura

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	101 267	100 789	104 035	106 659	107 898	109 575	112 675	117 814	120 938	120 983
Africa	1 864	1 864	1 864	1 864	1 864	1 864	1 864	2 863	3 196	3 196
Morocco	464	464	464	464	464	464	464	464	464 o	464
South Africa	1 400 u	1 400 u	1 400 u	1 400 u	1 400 u	1 400 u	1 400 u	2 399 u	2 732 u	2 732 e
Asia	46 568	49 798	52 950	55 370	56 570	57 689	58 809	62 469	65 169	65 169
China	13 700	16 930	18 383	20 333	21 533	22 110	23 030	26 690	29 390 e	29 390 e
Chinese Taipei	2 602 o	2 602 o	2 602 o	2 602 o	2 602 o	2 602 o	2 602 o	2 602 o	2 602 o	2 602 e
India	4 786 o	4 786 o	4 786 o	4 786 o	4 786 o	4 786 o	4 786 o	4 786 o	4 786 o	4 786 e
Japan	19 749	19 749	20 649	21 119	21 119	21 724	21 924	21 924	21 924 e	21 924 e
Korea Rep	3 900	3 900	4 700	4 700	4 700	4 700	4 700	4 700	4 700 o	4 700 o
Philippines	736 o	736 o	736 o	736 o	736 o	736 o	736 o	736 o	736 o	736 o
Thailand	1 095	1 095	1 095	1 095	1 095	1 031	1 031	1 031	1 031	1 031 o
Eurasia	1 216	1 216	1 216	1 216	1 216	1 216	1 216	1 216	1 356	1 356
Russian Fed	1 216	1 216	1 216	1 216	1 216	1 216	1 216	1 216	1 356 e	1 356 o
Europe	26 652	26 593	26 609	26 740	26 758	27 227	28 077	28 396	28 317	28 317
Austria										
Belgium	1 307	1 307	1 307	1 307	1 310	1 310	1 310	1 310	1 310 e	1 310 o
Bosnia Herzg	420 o	420 o	420 o	420 o	420 o	420 o	420 o	420 o	420 o	420 e
Bulgaria	864	864	864	864	864	864	864	864	864 e	864 o
Croatia										
Czechia	1 147	1 147	1 147	1 147	1 172	1 172	1 172	1 172	1 172	1 172 o
France	1 808	1 808	1 808	1 808	1 808	1 728	1 728	1 728	1 728	1 728 o
Germany	5 898	5 811	5 811	5 650	5 650	5 654	5 666	5 540	5 493	5 493 u
Greece										
Ireland	292			292	292	292	292	292	292 e	292 o
Italy	3 957	3 957	3 957	3 957	3 957	3 982	3 982	3 982	3 940	3 940 o
Lithuania	760	760	760	760	760	760	760	760	760 e	760 o
Luxembourg	1 100	1 100	1 100	1 100	1 100	1 296	1 296	1 296	1 296 e	1 296 e
Norway										
Poland	1 406	1 406	1 406	1 406	1 406	1 406	1 406	1 413	1 423	1 423 e
Portugal										
Romania	92	92	92	92	92	92	92	92	92	92 o
Serbia	614	614	614	614	614	614	614	614	614	614 o
Slovakia	916	916	916	916	916	916	916	916	916 e	916 e
Slovenia		180	180	180	180	180	180	180	180 e	180 o
Spain	2 449	2 449	2 465	2 465	2 455	2 455	3 280	3 337	3 337	3 337 o
Sweden										
Switzerland	316	456	456	456	456	456	469	527	527 e	527 e
UK	2 444	2 444	2 444	2 444	2 444	2 444	2 444	2 444	2 444 e	2 444 o
Ukraine	862	862	862	862	862	1 186	1 186	1 509	1 509 o	1 509 o
European Union	24 440	24 241	24 257	24 388	24 406	24 551	25 388	25 326	25 247	25 247
Middle East	240	240	240	240	240	240	1 280	1 280	1 280	1 280
Iran IR							1 040	1 040	1 040	1 040 e
Iraq	240	240	240	240	240	240	240	240 e	240 e	240 e
N America	22 337	18 688	18 766	18 839	18 860	18 950	19 040	19 201	19 231	19 276
Canada	177	177	177	174	174	174	174	174 o	174 e	174 e
USA	22 160	18 511	18 589	18 665	18 686	18 776	18 866	19 027	19 057 o	19 102 o
Oceania	1 416	1 416	1 416	1 416	1 416	1 416	1 416	1 416	1 416	1 416
Australia	1 416	1 416	1 416	1 416	1 416	1 416	1 416	1 416	1 416 e	1 416 e
S America	974	974	974	974	974	974	974	974	974	974
Argentina	974 o	974 o	974 o	974 o	974 o	974 o	974 o	974 o	974 o	974 o

# Marine energy

## Énergie marine

## Energía marina

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	244	250	503	509	510	513	513	523	530	532
Africa					0		0	0	0	0
Ghana							0 u	0 e	0 e	0 e
Reunion					0 u					
Asia	4	5	259	259	259	259	259	259	259	259
China	3	4	4	4	4	4	4	4	4	4
Korea Rep	1 o	1 o	255 o	255 o	255 o	255 o	255	255	255 o	255 o
Singapore					0	0	0	0	0 e	0 o
Eurasia	2	2	2	2	2	2	2	2	2	2
Russian Fed	2 u	2 u	2 u	2 u	2 u	2 u	2 u	2 u	2 u	2 o
Europe	217	222	221	228	228	231	231	241	245	247
Denmark	0 u	0 u	0 u	0 u			0 u			
Faroe Islands										
France	216	216	215	216	218	220	218	220	219	219 e
Italy					0 u	0 u	0 u	0 u	0 e	0 e
Netherlands				0 u	u	0 u	2 u	2 e	2 e	2 e
Norway		2 u	2 u	2 u	0 u	0 u	0 u	0 u	0 e	0 e
Portugal				0 u	0 u	1			0	0 e
Spain			0 u	0 u	0 u	0 u	0 u	5	5	5 o
Sweden		0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 e	0 e
UK	1	4	4	9	8	9	9	13	18 e	20 o
European Union	217	220	219	226	228	231	230	241	245	247
N America	20	20	20	20	20	20	20	20	23	23
Canada	20	20	20	20	20	20	20	20	23 e	23 e
USA					0 u	0 e	0 u	0 u	0 o	
Oceania	1	1	1	1	1	1	1	1	1	1
Australia	1	1	1	1	1	1	1	1	1 e	1 e
New Zealand			0	0						
S America				0	0	0	0	0	0	0
Brazil				0	0	0	0	0	0	0 o

# Wind energy

## Énergie éolienne

### Energía eólica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	150 096	180 854	219 984	266 866	299 941	349 185	416 225	467 052	514 622	563 726
Africa	739	861	990	1 124	1 738	2 396	3 317	3 828	4 570	5 464
Algeria						10	10	10	10	10
Cabo Verde	2	2	16	26	26	26	26	26	26	27
Chad								1	1	1
Egypt	435	550	550	550	550	550	750	750	750	1 125
Eritrea	1	1	1	1	1	1	1	1	1	1
Ethiopia			81	81	171	171	324	324	324	324
Gambia	0	0	0	1	1	1	1	1	1	1
Ghana							0	0	0	0
Kenya	0	6	6	6	6	6	26	26	26	336
Madagascar	0	0	0	0	0	0	0	0	0	0
Mauritania					4	4	34	34	34	34
Mauritius	1	1	1	1	1	1	1	11	11	11
Morocco	221	221	255	255	495	797	797	897	1 017	1 220
Namibia	0	0	0	0	0	0	0	0	0	5
Nigeria	2	2	2	2	2	3	3	3	3	3
Reunion	15	15	15	15	15	15	15	17	17	17
Seychelles					6	6	6	6	6	6
Somalia				2	2	2	3	3	4	4
South Africa	8	10	10	10	257	569	1 079	1 473	2 094	2 094
Tunisia	53	53	53	173	200	233	240	245	245	245
Asia	31 308	46 083	66 019	82 809	99 541	124 346	161 799	184 184	204 884	229 026
Afghanistan				0	0	0	0	0	0	0
Bangladesh	2	2	2	2	2	2	3	3	3	3
Bhutan							1	1	1	1
Cambodia	0	0	0	0	0	0	0	0	0	0
China	17 599	29 633	46 355	61 597	76 731	96 819	131 048	148 517	164 392	184 696
Chinese Taipei	374	476	523	571	614	637	647	682	692	704
India	10 925	13 184	16 179	17 300	18 420	22 465	25 088	28 700	32 848	35 288
Indonesia	1	0	1	1	1	1	1	1	1	76
Japan	1 997	2 294	2 419	2 562	2 645	2 753	2 808	3 246	3 392	3 653
Kazakhstan				2	4	53	72	98	112	121
Korea DPR	0	0	0	0	0	0	0	0	1	1
Korea Rep	351	382	425	464	576	612	847	1 067	1 143	1 311
Maldives	1	1	1	1	1	1	1	1	1	1
Mongolia	0	1	1	1	51	51	51	51	101	156
Nepal					0	0	0	0	0	0
Pakistan	6	6	6	56	106	206	308	591	789	1 186
Philippines	33	33	33	33	33	337	427	427	427	427
Singapore									0	0
Sri Lanka	3	33	36	76	81	131	127	131	146	146
Thailand	5	6	7	112	223	225	234	507	628	1 018
Uzbekistan									1	1
Viet Nam	9	31	31	31	53	53	136	160	205	237
C America + Carib	261	307	460	732	776	923	1 308	1 498	1 600	1 709
Aruba	30	30	30	30	30	30	30	30	30	30
Barbados								0	0	0
BES Islands	11	11	11	11	11	11	11	11	11	11
Br Virgin Is		1	1	1	1	1	1	1	1	1
Costa Rica	120	120	133	148	148	197	278	319	378	408
Cuba	7	7	12	12	12	12	12	12	12	12
Curacao	9	9	9	30	30	30	30	30	47	47
Dominica	0	0	0	0	0	0	0	0	0	0
Dominican Rep			33	85	85	85	85	135	135	183
Grenada	0	0	0	0	0	0	0	0	0	0
Guadeloupe	22	23	23	23	23	23	27	26	26	26
Guatemala							76	76	76	107
Haiti										0
Honduras			102	102	102	126	152	175	225	225
Jamaica	21	39	39	39	39	39	39	99	99	99
Martinique	1	1	1	1	1	1	1	1	1	1
Nicaragua	40	63	63	146	147	186	186	186	186	186
Panama					20	55	253	270	270	270
Puerto Rico		1	1	101	125	125	125	125	101	101
St Kitts Nevis		2	2	2	2	2	2	2	2	2
Trinidad Tobago							0	0	0	0
US Virgin Is					0	0	0	0	0	0
Eurasia	807	1 335	1 742	2 274	2 775	3 645	4 525	5 801	6 601	7 201
Armenia	3	3	3	3	3	3	3	3	3	3
Azerbaijan	2	2			3	3	8	16	16	66

# Wind energy

## Énergie éolienne

### Energía eólica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Georgia								21	21	21
Russian Fed	10	10	10	10	10	10	11	11	46	106
Turkey	792	1 320	1 729	2 261	2 760	3 630	4 503	5 751	6 516	7 005
Europe	75 780	84 922	94 684	107 146	118 357	130 126	143 014	155 905	171 045	182 491
Austria	1 001	1 016	1 106	1 337	1 675	2 110	2 489	2 730	2 887	3 078
Belarus	2	2	2	2	2	3	43	68	83	101
Belgium	608	912	1 069	1 370	1 780	1 944	2 176	2 370	2 806	3 157
Bosnia Herzg			0	0	0	0	0	0	0	51
Bulgaria	333	488	541	677	683	699	699	699	698	698
Croatia	70	79	130	180	254	339	418	483	576	582
Cyprus		82	134	147	147	147	158	158	158	158
Czechia	193	213	213	258	262	278	281	282	308	316
Denmark	3 482	3 802	3 952	4 162	4 819	4 887	5 077	5 246	5 522	5 758
Estonia	104	108	180	266	248	275	300	310	312	312
Faroe Islands	4	4	4	9	9	20	20	20	20	20
Finland	147	197	199	257	447	627	1 005	1 565	2 044	2 041
France	4 582	5 912	6 723	7 562	8 250	9 110	10 258	11 511	13 512	15 108
Germany	25 732	26 903	28 712	30 979	33 477	38 614	44 580	49 592	55 718	59 420
Greece	1 171	1 298	1 640	1 753	1 809	1 978	2 091	2 370	2 624	2 877
Hungary	203	293	331	325	329	329	329	329	329	329
Iceland					2	3	3	3	3	3
Ireland	1 251	1 390	1 585	1 704	2 008	2 283	2 451	2 786	3 318	3 518
Italy	4 879	5 794	6 918	8 102	8 542	8 683	9 137	9 384	9 737	10 310
Kosovo*		1	1	1	1	1	1	1	34	37
Latvia	29	30	36	59	66	69	68	70	77	77
Lithuania	98	133	202	275	279	288	436	509	518	521
Luxembourg	43	44	45	58	58	58	64	120	120	150
Malta							0	0	0	0
Moldova Rep					1	1	1	2	2	2
Montenegro									72	118
Netherlands	2 222	2 237	2 316	2 433	2 713	2 865	3 391	4 257	4 202	4 471
North Macedonia						37	37	37	37	37
Norway	423	425	512	705	818	863	867	883	1 207	1 675
Poland	709	1 108	1 800	2 564	3 429	3 836	4 886	5 747	5 759	5 775
Portugal	3 326	3 796	4 256	4 412	4 610	4 857	4 937	5 124	5 124	5 191
Romania	15	389	988	1 822	2 773	3 244	3 130	3 025	3 030	3 030
Serbia			1	1	1	1	10	17	25	374
Slovakia	3	3	3	3	5	3	3	3	4	4
Slovenia					4	4	5	5	5	5
Spain	19 176	20 693	21 529	22 789	22 958	22 925	22 943	22 990	23 100	23 436
Sweden	1 448	2 019	2 769	3 607	4 194	5 097	5 840	6 434	6 611	7 318
Switzerland	18	42	46	49	60	60	60	75	75	75
UK	4 422	5 421	6 596	9 030	11 282	13 074	14 306	16 174	19 835	21 736
Ukraine	86	88	146	248	362	514	514	526	553	621
European Union	75 285	84 399	94 012	106 171	117 141	128 662	141 501	154 316	168 978	179 420
Middle East	101	104	107	115	119	162	284	408	434	612
Bahrain	1	1	1	1	1	1	1	1	1	1
Iran IR	92	95	98	106	108	149	153	191	191	282
Israel	6	6	6	6	6	6	6	27	27	27
Jordan	1	1	1	1	1	1	118	184	198	285
Kuwait									10	10
Lebanon				1	2	3	3	3	3	3
Saudi Arabia									3	3
Syrian AR	1	1	1	1	1	1	1	1	1	1
United Arab Em					1	2	2	1	1	1
N America	38 004	43 622	51 543	67 092	69 897	76 495	87 058	97 410	104 145	111 987
Canada	3 282	3 967	5 265	6 201	7 801	9 694	11 214	11 973	12 403	12 816
Mexico	425	519	601	1 815	2 122	2 569	3 271	4 051	4 199	4 875
St Pierre Mq	1	1	1	1	1					
USA	34 296	39 135	45 676	59 075	59 973	64 232	72 573	81 386	87 543	94 295
Oceania	2 251	2 439	2 702	3 235	3 895	4 532	4 969	5 068	5 615	6 558
Australia	1 703	1 864	2 127	2 561	3 221	3 797	4 234	4 327	4 874	5 816
Cook Is	0	0	0	0						
Fiji	10	10	10	10	10	10	10	10	10	10
Fr Polynesia	0	0	0	0	0	0	0	0	0	0
Guam								0	0	0
Marshall Is										0
Micronesia										1
New Caledon	37	37	38	38	38	38	38	38	38	38
New Zealand	497	524	524	623	623	683	683	688	688	688



# Wind energy

## Énergie éolienne

### Energía eólica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Samoa						1	1	1	1	1
Tonga					0	0	0	0	0	0
Vanuatu	3	3	3	3	3	4	4	4	4	4
S America	846	1 182	1 737	2 340	2 843	6 558	9 951	12 950	15 727	18 679
Argentina	28	28	60	137	190	215	215	215	257	750
Bolivia		0	0	0	0	3	3	27	27	27
Brazil	602	927	1 426	1 894	2 202	4 888	7 633	10 124	12 294	14 401
Chile	163	163	184	202	301	736	910	1 039	1 305	1 524
Colombia	18	18	18	18	18	18	18	18	18	18
Ecuador	2	2	2	2	19	21	21	21	21	21
Falklands Malv	1	2	2	2	2	2	4	4	4	4
Guyana							0	0	0	0
Peru	1	1	1	1	1	143	240	240	240	372
Uruguay	31	41	44	53	59	481	857	1 212	1 511	1 511
Venezuela				30	50	50	50	50	50	50

# Onshore wind energy

## Énergie éolienne terrestre

## Energía eólica terrestre

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	147 962	177 798	216 208	261 531	292 770	340 693	404 508	452 710	495 731	540 370
Africa	739	861	990	1 124	1 738	2 396	3 317	3 828	4 570	5 464
Algeria						10	10	10	10 e	10 e
Cabo Verde	2 o	2 o	16 o	26 o	26 o	26 o	26 o	26 o	26 o	27 o
Chad								1 u	1 e	1 e
Egypt	435	550	550	550	550	550	750	750	750 o	1 125
Eritrea	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Ethiopia			81	81	171	171	324	324 u	324 e	324 e
Gambia	0 o	0 o	0 o	1 o	1 o	1 o	1 o	1 o	1 o	1 e
Ghana							0 o	0 o	0 o	0 e
Kenya	0 o	6 o	6 o	6 o	6 o	6 o	26 e	26 e	26 e	336 e
Madagascar	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 e	0 e
Mauritania					4 o	4 o	34 o	34 o	34 o	34 e
Mauritius	1	1	1	1	1	1	1	11	11 e	11 e
Morocco	221	221	255	255	495	797	797	897	1 017	1 220
Namibia	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	5 e
Nigeria	2 u	2 u	2 u	2 u	2 u	3 u	3 e	3 e	3 e	3 e
Reunion	15 o	15 o	15 o	15 o	15 o	15 o	15 o	17 o	17 e	17 o
Seychelles					6 o	6 o	6 o	6 o	6 o	6 e
Somalia				2 u	2 u	2 u	3 u	3 u	4 u	4 e
South Africa	8 o	10 o	10 o	10 o	257 o	569 o	1 079 o	1 473 o	2 094 o	2 094 o
Tunisia	53 o	53 o	53 o	173 o	200 o	233 o	240 o	245	245 e	245 e
Asia	31 295	45 958	65 784	82 487	99 054	123 830	161 077	182 504	201 878	224 221
Afghanistan				0 u	0 e	0 e	0 e	0 e	0 e	0 e
Bangladesh	2 o	2 o	2 o	2 o	2 o	2 o	3 o	3 o	3 o	3 e
Bhutan							1 u	1 e	1 e	1 e
Cambodia	0 u	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
China	17 598	29 533	46 145	61 306	76 314	96 379	130 489	147 037	161 604	180 108 e
Chinese Taipei	374 o	476 o	523 o	571 o	614 o	637 o	647 o	682 o	684 o	696 u
India	10 925 o	13 184 o	16 179 o	17 300 o	18 420 o	22 465 o	25 088 o	28 700 o	32 848 o	35 288 o
Indonesia	1 o	0 o	1 o	1 o	1 o	1 o	1 o	1 o	1 o	76 o
Japan	1 986	2 269	2 394	2 537	2 595	2 703	2 755	3 186	3 327 u	3 588 u
Kazakhstan				2	4	53	72	98	112	121 o
Korea DPR	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	1 o	1 e
Korea Rep	351	382	425	459	571	602	837	1 027	1 098 o	1 265 o
Maldives	1 u	1 u	1 u	1 u	1 u	1 e	1 e	1 e	1 e	1 e
Mongolia	0 e	1 e	1 e	1 e	51 e	51 e	51 e	51 e	101 e	156 o
Nepal					0 u	0 u	0 u	0 u	0 e	0 e
Pakistan	6 e	6 e	6 e	56 e	106 e	206 e	308 e	591 e	789 e	1 186 e
Philippines	33 o	33 o	33 o	33 o	33 o	337 o	427 o	427 o	427 o	427 o
Singapore									0 u	0 e
Sri Lanka	3 o	33 o	36 o	76 o	81 o	131 o	127 o	131 o	146 e	146 e
Thailand	5	6	7	112	223	225	234	507	628 o	1 018 o
Uzbekistan									1 o	1 o
Viet Nam	9	31	31	31	37	37 u	37 u	61 e	106 e	138 u
C America + Carib	261	307	460	732	776	923	1 308	1 498	1 600	1 709
Aruba	30 o	30	30	30	30	30	30	30	30	30 e
Barbados								0	0	0 e
BES Islands	11 o	11 o	11 o	11 o	11 o	11 o	11 o	11 o	11 o	11 e
Br Virgin Is		1	1	1	1	1	1	1	1	1 e
Costa Rica	120	120	133	148	148	197	278	319	378	408 o
Cuba	7	7	12	12	12	12	12	12	12	12 e
Curacao	9	9	9	30	30	30	30	30	47 u	47 e
Dominica	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 e
Dominican Rep	o	o	33	85	85	85	85	135 o	135 o	183 o
Grenada	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u
Guadeloupe	22	23	23	23	23	23	27	26	26	26 o
Guatemala							76	76	76	107 o
Haiti										0 u
Honduras			102 o	102 o	102 o	126 o	152 o	175 o	225 o	225 o
Jamaica	21	39	39	39	39	39	39	99	99	99 e
Martinique	1 o	1 o	1 o	1 o	1 o	1 o	1 o	1 o	1 e	1 o
Nicaragua	40	63	63	146	147	186	186	186	186	186 o
Panama					20	55	253	270	270	270 o
Puerto Rico		1	1	101	125	125	125	125	101	101 e
St Kitts Nevis		2	2	2	2	2	2	2	2 u	2 e
Trinidad Tobago							0	0	0	0 e
US Virgin Is					0 o	0 o	0 o	0 o	0 o	0 e
Eurasia	807	1 335	1 742	2 274	2 775	3 645	4 525	5 801	6 601	7 201
Armenia	3	3	3	3	3	3	3	3 o	3 e	3 o
Azerbaijan	2	2			3	3	8	16 u	16 u	66 u

