

# **OFF-GRID RENEWABLE ENERGY STATISTICS 2020**

# **STATISTIQUES D'ÉNERGIE RENOUVELABLE HORS RÉSEAU 2020**

# **ESTADÍSTICAS DE ENERGÍA RENOVABLE FUERA DE LA RED 2020**

© IRENA 2020

Unless otherwise stated, material in this publication may be freely used, shared, copied, reproduced, printed and/or stored, provided that appropriate acknowledgment is given of IRENA as the source and copyright holder. Material in this publication that is attributed to third parties may be subject to separate terms of use and restrictions, and appropriate permissions from these third parties may need to be secured before any use of such material.

ISBN 978-92-9260-333-5

Report citation: IRENA (2020), *Off-grid Renewable Energy Statistics 2020*, International Renewable Energy Agency, Abu Dhabi.

## About IRENA

The International Renewable Energy Agency (IRENA) serves as the principal platform for international co-operation, a centre of excellence, a repository of policy, technology, resource and financial knowledge, and a driver of action on the ground to advance the transformation of the global energy system. An intergovernmental organisation established in 2011, 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).

## Acknowledgements

This report was prepared by Adrian Whiteman and Niveditha Reddy Vesireddy from the IRENA Statistics Team.

For further information or to provide feedback, please contact the IRENA Statistics Team ([statistics@irena.org](mailto:statistics@irena.org)).



The IRENA Statistics Team also gratefully acknowledges the contribution to this dataset from the “Global Off-Grid Solar Market Report”, the most comprehensive primary data collection for the off-grid solar industry by GOGLA in partnership with IFC Lighting Global and the Efficiency for Access Coalition. GOGLA is the global association for the off-grid solar energy industry. Established in 2012, GOGLA now represents over 170 members as a neutral, independent, not-for-profit industry association. Its mission is to help its members build sustainable markets, delivering quality, affordable products and services to as many households, businesses and communities as possible across the developing world. The products and solutions that GOGLA members sell transform lives. They improve health and education, create jobs and income opportunities and help consumers save money. To find out more, go to [www.gogla.org](http://www.gogla.org).

Report available for download from: [www.irena.org/Publications](http://www.irena.org/Publications).

## Disclaimer

This publication and the material herein are provided “as is”. All reasonable precautions have been taken by IRENA to verify the reliability of the material in this publication. However, neither IRENA nor any of its officials, agents, data or other third-party content providers provides a warranty of any kind, either expressed or implied, and they accept no responsibility or liability for any consequence of use of the publication or material herein.

The information contained herein does not necessarily represent the views of all Members of IRENA. The mention of specific companies or certain projects or products does not imply that they are endorsed or recommended by IRENA in preference to others of a similar nature that are not mentioned. The designations employed and the presentation of material herein do not imply the expression of any opinion on the part of IRENA concerning the legal status of any region, country, territory, city or area or of its authorities, or concerning the delimitation of frontiers or boundaries.

# TABLE OF CONTENTS

## TABLE DES MATIÈRES

### TABLA DE CONTENIDOS

#### Off-grid capacity - Capacité hors réseau - Capacidad fuera de la red

Hydropower Hydroélectricité Hidroeléctrica	3
Solar energy Énergie solaire Energía solar	4
Biogas Biogaz Biogás	20

#### Biogas production - Production de biogaz - Produccion de biogas

Total biogas production Production totale de biogaz Producción total de biogás	23
Production of biogas for cooking Production de biogaz pour la cuisson Producción de biogás para cocinar	24
Production of biogas for off-grid electricity Production de biogaz pour l'électricité hors réseau Producción de biogás para electricidad fuera de la red	25
Production of biogas for industry Production de biogaz pour l'industrie Producción de biogás para la industria	26
Production of biogas for commercial and public services Production de biogaz pour les services commerciaux et publics Producción de biogás para servicios comerciales y públicos	27
Production of biogas for agriculture Production de biogaz pour l'agriculture Producción de biogás para la agricultura	28

#### Off-grid energy access - Accès à l'énergie hors réseau Acceso a la energía fuera de la red

Number of people connected to hydropower Nombre de personnes connectées à l'hydroélectricité Número de personas conectadas a la hidroelectricidad	31
Number of people using solar lights (<11 W) Nombre de personnes utilisant des lampes solaires (<11 W) Número de personas que usan lámparas solares (<11 W)	32

Number of people using SHS (11-50 W) Nombre de personnes utilisant des SSD (11-50 W) Número de personas que usan SSD (11-50 W)	34
Number of people using SHS (>50 W) Nombre de personnes utilisant des SSD (>50 W) Número de personas que usan SSD (>50 W)	35
Number of people connected to solar mini-grids (Tier 1) Personnes connectées aux mini-réseaux solaires (Niveau 1) Número de personas conectadas a mini-redes solares (Nivel 1)	36
Number of people connected to solar mini-grids (Tier 2+) Personnes connectées aux mini-réseaux solaires (Niveau 2+) Número de personas conectadas a mini-redes solares (Nivel 2+)	37
Number of people using biogas electricity Nombre de personnes utilisant l'électricité biogaz Número de personas que usan electricidad a partir de biogás	39
Number of people using biogas for cooking Nombre de personnes utilisant le biogaz pour la cuisson Número de personas que usan biogás para cocinar	40

**Statistical methodology (in English)**  
**Méthodologie statistique (en anglais)**  
**Metodología estadística (en inglés)**

IRENA (2018), Measurement and estimation of off-grid solar, hydro and biogas energy, International Renewable Energy Agency (IRENA), Abu Dhabi. <https://www.irena.org/publications/2018/Dec/Measurement-and-estimation-of-off-grid-solar-hydro-and-biogas-energy>

Off-grid capacity

Capacité hors réseau

Capacidad fuera de la red



# Hydropower Hydroélectricité Hidroeléctrica

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	223.323	243.454	261.693	276.550	290.614	301.795	327.697	335.419	345.118	346.542
Africa	26.936	28.563	29.405	31.165	31.910	32.724	38.757	39.428	44.388	44.388
Cent Afr Rep	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
Eswatini	1.690	1.690	1.690	1.690	1.690	1.690	1.690	1.690	1.690	1.690
Ethiopia	1.150	1.157	1.279	1.279	1.279	1.279	1.279	1.279	1.279	1.279
Guinea	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220
Kenya	3.495	5.115	5.115	5.115	5.115	5.755	5.755	6.115	6.435	6.435
Lesotho	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190
Liberia	4.800	4.800	4.800	4.800	4.800	4.860	4.860	4.860	4.860	4.860
Madagascar						0.018	0.018	0.018	0.018	0.018
Malawi	1.340	1.340	1.400	1.400	1.400	1.400	1.400	1.700	1.700	1.700
Mali	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Mozambique	0.065	0.065	0.065	0.065	0.065	0.065	0.549	0.549	0.549	0.549
Nigeria							0.400	0.400	0.400	0.400
Rwanda	0.840	0.840	1.140	1.540	2.240	2.240	2.240	2.251	2.251	2.251
Sierra Leone				0.250	0.250	0.250	0.250	0.250	4.890	4.890
South Africa	6.774	6.774	7.104	7.109	7.154	7.250	7.400	7.400	7.400	7.400
Tanzania	2.830	2.830	2.860	2.860	2.860	2.860	7.860	7.860	7.860	7.860
Uganda	0.301	0.301	0.302	0.406	0.406	0.406	0.406	0.406	0.406	0.406
Zambia	0.700	0.700	0.700	1.700	1.700	1.700	1.700	1.700	1.700	1.700
Zimbabwe	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338
Asia	189.062	207.528	224.841	237.803	250.841	260.921	275.081	281.996	286.705	288.129
Afghanistan	10.401	13.850	17.299	20.748	24.197	27.646	31.095	34.544	37.993	37.993
Bhutan	1.240	1.240	1.240	1.240	1.240	1.240	1.240	1.240	1.240	1.240
India	70.633	74.150	78.568	79.237	82.169	83.377	84.079	84.675	84.675	84.675
Indonesia	6.384	7.145	8.760	9.555	11.515	12.764	14.457	14.887	14.887	15.047
Malaysia	0.060	0.110	0.110	0.110	0.110	0.450	0.450	0.450	0.465	0.465
Myanmar	2.828	2.834	2.949	2.949	2.974	3.165	6.890	6.890	6.890	6.890
Nepal	31.396	33.091	35.544	38.802	42.168	45.456	49.102	51.012	52.257	53.506
Pakistan	5.750	10.820	11.596	15.104	15.554	15.619	15.619	15.619	15.619	15.634
Philippines	2.699	5.986	8.086	8.203	8.228	8.273	8.273	8.273	8.273	8.273
Sri Lanka	4.505	4.671	4.837	5.003	5.248	5.493	5.738	6.068	6.068	6.068
Tajikistan	9.586	10.051	12.272	13.272	13.858	13.858	14.358	14.558	14.558	14.558
Thailand	0.255	0.255	0.255	0.255	0.255	0.255	0.455	0.455	0.455	0.455
Timor Leste	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325
Viet Nam	43.000	43.000	43.000	43.000	43.000	43.000	43.000	43.000	43.000	43.000
C America + Carib	3.272	3.290	3.373	3.508	3.789	4.076	9.784	9.915	9.945	9.945
Cuba							5.432	5.432	5.432	5.432
Dominican Rep	0.184	0.202	0.285	0.362	0.514	0.801	1.077	1.208	1.238	1.238
El Salvador	0.082	0.082	0.082	0.140	0.140	0.140	0.140	0.140	0.140	0.140
Haiti	2.170	2.170	2.170	2.170	2.170	2.170	2.170	2.170	2.170	2.170
Honduras					0.129	0.129	0.129	0.129	0.129	0.129
Nicaragua	0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
Oceania	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Fiji	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S America	3.054	3.074	3.074	3.074	3.074	3.074	3.074	3.079	3.079	3.079
Argentina	2.445	2.445	2.445	2.445	2.445	2.445	2.445	2.445	2.445	2.445
Brazil		0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Colombia								0.005	0.005	0.005
Peru	0.609	0.609	0.609	0.609	0.609	0.609	0.609	0.609	0.609	0.609

