

OFF-GRID RENEWABLE ENERGY STATISTICS 2023

STATISTIQUES D'ÉNERGIE RENOUVELABLE HORS RÉSEAU 2023

ESTADÍSTICAS DE ENERGÍA RENOVABLE AISLADA 2023

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: 978-92-9260-572-8

Report citation: IRENA (2023), *Off-grid renewable energy statistics 2023*, International Renewable Energy Agency, Abu Dhabi.

About IRENA

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

Acknowledgements

This report was prepared by Dennis Akande, Iman Ahmed and Julian Prime from the IRENA Statistics Team. For further information or to provide feedback, please contact the IRENA Statistics Team (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.



SNV is a mission-driven global development partner working in more than 20 countries across Africa and Asia. Building on 60 years of experience and together with our team of over 1,600 people, we strengthen capacities and catalyse partnerships that transform the agri-food, energy, and water systems, which enable sustainable and more equitable lives for all. Grounded in the 2030 Agenda for Sustainable Development, we work on the core themes of gender equality and social inclusion, climate adaptation and mitigation, and strong institutions and effective governance. To find out more, go to www.snv.org.

Report available for download from: 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 aislada

Hydropower	
Hydroélectricité	2
Hidroeléctrica	
Solar energy	
Énergie solaire	4
Energía solar	
Biogas	
Biogaz	35
Biogás	
Other solid biofuels	
Autres biocarburants solides	36
Otros biocombustibles sólidos	
Wind energy	
Énergie éolienne	37
Energía eólica	

Off-grid Biogas production - Production de biogaz hors réseau - Producción de biogás aislada

Total biogas production	
Production totale de biogaz	39
Producción total de biogás	
Production of biogas for cooking	
Production de biogaz pour la cuisson	41
Producción de biogás para cocinar	
Production of biogas for off-grid electricity	
Production de biogaz pour l'électricité hors réseau	42
Producción de biogás para electricidad aislada	
Production of biogas for industry	
Production de biogaz pour l'industrie	43
Producción de biogás para la industria	
Production of biogas for commercial and public services	
Production de biogaz pour les services commerciaux et publics	44
Producción de biogás para servicios comerciales y públicos	
Production of biogas for agriculture	
Production de biogaz pour l'agriculture	45
Producción de biogás para la agricultura	

Off-grid energy access - Accès à l'énergie hors réseau Acceso a la energía aislada

Number of people connected to hydropower Nombre de personnes connectées à l'hydroélectricité Número de personas conectadas a la hidroelectricidad	47
Number of people using solar lights (<11 W) Nombre de personnes utilisant des lampes solaires (<11 W) Número de personas usando lámparas solares (<11 W)	49
Number of people using SHS (11-50 W) Nombre de personnes utilisant des SSD (11-50 W) Número de personas usando SSD (11-50 W)	51
Number of people using SHS (>50 W) Nombre de personnes utilisant des SSD (>50 W) Número de personas usando SSD (>50 W)	53
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)	55
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+)	56
Number of people using biogas electricity Nombre de personnes utilisant l'électricité biogaz Número de personas usando electricidad a partir de biogás	58
Number of people using biogas for cooking Nombre de personnes utilisant le biogaz pour la cuisson Número de personas usando biogás para cocinar	59

NOTES TO THE TABLES

The off-grid data is a combination of official and unofficial statistics obtained from various sources including national and international databases; industry association reports; and online sources such as websites, project reports, press releases, and news articles. Sections showing totals for biogas production, solar pump, and other off-grid solar PV are classified by end-use in separate tables. These separate tables are subsets and do not necessarily add up to their section totals. Individual entries in the tables are rounded independently and this can result in totals which are different from the sum of the constituent items shown.

The numbers represent estimates that are constantly revised to improve off-grid renewable energy statistics. Off-grid renewable power capacity data reflects the capacity installed and connected at the end of the calendar year. The data is presented in megawatts (MW) rounded to three decimal places. Figures between zero and 0.5 kW are shown as a 0. The number of people served by off-grid renewable power under five hundred is depicted as 0. Blanks represent real zero values.

NOTES À PROPOS DES TABLEAUX

Les données hors réseau sont une combinaison de statistiques officielles et non officielles obtenues à partir de diverses sources, notamment des bases de données nationales et internationales; rapports d'associations industrielles; et des sources en ligne telles que des sites Web, des rapports de projet, des communiqués de presse et des articles de presse. Les sections présentant les totaux de la production de biogaz, des pompes solaires et des autres systèmes photovoltaïques hors réseau sont classées par utilisation finale dans des tableaux distincts.