# Onshore wind energy

## Énergie éolienne terrestre

## Energía eólica terrestre

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Georgia								21 u	21 e	21 e
Russian Fed	10	10	10	10	10	10 e	11 e	11 e	46 o	106 o
Turkey	792	1 320	1 729	2 261	2 760	3 630	4 503	5 751	6 516	7 005 o
Europe	73 659	81 991	91 143	102 133	111 673	122 150	132 019	143 272	155 189	163 970
Austria	1 001	1 016	1 106	1 337	1 675	2 110	2 489	2 730	2 887	3 078 o
Belarus	2	2	2	2	2	3	43	68	83	101 o
Belgium	577	716	873	989	1 072	1 236	1 464	1 658	1 928	1 979 o
Bosnia Herzg			0 o	0 o	0 o	0 o	0 o	0 o	0 o	51 u
Bulgaria	333	488	541	677	683	699	699	699	698	698 o
Croatia	70	79	130	180	254	339	418	483	576	582 o
Cyprus		82	134	147	147	147	158	158	158	158 o
Czechia	193	213	213	258	262	278	281	282	308	316 o
Denmark	2 821	2 934	3 081	3 240	3 548	3 616	3 806	3 975	4 226	4 401 u
Estonia	104	108	180	266	248	275	300	310	312	312 e
Faroe Islands	4 o	4 o	4 o	9 o	9 o	20 o	20 o	20 o	20 e	20 e
Finland	123 e	171 e	173 e	231 e	421 e	601 e	973 e	1 533 e	1 971	1 968 o
France	4 582	5 912	6 723	7 562	8 250	9 110	10 258	11 511	13 510	15 106 o
Germany	25 697 o	26 823 o	28 524 o	30 711 o	32 969 o	37 620 o	41 297 o	45 460 o	50 291	53 010 u
Greece	1 171	1 298	1 640	1 753	1 809	1 978	2 091	2 370	2 624	2 877 u
Hungary	203	293	331	325	329	329	329	329	329 u	329 u
Iceland					2	3	3	3	3 u	3 e
Ireland	1 226	1 365	1 559	1 679	1 983	2 258	2 426	2 761	3 293	3 493 o
Italy	4 879	5 794	6 918	8 102	8 542	8 683	9 137	9 384	9 737	10 310 o
Kosovo*		1	1	1	1	1	1	1	34	37 o
Latvia	29	30	36	59	66	69	68	70	77	77 e
Lithuania	98	133	202	275	279	288	436	509	518	521 o
Luxembourg	43	44	45	58	58	58	64	120	120	150 o
Malta							0 o	0	0	0 e
Moldova Rep					1	1	1	2	2	2 e
Montenegro									72 u	118 u
Netherlands	1 994 o	2 009 o	2 088 o	2 205 o	2 485 o	2 637 o	3 034 o	3 300 o	3 245	3 514 u
North Macedonia						37	37	37	37 u	37 u
Norway	421 e	423 e	510 e	703 e	816 e	861 e	865 e	881 e	1 205 o	1 673 u
Poland	709	1 108	1 800	2 564	3 429	3 836	4 886	5 747	5 759	5 775 u
Portugal	3 326	3 796	4 254	4 410	4 608	4 855	4 935	5 124	5 124	5 191 o
Romania	15	389	988	1 822	2 773	3 244	3 130	3 025	3 030	3 030 o
Serbia				1	1	1	10	17	25 u	374 u
Slovakia	3	3	3	3	5	3	3	3	4 u	4 e
Slovenia					4	4	5	5	5	5 o
Spain	19 176	20 693	21 529	22 789	22 953 e	22 920	22 938 e	22 985	23 095	23 426 o
Sweden	1 285	1 856	2 606	3 444	3 982	4 884	5 627	6 231	6 408	7 112 u
Switzerland	18	42	46	49	60	60	60	75	75 u	75 u
UK	3 471	4 080	4 758	6 035	7 586	8 573	9 212	10 880	12 847	13 436 o
Ukraine	86	88	146	248	362	514	514	526	553	621 o
European Union	73 166	81 471	90 474	101 160	110 459	120 689	130 507	141 685	153 124	160 901
Middle East	101	104	107	115	119	162	284	408	434	612
Bahrain	1 u	1 u	1 u	1 u	1 u	1 u	1 u	1 u	1 u	1 e
Iran IR	92	95	98	106	108	149	153	191	191	282 o
Israel	6	6	6	6	6 e	6 o	6 e	27 e	27 e	27 e
Jordan	1 o	1 o	1 o	1 o	1 o	1 o	118 o	184 o	198 o	285 u
Kuwait									10 e	10 e
Lebanon				1 u	2 u	3 u	3 e	3 e	3 e	3 e
Saudi Arabia									3 u	3 e
Syrian AR	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
United Arab Em					1 e	2 e	2 e	1 e	1 e	1 e
N America	38 004	43 622	51 543	67 092	69 897	76 495	87 058	97 381	104 116	111 957
Canada	3 282	3 967	5 265	6 201	7 801	9 694	11 214	11 973	12 403 u	12 816 u
Mexico	425	519	601	1 815	2 122	2 569	3 271	4 051	4 199 o	4 875 o
St Pierre Mq	1 u	1 u	1 u	1 u	1 u					
USA	34 296	39 135	45 676	59 075	59 973	64 232	72 573	81 357	87 514 o	94 266 o
Oceania	2 251	2 439	2 702	3 235	3 895	4 532	4 969	5 068	5 615	6 558
Australia	1 703	1 864	2 127	2 561	3 221	3 797	4 234	4 327	4 874 u	5 816 u
Cook Is	0 e	0 e	0 e	0 e						
Fiji	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
Fr Polynesia	0 o	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
Guam								0 o	0 o	0 e
Marshall Is										0 u
Micronesia										1 u
New Caledon	37 o	37 o	38 o	38 o	38 o	38 o	38 o	38 o	38 o	38 o
New Zealand	497	524	524	623	623	683	683	688	688 o	688 e

# Onshore wind energy

## Énergie éolienne terrestre

### Energía eólica terrestre

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Samoa						1 o	1 o	1 o	1 o	1 o
Tonga					0 e	0 e	0 o	0 o	0 o	0 o
Vanuatu	3 o	3 o	3 o	3 o	3 o	4 o	4 o	4 o	4 e	4 e
S America	846	1 182	1 737	2 340	2 843	6 558	9 951	12 950	15 727	18 679
Argentina	28 o	28 o	60 o	137 o	190 o	215 o	215 o	215 o	257 e	750 e
Bolivia		0	0	0	0	3	3	27	27	27 e
Brazil	602	927	1 426	1 894	2 202	4 888	7 633	10 124	12 294	14 401 o
Chile	163	163	184	202	301	736	910	1 039	1 305 o	1 524 o
Colombia	18 e	18 e	18 o	18 o	18 o	18 o	18 o	18 o	18 o	18 o
Ecuador	2	2	2	2	19	21 o	21 o	21 o	21 o	21 e
Falklands Malv	1 e	2 e	2 e	2 e	2 e	2 e	4 e	4 e	4 e	4 e
Guyana							0	0	0	0 e
Peru	1	1	1	1	1	143	240	240	240	372 e
Uruguay	31	41	44	53	59	481	857	1 212	1 511 o	1 511 e
Venezuela				30	50	50	50	50	50	50 e

# Offshore wind energy

## Énergie éolienne maritime

### Energía eólica marina

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	2 134	3 056	3 776	5 334	7 171	8 492	11 717	14 342	18 891	23 356
Asia	13	125	235	321	488	516	722	1 680	3 006	4 806
China	2	100	210	291	417	440	559	1 480	2 788 u	4 588 u
Chinese Taipei									8 u	8 u
Japan	11	25	25	25	50	50	53	60	65 u	65 u
Korea Rep				5	5	11	11	41	46 e	46 e
Viet Nam					16 e	16 u	99 u	99 o	99 o	99 e
Europe	2 121	2 931	3 541	5 013	6 684	7 976	10 996	12 633	15 856	18 521
Belgium	32	197	197	381	708	708	712	712	877	1 178 o
Denmark	661	868	871	922	1 271	1 271	1 271	1 271	1 297	1 358 u
Finland	24 u	26 u	26 u	26 u	26 u	26 u	32 u	32 u	73	73 o
France									2 u	2 o
Germany	35 o	80 o	188 o	268 o	508 o	994 o	3 283 o	4 132 o	5 427	6 410 u
Ireland	25	25	25	25	25	25	25	25	25 u	25 o
Netherlands	228 o	228 o	228 o	228 o	228 o	228 o	357 o	957 o	957 u	957 u
Norway	2 u	2 u	2 u	2 u	2 u	2 u	2 u	2 u	2 o	2 u
Portugal			2	2	2	2	2			
Spain					5 u	5 u	5 u	5 u	5 u	10 o
Sweden	163	163	163	163	212	213	213	203	203 e	206 u
UK	951 o	1 341 o	1 838 o	2 995 o	3 696 o	4 501 o	5 093 o	5 293 o	6 988	8 300 o
European Union	2 119	2 928	3 539	5 011	6 681	7 974	10 994	12 631	15 854	18 519
N America						0	0	29	29	29
USA						0 u	0 u	29 o	29 o	29 o

# Solar energy

## Énergie solaire

### Energía solar

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	23 371	40 871	72 683	102 871	139 602	177 496	225 820	297 293	391 063	485 826
Africa	108	240	333	413	727	1 725	2 260	3 398	4 284	6 093
Algeria		25	25	25	25	26	74	244	425	435
Angola	5	7	8	10	11	12	13	13	13	13
Benin	0	0	1	1	1	1	5	8	8	8
Botswana	0	0	0	2	2	2	2	3	3	3
Burkina Faso	3	4	6	6	6	7	8	10	47	62
Burundi	0	1	1	2	3	3	3	4	5	5
Cabo Verde		6	6	6	6	6	6	6	6	8
Cameroon	1	1	2	3	4	6	7	9	12	14
Cent Afr Rep	0	0	0	0	0	0	0	0	0	0
Chad		0	0	0	0	0	0	0	0	0
Congo DR			0	0	0	1	1	3	5	7
Congo Rep			0	0	0	0	0	0	1	1
Cote d Ivoire	1	2	2	2	3	4	5	5	8	8
Djibouti				0	0	0	0	0	0	0
Egypt	1	15	35	35	35	35	45	68	189	770
Eritrea	0	0	0	0	0	0	0	1	3	3
Eswatini	0	1	1	1	1	1	1	1	1	1
Ethiopia	0	0	0	1	3	9	10	14	12	11
Gabon	1	1	1	1	1	1	1	1	1	1
Gambia	2	2	2	2	2	2	2	2	2	2
Ghana					3	5	30	34	39	64
Guinea	1	1	1	1	3	3	13	13	13	13
Guinea Bissau							0	0	0	1
Kenya	0	0	1	3	7	17	31	32	38	93
Lesotho					0	0	0	0	0	0
Liberia		0	0	0	0	0	0	0	2	3
Libya	3	4	4	5	5	5	5	5	5	5
Madagascar	1	2	2	3	5	7	9	11	13	33
Malawi	0	1	2	3	5	8	12	12	19	23
Mali	4	6	10	16	16	16	17	18	20	20
Mauritania					18	18	18	35	85	86
Mauritius				1	2	18	19	21	29	30
Mayotte	2	8	12	13	13	13	13	13	15	15
Morocco	13	34	34	35	35	40	200	202	205	735
Mozambique			1	2	5	7	10	13	15	17
Namibia	4	4	7	11	15	16	27	36	46	79
Niger	1	2	3	4	5	6	7	8	9	20
Nigeria				15	15	16	17	18	19	19
Reunion	43	89	131	153	156	167	187	186	188	190
Rwanda	0	0	0	0	1	10	14	19	27	30
Sao Tome Prn						0	0	0	0	0
Senegal	3	3	5	6	7	10	11	43	113	134
Seychelles					0	1	1	2	3	3
Sierra Leone	0	0	0	0	0	0	0	0	4	4
Somalia						0	0	5	7	7
South Africa		2	6	11	262	1 163	1 352	2 174	2 486	2 959
South Sudan				0	0	0	0	0	0	0
Sudan	1	2	4	8	8	8	11	12	13	18
Tanzania		0	0	1	4	11	13	18	22	25
Togo	0	0	0	0	1	1	2	3	3	3
Tunisia	1	2	3	5	9	17	27	37	47	47
Uganda	14	15	16	17	19	20	22	24	46	48
Zambia	1	1	1	1	2	2	3	3	4	5
Zimbabwe	0	0	0	1	2	3	4	5	6	11
Asia	3 712	5 515	9 639	16 140	35 884	60 307	90 037	139 734	210 790	274 866
Afghanistan	0	0	0	16	17	18	19	20	22	22
Bangladesh	18	32	43	66	95	122	145	155	200	201
Bhutan	0	0	0	0	0	0	0	0	0	0
Brunei Darism		1	1	1	1	1	1	1	1	1
Cambodia	2	2	4	5	6	9	12	18	28	28
China	415	1 025	3 113	6 726	17 762	28 402	43 552	77 802	130 816	175 032
Chinese Taipei	10	22	118	223	392	620	842	1 245	1 768	2 618
India	39	65	566	926	1 336	3 518	5 396	9 647	17 873	27 098
Indonesia	13	15	17	26	38	42	51	58	59	60
Japan	2 627	3 618	4 914	6 632	13 599	23 339	34 150	42 040	49 040	55 500
Kazakhstan					1	5	57	57	59	209
Korea DPR	1	1	2	3	4	5	8	10	11	11
Korea Rep	524	650	730	1 024	1 555	2 481	3 613	4 502	5 835	7 862
Lao PDR	0	0	0	0	0	3	3	4	7	7
Malaysia	1	1	1	25	97	166	229	279	317	438
Maldives	0	0	0	1	1	4	4	7	9	9
Mongolia	4	5	5	5	5	5	5	15	48	63
Myanmar	0	0	1	3	4	8	26	55	55	55



# Solar energy

## Énergie solaire

## Energía solar

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nepal	4	4	8	9	11	12	13	14	53	53
Pakistan	4	9	19	46	101	165	230	410	742	1 568
Philippines	1	1	1	1	1	23	165	759	886	886
Singapore	2	3	5	8	12	26	46	97	116	150
Sri Lanka	6	7	9	9	13	22	37	80	130	159
Thailand	37	49	79	382	829	1 304	1 425	2 451	2 702	2 725
Timor Leste	0	0	0	0	1	1	1	1	1	1
Uzbekistan					1	1	1	4	4	4
Viet Nam	4	4	4	4	4	5	5	5	8	106
C America + Carib	48	75	109	168	267	341	924	1 151	1 485	1 737
Anguilla				0	0	1	1	2	2	1
Antigua Barb	0	0	0	0	0	0	3	4	4	8
Aruba		0	0	1	2	5	6	6	6	6
Bahamas	0	0	0	1	1	1	1	1	1	1
Barbados	1	1	2	2	3	7	9	19	19	24
Belize	1	1	1	2	2	3	4	4	4	4
BES Islands							0	2	4	4
Br Virgin Is		0	0	0	0	0	0	0	0	0
Cayman Is								3	9	10
Costa Rica	5	6	7	10	13	17	22	24	28	28
Cuba				1	11	22	24	37	65	96
Curacao	0	0	0	0	3	8	10	17	18	18
Dominica	0	0	0	0	0	0	0	1	1	1
Dominican Rep			0	1	6	13	23	68	103	166
El Salvador	0	0	0	0	13	14	25	26	119	184
Grenada	0	0	0	0	1	1	1	2	2	2
Guadeloupe	11	22	29	60	67	67	67	68	70	70
Guatemala	0	1	1	2	3	10	93	93	99	114
Haiti		1	1	1	1	2	2	2	2	3
Honduras	4	4	4	5	5	5	393	414	451	516
Jamaica	1	1	2	2	2	4	7	28	56	56
Martinique	14	26	48	60	62	63	65	67	67	67
Nicaragua	3	3	4	6	7	9	10	19	30	30
Panama	2	2	2	3	4	6	49	93	147	147
Puerto Rico	4	4	4	7	58	73	88	133	165	165
St Kitts Nevis			0	0	0	1	1	2	2	2
St Lucia	0	0	0	0	0	0	1	1	1	4
St Martin					1	2	3	2	0	0
St Vincent Gren			0	0	0	0	1	1	1	1
Trinidad Tobago	2	3	3	3	3	3	3	3	3	3
Turks Caicos							0	0	0	0
US Virgin Is			0	1	1	5	9	9	5	5
Eurasia	5	6	8	13	21	50	317	937	3 688	5 663
Armenia								1	2	17
Azerbaijan	0	0	1	1	1	2	5	25	28	36
Russian Fed		0	0	0	1	7	62	77	236	546
Turkey	5	6	7	12	19	41	250	834	3 422	5 064
Europe	17 119	30 857	54 720	73 801	84 263	91 125	99 609	106 110	112 437	121 692
Albania	0	0	1	1	1	1	1	1	1	1
Austria	49	89	174	337	626	785	937	1 096	1 269	1 431
Belarus					1	4	13	51	153	154
Belgium	386	1 007	1 979	2 647	2 902	3 015	3 131	3 325	3 610	4 026
Bosnia Herzg	0	0	0	0	1	7	8	14	17	19
Bulgaria	2	25	154	1 013	1 020	1 026	1 029	1 028	1 036	1 036
Croatia			0	4	19	33	48	56	60	61
Cyprus	4	7	10	17	35	64	76	84	110	113
Czechia	465	1 727	1 913	2 022	2 064	2 068	2 075	2 068	2 070	2 078
Denmark	5	7	17	402	571	607	782	851	906	998
Estonia	0	0	0	0	2	3	7	11	11	11
Finland	6	7	7	8	9	11	15	35	74	125
France	277	1 044	3 004	4 359	5 277	6 034	7 138	7 702	8 610	9 483
Germany	10 567	18 007	25 917	34 077	36 711	37 900	39 245	40 716	42 339	45 932
Greece	46	202	612	1 536	2 579	2 596	2 604	2 604	2 606	2 652
Hungary	1	2	4	12	35	89	172	235	344	665
Ireland	1	1	1	1	1	2	2	6	16	29
Italy	1 264	3 597	13 136	16 790	18 190	18 600	18 907	19 289	19 688	20 126
Kosovo*							0	2	7	7
Latvia			0	0	0	0	0	1	1	1
Lithuania	0	0	0	7	68	69	69	70	74	84
Luxembourg	26	29	41	75	95	110	116	122	128	134
Malta	1	1	5	16	28	55	74	93	112	127
Moldova Rep						1	1	2	2	2
Montenegro	0	1	1	1	1	2	3	3	3	3