# Solar lights and solar home systems (SHS)

## Lampes solaires et systèmes solaires domestiques (SDD)

## Lámparas solares y sistemas solares domésticos (SSD)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	48.997	65.657	85.793	118.995	171.870	219.419	258.741	283.472	333.668	354.702
Africa	5.894	5.999	7.528	11.785	23.747	40.704	61.466	83.664	104.746	134.998
Angola									0.001	0.005
Benin							0.064	0.246	0.277	0.248
Burkina Faso	0.002	0.007	0.027	0.088	0.230	0.411	0.637	0.647	0.707	0.541
Burundi					0.010	0.023	0.029	0.019	0.006	0.005
Cabo Verde										0.005
Cameroon								0.089	0.133	0.273
Cent Afr Rep										0.005
Chad										0.017
Congo DR			0.022	0.086	0.284	0.503	0.567	0.445	0.784	0.784
Cote d'Ivoire							0.055	0.141	0.238	1.993
Egypt								4.889	4.889	4.889
Ethiopia			0.256	0.975	3.171	5.604	6.332	5.381	3.804	3.608
Gabon										0.005
Gambia								0.002	0.004	0.009
Ghana					0.144	0.146	0.199	0.386	0.848	0.875
Guinea										0.005
Guinea Bissau					0.051	0.102	0.152	0.203	0.254	0.259
Kenya			0.408	1.556	5.060	9.007	11.256	11.974	15.135	24.523
Lesotho				0.097	0.097	0.097	0.097	0.097		
Liberia							0.024	0.052	0.158	0.152
Madagascar								0.041	2.155	2.229
Malawi			0.051	0.081	0.144	0.22213	0.568	0.802	0.975	0.735
Mali					0.070	0.140	0.326	0.479	0.782	0.753
Mauritania										0.005
Mauritius			0.049	0.087	0.126	0.107	0.134	0.230	0.311	0.356
Morocco	4.583	4.583	4.583	4.583	4.583	4.583	15.857	15.857	15.857	15.857
Mozambique					0.010	0.031	0.031	0.084	0.143	0.148
Namibia								0.010	0.053	0.088
Niger							0.015	0.015	0.007	0.020
Nigeria			0.022	0.086	0.748	1.431	2.258	3.212	8.671	13.217
Rwanda			0.056	0.212	0.692	1.235	1.815	6.959	11.586	18.611
Senegal					0.049	0.097	0.303	0.434	0.724	0.823
Sierra Leone							0.129	0.177	0.258	0.134
Somalia								0.023	0.052	0.427
South Africa					0.265	0.530	0.852	1.136	1.601	1.365
South Sudan										0.005
Sudan							0.000	0.000	0.000	
Tanzania			0.272	1.031	3.354	10.724	12.160	17.438	20.582	24.878
Togo								0.002	0.014	0.098
Tunisia	1.310	1.316	1.350	1.450	1.450	1.450	1.450	1.800	1.800	1.800
Uganda		0.093	0.260	0.563	1.295	2.171	4.087	8.752	10.309	12.108
Zambia							0.208	0.294	0.424	1.722
Zimbabwe			0.172	0.890	1.916	2.076	1.861	1.349	1.203	1.420
Asia	42.701	58.765	77.322	105.535	145.094	174.843	192.965	193.551	219.208	210.618
Afghanistan					0.470	0.941	1.509	1.637	1.766	1.297
Bangladesh	18.304	32.186	42.524	65.911	93.769	118.097	128.106	126.074	138.677	120.416
Bhutan			0.023	0.023	0.023					
Cambodia					0.541	0.735	1.238	1.892	1.907	1.312
India	10.754	11.515	17.401	21.043	29.873	33.584	38.727	40.694	53.310	63.772
Indonesia	1.621	1.636	1.660	1.726	1.926	2.195	2.179	2.031	1.947	2.735
Malaysia										0.016
Mongolia	2.669	2.954	3.239	3.524	3.524	3.524	3.524	3.524	3.524	3.524
Myanmar			0.011	0.041	0.133	0.257	0.289	0.254	0.651	0.786
Nepal	3.071	3.513	4.732	5.434	6.931	7.575	9.214	9.268	8.805	6.867
Pakistan			0.007	0.026	0.085	0.166	0.264	0.235	0.198	0.108
Philippines						0.033	0.178	0.183	0.417	1.576
Sri Lanka	6.255	6.934	7.698	7.780	7.791	7.723	7.724	7.744	8.007	8.204
Thailand										0.005
Timor Leste						0.013	0.013	0.013		
Viet Nam	0.027	0.027	0.027	0.027	0.027					



## Solar lights and solar home systems (SHS)

### Lampes solaires et systèmes solaires domestiques (SDD)

### Lámparas solares y sistemas solares domésticos (SSD)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
C America + Carib		0.004	0.016	0.174	0.178	0.365	0.394	0.516	0.913	1.275
Bahamas			0.011	0.020	0.025	0.126	0.147	0.200	0.146	0.115
Cuba						0.009	0.017	0.030	0.515	0.528
Dominica									0.000	0.000
Dominican Rep										0.016
Guatemala						0.005	0.005	0.005	0.006	0.022
Haiti				0.002	0.002	0.002		0.017	0.097	0.116
Honduras				0.146	0.146	0.198	0.198	0.239	0.091	0.397
Nicaragua		0.004	0.005	0.006	0.005	0.005	0.005	0.002	0.001	
Panama						0.021	0.021	0.023	0.028	0.044
Puerto Rico									0.028	0.036
Middle East			0.027	0.056	0.122	0.214	0.526	0.536	0.592	0.452
Jordan			0.027	0.056	0.122	0.214	0.526	0.536	0.592	0.426
Yemen										0.026
Oceania	0.197	0.261	0.271	0.576	0.857	1.158	1.502	1.869	2.009	2.071
Fiji	0.197	0.261	0.261	0.540	0.737	0.929	0.929	0.929	0.955	0.998
Nauru									0.009	0.009
Papua N Guin			0.010	0.037	0.119	0.229	0.572	0.894	0.860	0.623
Vanuatu										0.168
S America	0.205	0.629	0.628	0.867	1.813	2.061	1.806	3.296	6.029	5.086
Argentina		0.423	0.423	0.423	0.423	0.423				
Bolivia					0.293	0.293	0.293	0.293	0.293	
Brazil								0.159	3.263	3.263
Chile									0.005	0.008
Colombia								0.873	0.873	0.873
Peru	0.205	0.206	0.205	0.444	1.096	1.345	1.513	1.971	1.595	0.943

## Solar lights (<11 W) Lampes solaires (<11 W) Lámparas solares (<11 W)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1.910	1.358	4.775	11.676	29.232	46.395	55.607	58.306	68.453	76.351
Africa			1.253	4.799	14.442	24.058	28.759	27.656	26.042	27.194
Angola									0.001	0.005
Benin							0.064	0.246	0.277	0.248
Burkina Faso			0.013	0.049	0.162	0.287	0.456	0.417	0.449	0.312
Burundi					0.010	0.023	0.029	0.019	0.006	0.005
Cabo Verde										0.005
Cameroon								0.089	0.133	0.233
Cent Afr Rep										0.005
Chad										0.017
Congo DR			0.022	0.086	0.284	0.503	0.567	0.445	0.784	0.784
Cote d Ivoire							0.055	0.141	0.238	0.217
Ethiopia			0.256	0.975	3.171	5.597	6.324	5.356	3.780	3.583
Gabon										0.005
Gambia								0.002	0.004	0.009
Ghana					0.016	0.018	0.071	0.257	0.372	0.528
Guinea										0.005
Guinea Bissau										0.005
Kenya			0.359	1.366	4.441	7.830	9.411	9.314	7.956	8.345
Liberia							0.024	0.052	0.158	0.152
Madagascar								0.041	0.374	0.448
Malawi			0.051	0.081	0.144	0.222	0.568	0.802	0.975	0.735
Mali							0.116	0.200	0.433	0.472
Mauritania										0.005
Mauritius			0.049	0.087	0.126	0.107	0.134	0.230	0.311	0.356
Mozambique					0.010	0.031	0.031	0.058	0.116	0.121
Namibia								0.010	0.053	0.088
Niger						0.015	0.015	0.015	0.007	0.020
Nigeria			0.022	0.086	0.282	0.500	0.861	1.204	1.302	1.295
Rwanda			0.048	0.180	0.589	1.039	1.013	1.224	1.314	1.624
Senegal					0.049	0.097	0.303	0.434	0.724	0.813
Sierra Leone							0.129	0.177	0.258	0.134
Somalia								0.023	0.052	0.427
South Africa							0.057	0.077	0.277	0.306
South Sudan										0.005
Sudan						0.000	0.000	0.000		
Tanzania			0.238	0.904	2.941	5.187	5.534	3.790	1.632	1.119
Togo								0.002	0.014	0.098
Uganda			0.024	0.093	0.303	0.528	0.926	1.596	2.642	3.078
Zambia							0.208	0.294	0.406	0.376
Zimbabwe			0.172	0.890	1.916	2.076	1.861	1.142	0.993	1.210
Asia	1.910	1.354	3.469	6.755	14.456	21.686	25.512	29.088	40.465	47.368
Afghanistan					0.342	0.683	1.025	1.025	1.025	0.684
Bangladesh							0.184	0.236	0.394	0.428
Bhutan			0.023	0.023	0.023					
Cambodia							0.055	0.103	0.118	0.064
India	1.910	1.354	3.318	6.407	13.404	19.863	22.908	26.510	37.566	44.296
Indonesia			0.024	0.090	0.290	0.560	0.543	0.395	0.310	0.422
Malaysia										0.016
Myanmar			0.011	0.041	0.133	0.257	0.289	0.254	0.151	0.286
Nepal							0.014	0.075	0.086	0.098
Pakistan			0.007	0.026	0.085	0.166	0.264	0.235	0.198	0.108
Philippines						0.033	0.106	0.111	0.222	0.369
Sri Lanka			0.085	0.168	0.178	0.111	0.112	0.132	0.395	0.592
Thailand										0.005
Timor Leste						0.013	0.013	0.013		
C America + Carib		0.004	0.016	0.029	0.033	0.136	0.156	0.224	0.281	0.339
Bahamas			0.011	0.020	0.025	0.126	0.147	0.200	0.146	0.115
Dominica									0.000	0.000
Dominican Rep										0.016
Guatemala									0.001	0.017

## Solar lights (<11 W) Lampes solaires (<11 W) Lámparas solares (<11 W)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Haiti				0.002	0.002	0.002		0.017	0.097	0.116
Honduras						0.003	0.003	0.003		0.016
Nicaragua		0.004	0.005	0.006	0.005	0.005	0.005	0.002	0.001	
Panama								0.002	0.007	0.023
Puerto Rico									0.028	0.036
Middle East			0.027	0.056	0.122	0.214	0.526	0.536	0.592	0.452
Jordan			0.027	0.056	0.122	0.214	0.526	0.536	0.592	0.426
Yemen										0.026
Oceania			0.010	0.037	0.119	0.229	0.572	0.762	0.903	0.797
Fiji									0.026	0.068
Nauru									0.009	0.009
Papua N Guin			0.010	0.037	0.119	0.229	0.572	0.717	0.683	0.445
Samoa									0.025	0.025
Vanuatu								0.046	0.160	0.249
S America		0.000	0.001	0.001	0.060	0.072	0.082	0.038	0.170	0.201
Argentina										0.016
Bolivia		0.000	0.000	0.000	0.056	0.059	0.062	0.014	0.058	0.070
Colombia								0.003	0.003	0.003
Peru			0.000	0.001	0.004	0.014	0.020	0.022	0.109	0.112

## Solar home systems (SHS 11-50 W)

### Systèmes solaires domestiques (SSD 11-50 W)

### Sistemas solares domésticos (SSD 11-50 W)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	30.424	46.065	61.685	87.109	121.193	145.587	162.478	163.234	179.256	170.749
Africa			0.142	0.539	1.884	3.472	5.971	9.410	13.104	23.421
Cameroon										0.040
Ethiopia						0.007	0.007	0.024	0.024	0.024
Ghana					0.128	0.128	0.128	0.128	0.168	0.039
Kenya			0.049	0.190	0.620	1.178	1.755	2.571	4.450	10.095
Madagascar									0.204	0.204
Mozambique								0.026	0.026	0.026
Nigeria								0.146	0.445	0.791
Rwanda			0.009	0.032	0.103	0.196	0.292	0.423	0.878	1.494
Senegal										0.010
Tanzania			0.034	0.127	0.413	0.785	1.169	1.284	1.821	3.160
Uganda			0.049	0.190	0.620	1.178	2.620	4.600	4.860	5.982
Zambia									0.019	1.347
Zimbabwe								0.208	0.210	0.210
Asia	30.219	45.859	61.338	85.981	117.774	140.255	154.479	151.423	164.267	146.218
Afghanistan					0.064	0.128	0.289	0.353	0.417	0.353
Bangladesh	18.304	32.186	42.524	65.911	93.769	118.097	127.922	125.838	138.283	119.504
Cambodia					0.541	0.735	1.183	1.789	1.789	1.248
India	8.844	10.161	14.082	14.636	16.469	13.722	15.820	14.184	14.372	17.471
Indonesia										0.064
Myanmar									0.500	0.500
Nepal	3.071	3.513	4.732	5.434	6.931	7.575	9.200	9.193	8.719	6.769
Philippines							0.065	0.065	0.187	0.308
C America + Carib				0.146	0.146	0.221	0.221	0.262	0.117	0.117
Guatemala						0.005	0.005	0.005	0.005	0.005
Honduras				0.146	0.146	0.195	0.195	0.236	0.091	0.091
Panama						0.021	0.021	0.021	0.021	0.021
Oceania								0.178	0.178	0.345
Papua N Guin								0.178	0.178	0.178
Vanuatu										0.168
S America	0.205	0.206	0.205	0.444	1.390	1.639	1.806	1.962	1.591	0.648
Bolivia					0.293	0.293	0.293	0.293	0.293	0.293
Chile									0.005	0.008
Peru	0.205	0.206	0.205	0.444	1.096	1.345	1.513	1.668	1.292	0.640