Ces tableaux distincts sont des sous-ensembles et ne correspondent pas nécessairement aux sommes totales de leur section. Les entrées individuelles dans les tableaux sont arrondies indépendamment, ce qui peut donner des sommes totales différentes de la somme des éléments constitutifs indiqués.

Les chiffres représentent des estimations qui sont constamment révisées pour améliorer les statistiques sur les énergies renouvelables hors réseau. Les données sur la capacité d'énergie renouvelable hors réseau reflètent la capacité installée et connectée à la fin de l'année civile. Les données sont présentées en mégawatts (MW) arrondis à trois décimales. Les chiffres compris entre zéro et 0,5 kW sont représentés par un 0. Le nombre de personnes desservies par une énergie renouvelable hors réseau de moins de cinq cents est représenté par un zéro. Les espaces vides représentent des valeurs réelles nulles.

NOTAS A LAS TABLAS

Los datos sobre energías no conectadas a la red son una combinación de estadísticas oficiales y no oficiales obtenidas de diversas fuentes, incluyendo bases de datos nacionales e internacionales, informes de asociaciones industriales y fuentes en línea como sitios web, informes de proyectos, comunicados de prensa y artículos de noticias. Las secciones que muestran los totales de producción de "biogás", "bombas solares" y "otros sistemas fotovoltaicos solares no conectados a la red", se clasifican por uso final en tablas separadas. Estas tablas separadas son subconjuntos y no suman necesariamente los totales de sus secciones. Las entradas individuales de las tablas se redondean de forma independiente, lo que puede dar lugar a totales diferentes de la suma de los elementos constituyentes mostrados.

Las cifras representan estimaciones que se revisan constantemente para mejorar las estadísticas sobre energías renovables fuera de la red. Los datos de capacidad de energía renovable sin conexión a la red reflejan la capacidad instalada y conectada al final del año natural. Los datos se presentan en megavatios (MW) redondeados a tres decimales. El número de personas atendidas por la energía renovable fuera de la red que sea inferior a quinientas se representa como 0. Los espacios en blanco representan valores reales de cero. Las cifras entre cero y 0,5 kW se muestran como un 0. Los espacios en blanco representan valores reales de cero.

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. www.irena.org/publications/2018/Dec/Measurement-and-estimation-of-off-grid-solar-hydro-and-biogas-energy