# Solar energy

## Énergie solaire

## Energía solar

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Netherlands	69	90	149	369	746	1 048	1 515	2 049	2 903	4 150
North Macedonia			2	4	7	15	17	17	17	21
Norway	9	9	10	10	11	13	15	27	45	68
Poland			1	1	2	27	108	187	287	487
Portugal	115	134	172	238	296	415	447	513	579	670
Romania	0	0	1	41	761	1 293	1 326	1 372	1 374	1 377
Serbia	1	1	2	3	5	6	9	11	10	10
Slovakia		19	496	513	533	533	533	533	528	531
Slovenia	4	12	57	142	187	223	238	233	247	256
Spain	3 705	4 605	5 432	6 569	6 994	7 001	7 008	7 020	7 029	7 048
Sweden	9	11	12	24	43	60	104	153	291	421
Switzerland	79	125	223	437	756	1 061	1 394	1 664	1 906	2 246
UK	27	95	1 000	1 753	2 937	5 528	9 601	11 912	12 776	13 108
Ukraine		3	188	372	748	819	841	955	1 200	2 003
European Union	17 099	30 886	54 546	73 293	83 065	89 545	97 681	103 745	109 462	117 547
Middle East	42	91	215	275	618	905	1 153	1 636	2 183	3 181
Bahrain				1	1	5	5	5	5	5
Iran IR	0	0	0	0	1	9	9	43	111	286
Iraq					30	37	37	37	37	37
Israel	31	76	196	243	426	676	772	872	975	1 076
Jordan			0	0	0	0	29	296	396	771
Kuwait			0	0	0	2	3	31	31	31
Lebanon	0	0	0	1	2	5	11	24	36	42
Oman					1	1	2	2	8	8
Palestine			0	1	1	3	12	25	35	36
Qatar			1	1	2	4	4	5	5	5
Saudi Arabia	0	2	3	14	22	24	74	74	89	139
Syrian AR									0	1
United Arab Em	10	11	13	14	130	134	135	142	355	594
Yemen	1	1	1	1	2	5	60	80	100	150
N America	2 206	3 632	6 180	9 439	14 337	18 504	26 132	37 908	46 578	57 118
Canada	95	221	497	766	1 210	1 843	2 517	2 661	2 873	3 113
Mexico	25	29	39	60	82	116	173	389	674	2 555
USA	2 086	3 382	5 644	8 613	13 045	16 545	23 442	34 858	43 031	51 450
Oceania	117	414	1 420	2 467	3 299	4 070	4 489	4 875	6 201	10 006
Amer Samoa				2	2	2	2	4	4	4
Australia	108	402	1 397	2 435	3 258	4 007	4 360	4 721	5 993	9 769
Cook Is	0	0	0	0	1	2	2	3	3	5
Fiji	0	0	0	1	1	2	3	5	7	9
Fr Polynesia	3	3	12	15	18	22	26	29	34	34
Guam	0	0	0	0	1	1	32	35	35	35
Kiribati	0	0	0	0	1	1	2	3	3	3
Marshall Is	0	0	0	0	1	1	1	2	2	2
Micronesia	1	1	1	1	1	1	1	1	1	2
Nauru	0	0	0	0	0	0	0	1	1	1
New Caledon	1	3	3	3	3	3	7	9	28	33
New Zealand	3	3	3	4	7	19	38	42	59	79
Niue	0	0	0	0	0	0	0	0	0	0
Palau	0	0	1	1	1	1	1	1	1	1
Papua N Guin	0	0	0	0	0	0	1	1	1	1
Samoa	0	0	0	0	0	3	5	7	14	14
Solomon Is	0	0	1	1	1	1	1	2	3	3
Tokelau	0	0	0	1	1	1	1	1	1	1
Tonga	0	0	0	1	2	2	3	3	6	6
Tuvalu	0	0	0	0	0	0	2	2	2	2
Vanuatu	0	0	0	0	0	0	0	2	3	3
S America	15	41	60	156	187	469	900	1 545	3 417	5 469
Argentina	0	0	1	6	8	8	9	9	9	191
Bolivia	3	3	3	4	6	6	6	6	8	71
Brazil		1	1	2	5	15	23	80	1 097	2 296
Chile				2	15	221	576	1 125	1 809	2 137
Colombia	1	1	1	1	1	1	1	2	11	87
Ecuador	0	0	0	0	4	26	26	26	26	26
Falklands Malv							0	0	0	0
Fr Guiana	1	22	32	34	34	38	39	45	45	47
Guyana	0	0	1	1	1	6	6	7	9	10
Peru	10	13	18	103	109	134	139	146	153	345
Suriname		0	0	1	1	6	6	6	6	7
Uruguay	0	0	1	1	2	4	65	90	239	248
Venezuela		2	2	2	2	3	5	5	5	4

# Solar photovoltaic

## Solaire photovoltaïque

### Solar fotovoltaica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	22 606	39 603	70 973	100 297	135 758	172 994	221 067	292 440	386 107	480 357
Africa	108	195	268	348	662	1 560	1 935	2 973	3 759	5 118
Algeria						1	49	219	400 o	410 u
Angola	5 e	7 e	8 e	10 e	11 e	12 e	13 e	13 e	13 e	13 e
Benin	0 e	0 e	1 e	1 e	1 e	1 e	5 e	8 e	8 e	8 e
Botswana	0	0	0	2	2	2	2	3	3 e	3 e
Burkina Faso	3 e	4 e	6 e	6 e	6 e	7 e	8 e	10 e	47 e	62 e
Burundi	0 e	1 e	1 e	2 e	3 e	3 e	3 e	4 e	5 e	5 e
Cabo Verde		6 o	6 o	6 o	6 o	6 o	6 o	6 o	6 o	8 o
Cameroon	1 e	1 e	2 e	3 e	4 e	6 e	7 e	9 e	12 e	14 e
Cent Afr Rep	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
Chad		0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
Congo DR			0 e	0 e	0 e	1 e	1 e	3 u	5 u	7 u
Congo Rep			0 e	0 e	0 e	0 e	0 e	0 e	1 e	1 e
Cote d'Ivoire	1 e	2 e	2 e	2 e	3 e	4 e	5 e	5 e	8 e	8 e
Djibouti				0 e	0 e	0 e	0 e	0 e	0 e	0 e
Egypt	1	15	15	15	15	15	25	48 u	169 e	750
Eritrea	0 e	0 e	0 e	0 e	0 e	0 e	0 e	1 e	3 u	3 e
Eswatini	0 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Ethiopia	0 e	0 e	0 e	1 e	3 e	9 e	10 e	14 e	12 e	11 e
Gabon	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Gambia	2 e	2 e	2 e	2 e	2 e	2 e	2 e	2 e	2 e	2 e
Ghana	o	o	o	o	3 o	5 o	30 o	34 o	39 o	64 e
Guinea	1 e	1 e	1 e	1 e	3 e	3 e	13 e	13 e	13 e	13 e
Guinea Bissau							0 e	0 e	0 e	1 o
Kenya	0 e	0 e	1 e	3 e	7 e	17 e	31 e	32 e	38 e	93 e
Lesotho					0 e	0 e	0 e	0 e	0 e	0 e
Liberia		0 u	0 u	0 u	0 u	0 u	0 u	0 u	2 u	3 u
Libya	3 e	4 e	4 e	5 u	5 u	5 u	5 u	5 u	5 u	5 e
Madagascar	1 e	2 e	2 e	3 e	5 e	7 e	9 e	11 e	13 e	33 e
Malawi	0 e	1 e	2 e	3 e	5 e	8 e	12 e	12 e	19 e	23 e
Mali	4 e	6 e	10 e	16 e	16 o	16 e	17 e	18 e	20 e	20 e
Mauritania					18 o	18 o	18 o	35 o	85 u	86 e
Mauritius				1	2	18	19	21	29 u	30
Mayotte	2 o	8 o	12 o	13 o	13 o	13 o	13 o	13 o	15 o	15 o
Morocco	13	14	14	15	15	20	20	22	25	205 e
Mozambique			1 e	2 e	5 e	7 e	10 e	13 e	15 e	17 e
Namibia	4 e	4 e	7 e	11 e	15 e	16 e	27 e	36 e	46 e	79 e
Niger	1 e	2 e	3 e	4 e	5 e	6 e	7 e	8 e	9 e	20 o
Nigeria				15 e	15 e	16 e	17 e	18 e	19 e	19 u
Reunion	43 o	89 o	131 o	153 o	156 o	167 o	187 o	186 o	188 o	190 o
Rwanda	0 e	0 e	0 e	0 e	1 e	10 e	14 e	19 e	27 e	30 e
Sao Tome Prn						0 o	0 e	0 e	0 e	0 e
Senegal	3 e	3 e	5 e	6 e	7 e	10 e	11 e	43 e	113 e	134 e
Seychelles					0 o	1 o	1 o	2 o	3 e	3 e
Sierra Leone	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	4 u	4 u
Somalia						0 e	0 e	5 e	7 e	7 e
South Africa		2 e	6 e	11 e	262 e	1 063 e	1 252 e	1 974 e	2 186 e	2 559 e
South Sudan				0 e	0 e	0 e	0 e	0 u	0 u	0
Sudan	1	2	4	8	8	8	11	12 o	13	18 e
Tanzania	e	0 e	0 e	1 e	4 e	11 e	13 e	18 e	22 e	25 e
Togo	0 e	0 e	0 e	0 e	1 e	1 e	2 e	3 e	3 o	3 o
Tunisia	1 e	2 e	3 e	5 e	9 e	17 e	27 e	37 e	47 e	47 e
Uganda	14 e	15 e	16 e	17 e	19 e	20 e	22 e	24 e	46 e	48 e
Zambia	1 e	1 e	1 e	1 e	2 e	2 e	3 e	3 e	4 e	5 e
Zimbabwe	0 e	0 e	0 e	1 e	2 e	3 e	4 e	5 e	6 e	11 e
Asia	3 712	5 512	9 631	16 124	35 812	60 059	89 789	139 487	210 542	274 619
Afghanistan	0 e	0 e	0 e	16 e	17 e	18 e	19 e	20 e	22 e	22 e
Bangladesh	18 e	32 e	43 e	66 e	95 e	122 e	145 e	155 e	200 e	201 e
Bhutan	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
Brunei Darism		1	1	1	1	1	1	1	1	1 e
Cambodia	2 e	2 e	4 e	5 e	6 e	9 e	12 e	18 e	28 e	28 e
China	415	1 022	3 108	6 718	17 748	28 388	43 538	77 788	130 802	175 018 e
Chinese Taipei	10 o	22 o	118 o	223 o	392 o	620 o	842 o	1 245 o	1 768 o	2 618 u
India	39 e	65 e	563 e	923 e	1 283 e	3 290 e	5 168 e	9 418 e	17 644 e	26 869 o
Indonesia	13 e	15 e	17 e	26 e	38 e	42 e	51 e	58 e	59 e	60 e
Japan	2 627	3 618	4 914	6 632	13 599	23 339	34 150	42 040	49 040 e	55 500 u
Kazakhstan					1	5	57	57	59	209 o
Korea DPR	1 e	1 e	2 e	3 e	4 e	5 e	8 e	10 e	11 e	11 e
Korea Rep	524	650	730	1 024	1 555	2 481	3 613	4 502 o	5 835 o	7 862 o
Lao PDR	0 e	0 e	0 e	0 e	0 e	3 e	3 e	4 e	7 e	7 e
Malaysia	1 o	1 o	1 o	25 o	97 o	166 e	229 e	279 e	317 e	438 e
Maldives	0 e	0 e	0 o	1 o	1 o	4 o	4 o	7 o	9 u	9 e
Mongolia	4 e	5 e	5 e	5 e	5 e	5 e	5 e	15 e	48 e	63 o
Myanmar	0 e	0 e	1 e	3 e	4 o	8 o	26 o	55 o	55 e	55 e

# Solar photovoltaic

## Solaire photovoltaïque

### Solar fotovoltaica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nepal	4 o	4 o	8 o	9 o	11 o	12 o	13 o	14 o	53 o	53 o
Pakistan	4 e	9 e	19 e	46 e	101 e	165 e	230 e	410 e	742 e	1 568 e
Philippines	1 o	1 o	1 o	1 o	1 o	23 e	165 e	759 e	886 e	886 e
Singapore	2 o	3 o	5 o	8 o	12 o	26 o	46 o	97 o	116 o	150 o
Sri Lanka	6 e	7 e	9 e	9 e	13 e	22 e	37 e	80 e	130 e	159 e
Thailand	37	49	79	377	824	1 299	1 420	2 446	2 697	2 720 o
Timor Leste	0 e	0 e	0 e	0 e	1 e	1 e	1 e	1 e	1 e	1 e
Uzbekistan					1	1	1	4	4 e	4 e
Viet Nam	4 e	4 e	4 e	4 e	4 e	5 e	5 e	5 e	8 e	106 e
C America + Carib	48	75	109	168	267	341	924	1 151	1 485	1 737
Anguilla				0 e	0 e	1 e	1 e	2 e	2 e	1 u
Antigua Barb	0	0	0	0	0	0	3	4	4	8 u
Aruba	e	0 e	0 e	1 e	2 e	5 e	6	6	6	6 e
Bahamas	0	0	0 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Barbados	1	1	2	2	3	7	9	19	19	24 u
Belize	1	1	1	2	2	3	4	4	4	4 e
BES Islands							0	2	4	4 e
Br Virgin Is		0	0	0	0	0	0	0	0	0 e
Cayman Is								3 u	9 u	10 u
Costa Rica	5 e	6 e	7 e	10 e	13 e	17 e	22 e	24 e	28 e	28 u
Cuba				1	11	22	24	37	65 u	96 u
Curacao	0	0	0	0	3	8	10	17 o	18 e	18 e
Dominica	0	0	0	0	0	0	0	1	1	1 e
Dominican Rep			0 o	1	6 o	13 o	23 o	68	103 o	166 u
El Salvador	0 e	0 e	0 e	0 e	13 e	14 e	25 e	26 e	119 e	184 e
Grenada	0 o	0 o	0 o	0 o	1 o	1 o	1 o	2 o	2 o	2 o
Guadeloupe	11	22	29	60	67	67	67	68	70	70 o
Guatemala	0 e	1 e	1 e	2 e	3 e	10 e	93 e	93 e	99 e	114 e
Haiti		1 e	1 e	1 e	1 e	2 e	2 e	2 e	2 e	3 e
Honduras	4 e	4 e	4 e	5 e	5 e	5 e	393 e	414 e	451 e	516 e
Jamaica	1	1	2	2	2	4	7	28	56 u	56 e
Martinique	14	26	48	60	62	63 o	65	67 o	67 e	67 o
Nicaragua	3	3	4	6	7	9 o	10 o	19 o	30 o	30 o
Panama	2	2	2	3	4	6	49	93	147 o	147 e
Puerto Rico	4	4	4	7	58	73	88	133	165 e	165 e
St Kitts Nevis			0	0	0	1	1	2	2	2 e
St Lucia	0	0	0	0	0	0	1	1	1	4 u
St Martin					1	2	3	2	0 o	0 e
St Vincent Gren			0	0	0	0	1	1	1	1 e
Trinidad Tobago	2	3 e	3 e	3 e	3 e	3 e	3 e	3 e	3 e	3 e
Turks Caicos							0 o	0 e	0 u	0 u
US Virgin Is			0 e	1 e	1 e	5 e	9 e	9 e	5 e	5 o
Eurasia	5	6	8	13	20	49	316	936	3 687	5 662
Armenia								1	2	17 o
Azerbaijan	0 e	0 e	1	1	1	2 u	5	25	28 u	36 u
Russian Fed		0	0	0	1	7 e	62 e	77 e	236 o	546 o
Turkey	5 u	6 u	7 u	12 u	18 u	40	249	833	3 421 o	5 063 o
Europe	16 835	30 118	53 564	71 794	81 952	88 813	97 297	103 798	110 125	119 380
Albania	0 e	0 e	1 e	1 e	1 e	1 e	1 e	1	1	1 e
Austria	49	89	174	337	626	785	937	1 096	1 269	1 431 o
Belarus					1 e	4	13	51	153	154 o
Belgium	386	1 007	1 979	2 647	2 902	3 015	3 131	3 325	3 610	4 026 o
Bosnia Herzg	0 e	0 e	0 e	0 o	1 o	7 o	8 o	14 o	17 o	19 e
Bulgaria	2	25	154	1 013	1 020	1 026	1 029	1 028	1 036	1 036 o
Croatia			0	4	19	33	48	56	60	61 o
Cyprus	4	7	10	17	35	64	76	84	110	113 o
Czechia	465	1 727	1 913	2 022	2 064	2 068	2 075	2 068	2 070	2 078 o
Denmark	5	7	17	402	571	607	782	851	906	998 o
Estonia	0 e	0 e	0 u	0 u	2 u	3 u	7 u	11 u	11 e	11 e
Finland	6	7	7	8	9	11	15	35	74	125 e
France	277	1 044	3 004	4 359	5 277	6 034	7 138	7 702	8 610	9 483 o
Germany	10 565	18 005	25 915	34 075	36 709	37 898	39 243	40 714	42 337	45 930 u
Greece	46	202	612	1 536	2 579	2 596	2 604	2 604	2 606	2 652 o
Hungary	1	2	4	12	35	89	172	235	344	665 u
Ireland	1	1	1	1	1	2	2	6	16	29 e
Italy	1 264	3 592	13 131	16 785	18 185	18 594	18 901	19 283	19 682	20 120 o
Kosovo*							0 o	2	7	7 o
Latvia			0 e	0 e	0 e	0 e	0	1	1	1 e
Lithuania	0	0	0	7	68	69	69	70	74	84 o
Luxembourg	26	29	41	75	95	110	116	122	128	134 e
Malta	1 e	1	5	16	28	55	74	93	112	127 e
Moldova Rep						1	1	2	2	2 e
Montenegro	0 e	1 e	1 e	1 e	1 e	2 e	3 e	3 e	3 e	3 e