## Solar home systems (SHS >50 W) Systèmes solaires domestiques (SSD >50 W) Sistemas solares domésticos (SSD >50 W)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	16.664	18.234	19.332	20.210	21.445	27.437	40.657	61.932	85.959	107.601
Africa	5.894	5.999	6.133	6.448	7.421	13.174	26.736	46.599	65.600	84.383
Burkina Faso	0.002	0.007	0.015	0.039	0.068	0.124	0.181	0.230	0.258	0.229
Cote d'Ivoire										1.776
Egypt								4.889	4.889	4.889
Ghana									0.308	0.308
Guinea Bissau					0.051	0.102	0.152	0.203	0.254	0.254
Kenya							0.090	0.090	2.730	6.083
Lesotho				0.097	0.097	0.097	0.097	0.097		
Madagascar									1.577	1.577
Mali					0.070	0.140	0.210	0.279	0.349	0.280
Morocco	4.583	4.583	4.583	4.583	4.583	4.583	15.857	15.857	15.857	15.857
Nigeria					0.466	0.931	1.397	1.862	6.925	11.131
Rwanda							0.510	5.312	9.394	15.493
South Africa					0.265	0.530	0.794	1.059	1.324	1.059
Tanzania						4.753	5.457	12.364	17.129	20.598
Tunisia	1.310	1.316	1.350	1.450	1.450	1.450	1.450	1.800	1.800	1.800
Uganda		0.093	0.186	0.279	0.372	0.466	0.540	2.557	2.808	3.048
Asia	10.572	11.551	12.515	12.799	12.864	12.902	12.974	13.040	14.476	17.032
Afghanistan					0.065	0.130	0.195	0.259	0.324	0.259
Bangladesh										0.484
India									1.371	2.005
Indonesia	1.621	1.636	1.636	1.636	1.636	1.636	1.636	1.636	1.636	2.249
Mongolia	2.669	2.954	3.239	3.524	3.524	3.524	3.524	3.524	3.524	3.524
Philippines							0.008	0.008	0.008	0.898
Sri Lanka	6.255	6.934	7.613	7.613	7.613	7.613	7.613	7.613	7.613	7.613
Viet Nam	0.027	0.027	0.027	0.027	0.027					
C America + Carib						0.009	0.017	0.030	0.515	0.819
Cuba						0.009	0.017	0.030	0.515	0.528
Honduras										0.291
Oceania	0.197	0.261	0.261	0.540	0.737	0.929	0.929	0.929	0.929	0.929
Fiji	0.197	0.261	0.261	0.540	0.737	0.929	0.929	0.929	0.929	0.929
S America		0.423	0.423	0.423	0.423	0.423		1.335	4.439	4.439
Argentina		0.423	0.423	0.423	0.423	0.423				
Brazil								0.159	3.263	3.263
Colombia								0.873	0.873	0.873
Peru								0.303	0.303	0.303

# Solar mini-grids

## Mini-réseaux solaires

### Mini-redes solares

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	17.246	20.256	24.246	31.807	41.449	50.423	132.145	305.923	338.473	362.130
Africa	1.756	2.141	2.761	4.606	8.075	9.809	74.241	246.698	261.999	280.386
Algeria	0.454	0.454	0.454	0.454	0.454	0.454	49.100	219.100	219.100	219.100
Benin							0.102	0.706	0.706	0.746
Burkina Faso								0.086	0.135	0.195
Cabo Verde				0.027	0.027	0.040	0.149	0.149	0.149	0.149
Cameroon	0.010	0.010	0.010	0.010	0.010	0.010	0.082	0.154	11.431	23.851
Chad							0.122	0.122	0.122	0.122
Congo DR										1.032
Cote d'Ivoire							0.218	0.218	0.218	0.218
Egypt							10.000	10.000	10.000	10.125
Eritrea								0.350	0.350	2.600
Ethiopia										0.018
Gambia							0.060	0.060	0.060	0.060
Ghana						0.012	0.012	0.222	0.513	0.705
Guinea										
Guinea Bissau								0.312	0.312	0.920
Kenya				0.714	0.834	0.884	0.849	0.928	0.928	0.958
Liberia									0.157	0.254
Madagascar		0.003	0.003	0.003	0.003	0.003	0.148	0.148	0.280	0.280
Mali	0.072	0.454	0.870	1.172	3.050	3.380	4.222	4.308	5.686	5.797
Mauritania							0.135	0.135	0.153	0.153
Mozambique					1.324	1.331	1.331	1.331	1.331	1.331
Namibia			0.202	0.202	0.202	0.494	0.494	0.494	0.494	0.494
Niger						0.028	0.028	0.028	0.097	0.165
Nigeria				0.083	0.191	0.360	1.043	1.212	2.025	2.152
Rwanda							3.346	3.376	3.505	3.505
Senegal	0.370	0.370	0.370	1.089	1.089	1.089	1.089	1.099	1.099	2.009
Sierra Leone					0.005	0.005	0.005	0.005	0.198	0.198
South Africa			0.001	0.001	0.001	0.001	0.001	0.001	0.033	0.033
Tanzania					0.033	0.107	0.141	0.243	0.488	0.488
Togo									0.400	0.700
Uganda	0.850	0.850	0.851	0.851	0.851	1.478	1.565	1.795	1.818	1.818
Zambia							0.001	0.001	0.113	0.113
Zimbabwe								0.099	0.099	0.099
Asia	14.864	16.724	19.369	24.935	31.109	38.345	50.007	50.732	56.033	60.028
Afghanistan		0.100	0.100	0.100	0.344	1.394	1.394	1.797	1.797	1.797
Bangladesh		0.100	0.100	0.200	0.200	0.640	2.021	2.021	5.761	7.391
India	3.700	4.420	4.720	5.030	5.340	6.420	6.940	7.080	7.460	8.000
Indonesia	10.462	11.402	11.547	16.703	22.323	25.261	34.056	34.106	35.025	36.225
Malaysia						1.525	2.412	2.412	2.412	2.412
Maldives						0.204	0.204	0.204	0.204	0.204
Myanmar							0.079	0.211	0.443	0.443
Nepal	0.702	0.702	2.902	2.902	2.902	2.902	2.902	2.902	2.932	3.058
Pakistan										0.500
C America + Carib			0.253	0.346	0.346	0.346	0.546	0.549	12.307	12.607
Cuba									11.746	11.746
El Salvador			0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044
Guatemala			0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108
Haiti				0.093	0.093	0.093	0.293	0.296	0.296	0.296
Honduras			0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063
Nicaragua			0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.339
Puerto Rico									0.012	0.012
Middle East	0.012	0.012	0.012	0.017	0.017	0.017	3.767	3.767	3.767	3.767
Palestine	0.012	0.012	0.012	0.017	0.017	0.017	0.017	0.017	0.017	0.017
United Arab Em							3.750	3.750	3.750	3.750
Oceania							0.555	0.555	0.555	0.555

## Solar mini-grids Mini-réseaux solaires Mini-redes solares

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fiji							0.555	0.555	0.555	0.555
S America	0.614	1.379	1.850	1.903	1.903	1.907	3.030	3.622	3.813	4.787
Bolivia			0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119
Brazil				0.040	0.040	0.040	0.040	0.040	0.040	0.040
Colombia						0.004	0.004	0.596	0.787	0.809
Ecuador			0.084	0.096	0.096	0.096	0.096	0.096	0.096	1.048
Paraguay			0.079	0.079	0.079	0.079	0.079	0.079	0.079	0.079
Peru	0.002	0.002	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192
Uruguay							0.052	0.052	0.052	0.052
Venezuela	0.612	1.377	1.377	1.377	1.377	1.377	2.448	2.448	2.448	2.448

# Solar pumps

## Pompes solaires

## Bombas solares

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	13.798	14.928	16.268	19.951	26.498	59.656	119.676	194.342	370.591	557.112
Africa	1.225	1.589	2.777	3.472	4.520	5.496	7.238	9.110	10.410	14.117
Algeria	0.050	0.050	0.051	0.056	0.057	0.073	0.076	0.076	0.076	0.081
Angola			0.000	0.010	0.016	0.016	0.016	0.016	0.016	0.016
Botswana				0.003	0.003	0.003	0.003	0.025	0.025	0.027
Burkina Faso			0.004	0.009	0.016	0.017	0.417	0.417	0.417	0.417
Burundi								0.002	0.002	0.002
Cabo Verde										0.041
Cameroon				0.002	0.006	0.006	0.007	0.007	0.009	0.009
Chad		0.003	0.003	0.003	0.008	0.008	0.008	0.008	0.008	0.008
Congo DR					0.001	0.001	0.001	0.005	0.005	0.005
Congo Rep				0.003	0.015	0.019	0.020	0.032	0.032	0.032
Cote d'Ivoire						0.000	0.000	0.000	0.000	0.000
Djibouti		0.009	0.013	0.043	0.043	0.043	0.043	0.043	0.043	0.043
Egypt	0.002	0.043	0.043	0.097	0.325	0.607	1.138	1.389	1.575	1.575
Eritrea	0.001	0.001	0.001	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Ethiopia	0.001	0.002	0.018	0.031	0.031	0.041	0.058	0.102	0.129	0.160
Gabon			0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Gambia	0.052	0.163	0.163	0.163	0.223	0.249	0.249	0.561	0.562	0.569
Ghana							0.016	0.016	0.016	0.017
Guinea							0.002	0.002	0.002	0.002
Guinea Bissau	0.001	0.005	0.014	0.016	0.018	0.018	0.031	0.031	0.031	0.031
Kenya	0.020	0.025	0.027	0.069	0.111	0.220	0.298	0.349	0.422	0.562
Libya					0.004	0.004	0.004	0.004	0.004	0.004
Madagascar						0.011	0.011	0.011	0.011	0.011
Malawi				0.045	0.091	0.137	0.182	0.497	0.505	0.505
Mali	0.015	0.095	0.112	0.125	0.138	0.138	0.138	0.152	0.152	0.152
Mauritania			0.014	0.014	0.014	0.030	0.045	0.045	0.045	0.045
Morocco	0.047	0.058	0.086	0.318	0.634	0.800	1.014	1.307	1.361	1.361
Mozambique				0.001	0.001	0.008	0.011	0.021	0.021	0.021
Namibia	0.916	0.952	0.952	0.952	0.952	0.952	0.952	0.953	0.953	0.953
Niger	0.006	0.006	0.006	0.008	0.008	0.011	0.026	0.031	0.031	0.053
Nigeria	0.005	0.031	0.985	0.985	0.985	0.985	1.010	1.010	1.010	1.010
Rwanda									0.004	3.308
Senegal			0.010	0.030	0.089	0.136	0.164	0.261	0.459	0.470
Sierra Leone			0.002	0.002	0.002	0.002	0.002	0.002	0.245	0.280
Somalia	0.020	0.020	0.020	0.020	0.020	0.095	0.128	0.128	0.128	0.128
South Africa		0.012	0.016	0.076	0.076	0.087	0.090	0.100	0.100	0.100
South Sudan			0.030	0.030	0.045	0.045	0.045	0.087	0.167	0.167
Sudan	0.002	0.002	0.002	0.007	0.020	0.020	0.022	0.022	0.022	0.022
Tanzania		0.008	0.008	0.076	0.209	0.279	0.345	0.409	0.524	0.592
Tunisia	0.086	0.086	0.096	0.105	0.105	0.113	0.260	0.282	0.310	0.310
Uganda		0.020	0.077	0.122	0.167	0.212	0.260	0.515	0.533	0.573
Zambia									0.089	0.089
Zimbabwe	0.002	0.002	0.005	0.015	0.053	0.075	0.112	0.157	0.332	0.332
Asia	12.281	12.681	12.812	15.684	20.900	52.554	110.359	182.691	357.106	539.732
Afghanistan	0.002	0.002	0.020	0.022	0.029	0.029	0.029	0.092	0.117	0.118
Bangladesh	0.012	0.023	0.023	0.373	0.703	2.043	4.583	11.823	20.517	23.927
Cambodia	0.003	0.007	0.007	0.007	0.007	0.007	0.007	0.034	0.034	0.034
India	12.248	12.517	12.517	14.739	19.415	49.547	104.273	168.880	333.869	512.936
Indonesia	0.013	0.013	0.031	0.064	0.116	0.179	0.317	0.457	0.826	0.909
Korea DPR								0.004	0.004	0.004
Lao PDR	0.001	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Malaysia		0.004	0.004	0.004	0.004	0.004	0.004	0.006	0.017	0.017
Myanmar		0.005	0.024	0.052	0.054	0.061	0.061	0.095	0.101	0.102
Nepal	0.002	0.077	0.152	0.227	0.302	0.377	0.578	0.694	0.869	0.869
Pakistan		0.025	0.025	0.187	0.233	0.261	0.307	0.329	0.360	0.360
Philippines					0.006	0.007	0.130	0.140	0.187	0.234
Sri Lanka	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Thailand		0.005	0.005	0.005	0.010	0.012	0.043	0.109	0.176	0.194
Timor Leste					0.017	0.023	0.023	0.023	0.023	0.023
C America + Carib	0.003	0.008	0.009	0.075	0.146	0.209	0.285	0.404	0.538	0.556