Hydropower

Hydroélectricité

Hidroeléctrica

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	568.182	574.522	605.911	616.326	633.965	655.398	675.899	679.422	679.842	680.719
Africa	76.787	78.491	88.806	95.617	130.825	141.031	156.017	157.578	158.491	158.849
Angola	21.659	21.659	22.859	22.859	35.279	35.279	35.279	35.279	35.279	35.279
Burkina Faso						2.600	2.600	2.600	2.600	2.600
Burundi	1.603	1.603	1.603	1.603	1.603	1.603	1.603	1.603	1.603	1.603
Cameroon	0.097	0.097	0.097	0.097	0.097	0.097	0.516	0.516	0.516	0.516
Cent Afr Rep	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
Congo DR					10.800	20.800	30.700	30.700	30.700	30.700
Eswatini	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800
Ethiopia	1.449	1.449	1.449	1.469	1.469	1.469	1.469	1.469	1.469	1.469
Gabon	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
Ghana							0.045	0.045	0.045	0.045
Guinea	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220
Kenya	9.495	10.135	10.135	13.655	19.775	19.793	19.819	19.819	19.819	19.857
Lesotho	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
Liberia	4.860	4.860	4.860	4.860	4.860	4.860	4.860	4.860	4.860	4.860
Madagascar	3.637	4.380	5.222	5.282	5.397	5.457	5.757	5.557	5.557	5.557
Malawi	1.420	1.420	1.420	1.720	1.720	1.848	2.056	2.056	2.469	2.469
Mali	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Mauritius	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700
Mozambique	0.563	0.563	1.355	1.355	1.378	1.378	1.378	1.378	1.378	1.378
Nigeria			0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
Rwanda	1.640	1.640	1.640	1.651	1.651	1.651	1.664	1.680	1.680	1.680
Sierra Leone	0.250	0.250	0.250	0.250	4.890	4.890	4.890	4.890	4.890	4.890
South Africa	7.540	7.836	7.986	7.986	7.986	7.986	7.986	7.986	7.986	7.986
Tanzania	10.480	10.505	17.445	20.345	21.435	21.435	22.335	24.035	24.535	24.855
Uganda	3.906	3.906	3.906	3.906	3.906	3.906	3.906	3.906	3.906	3.906
Zambia	1.937	1.937	1.913	1.913	1.913	1.913	2.553	2.553	2.553	2.553
Zimbabwe	0.570	0.570	0.585	0.585	0.585	0.585	0.565	0.565	0.565	0.565
Asia	258.689	269.074	285.431	294.876	300.114	309.622	323.111	324.377	323.984	324.503
Afghanistan	24.197	27.646	31.095	34.544	37.993	37.993	37.993	37.993	37.993	37.993
Bhutan	1.290	1.290	1.290	1.290	1.290	1.290	1.290	1.290	1.290	1.290
Cambodia	0.370	0.370	0.370	0.370	0.370	0.370	0.370	0.370	0.370	0.370
India	82.169	83.377	84.079	84.675	84.675	84.675	84.675	84.675	84.675	84.675
Indonesia	12.065	13.314	15.007	15.437	15.437	15.597	15.597	15.597	15.597	15.597
Lao PDR	9.846	9.846	9.846	9.846	9.846	9.846	9.846	9.846	9.846	9.846
Malaysia	0.225	0.585	0.633	0.708	0.741	0.735	0.765	0.765	0.765	0.765
Mongolia	5.198	5.198	5.198	5.198	5.198	5.198	5.198	5.198	5.198	5.198
Myanmar	3.134	3.395	7.420	7.420	7.420	7.420	7.420	7.420	7.420	7.420
Nepal	19.570	22.858	26.504	28.414	29.659	30.915	32.368	33.184	34.932	35.436
Pakistan	17.074	17.539	18.789	21.544	21.580	21.660	23.666	23.666	23.666	23.666
Philippines	18.303	18.393	19.236	19.236	19.236	27.254	37.254	37.254	35.113	35.128
Sri Lanka	4.447	4.447	4.447	4.447	4.447	4.447	4.447	4.447	4.447	4.447
Tajikistan	17.178	17.193	17.693	17.923	18.398	18.398	18.398	18.848	18.848	18.848
Thailand	0.298	0.298	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498
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	6.170	6.547	7.065	6.901	7.034	7.148	7.162	7.178	7.178	7.178
Cuba	3.712	3.712	3.884	3.884	3.884	3.884	3.884	3.884	3.884	3.884
Dominican Rep	0.633	0.920	1.196	1.327	1.458	1.572	1.678	1.694	1.694	1.694
El Salvador	0.140	0.140	0.140	0.140	0.097	0.097	0.005	0.005	0.005	0.005
Guatemala	0.331	0.421	0.511	0.601	0.646	0.646	0.646	0.646	0.646	0.646
Haiti	0.520	0.520	0.500	0.515	0.515	0.515	0.515	0.515	0.515	0.515
Honduras	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129
Nicaragua	0.705	0.705	0.705	0.305	0.305	0.305	0.305	0.305	0.305	0.305
Oceania	61.296	61.371	61.371	60.024						
Fiji	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
Papua N Guin	60.985	60.985	60.985	59.485	59.485	59.485	59.485	59.485	59.485	59.485
Solomon Is	0.181	0.181	0.181	0.331	0.331	0.331	0.331	0.331	0.331	0.331
Vanuatu	0.075	0.075	0.075	0.078	0.078	0.078	0.078	0.078	0.078	0.078

S America	165.240	159.039	163.238	158.908	135.969	137.574	129.586	130.266	130.166	130.166
Argentina	3.667	3.667	4.091	4.120	4.120	4.120	4.120	4.120	4.120	4.120
Bolivia	8.000		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Brazil	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Chile	0.765	0.765	0.765	0.765	0.765	0.765	0.765	1.445	1.445	1.445
Colombia	4.375	4.375	4.393	4.543	4.643	4.643	4.643	4.643	4.543	4.543
Ecuador	6.800	6.060	6.060	6.060	6.060	6.060	6.060	6.060	6.060	6.060
Fr Guiana	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Peru	140.404	142.943	146.699	142.190	119.116	120.721	112.733	112.733	112.733	112.733
Suriname					0.035	0.035	0.035	0.035	0.035	0.035
Venezuela	1.208	1.208	1.208	1.208	1.208	1.208	1.208	1.208	1.208	1.208