# Solar photovoltaic

## Solaire photovoltaïque

### Solar fotovoltaica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Netherlands	69	90	149	369	746	1 048	1 515	2 049	2 903	4 150 u
North Macedonia			2	4	7	15	17	17	17	21 o
Norway	9 u	9 u	10 u	10 u	11 u	13 u	15 u	27 u	45 u	68 u
Poland			1	1	2	27	108	187	287	487 u
Portugal	115	134	172	238	296	415	447	513	579	670 o
Romania	0 e	0 e	1	41	761	1 293	1 326	1 372	1 374	1 377 e
Serbia	1 e	1 e	2 e	3 e	5 e	6	9	11	10	10 e
Slovakia		19	496	513	533	533	533	533	528	531 e
Slovenia	4	12	57	142	187	223	238	233	247	256 o
Spain	3 423	3 873	4 283	4 569	4 690	4 697	4 704	4 716	4 725	4 744 o
Sweden	9	11	12	24	43	60	104	153	291 e	421 e
Switzerland	79	125	223	437	756	1 061	1 394	1 664	1 906 o	2 246 u
UK	27	95	1 000	1 753	2 937	5 528	9 601	11 912	12 776	13 108 o
Ukraine		3 o	188	372	748	819 o	841 o	955 o	1 200 o	2 003 o
European Union	16 815	30 147	53 391	71 286	80 754	87 233	95 369	101 433	107 150	115 234
Middle East	36	85	208	269	512	799	1 047	1 529	2 076	3 025
Bahrain				1 u	1 u	5 u	5 u	5 u	5 e	5 e
Iran IR	0	0	0	0	1	9	9	43	111	286 e
Iraq					30 o	37 o	37 e	37 e	37 e	37 e
Israel	25 u	70 u	190 u	237 u	420 u	670 u	766 e	866 e	969 e	1 070 u
Jordan			0 e	0 e	0 e	0 e	29 e	296 e	396 u	771 e
Kuwait			0 o	0 o	0 o	2 o	3 o	31 o	31 e	31 e
Lebanon	0 e	0 e	0 e	1 e	2 e	5 e	11 e	24 e	36 e	42 e
Oman					1 u	1 e	2 e	2 e	8 e	8 e
Palestine			0	1	1	3	12	25	35	36 u
Qatar			1 u	1 u	2 u	4 u	4 e	5 u	5 e	5 e
Saudi Arabia	0 u	2 u	3 u	14 u	22 u	24 e	74 e	74 e	89 e	89 e
Syrian AR									0 u	1 u
United Arab Em	10 e	11 e	13 e	14 e	30 e	34 e	35 e	42 e	255 e	494 e
Yemen	1 o	1 o	1 o	1 o	2 o	5 o	60 o	80 o	100 e	150 e
N America	1 734	3 159	5 708	8 963	13 051	16 837	24 374	36 150	44 820	55 346
Canada	95	221	497	766	1 210	1 843	2 517	2 661	2 873 e	3 113 e
Mexico	25	29	39	60	82	116	173	389	674 o	2 541 u
USA	1 614	2 909	5 172	8 137	11 759	14 878	21 684	33 100	41 273 o	49 692 o
Oceania	114	411	1 417	2 464	3 296	4 067	4 486	4 872	6 195	10 001
Amer Samoa				2 o	2 o	2 o	2 o	4 o	4 o	4 o
Australia	105	399	1 394	2 432	3 255	4 004	4 357	4 718	5 988 u	9 763 u
Cook Is	0 e	0 e	0 e	0 e	1 e	2 e	2 e	3 e	3 e	5 e
Fiji	0 u	0 u	0 u	1 u	1 u	2 u	3 u	5 u	7 u	9 u
Fr Polynesia	3 o	3 e	12 e	15 e	18 e	22 e	26 e	29 e	34 e	34 e
Guam	0 o	0 o	0 o	0 o	1 o	1 o	32 o	35 o	35 o	35 e
Kiribati	0 o	0 o	0 o	0 o	1 o	1 u	2 u	3 u	3 u	3 e
Marshall Is	0 e	0 e	0 e	0 e	1 e	1 e	1 e	2 e	2 e	2 e
Micronesia	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	2 e
Nauru	0 e	0 e	0 e	0 e	0 e	0 e	0 e	1 e	1 e	1 e
New Caledon	1 o	3 o	3 o	3 o	3 o	3 o	7 o	9 o	28 o	33 o
New Zealand	3	3	3	4	7	19	38	42	59 o	79 o
Niue	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
Palau	0 o	0 o	1 o	1 o	1 o	1 o	1 o	1 o	1 o	1 e
Papua N Guin	0 e	0 e	0 e	0 e	0 e	0 e	1 u	1 u	1 u	1 u
Samoa	0 e	0 e	0 e	0 e	0 e	3 e	5 e	7 e	14 e	14 e
Solomon Is	0 e	0 e	1 e	1 e	1 e	1 e	1 e	2 e	3 e	3 u
Tokelau	0 e	0 e	0 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Tonga	0 o	0 o	0 o	1 e	2 o	2 o	3 o	3 o	6 o	6 o
Tuvalu	0 o	0 o	0 o	0 o	0 o	0 o	2 o	2 o	2 o	2 e
Vanuatu	0 e	0 e	0 e	0 e	0 e	0 e	0 e	2 e	3 e	3 e
S America	15	41	60	156	187	469	900	1 545	3 417	5 469
Argentina	0 o	0 o	1 o	6 o	8 o	8 o	9 o	9 o	9 e	191 e
Bolivia	3 e	3 e	3 e	4 e	6 e	6 e	6 e	6 e	8 e	71 e
Brazil		1	1	2	5	15	23	80	1 097	2 296 o
Chile				2	15	221	576	1 125	1 809 o	2 137 o
Colombia	1 e	1 e	1 e	1 e	1 e	1 e	1 o	2 o	11 o	87 o
Ecuador	0	0	0	0	4 o	26 o	26 o	26 o	26 o	26 e
Falklands Malv							0 o	0 o	0 o	0 o
Fr Guiana	1	22	32	34	34	38	39	45	45	47 o
Guyana	0 e	0 e	1 e	1 e	1 e	6 e	6 e	7 e	9 e	10 e
Peru	10 e	13 e	18 e	103 e	109 e	134 e	139 e	146 e	153 e	345 e
Suriname		0 e	0 e	1 e	1 e	6 e	6 e	6 e	6 e	7 e
Uruguay	0	0	1	1	2	4	65	90	239	248 e
Venezuela		2	2	2	2	3	5	5	5	4 e

# Concentrated solar power

## Solaire thermique à concentration

### Energía solar termoeléctrica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	765	1 269	1 710	2 573	3 845	4 502	4 753	4 853	4 956	5 469
Africa		45	65	65	65	165	325	425	525	975
Algeria		25 o	25 o	25 o	25 o	25 o	25 o	25 o	25 e	25 e
Egypt		20	20	20	20	20	20	20	20 o	20
Morocco		20	20	20	20	20	180	180	180 o	530
South Africa		o	o	o	o	100 o	100 o	200 o	300 o	400 o
Asia		3	8	16	73	248	248	248	248	247
China		3	5	8	14	14	14	14	14	14
India			3 e	4 e	54 e	229 e	229 e	229 e	229 e	229 o
Korea Rep			0 e	0 e	0 e	0 e	0 e	0 e	0 e	
Thailand				5	5	5	5	5	5	5 e
Eurasia					1	1	1	1	1	1
Turkey					1 o	1 o	1 o	1 o	1 o	1 o
Europe	284	739	1 156	2 007	2 311	2 312	2 312	2 312	2 312	2 312
Germany	2	2	2	2	2	2	2	2	2 e	2 u
Italy		5 o	5 o	5 o	5 o	6 o	6 o	6 o	6 o	6 e
Romania									0	0 o
Spain	282	732	1 149	2 000	2 304	2 304	2 304	2 304	2 304	2 304 o
European Union	284	739	1 156	2 007	2 311	2 312	2 312	2 312	2 312	2 312
Middle East	6	6	6	6	106	106	106	106	106	156
Israel	6 u	6 e	6 e	6 e	6 e	6 e	6 e	6 e	6 e	6 e
Saudi Arabia										50 u
United Arab Em					100 o	100 o	100 u	100 u	100 u	100 e
N America	472	473	472	476	1 286	1 667	1 758	1 758	1 758	1 772
Mexico										14 o
USA	472	473	472	476	1 286	1 667	1 758	1 758	1 758 o	1 758 o
Oceania	3	3	3	3	3	3	3	3	6	6
Australia	3	3	3	3	3	3	3	3	6 e	6 e

# Bioenergy

## Bioénergie

### Bioenergía

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	62 119	66 929	73 336	77 867	84 702	90 625	96 554	104 788	109 994	115 731
Africa	956	1 019	1 104	1 196	1 290	1 444	1 484	1 495	1 501	1 556
Angola						51	51	51	51	51
Burkina Faso					0	0	0	0	0	0
Burundi	4	4	4	4	4	4	4	4	4	4
Congo DR	0	0	0	0	0	0	0	0	2	3
Egypt	67	67	67	67	67	67	67	67	67	67
Eswatini	61	61	123	123	123	106	106	106	106	106
Ethiopia	21	21	21	21	82	142	142	142	142	192
Gabon							1	1	1	1
Ghana	7	7	7	7	7	8	8	11	11	11
Kenya	32	67	67	67	67	67	88	88	88	88
Madagascar	0	0	0	0	0	0	0	0	0	0
Malawi	12	12	12	12	12	12	12	12	12	12
Mali	32	32	32	32	32	40	40	40	40	40
Mauritius	104	103	93	79	80	80	91	91	91	91
Morocco				1	1	1	2	2	2	2
Mozambique	14	14	14	14	14	14	14	14	14	14
Namibia		0	0	0	0	0	0	0	0	0
Nigeria	5	6	6	6	8	9	9	10	10	10
Reunion	44	44	44	44	44	44	45	46	46	46
Rwanda	1	1	1	1	1	1	1	1	1	1
Senegal	9	25	25	25	25	25	25	25	25	25
Sierra Leone						34	34	34	34	34
South Africa	246	246	246	246	246	246	251	256	260	265
Sudan	87	87	87	190	190	190	190	190	190	190
Tanzania	38	49	64	66	66	70	70	70	70	70
Uganda	48	48	48	48	78	90	90	90	90	90
Zambia	43	43	43	43	43	43	43	43	43	43
Zimbabwe	82	82	100	100	100	100	100	100	100	100
Asia	14 341	14 176	15 657	16 352	18 631	21 315	24 184	29 450	32 828	36 227
Bangladesh	1	1	2	3	3	4	5	5	5	5
Cambodia	6	6	7	23	15	23	21	19	30	30
China	4 600	3 446	3 808	4 617	6 089	6 653	7 977	9 269	11 234	13 235
Chinese Taipei	413	413	409	411	411	411	412	412	412	412
India	2 577	3 214	3 751	4 014	4 276	5 138	5 605	9 009	9 513	10 253
Indonesia	1 790	1 911	1 950	1 970	1 701	1 729	1 749	1 770	1 822	1 841
Japan	1 832	1 956	2 147	1 514	1 547	1 708	1 955	1 955	2 214	2 272
Kazakhstan					0	0	0	0	1	1
Korea Rep	117	161	194	197	192	601	728	1 066	1 173	1 419
Lao PDR					40	40	40	40	40	40
Malaysia	717	670	783	776	1 054	1 440	1 596	1 552	1 574	1 592
Myanmar	1	1	1	1	1	1	1	1	4	4
Pakistan	262	262	262	262	268	324	333	374	374	396
Philippines	65	102	104	104	131	143	233	254	254	269
Singapore	128	128	128	128	128	128	128	128	128	128
Sri Lanka	12	12	13	11	16	20	20	24	45	45
Thailand	1 695	1 767	1 975	2 196	2 634	2 829	3 231	3 395	3 824	4 095
Viet Nam	125	125	125	125	125	125	150	177	181	191
C America + Carib	1 392	1 397	1 482	1 548	1 647	1 809	2 087	2 432	2 475	2 580
Aruba						2	2	2	2	2
Belize	28	28	28	28	28	28	28	44	52	52
Costa Rica	44	44	44	44	46	42	43	43	43	55
Cuba	547	549	544	519	470	499	530	495	495	495
Dominican Rep		14	14	14	14	15	15	50	50	50
El Salvador	104	94	116	136	136	136	202	251	251	286
Guadeloupe	30	31	31	31	31	31	31	31	31	36
Guatemala	373	372	384	473	598	714	873	1 056	1 091	1 104
Honduras	91	91	138	106	124	142	161	210	210	210
Jamaica	32	32	32	32	32	32	32	32	32	32
Martinique	4	4	4	4	4	4	5	5	5	45
Nicaragua	122	122	122	134	134	134	134	177	177	177
Panama	19	19	28	28	30	30	27	32	33	33
Puerto Rico							5	5	5	5
Trinidad Tobago										
Eurasia	1 337	1 316	1 297	1 340	1 406	1 628	1 679	1 767	1 880	1 980
Armenia	1	1	1	1						
Azerbaijan					37	37	38	38	38	38
Russian Fed	1 234	1 197	1 197	1 197	1 197	1 370	1 370	1 370	1 370	1 370
Turkey	102	118	99	142	172	221	271	359	472	572

# Bioenergy

## Bioénergie

### Bioenergía

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Europe	23 501	25 866	29 297	30 687	31 700	33 205	34 635	35 731	36 643	38 458
Austria	2 179	2 176	2 249	1 672	1 507	1 411	1 396	1 393	1 290	1 322
Belarus	16	75	80	80	96	96	96	100	100	107
Belgium	907	1 004	1 031	986	965	899	945	922	912	908
Bosnia Herzg							8	9	9	9
Bulgaria	9	10	11	14	34	40	54	57	52	52
Croatia	8	9	14	18	23	24	53	63	87	104
Cyprus	8	8	9	9	10	10	10	10	10	10
Czechia	351	410	505	653	690	745	771	772	802	802
Denmark	939	1 098	1 146	1 377	1 178	1 251	1 240	1 283	1 318	1 318
Estonia	60	142	149	167	261	278	281	281	281	302
Finland	1 749	1 768	1 880	1 868	1 952	1 977	1 987	2 009	2 228	2 427
France	818	928	1 110	1 125	1 178	1 198	1 304	1 579	1 636	1 710
Germany	5 588	6 221	7 162	7 489	7 964	8 202	8 429	8 649	9 003	9 003
Greece	40	41	45	45	46	47	51	58	64	85
Hungary	509	514	500	331	328	549	519	427	459	468
Iceland	2									
Ireland	35	36	45	57	66	70	70	72	101	106
Italy	1 520	1 825	2 260	3 178	3 344	3 359	3 367	3 439	3 450	3 510
Latvia	10	16	30	66	108	121	126	143	154	154
Lithuania	24	29	33	53	64	71	71	72	79	111
Luxembourg	13	19	19	20	23	23	24	25	36	36
Malta			3	3	3	3	3	5	5	5
Moldova Rep				0	0	0	3	4	4	4
Netherlands	1 027	1 198	1 246	1 199	1 051	887	863	840	798	1 093
North Macedonia							4	5	7	8
Norway	112	122	140	140	140	140	140	87	87	87
Poland	110	134	277	583	735	816	961	974	964	1 002
Portugal	401	546	560	568	551	561	577	587	582	648
Romania	16	20	30	35	46	94	118	123	140	140
Serbia			2	4	4	5	5	10	13	15
Slovakia	167	181	195	213	214	237	242	253	246	246
Slovenia	50	47	54	59	59	62	63	60	62	62
Spain	774	862	884	970	994	1 017	1 018	1 018	1 023	1 028
Sweden	4 014	4 055	4 215	4 348	4 013	4 483	4 716	4 850	4 822	4 822
Switzerland	202	211	207	232	232	229	240	241	241	241
UK	1 846	2 160	3 204	3 117	3 791	4 254	4 829	5 254	5 508	6 418
Ukraine	2	4	4	13	31	50	53	60	73	98
European Union	23 249	25 535	28 945	30 299	31 277	32 765	34 169	35 299	36 194	38 020
Middle East	19	27	65	67	72	80	91	98	98	98
Iran IR	2	7	7	7	7	12	12	12	12	12
Israel	7	10	10	10	14	17	28	28	28	28
Jordan	4	4	4	4	4	4	4	4	4	4
Lebanon				2	2	2	2	9	9	9
Palestine									0	0
Qatar			38	38	38	38	38	38	38	38
Syrian AR	7	7	7	7	7	7	7	7	7	7
United Arab Em					1	1	1	1	1	1
N America	12 134	12 402	12 511	13 311	14 396	15 050	15 741	16 281	16 565	16 563
Canada	1 680	1 707	1 642	1 649	1 596	2 025	2 049	2 471	2 471	2 511
Mexico	318	405	382	445	516	606	723	907	1 022	1 105
USA	10 136	10 290	10 487	11 218	12 284	12 419	12 969	12 903	13 073	12 948
Oceania	993	996	997	1 003	998	1 008	1 013	1 008	1 022	1 048
Australia	822	825	826	827	817	824	826	826	829	855
Fiji	42	42	42	42	42	42	42	42	54	54
New Caledon	0	0	0	0	0	0	0	0	0	0
New Zealand	115	115	115	118	118	121	123	118	118	118
Papua N Guin	15	15	15	16	18	18	18	18	18	18
Samoa										
Solomon Is							1	1	1	1
Vanuatu	0	0	0	0	3	3	3	3	3	3
S America	7 445	9 729	10 927	12 362	14 564	15 086	15 642	16 527	16 982	17 219
Argentina	577	570	608	634	642	657	657	659	665	676
Bolivia	85	85	85	85	85	126	134	142	142	142
Brazil	5 717	7 927	9 028	9 922	11 601	12 342	13 310	14 187	14 559	14 782
Chile	490	528	567	859	1 267	926	466	463	466	467
Colombia	114	174	180	182	187	215	237	255	296	296
Ecuador	107	101	101	101	101	144	144	146	152	152
Fr Guiana	2	2	2	2	2	2	2	2	2	2



Bioenergy  
Bioénergie  
Bioenergía

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Guyana	41	41	41	41	41	41	41	41	41	41
Paraguay					39	39	39	39	39	39
Peru	75	65	70	111	175	159	175	156	183	186
Suriname							2	2	2	2
Uruguay	237	237	244	424	424	436	436	436	436	436

# Solid biofuels and renewable waste

## Biocombustibles solides et déchets renouvelables

## Biocombustibles sólidos y residuos renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	52 146	55 560	60 014	62 695	68 728	73 362	78 528	85 902	90 442	95 687
Africa	949	1 012	1 095	1 187	1 279	1 433	1 461	1 465	1 467	1 518
Angola						51 e	51 e	51 e	51 e	51 e
Burundi	4 e	4 e	4 e	4 e	4 o	4 e	4 e	4 e	4 e	4 e
Congo DR	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	2 e	3 e
Egypt	67	67	67	67	67	67	67	67	67	67 e
Eswatini	61	61	123	123	123	106	106	106 e	106 e	106 e
Ethiopia	21 e	21 e	21 e	21 e	82 e	142 e	142 e	142 e	142 e	192 e
Ghana	7 e	7 e	7 e	7 e	7 e	8 e	8 e	11 e	11 e	11 e
Kenya	32 e	67 e	67 e	67 e	67 e	67 e	85 e	85 e	85 e	85 e
Madagascar	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 e	0 e
Malawi	12 e	12 e	12 e	12 e	12 e	12 e	12 e	12 e	12 e	12 e
Mali	32 e	32 e	32 e	32 e	32 o	40 e	40 e	40 e	40 u	40 e
Mauritius	104	103	91	77	77	77	87	87 o	87 e	87 e
Mozambique	14 e	14 e	14 e	14 e	14 e	14 e	14 e	14 e	14 e	14 e
Namibia		0	0	0	0	0	0	0 e	0 e	0 e
Nigeria	5 u	6 u	6 u	6 u	8 u	9 u	9 u	10 u	10 u	10 u
Reunion	42 e	42 e	42 e	42 e	42 e	42 e	42 e	42 e	42 e	42 e
Rwanda	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Senegal	9 e	25 e	25 e	25 e	25 e	25 e	25 e	25 e	25 e	25 e
Sierra Leone						34 e	34 e	34 e	34 e	34 e
South Africa	242 e	242 e	242 e	242 e	242 e	242 e	242 e	242 e	242 e	242 e
Sudan	87 e	87 e	87 e	190 u	190 u	190 u	190 u	190 u	190 u	190 e
Tanzania	37 o	48 o	63 o	66 o	66 o	70 o	70 o	70 o	70 e	70 e
Uganda	48 e	48 e	48 e	48 e	78 e	90 e	90 e	90 e	90 e	90 e
Zambia	43 e	43 e	43 e	43 e	43 e	43 e	43 e	43 e	43 e	43 e
Zimbabwe	82 e	82 e	100 e	100 e	100 e	100 e	100 e	100 e	100 e	100 e
Asia	14 140	13 859	15 249	15 844	17 982	20 113	22 867	28 003	31 199	34 385
Bangladesh							0 o	0 o	0 o	0 e
Cambodia	6 o	6 o	7 o	23 o	15 o	23 o	20 o	18 o	29 o	29 e
China	4 600	3 375	3 727	4 479	5 896	6 343	7 646	8 920	10 780	12 605
Chinese Taipei	413 o	413 o	409 o	411 o	411 o	411 o	411 o	411 o	411 o	411 e
India	2 577 o	3 214 o	3 748 o	4 009 o	4 271 o	5 131 o	5 596 o	8 999 o	9 500 o	10 240 o
Indonesia	1 789 o	1 908 o	1 941 o	1 961 o	1 683 o	1 709 o	1 726 o	1 747 o	1 799 o	1 818 e
Japan	1 826	1 950	2 141	1 507	1 537	1 693	1 932	1 932	2 186 e	2 244 e
Korea Rep	29	66	87	89	93	124	255	578	678 o	924 o
Lao PDR					40 o	40 o	40 o	40 o	40 e	40 e
Malaysia	713 o	665 o	775 o	764 o	1 039 o	1 422 o	1 560 o	1 494 o	1 494 e	1 499 e
Myanmar									3 u	3 e
Pakistan	254 e	254 e	254 e	254 e	260 e	316 e	324 e	365 e	365 e	387 e
Philippines	44 o	80 o	80 o	80 o	100 o	112 o	202 o	214 o	214 o	229 o
Singapore	128 o	128 o	128 o	128 o	128 o	128 o	128 o	128 o	128 o	128 o
Sri Lanka	12 o	12 o	13 o	11 o	16 o	20 o	20 o	24 o	45 e	45 e
Thailand	1 625	1 663	1 816	2 003	2 369	2 518	2 858	2 960	3 349 o	3 595 o
Viet Nam	125 e	125 e	125 e	125 e	125 e	125 e	150 e	175 e	179 e	189 e
C America + Carib	1 388	1 393	1 471	1 536	1 632	1 795	2 063	2 400	2 440	2 540
Belize	28	28	28	28	28	28	28	44	52 u	52 e
Costa Rica	40	40	40	40	40	40	40	40	40	53 o
Cuba	547	549	544	519	470	498	530 o	495 o	495 o	495 e
Dominican Rep	o	14 o	14 o	14 o	14 o	14 o	14 o	48 o	48 o	48 e
El Salvador	104	94	110	130	130	130	195	244	244	279 o
Guadeloupe	30	31	31	31	31	31	31	31	31 u	31 e
Guatemala	373	372	384	473	597	713	869	1 053 o	1 084 o	1 097 o
Honduras	91 o	91 o	138 o	106 o	124 o	142 o	161 o	210 o	210 o	210 o
Jamaica	32	32	32	32	32	32	32	32	32	32 e
Martinique	4	4	4	4	4	4	4	4	4	44 e
Nicaragua	122	122	122	134	134	134	134	177	177	177 o
Panama	19	19	28	28	30	30	27	24	25 o	25 e
Trinidad Tobago										
Eurasia	1 281	1 244	1 207	1 207	1 244	1 417	1 419	1 462	1 490	1 510
Azerbaijan					37	37	37	37 e	37 e	37 u
Russian Fed	1 234 e	1 197 e	1 197 e	1 197 e	1 197 e	1 370 e	1 370 e	1 370 e	1 370 e	1 370 o
Turkey	47	47	10	10	10	10	12	55	83	103 o
Europe	16 118	17 323	19 108	19 172	19 676	20 668	21 550	22 269	22 709	24 389
Austria	1 798 e	1 832 e	1 870 e	1 393 e	1 307 e	1 221 e	1 202 e	1 188 e	1 108 e	1 131 o
Belarus	15	74	74	74	74	74	74	74	74	76 o
Belgium	663	767	821	790	764	677	712	690	684	680 o
Bosnia Herzg							8 o	8 o	8 o	8 e
Bulgaria	6	6	6	14	30	30	34	19	23	23 o