# Solar pumps

## Pompes solaires

## Bombas solares

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Barbados					0.001	0.001	0.001	0.001	0.001	0.001
Belize										0.002
Cayman Is					0.000	0.000	0.000	0.000	0.000	0.000
Costa Rica				0.002	0.002	0.002	0.002	0.020	0.044	0.046
Cuba								0.000	0.000	0.000
Dominican Rep	0.001	0.001	0.001	0.004	0.007	0.007	0.007	0.019	0.101	0.101
El Salvador									0.025	0.025
Guadeloupe										0.002
Guatemala						0.001	0.011	0.025	0.025	0.027
Haiti		0.005	0.005	0.026	0.047	0.068	0.089	0.110	0.110	0.110
Honduras				0.039	0.078	0.117	0.156	0.195	0.195	0.195
Jamaica					0.006	0.008	0.013	0.013	0.013	0.013
Martinique				0.002	0.002	0.002	0.002	0.002	0.003	0.003
Nicaragua	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.012	0.015	0.024
Panama		0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.005
St Kitts Nevis						0.001	0.001	0.001	0.001	0.001
Middle East	0.008	0.012	0.020	0.027	0.145	0.577	0.911	1.079	1.144	1.144
Iran IR	0.005	0.007	0.007	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Iraq	0.002	0.004	0.004	0.004	0.009	0.039	0.039	0.039	0.104	0.104
Lebanon	0.002	0.002	0.002	0.002	0.032	0.269	0.269	0.269	0.269	0.269
Oman							0.002	0.013	0.013	0.013
Syrian AR			0.008	0.008	0.018	0.018	0.018	0.024	0.024	0.024
United Arab Em					0.002	0.002	0.017	0.017	0.017	0.017
Yemen					0.070	0.235	0.552	0.704	0.704	0.704
Oceania						0.001	0.001	0.027	0.027	0.028
Papua N Guin						0.001	0.001	0.001	0.001	0.001
Tonga								0.026	0.026	0.026
Vanuatu										0.001
S America	0.282	0.637	0.650	0.694	0.788	0.819	0.882	1.031	1.365	1.535
Argentina		0.001	0.002	0.006	0.035	0.037	0.037	0.064	0.236	0.301
Bolivia					0.001	0.002	0.025	0.054	0.093	0.095
Brazil	0.001	0.001	0.001	0.001	0.001	0.001	0.010	0.012	0.029	0.044
Chile		0.002	0.006	0.035	0.037	0.042	0.052	0.075	0.081	0.100
Colombia		0.003	0.009	0.012	0.023	0.032	0.038	0.042	0.088	0.099
Ecuador		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Guyana	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Paraguay	0.001	0.002	0.004	0.012	0.042	0.048	0.062	0.067	0.090	0.090
Peru		0.000	0.000	0.000	0.018	0.023	0.023	0.035	0.048	0.093
Uruguay					0.001	0.005	0.007	0.053	0.070	0.084
Venezuela	0.280	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628

# Solar pumps (agriculture)

## Pompes solaires (agriculture)

### Bombas solares (agricultura)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	13.239	13.889	14.026	17.102	23.070	54.857	112.056	185.633	360.971	547.081
Africa	0.974	1.312	1.393	1.819	2.586	3.269	4.257	5.524	6.319	9.809
Algeria			0.001	0.006	0.008	0.023	0.026	0.026	0.026	0.031
Angola			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Botswana				0.003	0.003	0.003	0.003	0.014	0.014	0.014
Cameroon						0.000	0.001	0.001	0.001	0.001
Congo DR					0.001	0.001	0.001	0.001	0.001	0.001
Congo Rep				0.003	0.015	0.019	0.020	0.023	0.023	0.023
Cote d'Ivoire						0.000	0.000	0.000	0.000	0.000
Djibouti		0.009	0.013	0.043	0.043	0.043	0.043	0.043	0.043	0.043
Egypt	0.002	0.043	0.043	0.097	0.325	0.607	1.138	1.358	1.543	1.543
Eritrea	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ethiopia						0.010	0.010	0.034	0.034	0.034
Gabon			0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Gambia	0.052	0.163	0.163	0.163	0.223	0.249	0.249	0.554	0.555	0.555
Ghana							0.016	0.016	0.016	0.017
Kenya	0.020	0.025	0.027	0.027	0.027	0.051	0.087	0.087	0.159	0.299
Madagascar						0.011	0.011	0.011	0.011	0.011
Malawi					0.001	0.002	0.002	0.272	0.280	0.280
Mali		0.080	0.080	0.093	0.106	0.106	0.106	0.106	0.106	0.106
Mauritania			0.000	0.000	0.000	0.016	0.016	0.016	0.016	0.016
Morocco	0.001	0.012	0.040	0.272	0.588	0.754	0.965	1.240	1.294	1.294
Mozambique				0.001	0.001	0.008	0.008	0.018	0.018	0.018
Namibia	0.803	0.839	0.839	0.839	0.839	0.839	0.839	0.840	0.840	0.840
Niger	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.010	0.010	0.032
Nigeria	0.004	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Rwanda									0.004	3.308
Senegal			0.006	0.006	0.036	0.073	0.089	0.169	0.338	0.343
Somalia						0.032	0.032	0.032	0.032	0.032
South Africa		0.012	0.016	0.076	0.076	0.087	0.090	0.099	0.099	0.099
Sudan				0.005	0.018	0.018	0.020	0.020	0.020	0.020
Tanzania		0.008	0.008	0.008	0.063	0.073	0.079	0.079	0.098	0.110
Tunisia	0.086	0.086	0.096	0.105	0.105	0.113	0.235	0.257	0.285	0.285
Uganda							0.004	0.004	0.004	0.004
Zambia									0.089	0.089
Zimbabwe			0.003	0.013	0.051	0.073	0.110	0.143	0.309	0.309
Asia	12.261	12.561	12.596	15.196	20.260	51.105	106.999	179.047	353.157	535.673
Afghanistan			0.018	0.018	0.018	0.018	0.018	0.064	0.064	0.064
Bangladesh	0.012	0.023	0.023	0.373	0.703	1.343	3.183	10.273	18.967	22.377
Cambodia								0.025	0.025	0.025
India	12.248	12.517	12.517	14.739	19.415	49.547	103.293	167.900	332.889	511.956
Indonesia			0.018	0.018	0.018	0.054	0.165	0.233	0.445	0.451
Lao PDR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Malaysia							0.000	0.002	0.002	0.002
Myanmar				0.024	0.024	0.024	0.024	0.029	0.030	0.030
Nepal							0.117	0.233	0.350	0.350
Pakistan		0.013	0.013	0.016	0.062	0.090	0.137	0.157	0.187	0.187
Philippines					0.006	0.007	0.010	0.020	0.028	0.045
Sri Lanka	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Thailand		0.005	0.005	0.005	0.010	0.012	0.043	0.102	0.161	0.175
Timor Leste						0.006	0.006	0.006	0.006	0.006
C America + Carib	0.002	0.007	0.008	0.014	0.019	0.020	0.031	0.076	0.178	0.182
Barbados					0.001	0.001	0.001	0.001	0.001	0.001
Belize										0.002
Cayman Is					0.000	0.000	0.000	0.000	0.000	0.000
Costa Rica				0.002	0.002	0.002	0.002	0.020	0.037	0.038
Dominican Rep			0.001	0.003	0.006	0.006	0.006	0.018	0.100	0.100
El Salvador										
Guatemala							0.011	0.012	0.012	0.012
Haiti		0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Jamaica					0.000	0.002	0.002	0.002	0.002	0.002

## Solar pumps (agriculture) Pompes solaires (agriculture) Bombas solares (agricultura)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Martinique				0.002	0.002	0.002	0.002	0.002	0.003	0.003
Nicaragua	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.012	0.014	0.014
Panama		0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.005
Middle East	0.002	0.002	0.009	0.009	0.051	0.276	0.545	0.621	0.686	0.686
Iraq									0.065	0.065
Lebanon	0.002	0.002	0.002	0.002	0.032	0.178	0.178	0.178	0.178	0.178
Oman							0.002	0.013	0.013	0.013
Syrian AR			0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
United Arab Em					0.002	0.002	0.017	0.017	0.017	0.017
Yemen					0.010	0.089	0.342	0.406	0.406	0.406
Oceania						0.001	0.001	0.001	0.001	0.002
Papua N Guin						0.001	0.001	0.001	0.001	0.001
Vanuatu										0.001
S America	0.001	0.008	0.020	0.064	0.155	0.185	0.223	0.365	0.629	0.729
Argentina		0.001	0.002	0.006	0.035	0.037	0.037	0.062	0.182	0.192
Bolivia					0.001	0.002	0.007	0.033	0.061	0.062
Brazil								0.002	0.018	0.033
Chile		0.002	0.006	0.035	0.037	0.042	0.052	0.075	0.081	0.093
Colombia		0.003	0.008	0.011	0.023	0.031	0.037	0.042	0.088	0.098
Paraguay	0.001	0.002	0.004	0.012	0.042	0.048	0.062	0.067	0.090	0.090
Peru		0.000	0.000	0.000	0.015	0.020	0.021	0.032	0.042	0.083
Uruguay					0.001	0.005	0.007	0.052	0.068	0.078