# Solid biofuels and renewable waste

## Biocombustibles solides et déchets renouvelables

## Biocombustibles sólidos y residuos renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Croatia	3	3	6	7	7	8	25	26	42	52 o
Czechia	256 e	293 e	328 e	353 e	329 e	378 e	403 e	403 e	430 e	430 o
Denmark	862	1 018	1 069	1 297	1 087	1 156	1 139	1 176 e	1 206 e	1 206 e
Estonia	58	138	145	163	255	270	270	270	270 e	291 e
Finland	1 736 e	1 738 e	1 835 e	1 822 e	1 864 e	1 877 e	1 885 e	1 895 e	2 114 e	2 313 o
France	659	757	902	875	898	914	956	1 194	1 246	1 273 e
Germany	2 189	2 263	2 297	2 291	2 553	2 533	2 554	2 579	2 604	2 604 u
Greece							2	2	3	3 o
Hungary	485	490	455	278	265	486	447	351	379	400 u
Iceland	1									
Ireland	5	5	5	13	13	16	16	16	44	44 o
Italy	790	764	792	915	1 024	1 033	1 031	1 094	1 092	1 092 o
Latvia	2	5	5	23	55	63	66	81	94	94 e
Lithuania	16	16	18	38	48	51	50	47	54	71 o
Luxembourg	4	10	10	10	13	12	13	13	23	23 e
Netherlands	824	981	1 012	980	821	650	624	619	577 e	872 u
North Macedonia										1 o
Norway	97	109	123	123	123	123	123	77	77 e	77 e
Poland	42	53	175	455	582	629	745	749	682	719 e
Portugal	381 e	521 e	516 e	517 e	496 e	495 e	511 e	519 e	512 o	578 o
Romania	15	19	26	30	35	79	104	107	119	119 o
Slovakia	163	172	174	172	179	159	151	160	155	155 e
Slovenia	38	33	33	30	30	30	30	30	33	33 o
Spain	597	657	675	752	774	794	794	794	798 o	798 o
Sweden	3 469 e	3 505 e	3 683 e	3 815 e	3 460 e	3 959 e	4 138 e	4 333 e	4 273 e	4 273 o
Switzerland	170	179	175	199	199	197	211	212	212 e	212 e
UK	778	916	1 878	1 742	2 377	2 723	3 201	3 509	3 737	4 687 o
Ukraine	2	4	4	6	17	35	35	39	39 o	52 o
European Union	15 912	17 036	18 812	18 849	19 342	20 318	21 178	21 938	22 378	24 081
Middle East	3	3	33	33	33	33	33	33	33	33
Israel	3	3	3	3	3	3 e	3 e	3 e	3 e	3 e
Qatar			30 u	30 u	30 u	30 u	30 u	30 u	30 u	30 e
N America	10 223	10 426	10 382	10 850	11 816	12 348	13 062	13 551	13 731	13 713
Canada	1 544	1 571	1 512	1 533	1 480	1 909	1 933	2 355	2 355 e	2 395 e
Mexico	301	384	351	406	478	569	685	824 o	853 o	888 o
USA	8 378	8 471	8 519	8 912	9 858	9 870	10 444	10 373	10 524 o	10 431 o
Oceania	730	730	730	730	730	731	732	732	744	768
Australia	597	597	597	597	597	598	598	598	598 e	622 e
Fiji	42 u	42 u	42 u	42 u	42 u	42 u	42 u	42 u	54 u	54 u
New Zealand	77	77	77	77	77	77	77	77	77 o	77 e
Papua N Guin	15 u	15 u	15 u	15 u	15 u	15 u	15 u	15 u	15 u	15 u
Samoa										
Solomon Is							1 u	1 u	1 u	1 u
S America	7 313	9 570	10 738	12 136	14 337	14 824	15 342	15 986	16 628	16 831
Argentina	577 e	570 e	608 e	617 e	625 e	640 e	640 e	642 e	644 e	653 e
Bolivia	85	85	85	85	85	126	134	142	142	142 e
Brazil	5 587	7 771	8 865	9 746	11 424	12 145	13 088	13 732 o	14 306 o	14 499 o
Chile	490 e	526 e	548 e	832 e	1 240 e	884 e	417 e	410 e	410 e	410 e
Colombia	114	174	180	182	187	215	237	253	292 o	292 e
Ecuador	107 o	101 o	101 o	101 o	101 o	144 o	144 o	144 o	144 e	144 e
Fr Guiana	2	2	2	2	2	2	2	2	2	2 e
Guyana	41	41	41	41	41	41	41	41	41	41 e
Paraguay					39	39	39	39	39	39 e
Peru	75	65	65	106	170	154	165	146	173	173 e
Suriname							2	2	2	2 e
Uruguay	236 e	236 e	243 e	423 e	423 e	434 e	434 e	434 e	434 e	434 e

# Bagasse

## Bagasse

### Bagazo

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	8 255	10 568	11 702	12 784	14 584	15 632	16 882	17 715	18 155	18 533
Africa	922	983	1 051	1 140	1 231	1 394	1 422	1 425	1 425	1 425
Angola						51 e	51 e	51 e	51 e	51 e
Burundi	4 e	4 e	4 e	4 e	4 o	4 e	4 e	4 e	4 e	4 e
Egypt	67	67	67	67	67	67	67	67	67	67 e
Eswatini	44	44	106	106	106	106	106	106 e	106 e	106 e
Ethiopia	21 e	21 e	21 e	21 e	82 e	142 e	142 e	142 e	142 e	142 e
Ghana								3 u	3 e	3 e
Kenya	32 e	67 e	67 e	67 e	67 e	67 e	85 e	85 e	85 e	85 e
Malawi	12 e	12 e	12 e	12 e	12 e	12 e	12 e	12 e	12 e	12 e
Mali	32 e	32 e	32 e	32 e	32 o	40 e	40 e	40 e	40 u	40 e
Mauritius	104	103	91	77	77	77	87	87 o	87 e	87 e
Mozambique	14 e	14 e	14 e	14 e	14 e	14 e	14 e	14 e	14 e	14 e
Nigeria	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
Reunion	42 e	42 e	42 e	42 e	42 e	42 e	42 e	42 e	42 e	42 e
Rwanda	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Senegal	9 e	25 e	25 e	25 e	25 e	25 e	25 e	25 e	25 e	25 e
Sierra Leone						32 u	32 e	32 e	32 e	32 e
South Africa	242 e	242 e	242 e	242 e	242 e	242 e	242 e	242 e	242 e	242 e
Sudan	87 e	87 e	87 e	190 u	190 u	190 u	190 u	190 u	190 u	190 e
Tanzania	35 o	46 o	46 o	46 o	46 o	46 o	46 o	46 o	46 e	46 e
Uganda	48 e	48 e	48 e	48 e	48 e	90 e	90 e	90 e	90 e	90 e
Zambia	43 e	43 e	43 e	43 e	43 e	43 e	43 e	43 e	43 e	43 e
Zimbabwe	82	82	100	100	100	100	100 e	100 e	100 e	100 e
Asia	615	651	651	651	718	781	891	915	926	963
Cambodia									11 o	11 e
Indonesia	200 o	200 o	200 o	200 o	208 o	219 o	219 o	219 o	219 o	219 o
Lao PDR					40 o	40 o	40 o	40 o	40 e	40 e
Pakistan	254 e	254 e	254 e	254 e	254 e	306 e	314 e	314 e	314 e	336 e
Philippines	36 o	72 o	72 o	72 o	92 o	92 o	169 o	169 o	169 o	184 o
Viet Nam	125 e	125 e	125 e	125 e	125 e	125 e	150 e	174 e	174 e	174 e
C America + Carib	1 384	1 389	1 467	1 532	1 625	1 787	2 055	2 393	2 432	2 532
Belize	28	28	28	28	28	28	28	44	52 u	52 e
Costa Rica	40	40	40	40	40	40	40	40	40	53 o
Cuba	547	549	544	519	470	498	529	494	494	494 e
Dominican Rep	o	14 o	14 o	14 o	14 o	14 o	14 o	48 o	48 o	48 e
El Salvador	104	94	110	130	130	130	195	244	244	279 o
Guadeloupe	30	30	30	30	30	30	30	30	30	30 e
Guatemala	373	372	384	473	594	711	867	1 050 o	1 081 o	1 094 o
Honduras	91 o	91 o	138 o	106 o	124 o	142 o	161 o	210 o	210 o	210 o
Jamaica	32	32	32	32	32	32	32	32	32	32 e
Martinique										40 u
Nicaragua	122	122	122	134	134	134	134	177	177	177 o
Panama	19	19	28	28	30	30	27	24	25 o	25 e
Trinidad Tobago										
Europe	0	0					2	2	2	2
Portugal	0 e	0 e					2 e	2 e	2 o	2 o
European Union	72	72	72	72	72	72	74	74	74	114
N America	287	368	320	323	424	527	660	798	827	865
Mexico	287	368	320	323	424	527	660	798 o	827 o	865 o
Oceania	453	453	453	453	453	453	453	453	453	477
Australia	424	424	424	424	424	424	424	424	424 e	448 u
Fiji	29 u	29 u	29 u	29 u	29 u	29 u	29 u	29 u	29 u	29 u
S America	4 593	6 724	7 760	8 685	10 133	10 690	11 399	11 728	12 089	12 268
Argentina	70 e	70 e	70 e	70 e	70 e	85 e	85 e	85 e	85 e	85 e
Bolivia	85	85	85	85	85	126	134	142	142	142 e
Brazil	4 096	6 183	7 213	8 095	9 435	9 881	10 549	10 874	11 168	11 347 o
Colombia	114	174	180	182	187	215	237	253	292	292 e
Ecuador	107 o	101 o	101 o	101 o	101 o	144 o	144 o	144 o	144 e	144 e
Guyana	41	41	41	41	41	41	41	41	41	41 e
Paraguay					39	39	39	39	39	39 e
Peru	75	65	65	106	170	154	165	146	173	173 e
Uruguay	5	5	5	5	5	5	5	5	5	5 e

# Renewable municipal waste

## Déchets municipaux renouvelables

### Residuos municipales renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	5 708	7 020	7 187	7 355	8 438	8 704	9 654	10 473	11 425	12 624
Africa										50
Ethiopia										50 u
Asia	1 354	2 517	2 613	2 665	3 240	3 556	4 135	4 662	5 491	6 579
China		1 117	1 131	1 144	1 700	1 893	2 342	2 870	3 640	4 575
Chinese Taipei	311 o	311 o	312 o	315 o	315 o	315 o	315 o	315 o	315 o	315 e
India	53 o	69 o	83 o	94 o	105 o	124 o	137 o	139 o	146 o	159 o
Indonesia			13 o	13 o	13 o	18 o	18 o	18 o	18 o	18 e
Japan	837	850	870	877	885	954	954	954	954 e	954 e
Korea Rep	19	20	41	43	38	50	95	77	77 o	82 o
Malaysia		9	9	9	9	9	16	16	16	16 e
Myanmar									0 u	0 e
Singapore	128 o	128 o	128 o	128 o	128 o	128 o	128 o	128 o	128 o	128 o
Thailand	7	13	26	43	48	66	132	145	191	318 o
Viet Nam								1 u	5 u	15 e
C America + Carib	4	4	4	4	4	4	4	4	4	4
Martinique	4	4	4	4	4	4	4	4	4	4 e
Eurasia					37	37	37	37	37	37
Azerbaijan					37	37	37	37 e	37 e	37 u
Europe	3 215	3 368	3 400	3 513	3 972	3 919	4 282	4 571	4 697	4 760
Austria	244	243	242	288	290	262	263	271	271	276 o
Belgium	109	127	120	112	124	124	124	124	124	124 o
Czechia	2	22	22	23	23	23	23	28	28 e	28 o
Denmark	157	150	148	141	166	163	166	166	196	196 e
Estonia					105	105	105	105	105 e	105 e
Finland	83 e	85 e	76 e	95 e	113 e	126 e	134 e	148 e	148 e	148 o
France	411	404	419	443	426	422	391	434	438	438 e
Germany	721	763	743	733	930	944	962	979	1 004	1 004 u
Hungary	21	21	19	18	18	19	25	29	23	23 u
Iceland	1									
Ireland				8	8	11	11	11	39	39 o
Italy	352	358	371	377	418	413	415	409	408	408 o
Lithuania					5	5	5	8	9	9 o
Luxembourg	4	10	10	10	10	9	9	9	9	9 e
Netherlands	273	293	325	325	325	325	325	325	325 e	325 u
Norway	18	30	44	44	44	44	44	50	50 e	50 e
Poland							8	22	30	67 u
Portugal	39	39	38	38	38	39	40	42	41	41 o
Slovakia	3	3	3	3	3	6	6	10	6	6 e
Spain	95	112	112	112	117	117	117	117	121	121 o
Sweden	327	327	286	293	340	230	438	564	567	567 o
Switzerland	170	179	175	199	199	197	211	212	212 e	212 e
UK	191	207	251	257	273	340	465	514	546	566 o
European Union	3 031	3 163	3 186	3 274	3 733	3 683	4 032	4 314	4 439	4 503
Middle East	3	3	33	33	33	33	33	33	33	33
Israel	3	3	3	3	3	3 e	3 e	3 e	3 e	3 e
Qatar			30 u	30 u	30 u	30 u	30 u	30 u	30 u	30 e
N America	1 132	1 128	1 137	1 140	1 153	1 154	1 163	1 163	1 161	1 156
Canada	18	18	18	39	39	39	39	39	39 e	39 e
USA	1 114	1 110	1 119	1 102	1 114	1 115	1 124	1 124	1 122 o	1 117 o
S America								3	3	5
Brazil								3 o	3 o	5 o

# Other solid biofuels

## Autres biocarburants solides

## Otros biocombustibles sólidos

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	38 183	37 972	41 124	42 555	45 706	49 026	51 992	57 714	60 862	64 529
Africa	27	29	44	46	48	39	39	40	42	43
Congo DR	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	2 e	3 e
Eswatini	17	17	17	17	17					
Ghana	7 e	7 e	7 e	7 e	7 e	8 e	8 e	8 e	8 e	8 e
Madagascar	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 e	0 e
Namibia		0	0	0	0	0	0	0 e	0 e	0 e
Nigeria		1 u	1 u	1 u	3 u	4 u	4 u	5 u	5 u	5 u
Sierra Leone						2 e	2 e	2 e	2 e	2 e
Tanzania	3 o	3 o	18 o	20 o	20 o	24 o	24 o	24 o	24 e	24 e
Zimbabwe	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Asia	12 171	10 691	11 985	12 528	14 024	15 775	17 841	22 426	24 782	26 843
Bangladesh							0 o	0 o	0 o	0 e
Cambodia	6 o	6 o	7 o	23 o	15 o	23 o	20 o	18 o	18 o	18 e
China	4 600	2 258	2 596	3 336	4 196	4 450	5 304	6 050	7 140	8 030
Chinese Taipei	102 o	102 o	96 o	96 o	96 o	96 o	96 o	96 o	96 o	96 e
India	2 524 o	3 145 o	3 665 o	3 915 o	4 166 o	5 006 o	5 459 o	8 860 o	9 354 o	10 082 o
Indonesia	1 589 o	1 708 o	1 728 o	1 748 o	1 462 o	1 472 o	1 489 o	1 510 o	1 562 o	1 581 o
Japan	989	1 100	1 271	630	652	739	978	978	1 232 e	1 290 e
Korea Rep	10	46	46	46	55	74	160	501	601 o	842 o
Malaysia	713 o	656 o	766 o	755 o	1 030 o	1 413 o	1 544 o	1 478 o	1 478 e	1 483 e
Myanmar									3 u	3 e
Pakistan					6 e	10 e	10 e	51 e	51 e	51 e
Philippines	8 o	8 o	8 o	8 o	8 o	20 o	33 o	45 o	45 o	45 o
Sri Lanka	12 o	12 o	13 o	11 o	16 o	20 o	20 o	24 o	45 e	45 e
Thailand	1 618	1 650	1 790	1 960	2 321	2 452	2 727	2 815	3 157 o	3 277 o
C America + Carib		1	1	1	3	4	4	4	4	4
Cuba						1	1 o	1 o	1 o	1 e
Dominican Rep										
Guadeloupe		1	1	1	1	1	1	1	1 u	1 e
Guatemala					3	3	3	3	3	3 o
Eurasia	1 281	1 244	1 207	1 207	1 207	1 380	1 382	1 425	1 453	1 473
Russian Fed	1 234 e	1 197 e	1 197 e	1 197 e	1 197 e	1 370 e	1 370 e	1 370 e	1 370 e	1 370 o
Turkey	47	47	10	10	10	10	12	55	83	103 o
Europe	12 903	13 954	15 708	15 659	15 705	16 749	17 265	17 695	18 010	19 626
Austria	1 554 e	1 589 e	1 628 e	1 105 e	1 017 e	959 e	939 e	917 e	838 e	855 o
Belarus	15	74	74	74	74	74	74	74	74	76 o
Belgium	554	640	701	678	640	553	588	566	559	555 o
Bosnia Herzg							8 o	8 o	8 o	8 e
Bulgaria	6	6	6	14	30	30	34	19	23	23 o
Croatia	3	3	6	7	7	8	25	26	42	52 o
Czechia	254 e	271 e	306 e	330 e	306 e	355 e	380 e	376 e	402 e	402 o
Denmark	705	868	921	1 156	921	993	973	1 010 e	1 010 e	1 010 e
Estonia	58	138	145	163	150	165	165	165	165	186 u
Finland	1 653	1 653	1 759	1 727	1 751	1 751	1 751	1 747	1 966	2 165 o
France	248	353	483	432	471	492	566	760	808	835 o
Germany	1 468	1 500	1 554	1 558	1 623	1 589	1 592	1 600	1 600	1 600 u
Greece							2	2	3	3 o
Hungary	464	469	436	260	247	467	422	322	356	377 u
Ireland	5	5	5	5	5	5	5	5	5	5 o
Italy	438	406	421	538	606	620	616	685	684	684 o
Latvia	2	5	5	23	55	63	66	81	94	94 e
Lithuania	16	16	18	38	43	46	45	39	45	62 o
Luxembourg					4	4	4	4	15	15 e
Netherlands	551	688	687	655	496	325	299	294	252	547 u
North Macedonia										1 o
Norway	79	79	79	79	79	79	79	27	27 e	27 e
Poland	42	53	175	455	582	629	737	727	652	652 e
Portugal	342 e	482 e	478 e	479 e	458 e	456 e	469 e	475 e	469 o	535 o
Romania	15	19	26	30	35	79	104	107	119	119 o
Slovakia	160	169	171	169	176	153	145	150	149	149 e
Slovenia	38	33	33	30	30	30	30	30	33	33 o
Spain	502	545	563	640	657	677	677	677	677 o	677 o
Sweden	3 142 e	3 178 e	3 397 e	3 522 e	3 120 e	3 729 e	3 700 e	3 769 e	3 706 e	3 706 o
Switzerland										
UK	587	709	1 627	1 485	2 104	2 383	2 736	2 995	3 191	4 121 o
Ukraine	2	4	4	6	17	35	35	39	39 o	52 o
European Union	12 809	13 800	15 554	15 503	15 537	16 563	17 072	17 550	17 865	19 464

Other solid biofuels  
Autres biocarburants solides  
Otros biocombustibles sólidos

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
N America	8 804	8 930	8 925	9 387	10 239	10 667	11 240	11 591	11 744	11 692
Canada	1 526	1 553	1 494	1 494	1 441	1 870	1 894	2 316	2 316 e	2 356 e
Mexico	14	16	31	83	54	42	26	26	26	23 o
USA	7 264	7 361	7 400	7 810	8 744	8 755	9 320	9 249	9 402 o	9 314 o
Oceania	277	277	277	277	277	278	278	278	290	290
Australia	173	173	173	173	173	174	174	174	174 e	174 e
Fiji	12 u	12 u	12 u	12 u	12 u	12 u	12 u	12 u	24 u	24 u
New Zealand	77	77	77	77	77	77	77	77	77 o	77 e
Papua N Guin	15 u	15 u	15 u	15 u	15 u	15 u	15 u	15 u	15 u	15 u
Samoa										
Solomon Is							1 u	1 u	1 u	1 u
S America	2 720	2 846	2 978	3 450	4 204	4 134	3 943	4 255	4 537	4 557
Argentina	507 e	500 e	538 e	547 e	555 e	555 e	555 e	557 e	559 e	568 e
Brazil	1 491	1 588	1 652	1 651	1 989	2 264	2 538	2 855 o	3 135 o	3 147 o
Chile	490 e	526 e	548 e	832 e	1 240 e	884 e	417 e	410 e	410 e	410 e
Colombia									0 o	0 o
Fr Guiana	2	2	2	2	2	2	2	2	2	2 e
Guyana							0	0	0	0 e
Suriname							2	2	2	2 e
Uruguay	231 e	231 e	238 e	418 e	418 e	429 e	429 e	429 e	429 e	429 e

# Liquid biofuels

## Biocarburants liquides

## Biocarburantes líquidos

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	1 697	1 856	1 902	2 064	2 041	2 341	2 423	2 327	2 352	2 352
Africa					0	0	0	0	0	0
Burkina Faso					0 u	0 u	0 u	0 e	0 e	
Tanzania						0 u	0 e	0 e	0 e	0 e
Asia						356	361	359	359	359
Korea Rep						356	361	359	359 o	359 o
Eurasia						7	7	7	12	12
Turkey						7	7	7	12	12 o
Europe	1 513	1 673	1 715	1 855	1 879	1 800	1 870	1 798	1 817	1 817
Austria	46	15	7	6	6	1	3	3	1	1 o
Belgium	139	122	81	55	50	50	50	46	46	46 o
Denmark					7		1	0	1	1 e
France						4	7	8	4	4 e
Germany	412	410	345	277	263	232	232	231	230	230 u
Italy	371	581	736	989	1 003	990	1 000	993 e	987	987 o
Latvia										
Netherlands	17	17	17							
Poland	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e	0 e
Slovenia					1	1	1	1	1	1 o
Sweden	528 e	528 e	528 e	528	548	522	576	515	547	547 o
European Union	1 513	1 673	1 715	1 855	1 879	1 800	1 870	1 798	1 817	1 817
N America	183	183	183	204	155	155	155	155	155	155
USA	183	183	183	204	155	155	155	155 o	155 o	155 o
Oceania	0	0	0	0	3	3	3	3	3	3
Fiji		0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u	0 u
New Caledon	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o	0 o
Vanuatu	0 u	0 u	0 u	0 u	3 e	3 e	3 e	3 e	3 e	3 e
S America			4	4	4	19	27	4	5	5
Brazil			4	4	4	19	27	4 o	5 o	5 o



# Biogas Biogaz Biogás

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	8 276	9 513	11 420	13 109	13 933	14 923	15 603	16 559	17 201	17 692
Africa	7	7	9	10	11	11	23	29	33	38
Burkina Faso							0 u	0 e	0 e	0 e
Gabon							1 e	1 e	1 e	1 e
Ghana							0 o	0 o	0 e	0 o
Kenya		0 e	0 e	0 e	0 e	0 e	3 e	3 e	3 e	3 e
Mauritius			2	2	3	3	3	3 o	3 e	3 e
Morocco				1	1	1	2	2	2	2
Nigeria								0 u	0 u	0 u
Reunion	2 o	2 o	2 o	2 o	2 o	2 o	3 o	4 o	4 e	4 o
South Africa	4 u	4 u	4 u	4 e	4 e	4 e	9 e	14 e	18 e	23 u
Tanzania	1 o	1 o	1 o	1 o	1 o	1 o	1 o	1 u	1 e	1 e
Asia	201	317	408	509	650	846	956	1 088	1 269	1 483
Bangladesh	1 o	1 o	2 o	3 o	3 o	4 o	4 o	5 e	5 e	5 e
Cambodia							2 e	2 e	2 e	2 e
China		71	81	138	193	310	331	350	454	630
Chinese Taipei							1 o	1 o	1 o	1 e
India	1 o	1 o	3 o	4 o	6 o	7 o	10 o	10 o	13 e	13 e
Indonesia	1 o	3 o	9 o	9 o	18 o	19 o	23 o	23 o	23 o	23 e
Japan	6	6	6	7	10	15	23	23	28 e	29 e
Kazakhstan					0	0	0	0	1 o	1 o
Korea Rep	88	95	107	108	99	121	113	129	136 o	136 o
Malaysia	4 o	5 o	8 o	12 o	14 o	18 o	36 o	58 o	81 o	93 o
Myanmar	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e	1 e
Pakistan	9	9	9	9	9	9	9	9	9	9 e
Philippines	21 u	21 u	23 u	24 u	31 e	31 e	31 e	40 e	40 e	40 e
Thailand	70	103	159	193	266	312	373	435	475	500 o
Viet Nam								2 e	2 e	2 e
C America + Carib	4	4	11	11	15	14	23	32	36	40
Aruba						2 u	2 u	2 u	2 u	2 e
Costa Rica	4 e	4 e	4 e	4 e	6 e	2 e	3 e	3 e	3 e	3 e
Cuba						1 e	1 e	1 e	1 e	1 e
Dominican Rep			0 o	1 o	1 o	1 o	2 o	2 o	2 o	2 e
El Salvador			6	6	6	6	7	7	7	7 o
Guadeloupe				0	0	0	0	0	0	5 o
Guatemala					1	1	4	4	7	7 o
Martinique							1	1 o	1 o	1 o
Panama								8	8 o	8 e
Puerto Rico							5	5	5	5 e
Eurasia	56	72	90	133	162	204	253	298	378	458
Armenia	1	1	1	1			1	1	1	1 u
Azerbaijan										
Turkey	55	71	89	132	162	204	252	297	377	457 o
Europe	5 870	6 870	8 474	9 660	10 144	10 737	11 215	11 664	12 117	12 252
Austria	335 e	330 e	372 e	273 e	194 e	189 e	191 e	202 e	180 e	190 o
Belarus	1	1	6	6	22	22	22	27	27	30 o
Belgium	105	115	129	141	151	172	183	186	183	183 o
Bosnia Herzg								1 u	1 e	1 e
Bulgaria	3	4	5		4	10	20	38	29	29 o
Croatia	5	6	8	11	16	16	28	37 o	45 o	52 o
Cyprus	8	8	9	9	10	10	10	10	10 e	10 o
Czechia	96	118	177	300 o	361 o	367 o	368 o	369 o	372 e	372 o
Denmark	77	80	77	80	84	95	101	107 e	112 e	112 e
Estonia	2	4	4	4	6	8	11	11	11 e	11 e
Finland	13 e	30 e	45 e	46 e	88 e	100 e	102 e	114 e	114 e	114 o
France	159	171	208	250	280	280	341	377	386	433 o
Germany	2 987 o	3 548 o	4 520 o	4 921 o	5 148 o	5 437 o	5 643 o	5 839 o	6 169 o	6 169 u
Greece	40	41	45	45	46	47	49	56	62	83 o
Hungary	24	24	45	53	63	63	72	76	80	68 u
Iceland	1									
Ireland	30	31	39	44	52	53	53	56	56	62 o
Italy	359	480	732	1 274	1 317	1 336	1 336	1 352	1 372	1 432 o
Latvia	8 e	11 e	25 e	43 e	53 e	58 e	60 e	62 e	60 e	60 e
Lithuania	8	13	15	15	16	20	21	25 e	25 e	40 o
Luxembourg	9	9	10	10	10	10	12	12	12 e	12 e
Malta			3	3	3	3	3	5	5	5 e
Moldova Rep				0	0	0	3	4	4	4 e
Netherlands	186 e	200 e	217 e	219 e	230 e	237 e	239 e	221 e	221 e	221 u
North Macedonia							4	5	7	7 o

# Biogas Biogaz Biogás

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Norway	15	13	17	17	17	17	17	10	10 e	10 e
Poland	68 o	81 o	102 o	128 o	153 o	187 o	216 o	225 o	282 o	282 e
Portugal	20	25	44	51	55	66	66	68 e	70 o	70 o
Romania	1	1	4	5	11	15	14	16	22	22 o
Serbia			2	4	4	5	5	10	13	15 o
Slovakia	4	9	21	41	35	78	91	93	91	91 e
Slovenia	12	14	21	29	28	31	32	29	27	27 o
Spain	177	205	209	218	220	223	224	224	225	230 o
Sweden	17 e	22 e	4 e	5 e	5 e	2 e	2 e	2 e	2 e	2 o
Switzerland	32	32	32	33	33	32	29	29 o	29 e	29 e
UK	1 068 o	1 244 o	1 326 o	1 375 o	1 414 o	1 531 o	1 628 o	1 745 o	1 771 e	1 731 o
Ukraine				7 o	14 o	15 o	18 o	21 o	34 o	46 o
European Union	5 823	6 826	8 419	9 595	10 056	10 647	11 121	11 563	11 998	12 121
Middle East	16	24	32	34	39	47	58	65	65	65
Iran IR	2	7	7	7	7	12	12	12	12	12 e
Israel	4 e	7 e	7 e	7 e	11 e	14 e	25 e	25 e	25 e	25 e
Jordan	4 o	4 o	4 o	4 o	4 o	4 o	4 o	4 o	4 e	4 e
Lebanon				2 u	2 u	2 u	2 u	9 e	9 e	9 e
Palestine									0 u	0 e
Qatar			8 u	8 u	8 u	8 u	8 u	8 u	8 u	8 e
Syrian AR	7 e	7 e	7 e	7 e	7 e	7 e	7 e	7 e	7 e	7 e
United Arab Em					1 o	1 o	1 o	1 o	1 o	1 e
N America	1 728	1 793	1 946	2 257	2 425	2 547	2 524	2 574	2 679	2 695
Canada	136	136	130	116	116	116	116	116	116 e	116 e
Mexico	17	21	31	39	38	37	38	83 o	169 o	217 o
USA	1 575	1 636	1 785	2 102	2 271	2 394	2 370	2 375	2 394 o	2 362 o
Oceania	263	266	267	273	265	274	278	273	275	277
Australia	225	228	229	230	220	226	228	228	231 e	233 e
New Zealand	38	38	38	41	41	44	46	41	41 o	41 e
Papua N Guin				2 u	4 u	4 u	4 u	4 u	4 u	4 u
S America	131	159	184	222	223	243	273	537	349	383
Argentina				17 o	17 o	17 o	17 o	17 o	21 o	23 o
Brazil	130	156	159	172	173	178	196	451 o	249	278 o
Chile		2	19	27	27	42	49	53	56 o	57 o
Colombia								2	4	4 o
Ecuador								2 o	7 e	7 e
Peru			5	5	5	5	10	10	10	13 e
Uruguay	1	1	1	1	1	2	2	2	2	2 e

# Geothermal energy

## Énergie géothermique

### Energía geotérmica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	9 791	9 998	10 088	10 482	10 731	11 209	11 856	12 281	12 789	13 329
Africa	170	205	205	213	213	373	626	670	680	670
Ethiopia	7	7	7	7	7	7	7	7	7	7 e
Kenya	163 o	198 o	198 o	206 o	206 o	366 o	619 o	663 o	673 e	663 o
Asia	3 596	3 597	3 636	3 721	3 728	3 854	3 896	4 111	4 281	4 435
China	25	24	26	26	26	26	26	26	26	26
Chinese Taipei										0 u
Indonesia	1 189 o	1 189 o	1 226 o	1 336 o	1 344 o	1 404 o	1 439 o	1 644 o	1 809 o	1 946 o
Japan	535	537	537	512	512	508	516	526	531 e	536 e
Philippines	1 847 o	1 847 o	1 847 o	1 847 o	1 847 o	1 916 o	1 916 o	1 916 o	1 916 o	1 928 o
Thailand	0	0	0	0	0	0	0	0	0	0 e
C America + Carib	527	527	525	656	641	637	640	629	665	665
Costa Rica	166	166	218	218	218	218	217	207	207	207 o
El Salvador	204	204	151	204	204	204	204	204	204	204 o
Guadeloupe	15	15	15	15	15	12	15	15	15 u	15 e
Guatemala	54	54	54	54	49	49	49	49	49	49 o
Honduras									35 o	35 o
Nicaragua	88	88	88	165	155	155	155	155	155	155 o
Eurasia	158	175	195	243	390	483	702	899	1 142	1 361
Russian Fed	81	81	81	81	79	78	78	78	78 e	78 o
Turkey	77	94	114	162	311	405	624	821	1 064 o	1 283 o
Europe	1 304	1 337	1 443	1 446	1 460	1 499	1 501	1 500	1 556	1 601
Austria	1	1	1	1	1	1	1	1	1	1 o
France			16	15	16	16	16	16	16	16 e
Germany	8	8	8	12	24	24	26	29	32	32 u
Hungary									3 u	3 e
Iceland	575	575	665	665	665	665	665	663 o	708 o	753 u
Italy	695	728	728	728	729	768	768	767	767	767 e
Portugal	25	25	25	25	25	25	25	25	29	29 o
Romania						0 o	0 o	0 o	0 o	0 o
European Union	744	777	793	796	810	846	851	852	863	863
N America	3 347	3 370	3 296	3 416	3 430	3 327	3 448	3 443	3 414	3 496
Mexico	965	965	887	824	823	813	906	926	926 o	951 o
USA	2 382	2 405	2 409	2 592	2 607	2 514	2 542	2 517	2 488 o	2 546 o
Oceania	689	787	787	787	869	1 035	1 042	1 027	1 027	1 052
Australia	0	0	0	0	0	0	0	0	0 e	0 e
New Zealand	633	731	731	731	813	979	986	971	971 o	996 u
Papua N Guin	56 u	56 u	56 u	56 u	56 u	56 u	56 u	56 u	56 u	56 u
S America									24	48
Argentina										
Chile									24 o	48 o

Off-grid capacity

Capacité hors réseau

Capacidad fuera de la red

# Total renewable energy

## Total énergies renouvelables

### Total energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	3 858.035	4 155.398	4 599.977	4 968.280	5 336.621	6 333.349	6 975.704	7 607.687	8 401.915	8 793.412
Africa	342.818	375.051	417.976	473.062	577.170	718.486	864.822	1 117.594	1 378.199	1 473.346
Algeria						11.300	59.300	229.300	410.200	420.000
Angola	10.959	12.757	13.377	15.263	16.458	18.821	19.726	20.236	20.236	20.236
Benin	0.300	0.300	0.500	0.500	1.000	1.300	5.000	8.000	8.000	8.000
Botswana	0.020	0.035	0.065	0.211	0.211	0.356	0.441	1.513	1.513	1.514
Burkina Faso	3.000	3.600	5.800	5.800	6.450	7.150	8.150	10.150	12.150	27.000
Burundi	5.503	5.703	6.403	6.803	7.803	8.003	8.303	9.303	10.303	10.303
Cabo Verde				0.074	0.151	0.305	0.618	0.674	0.735	0.801
Cameroon	0.800	1.300	2.700	3.100	3.900	5.900	7.700	9.300	11.896	14.492
Cent Afr Rep	0.300	0.300	0.400	0.500	0.500	0.500	0.500	0.500	0.500	0.500
Chad		0.002	0.002	0.003	0.050	0.050	0.172	1.273	1.273	1.273
Congo DR	97.160	97.160	97.183	97.247	98.349	98.568	111.732	114.297	129.095	141.427
Congo Rep			0.070	0.120	0.230	0.460	0.460	0.460	0.570	0.570
Cote d'Ivoire	1.404	1.553	1.667	1.973	2.908	3.834	5.059	5.059	8.278	8.278
Djibouti				0.300	0.300	0.300	0.300	0.300	0.300	0.300
Egypt	68.300	82.000	82.000	82.000	82.000	82.000	92.000	106.000	106.000	117.000
Eq Guinea										
Eritrea	0.826	0.826	0.826	0.830	0.830	1.140	1.140	1.490	3.490	3.490
Eswatini	1.975	2.317	2.435	2.461	2.478	2.504	2.504	2.504	2.504	2.504
Ethiopia	22.378	22.385	22.765	23.578	86.174	151.961	152.720	156.822	155.078	153.900
Gabon	1.600	1.600	1.600	1.600	1.600	1.600	2.800	2.887	2.887	2.887
Gambia	1.626	1.777	1.859	1.991	1.995	2.000	2.000	2.000	2.002	2.002
Ghana	6.774	6.774	6.774	6.774	6.774	9.624	13.914	15.152	15.888	16.624
Guinea	2.820	2.820	2.820	2.820	5.591	5.591	15.493	15.499	15.499	15.499
Guinea Bissau							0.312	0.312	0.312	1.169
Kenya	3.680	5.865	6.604	8.573	12.351	21.944	36.027	37.479	44.064	43.954
Lesotho	0.180	0.180	0.180	0.180	0.343	0.343	0.343	0.343	0.343	0.343
Liberia	4.000	4.005	4.005	4.040	4.040	4.040	4.057	4.059	6.406	6.583
Libya	3.200	3.700	4.200	4.900	4.900	4.900	4.900	4.900	5.110	5.110
Madagascar	2.122	5.275	5.780	6.450	8.985	11.630	14.660	16.660	18.760	18.760
Malawi	1.832	2.066	3.155	4.081	5.965	8.234	12.657	12.957	20.037	23.577
Mali	35.922	38.449	41.857	47.741	47.741	56.163	57.226	57.508	59.575	59.575
Mauritania					7.400	7.551	7.566	24.166	24.166	25.466
Morocco	13.400	13.500	19.000	20.000	20.000	23.800	23.800	25.870	29.456	29.457
Mozambique			0.500	1.575	5.175	7.900	11.060	14.060	16.060	18.060
Namibia	3.640	4.210	7.350	10.700	13.400	14.176	14.176	14.176	14.187	21.940
Niger	1.200	2.100	3.000	4.000	5.000	6.000	7.000	8.000	9.000	20.000
Nigeria	7.000	8.200	8.200	23.400	25.100	27.800	29.600	31.030	31.230	31.395
Rwanda	0.306	0.506	0.802	1.359	2.538	3.081	7.007	12.181	17.346	20.473
Sao Tome Prn						0.074	0.074	0.074	0.074	0.074
Senegal	2.570	3.290	4.790	5.900	7.000	8.000	9.000	10.000	11.000	12.000
Seychelles					0.068	0.068	0.068	0.068	0.068	0.922
Sierra Leone	0.067	0.094	0.161	0.487	0.634	0.645	0.670	0.734	8.720	9.136
Somalia				2.200	2.200	2.300	2.970	7.470	10.444	10.618
South Africa	6.761	6.761	7.091	7.096	7.096	7.192	7.192	7.192	7.192	7.192
South Sudan				0.160	0.160	0.160	0.160	0.428	0.449	0.467
Sudan	0.882	2.270	3.506	8.041	8.041	8.041	11.142	12.322	12.580	17.580
Tanzania	10.300	10.531	25.803	32.464	34.974	46.248	53.603	59.221	63.533	67.044
Togo	0.081	0.174	0.331	0.435	0.530	0.987	2.022	2.534	3.000	3.000
Tunisia	1.396	1.402	1.446	1.555	1.555	1.563	1.710	2.060	2.076	2.076
Uganda	14.180	14.910	16.240	17.320	18.500	23.500	25.500	27.500	31.400	33.400
Zambia	2.807	2.807	3.007	4.007	4.207	4.607	4.357	4.857	5.357	5.857
Zimbabwe	1.547	1.547	1.722	2.450	3.515	4.272	5.931	6.714	7.857	9.518
Asia	3 081.657	3 332.958	3 718.381	3 927.449	4 127.012	4 909.501	5 316.254	5 636.476	5 951.562	6 335.480
Afghanistan	10.403	13.952	17.401	36.952	41.122	46.091	50.109	54.796	58.398	58.398
Bangladesh	19.986	34.699	45.707	70.133	98.991	125.799	141.259	146.917	171.955	142.451
Bhutan	1.600	1.629	1.707	1.713	1.713	1.713	1.713	1.713	1.713	1.713
Cambodia	0.253	0.257	0.257	0.257	0.798	0.992	2.995	3.676	3.691	3.691
China	130.800	215.800	302.400	391.330	508.330	586.930	655.530	710.490	765.450	820.410
India	421.055	509.512	657.080	712.932	772.527	1 046.802	1 158.460	1 333.831	1 508.251	1 801.521
Indonesia	1 781.820	1 885.536	1 898.589	1 915.888	1 655.872	1 671.356	1 682.042	1 682.561	1 683.864	1 702.097
Korea DPR	0.870	1.233	2.231	2.757	4.057	5.568	8.418	10.487	11.300	11.300
Lao PDR	1.991	1.992	1.993	1.993	2.453	2.885	3.237	3.610	3.610	3.610
Malaysia	462.990	405.914	515.624	504.974	732.644	1 101.978	1 240.665	1 245.868	1 245.878	1 248.450
Maldives	1.492	1.492	1.807	2.207	2.407	5.407	5.507	8.107	10.807	10.807
Mongolia	7.310	8.250	8.250	8.583	8.583	8.583	8.583	8.583	8.583	8.583
Myanmar	1.600	1.800	2.800	4.200	5.609	9.080	27.099	56.307	56.307	56.307
Nepal	35.170	37.383	43.338	47.373	52.380	56.387	61.872	63.953	104.918	104.918
Pakistan	5.750	10.845	11.628	15.364	15.919	16.119	16.268	16.261	27.455	27.853
Philippines	15.320	18.570	22.545	25.520	30.520	30.547	33.987	43.255	43.270	43.551
Sri Lanka	10.760	11.607	12.537	12.786	13.041	13.218	13.464	13.815	13.822	13.822
Tajikistan										42.000
Timor Leste	0.326	0.326	0.326	0.326	0.885	0.885	0.885	0.885	0.929	0.929
Uzbekistan					1.000	1.000	1.000	2.200	2.200	2.200