# Solar pumps (public water supply)

## Pompes solaires (alimentation en eau publique)

### Bombas solares (suministro público de agua)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	0.559	1.038	2.242	2.850	3.428	4.798	7.621	8.709	9.620	10.030
Africa	0.250	0.277	1.384	1.653	1.934	2.227	2.981	3.586	4.091	4.307
Algeria	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Angola				0.009	0.015	0.015	0.015	0.015	0.015	0.015
Botswana								0.012	0.012	0.012
Burkina Faso			0.004	0.009	0.016	0.017	0.417	0.417	0.417	0.417
Burundi								0.002	0.002	0.002
Cabo Verde										0.041
Cameroon				0.002	0.006	0.006	0.006	0.006	0.008	0.008
Chad		0.003	0.003	0.003	0.008	0.008	0.008	0.008	0.008	0.008
Congo DR								0.004	0.004	0.004
Congo Rep								0.009	0.009	0.009
Egypt								0.032	0.032	0.032
Eritrea				0.014	0.014	0.014	0.014	0.014	0.014	0.014
Ethiopia	0.001	0.002	0.018	0.031	0.031	0.031	0.048	0.068	0.095	0.126
Gambia								0.007	0.007	0.014
Guinea							0.002	0.002	0.002	0.002
Guinea Bissau	0.001	0.005	0.014	0.016	0.018	0.018	0.031	0.031	0.031	0.031
Kenya				0.042	0.084	0.169	0.211	0.262	0.263	0.263
Libya					0.004	0.004	0.004	0.004	0.004	0.004
Madagascar									0.000	0.000
Malawi				0.045	0.090	0.135	0.180	0.225	0.225	0.225
Mali	0.015	0.015	0.032	0.032	0.032	0.032	0.032	0.046	0.046	0.046
Mauritania			0.014	0.014	0.014	0.014	0.029	0.029	0.029	0.029
Morocco	0.046	0.046	0.046	0.046	0.046	0.046	0.049	0.067	0.067	0.067
Mozambique							0.003	0.003	0.003	0.003
Namibia	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113
Niger				0.002	0.002	0.006	0.021	0.021	0.021	0.021
Nigeria	0.001	0.001	0.954	0.954	0.954	0.954	0.979	0.979	0.979	0.979
Rwanda										
Senegal			0.004	0.024	0.053	0.063	0.075	0.091	0.121	0.127
Sierra Leone			0.002	0.002	0.002	0.002	0.002	0.002	0.245	0.280
Somalia	0.020	0.020	0.020	0.020	0.020	0.063	0.095	0.095	0.095	0.096
South Africa								0.001	0.001	0.001
South Sudan			0.030	0.030	0.045	0.045	0.045	0.087	0.167	0.167
Sudan	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Tanzania				0.068	0.146	0.206	0.266	0.330	0.426	0.482
Tunisia							0.025	0.025	0.025	0.025
Uganda		0.020	0.077	0.122	0.167	0.212	0.257	0.512	0.529	0.570
Zimbabwe	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.014	0.022	0.022
Asia	0.020	0.120	0.216	0.488	0.640	1.449	3.360	3.644	3.949	4.059
Afghanistan	0.002	0.002	0.002	0.004	0.011	0.011	0.011	0.027	0.052	0.053
Bangladesh						0.700	1.400	1.550	1.550	1.550
Cambodia	0.003	0.007	0.007	0.007	0.007	0.007	0.007	0.009	0.009	0.009
India							0.980	0.980	0.980	0.980
Indonesia	0.013	0.013	0.013	0.046	0.098	0.125	0.152	0.224	0.381	0.458
Korea DPR								0.004	0.004	0.004
Lao PDR	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Malaysia		0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.014	0.014
Myanmar		0.005	0.024	0.028	0.030	0.036	0.036	0.066	0.072	0.073
Nepal	0.002	0.077	0.152	0.227	0.302	0.377	0.461	0.461	0.519	0.519
Pakistan		0.012	0.012	0.170	0.170	0.170	0.170	0.173	0.173	0.173
Philippines							0.120	0.120	0.160	0.189
Thailand								0.007	0.016	0.018
Timor Leste					0.017	0.017	0.017	0.017	0.017	0.017
C America + Carib	0.001	0.001	0.001	0.061	0.127	0.189	0.254	0.327	0.360	0.374
Costa Rica									0.007	0.007
Cuba								0.000	0.000	0.000
Dominican Rep	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
El Salvador									0.025	0.025
Guadeloupe										0.002

## Solar pumps (public water supply)

### Pompes solaires (alimentation en eau publique)

### Bombas solares (suministro público de agua)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Guatemala						0.001	0.001	0.013	0.013	0.016
Haiti				0.021	0.042	0.063	0.084	0.105	0.105	0.105
Honduras				0.039	0.078	0.117	0.156	0.195	0.195	0.195
Jamaica					0.006	0.006	0.012	0.012	0.012	0.012
Nicaragua									0.001	0.010
St Kitts Nevis						0.001	0.001	0.001	0.001	0.001
Middle East	0.007	0.011	0.011	0.018	0.094	0.301	0.366	0.458	0.458	0.458
Iran IR	0.005	0.007	0.007	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Iraq	0.002	0.004	0.004	0.004	0.009	0.039	0.039	0.039	0.039	0.039
Lebanon						0.091	0.091	0.091	0.091	0.091
Syrian AR					0.011	0.011	0.011	0.016	0.016	0.016
Yemen					0.060	0.146	0.211	0.298	0.298	0.298
Oceania								0.026	0.026	0.026
Tonga								0.026	0.026	0.026
S America	0.281	0.630	0.630	0.630	0.633	0.633	0.659	0.667	0.736	0.806
Argentina								0.002	0.054	0.109
Bolivia						0.000	0.018	0.021	0.032	0.032
Brazil	0.001	0.001	0.001	0.001	0.001	0.001	0.010	0.010	0.011	0.011
Chile									0.000	0.007
Colombia			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ecuador		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Guyana	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peru					0.003	0.003	0.003	0.003	0.006	0.010
Uruguay								0.001	0.002	0.006
Venezuela	0.280	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628

## Other off-grid solar PV Autre solaire PV hors réseau Otra solar PV fuera de la red

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	6.839	11.301	56.261	136.929	268.154	369.849	458.310	561.741	709.471	794.642
Africa	1.173	1.450	1.853	3.086	12.717	34.244	62.859	72.656	90.583	135.273
Algeria	0.685	0.685	0.685	0.685	0.685	0.685	0.685	0.685	0.685	0.685
Angola					0.021	0.320	0.320	0.320	0.320	0.320
Benin						0.050	0.050	0.061	0.061	0.061
Botswana	0.020	0.139	0.169	0.312	0.412	0.557	0.850	0.850	0.972	1.276
Burkina Faso		0.093	0.093	0.593	0.893	1.193	1.493	1.793	1.793	16.793
Burundi							0.291	0.291	0.291	0.291
Cameroon				0.011	0.011	0.011	0.017	0.023	0.023	0.023
Cent Afr Rep										0.011
Chad					0.043	0.043	0.043	0.043	0.043	0.043
Congo DR			0.001	0.001	0.104	0.104	0.104	1.787	3.446	16.106
Cote d Ivoire						0.009	0.010	0.010	0.010	0.010
Egypt									0.011	0.011
Eritrea	0.001	0.003	0.003	0.007	0.019	7.843	7.843	7.843	7.843	7.843
Eswatini									0.003	0.003
Ethiopia	0.026	0.026	0.060	0.142	0.142	3.485	3.500	8.557	8.561	8.561
Gabon					0.026	0.026	0.038	0.038	0.038	0.038
Gambia				0.004	0.010	0.010	0.010	0.010	0.010	0.010
Ghana						3.200	3.219	3.220	9.305	9.856
Guinea					3.371	3.371	13.271	13.276	13.276	13.276
Kenya	0.165	0.171	0.484	0.550	0.742	5.529	17.270	17.580	21.493	23.350
Liberia			0.018	0.018	0.018	0.018	0.018	0.018	0.026	0.026
Madagascar				0.250	0.250	0.250	0.250	0.250	0.250	0.250
Malawi				0.003	0.003	0.003	0.003	0.003	0.043	0.043
Mali	0.002	0.002	0.002	0.059	0.088	0.098	0.098	0.237	0.237	0.251
Mauritania					0.010	0.010	0.010	0.010	0.010	0.010
Mozambique		0.000	0.000	0.000	0.038	0.124	0.256	0.488	0.488	0.528
Namibia										12.000
Niger					0.003	0.003	0.003	0.003	0.003	0.003
Nigeria	0.268	0.274	0.274	0.284	0.284	0.289	5.289	6.939	7.473	7.473
Rwanda	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.056	0.056	0.056
Senegal				0.008	0.008	0.008	0.012	0.012	0.012	0.012
Seychelles							0.500	0.500	0.500	1.250
Sierra Leone			0.008	0.008	0.024	0.024	0.024	0.130	0.170	0.170
Somalia			0.000	0.000	0.000	0.060	0.060	0.060	0.060	0.060
South Africa					5.240	6.044	6.044	6.044	11.468	11.572
South Sudan			0.000	0.014	0.053	0.053	0.062	0.076	0.083	0.565
Sudan					0.008	0.015	0.015	0.015	0.015	0.015
Tanzania		0.023	0.023	0.057	0.078	0.078	0.150	0.335	0.377	0.413
Togo					0.007	0.007	0.007	0.008	0.008	0.008
Tunisia										
Uganda		0.027	0.027	0.077	0.122	0.167	0.212	0.258	0.283	0.302
Zambia						0.000	0.276	0.276	0.283	0.283
Zimbabwe					0.001	0.551	0.551	0.551	0.552	1.416
Asia	4.934	7.318	51.871	130.830	238.079	316.519	370.112	461.183	587.622	627.735
Afghanistan		0.000	0.000	16.000	16.000	16.000	16.000	16.644	16.644	16.644
Bangladesh						1.180	10.200	15.392	35.372	37.802
India	3.530	4.910	47.198	108.905	214.949	291.777	336.173	421.206	476.247	513.920
Indonesia	1.341	1.341	2.591	3.841	4.993	4.993	5.069	5.125	5.226	5.229
Korea DPR					0.033	0.033	0.033	0.033	0.033	0.033
Mongolia			1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008
Myanmar		0.000	0.000	0.000	0.000	0.000	0.000	0.146	0.256	0.256
Nepal			0.008	0.008	0.008	0.008	0.008	0.008	40.016	40.023
Pakistan					0.000	0.026	0.031	0.031	11.231	11.231
Philippines					0.021	0.427	0.522	0.522	0.522	0.522
Thailand		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Timor Leste				0.001	0.001	0.001	0.001	0.001	0.001	0.001
Viet Nam	0.063	1.066	1.066	1.067	1.067	1.067	1.067	1.067	1.067	1.067
C America + Carib	0.010	0.554	0.555	0.610	14.552	16.134	17.967	19.280	22.447	22.447
Antigua Barb								0.010	0.414	0.414