# Total renewable energy

## Total énergies renouvelables

### Total energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Viet Nam	172.161	172.161	172.161	172.161	178.161	178.161	203.161	229.161	229.161	230.869
C America + Carib	33.117	50.008	62.289	70.634	94.958	105.266	115.462	123.990	132.537	133.509
Bahamas			0.011	0.020	0.025	0.126	0.147	0.172	0.089	0.089
Belize	0.585	0.665	0.810	1.875	1.910	2.090	3.390	3.390	3.390	3.390
Costa Rica	5.065	6.514	7.158	9.258	13.930	17.887	24.167	25.251	25.251	25.251
Cuba									0.467	0.835
Dominica	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Dominican Rep	0.184	13.702	13.927	14.653	16.580	18.647	20.916	22.537	31.318	31.550
El Salvador	0.126	0.126	0.126	0.184	12.545	12.545	12.545	12.545	12.570	12.570
Grenada	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
Guatemala	0.485	0.602	0.778	1.525	2.560	5.434	8.308	8.308	8.308	8.308
Haiti		0.543	0.543	0.715	0.816	0.837	1.064	1.105	1.185	1.385
Honduras	3.512	3.728	4.479	5.156	5.156	5.156	5.156	5.256	5.256	5.285
Nicaragua	2.938	3.470	4.464	6.664	7.235	8.343	9.368	17.525	16.240	16.340
Panama	20.132	20.568	29.903	30.494	34.011	34.011	30.211	27.711	28.211	28.211
Puerto Rico									0.062	0.105
US Virgin Is					0.100	0.100	0.100	0.100	0.100	0.100
Middle East	3.120	3.346	3.772	4.437	36.566	50.635	105.979	126.111	161.031	211.031
Iran IR	0.143	0.359	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
Iraq	1.340	1.340	1.340	1.340	30.840	37.840	37.840	37.840	37.840	37.840
Jordan			0.028	0.058	0.126	0.221	0.542	0.553	15.453	15.453
Lebanon	0.002	0.002	0.002	0.504	2.061	3.390	3.397	3.507	3.527	3.527
Oman								0.011	0.011	0.011
Saudi Arabia						0.014	0.014	0.014	0.014	0.014
Syrian AR	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
United Arab Em	0.038	0.038	0.138	0.190	0.192	3.192	3.208	3.208	3.208	3.208
Yemen	0.997	1.007	1.286	1.367	2.369	5.000	60.000	80.000	100.000	150.000
Oceania	143.895	144.075	145.694	158.038	160.392	162.172	166.675	171.199	173.118	173.713
Amer Samoa								1.410	1.760	1.760
Cook Is					0.010	0.010	0.010	0.010	0.010	0.110
Fiji	1.189	1.273	1.309	1.594	1.156	1.352	2.052	4.052	4.119	4.521
Fr Polynesia	3.057	2.937	3.686	4.348	4.790	5.562	6.412	6.925	6.925	6.925
Kiribati	0.266	0.392	0.426	0.466	0.502	0.743	1.389	1.397	1.397	1.397
Marshall Is	0.210	0.260	0.260	0.300	0.480	0.650	0.650	0.650	0.650	0.667
Micronesia	0.297	0.297	0.297	0.297	0.388	0.388	0.388	0.388	0.388	0.388
Nauru					0.008	0.008	0.008	0.008	0.008	0.008
New Caledon	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.760	0.760
Palau								0.170	0.170	0.170
Papua N Guin	137.834	137.834	137.834	149.140	151.046	151.046	151.585	151.936	151.902	151.902
Samoa	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Solomon Is	0.171	0.211	1.011	1.011	1.011	1.287	1.787	1.788	2.158	2.158
Tonga	0.120	0.120	0.120	0.131	0.234	0.234	0.240	0.251	0.251	0.251
Tuvalu	0.189	0.189	0.189	0.189	0.189	0.189	1.296	1.304	1.309	1.309
Vanuatu	0.048	0.048	0.048	0.048	0.064	0.189	0.344	0.396	1.297	1.373
S America	253.428	249.960	251.865	334.660	340.523	387.289	406.512	432.317	605.468	466.333
Argentina	3.986	4.954	4.801	4.801	3.695	6.237	4.748	4.753	4.753	4.753
Bolivia	70.983	71.149	71.602	72.301	73.705	96.035	105.735	105.735	105.735	105.761
Colombia	0.600	0.600	0.600	0.600	0.600	0.600	0.918	1.978	7.018	7.018
Ecuador	6.020	6.120	6.140	6.480	6.800	10.250	12.250	12.320	12.320	12.333
Falklands Malv	0.340	0.340	0.340	0.340	0.340	0.340	0.820	0.820	0.820	0.820
Guyana	0.332	0.422	0.552	0.701	0.805	1.038	1.272	1.609	3.058	3.058
Peru	170.257	163.511	164.339	215.166	200.025	216.884	223.114	246.947	404.779	265.262
Suriname		0.154	0.281	0.661	0.943	1.195	2.845	2.845	2.875	3.575
Uruguay	0.100	0.100	0.400	0.500	0.500	0.500	0.600	1.100	9.900	9.953
Venezuela	0.810	2.610	2.810	33.110	53.110	54.210	54.210	54.210	54.210	53.800

# Hydropower

## Hydroélectricité

## Hidroeléctrica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	545.053	558.880	570.869	608.954	624.695	638.292	672.656	679.971	859.422	764.306
Africa	134.953	139.596	140.848	145.878	147.643	154.374	174.169	174.916	193.912	203.912
Angola	5.659	5.659	5.659	5.659	5.659	6.859	6.859 e	6.859 e	6.859 e	6.859 e
Burundi	1.103 o	1.103 o	1.603 o	1.603 o	1.603 o	1.603 o	1.603 o	1.603 o	1.603 e	1.603 e
Cameroon	0.300 e	0.300 e	0.300 e	0.300 e	0.300 o	0.300 e	0.300 e	0.300 e	0.300 e	0.300 e
Cent Afr Rep	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e
Congo DR	97.000 e	97.000 e	97.000 e	97.000 e	97.800 e	97.800 e	110.900 e	110.900 e	121.700 e	131.700 u
Eswatini	1.700	1.700	1.700	1.700	1.700	1.700	1.700	1.700 e	1.700 e	1.700 e
Ethiopia	1.150	1.157 e	1.279 e	1.279 e	1.279 e	1.279 e	1.279 e	1.279	1.279	1.279 e
Gabon	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.200 e	0.287 e	0.287 e	0.287 e
Guinea	2.220 o	2.220 o	2.220 o	2.220 o	2.220 o	2.220 o	2.220 o	2.220 o	2.220 e	2.220 e
Kenya	3.495 o	5.115 o	5.115 o	5.115 o	5.115 o	5.755 o	5.755 o	6.115 o	6.435 o	6.435 o
Lesotho	0.180	0.180	0.180	0.180	0.180	0.180	0.180 e	0.180 e	0.180 e	0.180 e
Liberia	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e
Madagascar	0.893 o	3.509 o	3.509 o	3.509 o	3.574 o	4.219 o	5.249 o	5.249 o	5.349 e	5.349 e
Malawi	1.340 e	1.340 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.700 e	1.700 e	1.700 e
Mozambique				0.075 e	0.275 e	0.900 e	1.060 e	1.060 e	1.060 e	1.060 e
Nigeria							0.400 o	0.400 o	0.400 o	0.400 o
Rwanda	0.300 o	0.500 o	0.740 o	1.140 o	1.840 o	1.840 o	1.840 o	1.840 o	2.276 o	2.276 e
Sierra Leone				0.250 e	0.250 e	0.250 e	0.250 e	0.250 e	4.890 e	4.890 e
South Africa	6.761 e	6.761 e	7.091 e	7.096 e	7.096 e	7.192 e	7.192 e	7.192 e	7.192 e	7.192 e
Tanzania	5.300 e	5.500 e	5.500 e	8.800 e	8.800 e	8.800 e	14.620 e	14.620 e	15.420 e	15.420 e
Uganda						3.500 o	3.500 o	3.500 o	5.400 o	5.400 o
Zambia	1.607 o	1.607 o	1.607 o	2.607 o	2.607 o	2.607 o	1.857 o	1.857 o	1.857 o	1.857 o
Zimbabwe	1.545	1.545	1.545	1.545	1.545	1.570	1.605 e	1.605 e	1.605 e	1.605 e
Asia	181.139	198.697	213.674	227.694	240.096	249.904	262.639	269.354	274.048	316.063
Afghanistan	10.401 e	13.850 e	17.299 e	20.748 e	24.197 e	27.646 e	31.095 e	34.544 e	37.993 e	37.993 e
Bhutan	1.240 e	1.240 e	1.240 e	1.240 e	1.240 e	1.240 e	1.240 e	1.240 e	1.240 e	1.240 e
India	70.633 e	74.150 e	78.568 e	79.237 e	82.169 e	83.377 e	84.079 e	84.675 e	84.675 e	84.675 e
Indonesia	6.384 e	7.145 e	8.760 e	9.555 e	11.515 e	12.728 e	14.421 e	14.851 e	14.851 e	14.851 e
Lao PDR	1.983 u	1.983 u	1.983 u	1.983 u	1.983 u	1.983 u	1.983 u	1.983 u	1.983 u	1.983 u
Malaysia	0.060 e	0.110 e	0.110 e	0.110 e	0.110 e	0.450 e	0.450 e	0.450 e	0.450 e	0.450 e
Mongolia	2.992 e	2.992 e	2.992 e	2.992 e	2.992 e	2.992 e	2.992 e	2.992 e	2.992 e	2.992 o
Nepal	31.396 o	33.091 o	35.544 o	38.802 o	42.168 o	45.456 o	49.102 o	51.012 o	52.257 o	52.257 o
Pakistan	5.750 e	10.820 e	11.596 e	15.104 e	15.554 e	15.619 e	15.619 e	15.619 e	15.619 e	15.634 e
Philippines	2.470 o	5.320 o	7.420 o	9.595 o	9.595 o	9.595 o	12.595 o	12.595 o	12.595 o	12.595 o
Sri Lanka	4.505 e	4.671 e	4.837 e	5.003 e	5.248 e	5.493 e	5.738 e	6.068 e	6.068 e	6.068 e
Tajikistan										42.000 e
Timor Leste	0.325 o	0.325 o	0.325 o	0.325 o	0.325 o	0.325 e	0.325 e	0.325 e	0.325 e	0.325 e
Viet Nam	43.000 e	43.000 e	43.000 e	43.000 e	43.000 e	43.000 e	43.000 e	43.000 e	43.000 e	43.000 e
C America + Carib	0.266	0.284	0.367	0.902	1.173	1.460	1.736	1.557	1.688	1.717
Dominican Rep	0.184 o	0.202 o	0.285 o	0.362 o	0.633 o	0.920 o	1.196 o	1.317 o	1.448 o	1.448 e
El Salvador	0.082 e	0.082 e	0.082 e	0.140 e	0.140 e	0.140 e	0.140 e	0.140 e	0.140 e	0.140 e
Honduras								0.100 e	0.100 e	0.129 e
Nicaragua				0.400	0.400	0.400	0.400			
Middle East	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340	1.340
Iraq	1.340 e	1.340 e	1.340 e	1.340 e	1.340 e	1.340 e	1.340 e	1.340 e	1.340 e	1.340 e
Oceania	69.054	69.094	69.124	78.524	77.633	77.708	77.708	77.711	77.711	77.711
Fiji	0.991 u	0.991 u	1.021 u	1.021 u	0.130 u	0.130 u	0.130 u	0.130 u	0.130 u	0.130 u
Fr Polynesia	0.900 o	0.900 e	0.900 o	0.900 e	0.900 e	0.900 e	0.900 e	0.900 e	0.900 e	0.900 e
Papua N Guin	66.995 u	66.995 u	66.995 u	76.395 u	76.395 u	76.395 u	76.395 u	76.395 u	76.395 u	76.395 u
Solomon Is	0.168 u	0.208 u	0.208 u	0.208 u	0.208 u	0.208 u	0.208 u	0.208 u	0.208 u	0.208 u
Vanuatu						0.075 e	0.075 e	0.078 e	0.078 e	0.078 e
S America	158.301	149.869	145.516	154.616	156.810	153.506	155.064	155.093	310.723	163.563
Argentina	3.891 o	4.859 o	4.706 o	4.706 o	3.600 o	6.136 o	4.026 o	4.055 o	4.055 e	4.055 e
Bolivia	8.000	8.000	8.000	8.000	8.000		1.200	1.200	1.200	0.800 e
Colombia							0.318 e	0.318 e	5.318 o	5.318 o
Ecuador	3.600	3.700	3.700	4.000	4.000	3.660 o	5.660 o	5.660 o	5.660 e	5.660 e
Peru	142.000	132.500	128.300	137.100	140.400	142.900	142.900	142.900	293.500 o	146.750 e
Suriname							0.150	0.150	0.180 e	0.180 e
Venezuela	0.810 o	0.810 o	0.810 o	0.810 o	0.810 o	0.810 u	0.810 u	0.810 e	0.810 e	0.800 e