## Other off-grid solar PV Autre solaire PV hors réseau Otra solar PV fuera de la red

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Costa Rica								0.053	0.053	0.053
Cuba						0.006	0.332	0.332	0.332	0.332
Dominican Rep					1.500	3.000	4.500	5.750	8.490	8.490
El Salvador					12.361	12.361	12.361	12.361	12.361	12.361
Haiti	0.010	0.553	0.553	0.609	0.689	0.764	0.772	0.772	0.772	0.772
Honduras						0.001	0.001	0.002	0.002	0.002
Nicaragua		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Panama			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Puerto Rico									0.022	0.022
US Virgin Is									0.000	0.000
Middle East				0.007	0.034	0.140	0.268	0.485	0.506	0.506
Jordan					0.000	0.000	0.000	0.000	0.000	0.000
Lebanon				0.002	0.029	0.122	0.129	0.238	0.258	0.258
Palestine				0.005	0.005	0.005	0.005	0.005	0.005	0.005
Saudi Arabia						0.014	0.014	0.014	0.014	0.014
Syrian AR							0.000	0.000	0.001	0.001
United Arab Em							0.120	0.228	0.228	0.228
Yemen							0.000	0.000	0.000	0.000
Oceania		0.014	0.014	0.017	0.085	0.118	1.195	2.224	2.265	2.365
Cook Is					0.010	0.010	0.010	0.010	0.010	0.110
Fiji		0.014	0.014	0.014	0.024	0.028	0.728	1.728	1.769	1.769
Kiribati					0.010	0.010	0.017	0.017	0.017	0.017
Micronesia					0.010	0.010	0.010	0.010	0.010	0.010
Papua N Guin				0.003	0.011	0.040	0.305	0.334	0.334	0.334
Solomon Is					0.010	0.010	0.010	0.010	0.010	0.010
Vanuatu					0.010	0.010	0.116	0.116	0.116	0.116
S America	0.722	1.966	1.968	2.379	2.687	2.693	5.909	5.911	6.048	6.316
Argentina	0.041	1.285	1.285	1.285	1.285	1.285	1.285	1.285	1.285	1.285
Bolivia	0.000	0.001	0.002	0.004	0.009	0.009	0.009	0.009	0.009	0.009
Brazil	0.680	0.680	0.680	0.680	0.680	0.680	3.880	3.880	3.880	3.880
Chile									0.133	0.133
Colombia							0.013	0.013	0.013	0.281
Paraguay									0.003	0.003
Peru				0.410	0.712	0.719	0.722	0.725	0.725	0.725
Venezuela	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

## Biogas (electricity) Biogaz (électricité) Biogás (electricidad)

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	2.156	3.276	4.806	12.118	16.020	18.520	23.521	26.996	30.063	36.549
Africa		0.004	0.139	0.139	0.156	0.216	1.531	1.551	1.551	1.551
Gabon							1.200	1.200	1.200	1.200
Ghana			0.120	0.120	0.120	0.120	0.135	0.135	0.135	0.135
Kenya		0.004	0.019	0.019	0.019	0.079	0.079	0.079	0.079	0.079
Mozambique								0.010	0.010	0.010
Nigeria								0.010	0.010	0.010
Senegal							0.100	0.100	0.100	0.100
Uganda					0.017	0.017	0.017	0.017	0.017	0.017
Asia	2.070	2.886	4.123	10.706	12.615	13.961	16.687	19.782	20.599	21.685
Bangladesh	0.670	1.390	2.060	2.750	3.420	4.120	4.250	4.650	4.650	4.650
Cambodia							1.500	1.500	1.500	1.500
India			0.567	1.150	2.389	3.035	4.131	4.826	5.626	6.712
Myanmar	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400
Pakistan		0.096	0.096	0.406	0.406	0.406	0.406	0.406	0.424	0.424
Philippines				5.000	5.000	5.000	5.000	5.000	5.000	5.000
Viet Nam								2.000	2.000	2.000
C America + Carib	0.016	0.316	0.458	1.187	3.163	3.457	4.417	4.677	4.677	4.677
Costa Rica	0.016	0.316	0.316	0.396	2.216	2.216	2.683	2.683	2.683	2.683
Dominican Rep			0.142	0.791	0.947	1.227	1.720	1.970	1.970	1.970
Honduras						0.014	0.014	0.014	0.014	0.014
Nicaragua								0.010	0.010	0.010
S America	0.070	0.070	0.086	0.086	0.086	0.886	0.886	0.986	3.236	8.636
Argentina								0.100	0.100	0.100
Bolivia									2.000	2.000
Colombia									0.250	0.250
Ecuador	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peru			0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Uruguay						0.800	0.800	0.800	0.800	6.200



Biogas production

Production de biogaz

Produccion de biogas



# Total biogas production

## Production totale de biogaz

## Producción total de biogás

1,000 m <sup>3</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	14 799 698	16 060 948	16 883 411	16 848 513	16 856 185	16 525 683	15 845 389	15 872 101	15 820 040	15 737 384
Africa	882	3 008	7 735	17 021	25 294	35 648	41 543	47 425	51 389	54 002
Benin		8	15	20	26	39	36	34	33	30
Botswana		2	2	2	2	2	2	2	2	2
Burkina Faso	0	41	264	737	1 469	1 999	2 482	3 041	3 528	3 962
Burundi								2	2	2
Cameroon	10	31	45	68	85	126	143	139	132	127
Ethiopia	74	498	1 449	2 904	4 720	6 176	7 419	8 748	10 020	11 360
Gabon							610	610	610	610
Ghana	110	110	292	292	292	4 293	4 307	4 509	4 509	4 509
Kenya	2	503	1 899	3 933	6 940	8 638	9 725	10 336	10 598	11 465
Mali					6	76	113	161	161	160
Mozambique								15	15	15
Nigeria	347	347	353	353	353	298	298	325	325	325
Rwanda	252	615	1 070	4 608	5 128	6 638	7 313	8 647	8 903	8 892
Senegal		15	249	394	612	900	1 600	2 139	3 222	3 188
Tanzania	63	476	995	1 692	2 424	2 870	3 063	3 497	3 467	3 351
Uganda	25	363	1 102	1 787	3 004	3 305	3 670	3 885	4 094	4 235
Zambia						35	70	373	617	617
Zimbabwe				232	232	253	691	960	1 151	1 151
Asia	14 796 521	16 049 424	16 866 901	16 820 432	16 812 621	16 465 720	15 591 822	15 605 453	15 548 070	15 452 280
Afghanistan								25	25	25
Bangladesh	40 129	46 457	51 865	57 991	63 591	68 881	71 354	73 253	73 553	72 782
Bhutan			22	168	455	774	1 376	1 944	2 726	2 681
Cambodia	3 710	5 880	8 658	11 023	11 526	12 427	16 302	16 680	16 641	16 861
China	12 548 896	13 740 204	14 487 465	14 349 844	14 304 143	13 962 937	13 103 930	13 103 930	13 103 930	13 103 930
India	1 954 801	1 959 466	1 975 503	1 996 494	1 979 659	1 918 719	1 837 628	1 819 907	1 758 722	1 665 392
Indonesia	54	1 428	4 023	6 951	9 863	12 342	13 697	16 367	17 901	18 711
Lao PDR	769	1 580	2 659	4 045	4 021	3 937	3 809	3 639	3 390	3 342
Myanmar	948	948	948	1 073	1 073	1 069	1 069	1 069	1 049	1 049
Nepal	110 940	122 035	132 393	141 880	150 666	166 689	181 965	190 188	200 472	208 174
Pakistan	58	620	1 367	3 367	4 577	6 320	6 501	6 695	6 606	6 415
Philippines				8 761	8 761	8 761	8 761	8 761	8 761	8 761
Sri Lanka	4 257	4 321	4 296	4 272	4 247	4 222	4 091	3 822	3 515	3 205
Thailand							490	490	768	768
Viet Nam	131 958	166 484	197 700	234 564	270 039	298 641	340 848	358 682	350 011	340 185
C America + Carib	613	6 793	6 999	7 736	14 950	17 417	17 672	20 746	21 606	21 342
Costa Rica	4	304	304	505	7 468	7 468	7 774	9 965	9 965	9 965
Cuba	606	6 487	6 568	6 536	6 649	8 795	8 021	7 919	8 563	8 299
Dominican Rep			124	693	830	1 075	1 507	1 726	1 726	1 726
El Salvador								120	120	120
Grenada								2	5	5
Haiti								0	0	0
Honduras						17	17	17	17	17
Jamaica	2	2	2	2	2	2	2	2	2	2
Nicaragua					1	61	352	738	951	951
Panama								250	250	250
St Lucia								8	8	8
S America	1 683	1 723	1 777	3 324	3 320	6 898	194 352	198 478	198 974	209 759
Argentina	5	5	5	5	5	5	5	4 002	4 002	4 007
Bolivia	72	112	148	195	191	187	196	192	371	346
Brazil						1	187 435	187 437	187 437	187 437
Colombia								18	335	342
Ecuador	146	146	146	146	146	146	151	264	264	322
Peru	1 460	1 460	1 478	1 478	1 478	1 478	1 486	1 486	1 486	1 486

# Production of biogas for cooking

## Production de biogaz pour la cuisson

### Producción de biogás para cocinar

1,000 m <sup>3</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	14 796 908	16 051 732	16 872 955	16 823 553	16 822 413	16 482 513	15 607 402	15 625 091	15 571 464	15 476 698
Africa	772	2 880	7 413	15 239	23 503	29 202	33 227	38 417	42 199	44 812
Benin		8	15	20	26	39	36	34	33	30
Burkina Faso	0	41	264	737	1 469	1 999	2 482	3 041	3 528	3 962
Cameroon	10	31	45	68	85	126	143	139	132	127
Ethiopia	74	498	1 449	2 904	4 720	6 176	7 419	8 748	10 020	11 360
Ghana							1	2	2	2
Kenya	2	487	1 877	3 911	6 918	8 386	9 473	10 084	10 346	11 213
Mali					6	76	113	113	113	112
Nigeria	347	347	347	347	347	292	292	294	294	294
Rwanda	252	615	1 070	3 148	3 668	4 754	4 950	6 109	6 365	6 354
Senegal		15	249	394	612	900	1 235	1 774	2 857	2 823
Tanzania	63	476	995	1 692	2 424	2 870	3 063	3 497	3 467	3 351
Uganda	25	363	1 102	1 787	2 995	3 296	3 661	3 876	4 084	4 226
Zambia						35	70	373	617	617
Zimbabwe				232	232	253	288	332	340	340
Asia	14 795 458	16 048 098	16 864 671	16 807 438	16 797 924	16 450 124	15 571 455	15 583 737	15 525 455	15 428 351
Afghanistan								25	25	25
Bangladesh	39 987	46 162	51 427	57 407	62 864	68 005	70 451	72 265	72 565	71 794
Bhutan			22	168	455	774	1 376	1 944	2 726	2 681
Cambodia	3 710	5 880	8 658	11 023	11 526	12 427	13 382	13 760	13 721	13 941
China	12 548 896	13 740 204	14 487 465	14 349 844	14 304 143	13 962 937	13 103 930	13 103 930	13 103 930	13 103 930
India	1 954 801	1 959 466	1 974 741	1 995 081	1 976 685	1 914 996	1 832 583	1 814 065	1 752 020	1 657 376
Indonesia	54	1 428	4 023	6 951	9 863	12 341	13 696	16 366	17 899	18 710
Lao PDR	769	1 580	2 659	4 045	4 021	3 937	3 809	3 639	3 390	3 342
Myanmar	27	27	27	152	152	148	148	148	128	128
Nepal	110 940	122 035	132 393	141 880	150 666	166 689	181 965	190 188	200 472	208 174
Pakistan	58	510	1 258	2 053	3 263	5 006	5 187	5 381	5 256	5 064
Sri Lanka	4 257	4 321	4 296	4 272	4 247	4 222	4 080	3 770	3 459	3 148
Thailand									277	277
Viet Nam	131 958	166 484	197 700	234 564	270 039	298 641	340 848	358 257	349 586	339 760
C America + Carib	606	647	728	696	810	3 014	2 527	2 634	3 487	3 223
Cuba	606	647	728	696	809	2 955	2 181	2 079	2 723	2 459
Nicaragua					1	59	346	555	764	763
S America	72	108	144	180	176	172	193	302	324	312
Argentina								0	0	5
Bolivia	72	108	144	180	176	172	180	177	173	148
Colombia									26	33
Ecuador							5	118	118	118
Peru							7	7	7	7

# Production of biogas for off-grid electricity

## Production de biogaz pour l'électricité hors réseau

### Producción de biogás para electricidad fuera de la red

1,000 m <sup>3</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1 213	1 720	2 836	14 357	19 177	21 704	27 131	28 811	30 157	35 230
Africa		6	75	75	84	199	618	655	655	655
Gabon							305	305	305	305
Ghana			64	64	64	64	69	69	69	69
Kenya		6	11	11	11	126	126	126	126	126
Mozambique								15	15	15
Nigeria								22	22	22
Senegal							110	110	110	110
Uganda					9	9	9	9	9	9
Asia	1 063	1 265	2 168	12 931	14 635	15 532	19 802	21 110	21 981	23 295
Bangladesh	142	295	438	584	727	876	903	988	988	988
Cambodia							2 920	2 920	2 920	2 920
India			761	1 413	2 974	3 723	5 045	5 843	6 701	8 015
Myanmar	921	921	921	921	921	921	921	921	921	921
Pakistan		48	48	1 253	1 253	1 253	1 253	1 253	1 266	1 266
Philippines				8 760	8 760	8 760	8 760	8 760	8 760	8 760
Viet Nam								425	425	425
C America + Carib	4	304	428	1 187	4 294	4 556	5 293	5 520	5 520	5 520
Costa Rica	4	304	304	494	3 464	3 464	3 770	3 770	3 770	3 770
Dominican Rep			124	693	830	1 075	1 507	1 726	1 726	1 726
Honduras						17	17	17	17	17
Jamaica										
Nicaragua								8	8	8
S America	146	146	164	164	164	1 417	1 417	1 527	2 001	5 760
Argentina								110	110	110
Bolivia									183	183
Colombia									292	292
Ecuador	146	146	146	146	146	146	146	146	146	146
Peru			18	18	18	18	18	18	18	18
Uruguay						1 253	1 253	1 253	1 253	5 012

# Production of biogas for industry

## Production de biogaz pour l'industrie

### Producción de biogás para la industria

1,000 m <sup>3</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total		5 840	5 959	7 459	11 452	17 779	18 339	18 612	18 612	25 650
Africa			119	119	119	4 119	4 679	4 790	4 790	4 790
Burundi								1	1	1
Gabon							305	305	305	305
Ghana			119	119	119	4 119	4 119	4 228	4 228	4 228
Senegal							256	256	256	256
C America + Carib		5 840	5 840	5 840	9 833	9 833	9 833	9 993	9 993	9 993
Costa Rica					3 993	3 993	3 993	3 993	3 993	3 993
Cuba		5 840	5 840	5 840	5 840	5 840	5 840	5 840	5 840	5 840
Nicaragua								160	160	160
S America				1 500	1 500	3 827	3 827	3 829	3 829	10 867
Brazil								2	2	2
Ecuador										57
Uruguay						2 327	2 327	2 327	2 327	9 308
Venezuela				1 500	1 500	1 500	1 500	1 500	1 500	1 500

# Production of biogas for commercial and public services

## Production de biogaz pour services commerciaux et publics

### Producción de biogás para servicios comerciales y públicos

1,000 m <sup>3</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	117	134	140	1 612	1 612	2 038	2 946	5 723	5 911	5 911
Africa	110	123	129	1 589	1 589	2 013	2 899	3 440	3 623	3 623
Botswana		2	2	2	2	2	2	2	2	2
Burundi								1	1	1
Ghana	110	110	110	110	110	111	115	205	205	205
Kenya		11	11	11	11	11	11	11	11	11
Mali								49	49	49
Nigeria			6	6	6	6	6	6	6	6
Rwanda				1 460	1 460	1 883	2 363	2 538	2 538	2 538
Zimbabwe							403	628	811	811
Asia				1	1	1	19	60	64	64
Philippines				1	1	1	1	1	1	1
Sri Lanka							11	52	56	56
Thailand							7	7	7	7
C America + Carib	2	2	2	2	2	2	7	2 202	2 203	2 203
Costa Rica								2 191	2 191	2 191
Grenada								2	2	2
Haiti								0	0	0
Jamaica	2	2	2	2	2	2	2	2	2	2
Nicaragua							5	6	7	7
S America	5	9	9	20	20	21	21	21	21	21
Argentina	5	5	5	5	5	5	5	5	5	5
Bolivia		4	4	15	15	15	15	15	15	15
Brazil						1	1	1	1	1

# Production of biogas for agriculture

## Production de biogaz pour l'agriculture

### Producción de biogás para la agricultura

1,000 m <sup>3</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1 460	1 521	1 521	1 532	1 532	1 649	189 571	193 864	193 894	193 894
Africa						115	119	122	122	122
Ghana							4	4	4	4
Kenya						115	115	115	115	115
Nigeria								2	2	2
Asia		61	61	61	61	63	546	546	570	570
Indonesia						1	1	1	1	1
Pakistan		61	61	61	61	61	61	61	85	85
Thailand							484	484	484	484
C America + Carib				11	11	12	12	398	404	404
Costa Rica				11	11	11	11	11	11	11
Cuba										
El Salvador								120	120	120
Grenada									3	3
Nicaragua						1	1	9	13	13
Panama								250	250	250
St Lucia								8	8	8
S America	1 460	1 460	1 460	1 460	1 460	1 460	188 894	192 798	192 798	192 798
Argentina								3 887	3 887	3 887
Brazil							187 434	187 434	187 434	187 434
Colombia								18	18	18
Peru	1 460	1 460	1 460	1 460	1 460	1 460	1 460	1 460	1 460	1 460



Off-grid energy access

Accès à l'énergie hors réseau

Acceso a la energía fuera de la red



# Number of people connected to hydropower

## Nombre de personnes connectées à l'hydroélectricité

### Número de personas conectadas a la hidroelectricidad

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	3 492	4 241	4 763	5 245	5 644	5 927	6 325	6 522	6 793	6 830
Africa	257	291	301	336	346	347	420	426	565	565
Ethiopia	5	7	10	10	10	10	10	10	10	10
Guinea	28	28	28	28	28	28	28	28	28	28
Kenya	63	96	96	96	96	96	96	96	97	97
Lesotho	1	1	1	1	1	1	1	1	1	1
Liberia	62	62	62	62	62	63	63	63	63	63
Madagascar						1	1	1	1	1
Malawi	32	32	37	37	37	37	37	42	42	42
Mali	2	2	2	2	2	2	2	2	2	2
Mozambique	1	1	1	1	1	1	8	8	8	8
Nigeria							27	27	27	27
Rwanda	18	18	18	23	32	32	32	33	33	33
Sierra Leone				4	4	4	4	4	142	142
South Africa	0	0	0	0	0	0	0	0	0	0
Tanzania	35	35	35	35	35	35	74	74	74	74
Uganda	3	3	3	5	5	5	5	5	5	5
Zambia	5	5	5	30	30	30	30	30	30	30
Zimbabwe	2	2	2	2	2	2	2	2	2	2
Asia	3 189	3 903	4 415	4 862	5 246	5 524	5 831	6 021	6 152	6 189
Afghanistan	286	383	481	578	676	774	871	969	1 066	1 066
Bhutan	9	9	9	9	9	9	9	9	9	9
India	1 016	1 184	1 396	1 429	1 569	1 627	1 661	1 690	1 690	1 690
Indonesia	123	132	147	159	180	204	220	227	227	230
Malaysia	0	1	1	1	1	1	1	1	2	2
Myanmar	37	38	40	40	41	46	101	101	101	101
Nepal	837	883	948	1 035	1 125	1 212	1 310	1 360	1 394	1 427
Pakistan	339	638	683	890	917	917	917	917	917	918
Philippines	65	154	212	215	216	218	218	218	218	218
Sri Lanka	17	19	22	24	28	31	35	40	40	40
Tajikistan	56	59	72	78	81	81	84	85	85	85
Thailand	19	19	19	19	19	19	19	19	19	19
Timor Leste	5	5	5	5	5	5	5	5	5	5
Viet Nam	380	380	380	380	380	380	380	380	380	380
C America + Carib	41	41	41	42	47	50	69	71	71	71
Cuba							17	17	17	17
Dominican Rep	2	3	3	4	6	9	11	13	13	13
El Salvador	1	1	1	1	1	1	1	1	1	1
Haiti	34	34	34	34	34	34	34	34	34	34
Honduras					2	2	2	2	2	2
Nicaragua	4	4	4	4	4	4	4	4	4	4
Oceania	3	3	3	3	3	3	3	3	3	3
Fiji	3	3	3	3	3	3	3	3	3	3
S America	2	2	2	2	2	2	2	2	2	2
Argentina	2	2	2	2	2	2	2	2	2	2
Brazil		0	0	0	0	0	0	0	0	0
Colombia										
Peru	0	0	0	0	0	0	0	0	0	0

## Number of people using solar lights (<11 W)

### Nombre de personnes utilisant des lampes solaires (<11 W)

### Número de personas que usan lámparas solares (<11 W)

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1 375	977	5 808	15 668	40 074	64 416	88 916	100 853	120 173	130 837
Africa			1 680	6 465	19 784	33 229	46 758	48 531	47 318	42 097
Angola									1	11
Benin							143	950	1 021	942
Burkina Faso			23	89	288	508	990	1 076	1 732	1 429
Burundi					26	58	74	48	16	12
Cabo Verde										8
Cameroon								220	381	877
Cent Afr Rep										10
Chad										44
Congo DR			37	139	454	801	1 004	1 050	2 052	2 050
Cote d Ivoire							144	300	430	378
Ethiopia			361	1 375	4 471	7 891	10 810	9 811	7 589	5 672
Gabon										10
Gambia								8	16	33
Ghana					29	32	98	255	465	544
Guinea										14
Guinea Bissau										14
Kenya			452	1 720	5 594	9 864	13 487	14 070	12 359	11 220
Liberia							55	119	188	176
Madagascar								88	328	548
Malawi			70	109	195	300	606	972	1 401	1 282
Mali							277	473	822	721
Mauritania										16
Mauritius			33	60	87	74	93	159	215	246
Mozambique					19	62	62	103	113	123
Namibia								9	35	62
Niger						39	39	39	19	52
Nigeria			31	117	382	674	1 450	2 275	2 498	2 483
Rwanda			64	245	796	1 403	1 619	1 746	1 881	1 725
Senegal					190	380	744	923	1 396	1 416
Sierra Leone							100	228	409	322
Somalia								61	136	1 132
South Africa							200	235	422	373
South Sudan										12
Sudan						1	1	1		
Tanzania			357	1 357	4 413	7 783	10 249	8 509	5 184	2 167
Togo								1	21	73
Uganda			34	131	426	743	1 405	2 349	3 851	4 366
Zambia							693	957	1 131	645
Zimbabwe			217	1 123	2 415	2 616	2 417	1 495	1 204	887
Asia	1 375	974	4 057	9 031	19 841	30 366	40 270	50 124	70 315	86 129
Afghanistan					221	443	664	664	664	444
Bangladesh							329	358	901	1 436
Cambodia							46	148	178	134
India	1 375	974	3 902	8 624	18 723	28 353	37 413	46 973	66 140	80 939
Indonesia			27	104	338	655	665	611	634	628
Malaysia										31
Myanmar			14	54	175	338	421	414	254	523
Nepal							59	207	232	227
Pakistan			14	54	176	340	403	434	526	591
Philippines						80	111	131	323	476
Sri Lanka			100	196	209	129	131	154	462	693
Thailand										8
Timor Leste						28	28	28		
C America + Carib		3	4	8	7	9	6	35	116	279
Dominica									1	1
Dominican Rep										25
Guatemala									4	45
Haiti				3	3	3		27	68	97
Honduras						2	2	2		31

**Number of people using solar lights (<11 W)**  
**Nombre de personnes utilisant des lampes solaires (<11 W)**  
**Número de personas que usan lámparas solares (<11 W)**