# Solar photovoltaic

## Solaire photovoltaïque

### Solar fotovoltaica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	308.863	390.722	510.812	672.413	903.193	1 187.989	1 520.776	1 984.985	2 555.901	2 938.059
Africa	63.777	89.476	111.129	156.415	192.238	240.803	365.463	615.127	853.865	938.672
Algeria						1.100	49.100	219.100	400.000 o	410.000 u
Angola	5.300 e	7.098 e	7.718 e	9.604 e	10.799 e	11.962 e	12.867 e	13.377 e	13.377 e	13.377 e
Benin	0.300 e	0.300 e	0.500 e	0.500 e	1.000 e	1.300 e	5.000 e	8.000 e	8.000 e	8.000 e
Botswana	0.020	0.035	0.065	0.211	0.211	0.356	0.441	1.513	1.513 e	1.514 e
Burkina Faso	3.000 e	3.600 e	5.800 e	5.800 e	6.300 e	7.000 e	8.000 e	10.000 e	12.000 e	27.000 o
Burundi	0.400 e	0.600 e	0.800 e	1.200 e	2.200 e	2.400 e	2.700 e	3.700 e	4.700 e	4.700 e
Cabo Verde				0.074 o	0.151 o	0.305 o	0.618 o	0.674 o	0.735 o	0.801 o
Cameroon	0.500 e	1.000 e	2.400 e	2.800 e	3.600 e	5.600 e	7.400 e	9.000 e	11.596 e	14.192 e
Cent Afr Rep	0.100 e	0.100 e	0.200 e	0.300 e	0.300 e	0.300 e	0.300 e	0.300 e	0.300 e	0.300 e
Chad		0.002 e	0.002 e	0.003 e	0.050 e	0.050 e	0.172 e	0.173 e	0.173 e	0.173 e
Congo DR			0.023 e	0.087 e	0.389 e	0.608 e	0.672 e	3.237 u	5.235 u	6.767 u
Congo Rep			0.070 e	0.120 e	0.230 e	0.460 e	0.460 e	0.460 e	0.570 e	0.570 e
Cote d Ivoire	1.404 e	1.553 e	1.667 e	1.973 e	2.908 e	3.834 e	5.059 e	5.059 e	8.278 e	8.278 e
Djibouti				0.300 e	0.300 e	0.300 e	0.300 e	0.300 e	0.300 e	0.300 e
Egypt	1.300	15.000	15.000	15.000	15.000	15.000	25.000	39.000	39.000 e	50.000
Eq Guinea										
Eritrea	0.001 e	0.001 e	0.001 e	0.005 e	0.005 e	0.315 e	0.315 e	0.665 e	2.665 u	2.665 e
Eswatini	0.275 e	0.617 e	0.735 e	0.761 e	0.778 e	0.804 e	0.804 e	0.804 e	0.804 e	0.804 e
Ethiopia	0.028 e	0.028 e	0.286 e	1.099 e	3.295 e	9.082 e	9.841 e	13.937 e	12.193 e	11.015 e
Gabon	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e
Gambia	1.626 e	1.777 e	1.859 e	1.991 e	1.995 e	2.000 e	2.000 e	2.000 e	2.002 e	2.002 e
Ghana						1.350 o	5.609 o	6.847 o	7.583 o	8.319 e
Guinea	0.600 e	0.600 e	0.600 e	0.600 e	3.371 e	3.371 e	13.273 e	13.279 e	13.279 e	13.279 e
Guinea Bissau							0.312 e	0.312 e	0.312 e	1.169 o
Kenya	0.185 e	0.196 e	0.920 e	2.889 e	6.667 e	15.560 e	29.593 e	30.685 e	36.840 e	36.840 e
Lesotho					0.163 e	0.163 e	0.163 e	0.163 e	0.163 e	0.163 e
Liberia		0.005 u	0.005 u	0.040 u	0.040 u	0.040 u	0.057 u	0.059 u	2.406 u	2.583 u
Libya	3.200 e	3.700 e	4.200 e	4.900 u	4.900 u	4.900 u	4.900 u	4.900 u	5.110 u	5.110 e
Madagascar	1.100 e	1.500 e	2.000 e	2.600 e	5.000 e	7.000 e	9.000 e	11.000 e	13.000 e	13.000 e
Malawi	0.492 e	0.726 e	1.755 e	2.681 e	4.565 e	6.834 e	11.257 e	11.257 e	18.337 e	21.877 e
Mali	3.922 e	6.449 e	9.857 e	15.741 e	15.741 o	16.163 e	17.226 e	17.508 e	19.575 e	19.575 e
Mauritania					3.000 o	3.151 o	3.166 o	19.766 o	19.766 o	21.066 u
Morocco	13.400	13.500	14.000	15.000	15.000	18.800	18.800	20.870	24.456	24.457 e
Mozambique			0.500 e	1.500 e	4.900 e	7.000 e	10.000 e	13.000 e	15.000 e	17.000 e
Namibia	3.640 e	4.210 e	7.350 e	10.700 e	13.400 e	14.176 e	14.176 e	14.176 e	14.176 e	21.929 e
Niger	1.200 e	2.100 e	3.000 e	4.000 e	5.000 e	6.000 e	7.000 e	8.000 e	9.000 e	20.000 o
Nigeria				15.200 e	15.400 e	15.600 e	17.000 e	17.200 e	17.400 e	17.565 u
Rwanda	0.006 e	0.006 e	0.062 e	0.219 e	0.698 e	1.241 e	5.167 e	10.341 e	15.070 e	18.197 e
Sao Tome Prn						0.074 o	0.074 e	0.074 e	0.074 e	0.074 e
Senegal	2.570 e	3.290 e	4.790 e	5.900 e	7.000 e	8.000 e	9.000 e	10.000 e	11.000 e	12.000 e
Seychelles					0.068 o	0.068 o	0.068 o	0.068 o	0.068 e	0.922 u
Sierra Leone	0.067 u	0.094 u	0.161 u	0.237 u	0.384 u	0.395 u	0.420 u	0.484 u	3.830 u	4.246 u
Somalia						0.100 e	0.170 e	4.670 e	6.894 e	7.068 e
South Africa										
South Sudan				0.160 e	0.160 e	0.160 e	0.160 e	0.428 u	0.449 u	0.467
Sudan	0.882	2.270	3.506	8.041	8.041	8.041	11.142	12.322 o	12.580	17.580 e
Tanzania	e	0.031 e	0.303 e	1.164 e	3.674 e	11.188 e	12.723 e	18.316 e	21.828 e	25.339 e
Togo	0.081 e	0.174 e	0.331 e	0.435 e	0.530 e	0.987 e	2.022 e	2.534 e	3.000 o	3.000 o
Tunisia	1.396 e	1.402 e	1.446 e	1.555 e	1.555 e	1.563 e	1.710 e	2.060 e	2.076 e	2.076 e
Uganda	14.180 e	14.910 e	16.240 e	17.320 e	18.500 e	20.000 e	22.000 e	24.000 e	26.000 e	28.000 e
Zambia	1.200 e	1.200 e	1.400 e	1.400 e	1.600 e	2.000 e	2.500 e	3.000 e	3.500 e	4.000 e
Zimbabwe	0.002 e	0.002 e	0.177 e	0.905 e	1.970 e	2.702 e	4.326 e	5.109 e	6.252 e	7.913 e
Asia	212.148	259.891	346.805	448.147	583.896	786.530	917.052	1 086.799	1 363.841	1 601.654
Afghanistan	0.002 e	0.102 e	0.102 e	16.104 e	16.825 e	18.345 e	18.914 e	20.152 e	20.305 e	20.305 e
Bangladesh	18.316 e	32.309 e	42.647 e	66.383 e	94.571 e	120.679 e	134.609 e	139.817 e	164.855 e	135.351 e
Bhutan	0.360 e	0.389 e	0.467 e	0.473 e	0.473 e	0.473 e	0.473 e	0.473 e	0.473 e	0.473 e
Cambodia	0.003 e	0.007 e	0.007 e	0.007 e	0.548 e	0.742 e	1.245 e	1.926 e	1.941 e	1.941 e
China	130.800	157.800	177.800	217.800	297.800	337.800	357.800	367.800	377.800	387.800 e
India	30.232 e	33.362 e	81.835 e	93.670 e	106.330 e	227.120 e	289.010 e	405.540 e	591.970 e	843.110 o
Indonesia	13.436 e	14.391 e	15.829 e	22.333 e	29.357 e	32.628 e	41.621 e	41.710 e	43.013 e	44.246 e
Korea DPR	0.670 e	1.033 e	2.031 e	2.557 e	3.857 e	5.368 e	8.218 e	10.287 e	10.700 e	10.700 e
Lao PDR	0.008 e	0.009 e	0.010 e	0.010 e	0.470 e	0.902 e	1.254 e	1.627 e	1.627 e	1.627 e
Malaysia		0.004 o	0.004 o	0.004 o	0.004 o	1.528 e	2.415 e	2.418 e	2.428 e	5.000 u
Maldives	0.085 e	0.085 e	0.400 o	0.800 o	1.000 o	4.000 o	4.100 o	6.700 o	9.400 u	9.400 e
Mongolia	3.845 e	4.585 e	4.585 e	4.585 e	4.585 e	4.585 e	4.585 e	4.585 e	4.585 e	4.585 o
Myanmar	0.200 e	0.400 e	1.400 e	2.800 e	4.209 o	7.680 o	25.699 o	54.907 o	54.907 e	54.907 e
Nepal	3.774 o	4.292 o	7.794 o	8.571 o	10.143 o	10.862 o	12.701 o	12.872 o	52.592 o	52.592 o
Pakistan		0.025 e	0.032 e	0.105 e	0.210 e	0.345 e	0.494 e	0.487 e	11.681 e	12.064 e
Philippines						0.027 e	0.467 e	0.830 e	0.845 e	1.126 e
Sri Lanka	6.255 e	6.936 e	7.700 e	7.783 e	7.793 e	7.725 e	7.726 e	7.747 e	7.754 e	7.754 e
Timor Leste	0.001 e	0.001 e	0.001 e	0.001 e	0.560 e	0.560 e	0.560 e	0.560 e	0.604 e	0.604 e
Uzbekistan					1.000	1.000	1.000	2.200	2.200 e	2.200 e
Viet Nam	4.161 e	4.161 e	4.161 e	4.161 e	4.161 e	4.161 e	4.161 e	4.161 e	4.161 e	5.869 e



# Solar photovoltaic

## Solaire photovoltaïque

### Solar fotovoltaica

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
C America + Carib	14.145	17.118	20.374	27.455	46.632	56.373	69.133	80.090	88.006	88.925
Bahamas			0.011 e	0.020 e	0.025 e	0.126 e	0.147 e	0.172 e	0.089 e	0.089 e
Belize	0.585	0.665	0.810	1.875	1.910	2.090	3.390	3.390	3.390	3.390 e
Costa Rica	5.049 e	6.198 e	6.842 e	8.862 e	11.714 e	15.671 e	21.484 e	22.568 e	22.568 e	22.568 u
Cuba									0.467 u	0.835 u
Dominican Rep					1.500	3.000	4.500	5.750	14.400 o	14.632 u
El Salvador	0.044 e	0.044 e	0.044 e	0.044 e	12.405 e	12.405 e	12.405 e	12.405 e	12.430 e	12.430 e
Guatemala	0.485 e	0.602 e	0.778 e	1.525 e	2.560 e	5.434 e	8.308 e	8.308 e	8.308 e	8.308 e
Haiti		0.543 e	0.543 e	0.715 e	0.816 e	0.837 e	1.064 e	1.105 e	1.185 e	1.361 u
Honduras	3.512 e	3.728 e	4.479 e	5.156 e	5.156 e	5.156 e	5.156 e	5.156 e	5.156 e	5.156 e
Nicaragua	2.938	3.470	4.464	6.264	6.835	7.943 o	8.968 o	17.525 o	16.240 o	16.340 o
Panama	1.532	1.868	2.403	2.994	3.711	3.711	3.711	3.711	3.711 o	3.711 e
Puerto Rico									0.062 e	0.105 u
Middle East	1.180	1.406	1.832	1.997	32.626	45.695	101.039	121.171	156.091	206.091
Iran IR	0.143	0.359	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378 e
Iraq					29.500 o	36.500 o	36.500 e	36.500 e	36.500 e	36.500 e
Jordan			0.028 e	0.058 e	0.126 e	0.221 e	0.542 e	0.553 e	15.453 u	15.453 e
Lebanon	0.002 e	0.002 e	0.002 e	0.004 e	0.061 e	0.390 e	0.397 e	0.507 e	0.527 e	0.527 e
Oman								0.011 e	0.011 e	0.011 e
Saudi Arabia						0.014 e	0.014 e	0.014 e	0.014 e	0.014 e
United Arab Em	0.038 e	0.038 e	0.138 e	0.190 e	0.192 e	3.192 e	3.208 e	3.208 e	3.208 e	3.208 e
Yemen	0.997 o	1.007 o	1.286 o	1.367 o	2.369 o	5.000 o	60.000 o	80.000 o	100.000 e	150.000 e
Oceania	3.965	4.219	5.802	6.834	8.167	9.872	13.875	18.396	20.315	20.909
Amer Samoa								1.410 o	1.760 o	1.760 o
Cook Is					0.010 e	0.010 e	0.010 e	0.010 e	0.010 e	0.110 e
Fiji	0.198 u	0.276 u	0.276 u	0.555 u	1.002 u	1.198 u	1.898 u	3.898 u	3.965 u	4.367 u
Fr Polynesia	1.789 o	1.789 e	2.538 e	3.200 e	3.642 e	4.414 e	5.264 e	5.777 e	5.777 e	5.777 e
Kiribati	0.266 o	0.392 o	0.426 o	0.466 o	0.502 o	0.743 o	1.389 o	1.397 o	1.397 o	1.397 e
Marshall Is	0.210 e	0.260 e	0.260 e	0.300 e	0.480 e	0.650 e	0.650 e	0.650 e	0.650 e	0.666 u
Micronesia	0.297 e	0.297 e	0.297 e	0.297 e	0.388 e	0.388 e	0.388 e	0.388 e	0.388 e	0.388 e
Nauru					0.008 e	0.008 e	0.008 e	0.008 e	0.008 e	0.008 e
New Caledon	0.500 o	0.500 o	0.500 o	0.500 o	0.500 o	0.500 o	0.500 o	0.500 o	0.760 o	0.760 o
Palau								0.170 o	0.170 o	0.170 e
Papua N Guin	0.339 e	0.339 e	0.339 e	0.339 e	0.339 e	0.339 e	0.878 u	1.229 u	1.195 u	1.195 u
Samoa	0.014 e	0.014 e	0.014 e	0.014 e	0.014 e	0.014 e	0.014 e	0.014 e	0.014 e	0.014 e
Solomon Is	0.003 e	0.003 e	0.803 e	0.803 e	0.803 e	1.079 e	1.079 e	1.080 e	1.450 e	1.450 u
Tonga	0.120 o	0.120 o	0.120 o	0.131 o	0.234 o	0.234 o	0.240 o	0.251 o	0.251 o	0.251 o
Tuvalu	0.189 o	0.189 o	0.189 o	0.189 o	0.189 o	0.189 o	1.296 o	1.304 o	1.309 o	1.309 e
Vanuatu	0.040 e	0.040 e	0.040 e	0.040 e	0.056 e	0.106 e	0.261 e	0.310 e	1.211 e	1.287 e
S America	13.648	18.612	24.870	31.565	39.634	48.716	54.214	63.402	73.783	81.808
Argentina	0.026 o	0.026 o	0.026 o	0.026 o	0.026 o	0.024 o	0.618 o	0.606 o	0.606 e	0.606 e
Bolivia	2.813 e	2.979 e	3.432 e	4.131 e	5.535 e	5.535 e	5.535 e	5.535 e	5.535 e	5.961 e
Colombia	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 o	1.660 o	1.660 o	1.660 o
Ecuador	0.020	0.020	0.040	0.080	0.400 o	1.940	1.940	2.010	2.010	2.023 e
Falklands Malv							0.140 o	0.140 o	0.140 o	0.140 o
Guyana	0.332 e	0.422 e	0.552 e	0.701 e	0.805 e	1.038 e	1.272 e	1.609 e	3.058 e	3.058 e
Peru	9.757 e	12.511 e	17.539 e	22.566 e	28.525 e	34.484 e	38.914 e	46.147 e	53.379 e	60.612 e
Suriname		0.154 e	0.281 e	0.661 e	0.943 e	1.195 e	1.195 e	1.195 e	1.195 e	1.895 u
Uruguay	0.100	0.100	0.400	0.500	0.500	0.500	0.600	1.100	2.800	2.853 e
Venezuela		1.800	2.000	2.300	2.300	3.400	3.400	3.400	3.400	3.000 e

# Other renewable energy

## Autres énergies renouvelables

### Otras energías renovables

CAP (MW)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	3 004.119	3 205.796	3 518.296	3 686.913	3 808.733	4 507.068	4 782.272	4 942.731	4 986.592	5 091.047
Africa	144.088	145.979	165.999	170.769	237.289	323.309	325.190	327.551	330.422	330.762
Algeria						10.200	10.200	10.200	10.200 e	10.000 e
Burkina Faso					0.150 u	0.150 u	0.150 u	0.150 e	0.150 e	
Burundi	4.000 e	4.000 e	4.000 e	4.000 e	4.000 o	4.000 e	4.000 e	4.000 e	4.000 e	4.000 e
Chad								1.100 u	1.100 e	1.100 e
Congo DR	0.160 e	0.160 e	0.160 e	0.160 e	0.160 e	0.160 e	0.160 e	0.160 e	2.160 e	2.960 e
Egypt	67.000	67.000	67.000	67.000	67.000	67.000	67.000	67.000	67.000	67.000 e
Eritrea	0.825 e	0.825 e	0.825 e	0.825 e	0.825 e	0.825 e	0.825 e	0.825 e	0.825 e	0.825 e
Ethiopia	21.200 e	21.200 e	21.200 e	21.200 e	81.600 e	141.600 e	141.600 e	141.600 e	141.600 e	141.600 e
Gabon							1.200 e	1.200 e	1.200 e	1.200 e
Ghana	6.774 e	6.774 e	6.774 e	6.774 e	6.774 e	8.274 e	8.305 e	8.305 e	8.305 e	8.305 e
Kenya		0.554 e	0.569 e	0.569 e	0.569 e	0.629 e	0.679 e	0.679 e	0.789 e	0.679 e
Madagascar	0.129 o	0.266 o	0.271 o	0.341 o	0.411 o	0.411 o	0.411 o	0.411 o	0.411 e	0.411 e
Mali	32.000 e	32.000 e	32.000 e	32.000 e	32.000 o	40.000 e	40.000 e	40.000 e	40.000 u	40.000 e
Mauritania					4.400 o	4.400 o	4.400 o	4.400 o	4.400 o	4.400 e
Morocco			5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Namibia									0.011 u	0.011 e
Nigeria	7.000 u	8.200 u	8.200 u	8.200 u	9.700 u	12.200 u	12.200 e	13.430 e	13.430 e	13.430 e
Somalia				2.200 u	2.200 u	2.200 u	2.800 u	2.800 u	3.550 u	3.550 e
Tanzania	5.000 o	5.000 o	20.000 o	22.500 o	22.500 o	26.260 u	26.260 e	26.285 e	26.285 e	26.285 e
Asia	2 688.370	2 874.370	3 157.902	3 251.608	3 303.020	3 873.067	4 136.563	4 280.323	4 313.673	4 417.763
Afghanistan				0.100 u	0.100 e	0.100 e	0.100 e	0.100 e	0.100 e	0.100 e
Bangladesh	1.670 o	2.390 o	3.060 o	3.750 o	4.420 o	5.120 o	6.650 o	7.100 e	7.100 e	7.100 e
Cambodia	0.250 u	0.250 e	0.250 e	0.250 e	0.250 e	0.250 e	1.750 e	1.750 e	1.750 e	1.750 e
China		58.000	124.600	173.530	210.530	249.130	297.730	342.690	387.650	432.610 e
India	320.190 o	402.000 o	496.677 o	540.025 o	584.028 o	736.305 o	785.371 o	843.616 o	831.606 e	873.736 e
Indonesia	1 762.000 o	1 864.000 o	1 874.000 o	1 884.000 o	1 615.000 o	1 626.000 o	1 626.000 o	1 626.000 o	1 626.000 o	1 643.000 o
Korea DPR	0.200 u	0.200 u	0.200 u	0.200 u	0.200 u	0.200 u	0.200 u	0.200 u	0.600 o	0.600 e
Malaysia	462.930 o	405.800 o	515.510 o	504.860 o	732.530 o	1 100.000 o	1 237.800 o	1 243.000 o	1 243.000 e	1 243.000 e
Maldives	1.407 u	1.407 u	1.407 u	1.407 u	1.407 u	1.407 e	1.407 e	1.407 e	1.407 e	1.407 e
Mongolia	0.473 e	0.673 e	0.673 e	1.006 e	1.006 e	1.006 e	1.006 e	1.006 e	1.006 e	1.006 o
Myanmar	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e	1.400 e
Nepal					0.069 u	0.069 u	0.069 u	0.069 u	0.069 e	0.069 e
Pakistan				0.155 e	0.155 e	0.155 e	0.155 e	0.155 e	0.155 e	0.155 e
Philippines	12.850 u	13.250 u	15.125 u	15.925 u	20.925 e	20.925 e	20.925 e	29.830 e	29.830 e	29.830 e
Viet Nam	125.000 e	125.000 e	125.000 e	125.000 e	131.000 e	131.000 e	156.000 e	182.000 e	182.000 e	182.000 e
C America + Carib	18.706	32.606	41.548	42.277	47.153	47.433	44.593	42.343	42.843	42.867
Costa Rica	0.016 e	0.316 e	0.316 e	0.396 e	2.216 e	2.216 e	2.683 e	2.683 e	2.683 e	2.683 e
Dominica	0.010 o	0.010 o	0.010 o	0.010 o	0.010 o	0.010 o	0.010 o	0.010 o	0.010 o	0.010 o
Dominican Rep		13.500 o	13.642 o	14.291 o	14.447 o	14.727 o	15.220 o	15.470 o	15.470 o	15.470 e
Grenada	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080 u
Haiti										0.024 u
Panama	18.600	18.700	27.500	27.500	30.300	30.300	26.500	24.000	24.500 o	24.500 e
US Virgin Is					0.100 o	0.100 o	0.100 o	0.100 o	0.100 o	0.100 e
Middle East	0.600	0.600	0.600	1.100	2.600	3.600	3.600	3.600	3.600	3.600
Lebanon				0.500 u	2.000 u	3.000 u	3.000 e	3.000 e	3.000 e	3.000 e
Syrian AR	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e	0.600 e
Oceania	70.876	70.762	70.768	72.680	74.592	74.592	75.092	75.092	75.092	75.093
Fiji		0.006 u	0.012 u	0.018 u	0.024 u	0.024 u	0.024 u	0.024 u	0.024 u	0.024 u
Fr Polynesia	0.368 o	0.248 e	0.248 e	0.248 e	0.248 e	0.248 e	0.248 e	0.248 e	0.248 e	0.248 e
Marshall Is										0.001 u
Papua N Guin	70.500 u	70.500 u	70.500 u	72.406 u	74.312 u	74.312 u	74.312 u	74.312 u	74.312 u	74.312 u
Solomon Is							0.500 u	0.500 u	0.500 u	0.500 u
Vanuatu	0.008 u	0.008 u	0.008 u	0.008 u	0.008 u	0.008 u	0.008 u	0.008 u	0.008 u	0.008 u
S America	81.479	81.479	81.479	148.479	144.079	185.067	197.234	213.822	220.962	220.962
Argentina	0.069 o	0.069 o	0.069 o	0.069 o	0.069 o	0.077 o	0.104 o	0.092 o	0.092 e	0.092 e
Bolivia	60.170	60.170	60.170	60.170	60.170	90.500	99.000	99.000	99.000	99.000 e
Colombia									0.040 o	0.040 o
Ecuador	2.400	2.400	2.400	2.400	2.400	4.650 o	4.650 o	4.650 o	4.650 o	4.650 e
Falklands Malv	0.340 e	0.340 e	0.340 e	0.340 e	0.340 e	0.340 e	0.680 o	0.680 o	0.680 o	0.680 o
Peru	18.500	18.500	18.500	55.500	31.100	39.500	41.300	57.900	57.900	57.900 e
Suriname							1.500	1.500	1.500	1.500 e
Uruguay									7.100 o	7.100 e
Venezuela				30.000	50.000	50.000	50.000	50.000	50.000	50.000 e







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