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nicaragua		3	4	5	4	4	4	2	1	
Panama								3	12	39
Puerto Rico									31	42
Middle East			50	104	226	398	977	997	1 100	871
Jordan			50	104	226	398	977	997	1 100	791
Yemen										80
Oceania			15	58	187	363	836	1 095	1 189	1 274
Fiji									86	177
Nauru									25	25
Papua N Guin			15	58	187	363	836	1 067	958	760
Samoa									22	22
Vanuatu								28	98	291
S America		0	1	2	28	51	69	71	136	187
Argentina										23
Bolivia		0	1	1	21	27	33	25	50	73
Colombia								5	6	6
Peru			1	1	8	25	37	40	79	84

**Number of people using SHS (11-50 W)**  
**Nombre de personnes utilisant des SSD (11-50 W)**  
**Número de personas que usan SSD (11-50 W)**

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	4 305	6 168	8 334	11 508	15 573	18 741	21 201	21 468	20 682	20 798
Africa			43	165	571	1 055	1 825	2 470	3 195	4 982
Cameroon										14
Ethiopia						1	1	3	3	3
Ghana					35	35	35	35	44	9
Kenya			14	53	173	330	491	674	986	1 799
Madagascar									52	52
Mozambique								3	3	3
Nigeria								39	109	179
Rwanda			3	10	31	59	88	103	214	389
Senegal										2
Tanzania			11	42	138	262	390	428	542	746
Uganda			16	60	194	369	820	1 127	1 181	1 314
Zambia									3	415
Zimbabwe								58	58	58
Asia	4 289	6 152	8 274	11 284	14 857	17 507	19 180	18 749	17 289	15 685
Afghanistan					6	12	21	27	33	27
Bangladesh	2 013	3 540	4 678	7 440	10 291	13 288	14 155	13 929	12 383	10 466
Cambodia					55	73	115	172	172	117
India	1 698	1 951	2 707	2 822	3 202	2 710	3 150	2 882	2 985	3 656
Indonesia										16
Myanmar									49	49
Nepal	577	660	890	1 022	1 303	1 424	1 730	1 728	1 639	1 290
Philippines							10	10	28	63
C America + Carib				21	21	34	34	38	17	17
Guatemala						2	2	2	2	2
Honduras				21	21	27	27	31	10	10
Panama						5	5	5	5	5
Oceania								34	34	52
Papua N Guin								34	34	34
Vanuatu										19
S America	16	16	16	37	124	145	162	177	147	62
Bolivia					30	30	30	30	30	
Chile									1	1
Peru	16	16	16	37	94	115	132	147	116	60

## Number of people using SHS (>50 W) Nombre de personnes utilisant des SSD (>50 W) Número de personas que usan SSD (>50 W)

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	753	801	836	881	943	1 019	1 274	2 119	3 280	4 357
Africa	429	433	438	455	507	574	839	1 607	2 663	3 570
Burkina Faso	0	0	1	3	4	8	12	15	17	15
Cote d'Ivoire										128
Egypt								29	29	29
Ghana									15	15
Guinea Bissau					3	6	8	11	14	14
Kenya							3	3	151	296
Lesotho				7	7	7	7	7		
Madagascar									92	92
Mali					5	9	14	18	23	18
Morocco	357	357	357	357	357	357	483	483	483	483
Nigeria					26	52	79	105	398	636
Rwanda							31	249	449	632
South Africa					14	27	41	55	68	55
Tanzania						13	60	412	685	902
Tunisia	72	72	74	80	80	80	80	99	99	99
Uganda		3	6	9	12	15	22	122	141	157
Asia	318	347	376	396	400	403	407	411	503	646
Afghanistan					4	8	12	15	19	15
Bangladesh										28
India									88	126
Indonesia	13	13	13	13	13	13	13	13	13	44
Mongolia	188	209	229	249	249	249	249	249	249	249
Philippines							0	0	0	51
Sri Lanka	116	125	134	134	134	134	134	134	134	134
Viet Nam	1	1	1	1	1					
C America + Carib						0	1	1	7	33
Cuba						0	1	1	7	7
Honduras										26
Oceania	6	8	8	16	22	27	27	27	27	27
Fiji	6	8	8	16	22	27	27	27	27	27
S America		14	14	14	14	14		72	80	80
Argentina		14	14	14	14	14				
Brazil								1	8	8
Colombia								57	57	57
Peru								15	15	15

## Number of people connected to solar mini-grids (Tier 1) Personnes connectées aux mini-réseaux solaires (N.1) Número de personas conectadas a mini-redes solares (N.1)

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	146	216	230	323	391	573	706	829	991	1 082
Africa	1	3	8	101	169	239	297	407	496	563
Benin							3	81	81	88
Burkina Faso								3	10	10
Cameroon	1	1	1	1	1	1	8	15	19	19
Ghana						2	2	12	12	24
Kenya				63	67	67	79	80	80	90
Liberia									16	25
Madagascar		2	2	2	2	2	2	2	2	2
Mali			5	31	84	119	144	150	157	157
Mauritania						16	16	16	16	16
Mozambique					1	3	3	3	3	3
Nigeria				5	12	27	37	41	54	55
Rwanda									10	10
Senegal								1	1	29
Sierra Leone									24	24
Tanzania					2	2	2	2	9	9
Uganda			0	0	0	0	0	0	0	0
Zambia							1	1	1	1
Asia						112	187	199	273	298
Bangladesh							25	25	65	65
India						112	152	165	197	222
Myanmar							10	10	11	11
C America + Carib								0	0	0
Haiti								0	0	0
S America	145	213	222	222	222	222	222	222	222	222
Peru	0	0	9	9	9	9	9	9	9	9
Venezuela	145	213	213	213	213	213	213	213	213	213



## Number of people connected to solar mini-grids (Tier 2+)

### Personnes connectées aux mini-réseaux solaires (N.2)

### Número de personas conectadas a mini-redes solares (N.2)

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	338	381	506	629	759	856	1199	1503	1843	2147
Africa	35	36	46	108	151	172	336	628	798	1052
Algeria	6	6	6	6	6	6	91	344	344	344
Benin							1	4	4	4
Burkina Faso								1	1	2
Cabo Verde				0	0	0	1	1	1	1
Cameroon									120	270
Chad							1	1	1	1
Congo DR										1
Cote d'Ivoire							4	4	4	4
Egypt							25	25	25	30
Eritrea								16	16	56
Ethiopia										1
Gambia								2	2	2
Ghana									4	4
Guinea										
Guinea Bissau								7	7	24
Kenya					2	3	3	4	4	4
Liberia									1	1
Madagascar							6	6	9	9
Mali	3	4	13	13	44	49	65	65	80	82
Mauritania								0	0	0
Mozambique					11	11	11	11	11	11
Namibia			1	1	1	3	3	3	3	3
Niger						1	1	1	2	5
Nigeria						1	15	17	34	37
Rwanda							5	6	7	7
Senegal	17	17	17	78	78	78	78	78	78	107
Sierra Leone					0	0	0	0	0	0
South Africa			0	0	0	0	0	0	0	0
Tanzania						2	2	4	6	6
Togo									4	7
Uganda	9	9	9	9	9	19	22	25	25	25
Zambia									3	3
Zimbabwe								3	3	3
Asia	302	345	460	518	605	681	798	808	897	940
Afghanistan		2	2	2	5	14	14	20	20	20
Bangladesh		2	2	4	4	14	41	41	111	147
India	135	162	173	184	197	197	197	197	197	197
Indonesia	136	148	150	195	266	319	408	408	421	422
Malaysia						1	3	3	3	3
Maldives						2	2	2	2	2
Myanmar								4	10	10
Nepal	31	31	133	133	133	133	133	133	133	135
Pakistan										4
C America + Carib				2	2	2	5	5	85	89
Cuba									80	80
Haiti				2	2	2	5	5	5	5
Nicaragua										3
Middle East	0	0	0	0	0	0	0	0	0	0
Palestine	0	0	0	0	0	0	0	0	0	0
Oceania							14	14	14	14
Fiji							14	14	14	14
S America			0	1	1	1	46	48	48	52
Bolivia			0	0	0	0	0	0	0	0

**Number of people connected to solar mini-grids (Tier 2+)**  
**Personnes connectées aux mini-réseaux solaires (N.2)**  
**Número de personas conectadas a mini-redes solares (N.2)**

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Brazil				1	1	1	1	1	1	1
Colombia						0	0	2	3	3
Ecuador				0	0	0	0	0	0	4
Paraguay			0	0	0	0	0	0	0	0
Uruguay							0	0	0	0
Venezuela							44	44	44	44

## Number of people using biogas electricity

### Nombre de personnes utilisant l'électricité biogaz

### Número de personas que usan electricidad a partir de biogás

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	226.5	226.5	230.4	232.1	234.3	236.3	271.4	276.8	292.8	314.5
Africa					0.1	0.1	0.1	0.7	0.7	0.7
Uganda					0.1	0.1	0.1	0.1	0.1	0.1
Mozambique								0.6	0.6	0.6
Asia	226.5	226.5	230.2	231.9	234.0	236.0	271.1	275.9	291.9	313.6
Cambodia							34.3	34.3	34.3	34.3
India			3.7	5.4	7.5	9.5	10.3	15.1	31.1	52.8
Myanmar	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5
S America			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Peru			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

# Number of people using biogas for cooking

## Nombre de personnes utilisant le biogaz pour la cuisson

### Número de personas que usan biogás para cocinar

Thousands	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	115 000	120 019	126 508	128 134	127 650	125 120	125 635	125 762	125 548	125 085
Africa	6	22	59	121	191	243	284	337	385	406
Benin		0	0	0	0	0	0	0	0	0
Burkina Faso	0	0	3	8	16	22	27	33	39	44
Cameroon	0	0	0	1	1	1	1	1	1	1
Ethiopia	1	4	11	22	36	48	57	67	77	88
Ghana							0	0	0	0
Kenya	0	4	14	30	54	65	74	78	80	87
Mali					0	1	2	2	2	2
Nigeria	3	3	3	3	3	2	2	2	2	2
Rwanda	2	5	8	23	27	35	37	45	47	47
Senegal		0	3	6	11	19	30	45	71	70
Tanzania	1	4	8	14	20	24	25	29	28	27
Uganda	0	3	8	14	23	25	28	30	31	33
Zambia						0	1	3	5	5
Zimbabwe				2	2	2	2	2	2	2
Asia	114 989	119 991	126 442	128 006	127 451	124 852	125 329	125 401	125 134	124 652
Afghanistan								0	0	0
Bangladesh	166	194	217	244	269	291	303	312	314	311
Bhutan			0	1	4	6	12	16	23	22
Cambodia	32	50	74	94	98	106	114	117	117	119
China	102 763	107 442	113 523	114 668	113 938	111 355	111 938	111 938	111 938	111 938
India	10 497	10 522	10 604	10 713	10 615	10 283	9 841	9 741	9 408	8 900
Indonesia	0	6	17	30	42	53	58	70	76	79
Lao PDR	4	8	13	20	20	19	19	18	17	16
Myanmar	0	0	0	1	1	1	1	1	1	1
Nepal	970	1 067	1 158	1 240	1 317	1 457	1 591	1 663	1 753	1 820
Pakistan	1	4	11	18	27	43	44	46	45	43
Sri Lanka	18	18	18	18	18	18	17	16	15	13
Thailand									1	1
Viet Nam	539	680	807	957	1 102	1 219	1 391	1 462	1 427	1 387
C America + Carib	4	4	4	4	5	22	19	20	25	24
Cuba	4	4	4	4	5	21	17	16	20	18
Nicaragua					0	0	2	4	5	5
S America	1	2	2	3	3	3	3	4	4	4
Argentina										0
Bolivia	1	2	2	3	3	3	3	3	3	2
Colombia									0	0
Ecuador							0	1	1	1
Peru							0	0	0	0





IRENA Headquarters  
Masdar City  
P.O. Box 236, Abu Dhabi,  
United Arab Emirates  
[www.irena.org](http://www.irena.org)