Solar lights and solar home systems (SHS)

Lampes solaires et systèmes solaires domestiques (SDD)

Lámparas solares y sistemas solares domésticos (SSD)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	219.239	266.667	306.845	278.672	336.469	389.672	464.118	477.342	465.636	458.868
Africa	23.747	40.704	61.466	83.492	105.941	131.658	171.748	213.582	237.863	284.532
Angola				0.008	0.104	0.116	1.046	1.053	1.121	1.140
Benin			0.064	0.227	0.448	0.557	1.708	2.749	3.918	6.284
Botswana				0.001	0.014	0.014	0.013	0.012	0.045	0.033
Burkina Faso	0.230	0.411	0.637	0.753	0.990	1.071	1.628	2.118	2.902	3.497
Burundi	0.010	0.023	0.029	0.824	1.172	1.184	1.224	1.364	0.822	0.667
Cabo Verde				0.154	0.348	0.361	0.345	0.335	0.186	
Cameroon				0.013	0.047	0.212	0.886	1.620	1.876	1.898
Cent Afr Rep				0.008	0.020	0.035	0.032	0.049	0.048	0.045
Chad				0.008	0.017	0.081	0.077	0.125	0.112	0.157
Comoros				0.805	1.146	1.146	1.131	1.118	0.328	
Congo DR	0.284	0.503	0.567	0.378	0.774	0.701	1.697	3.877	6.862	9.659
Congo Rep				0.008	0.025	0.032	0.030	0.490	0.533	0.608
Cote d Ivoire			0.055	0.222	0.779	1.820	3.929	6.125	7.472	8.721
Egypt				4.889	4.889	4.889	4.889	4.889		
Eq Guinea				0.154	0.348	0.348	0.330	0.319	0.183	
Eritrea				0.805	1.146	1.146	1.143	1.130	0.348	0.009
Eswatini				0.001	0.001	0.001	0.013	0.013	0.013	
Ethiopia	3.171	5.604	6.332	6.330	5.072	5.477	8.446	9.853	9.526	7.969
Gabon				0.008	0.022	0.028	0.040	0.032	0.032	0.051
Gambia				0.155	0.355	0.377	0.378	0.369	0.355	0.151
Ghana	0.144	0.146	0.199	0.515	0.904	1.173	1.989	2.565	2.836	3.198
Guinea				0.154	0.353	0.617	1.231	1.847	2.178	3.276
Guinea Bissau	0.051	0.102	0.152	0.358	0.602	0.618	0.614	0.553	0.843	0.594
Kenya	5.060	9.007	11.256	12.675	16.844	24.142	38.850	56.927	68.466	80.129
Lesotho	0.097	0.097	0.097	0.098	0.001	0.001	0.015	0.021	0.021	0.007
Liberia				0.024	0.183	0.387	0.548	0.978	1.811	2.137
Madagascar				0.805	1.212	1.429	1.690	2.182	1.930	2.681
Malawi	0.144	0.222	0.568	1.607	2.123	2.417	2.540	3.082	3.397	4.398
Mali	0.070	0.140	0.326	0.617	1.079	1.199	1.896	2.033	2.674	3.111
Mauritania				0.154	0.350	0.358	0.345	0.333	0.189	
Mauritius	0.126	0.107	0.134	0.915	3.287	3.440	4.815	4.148	3.380	1.364
Morocco	4.583	4.583	15.857	15.857	15.857	15.857	15.857	15.857	15.857	15.857
Mozambique	0.010	0.031	0.031	0.832	1.247	1.350	1.533	2.111	2.259	3.337
Namibia				0.009	0.049	0.089	0.107	0.096	0.113	0.128
Niger		0.015	0.015	0.169	0.357	0.387	0.514	0.701	0.566	0.964
Nigeria	0.748	1.431	2.258	3.218	6.152	9.570	13.060	18.405	26.573	51.802
Rwanda	0.692	1.235	1.815	2.975	4.401	6.030	9.423	10.998	12.346	13.561
Sao Tome Prn				0.154	0.348	0.348	0.349	0.339	0.203	0.013
Senegal	0.049	0.097	0.303	0.562	1.100	1.400	2.521	3.015	3.982	4.399
Seychelles				0.805	1.146	1.146	1.131	1.118	0.351	0.023
Sierra Leone			0.129	0.323	0.626	0.568	1.272	2.082	2.688	2.981
Somalia				0.799	1.183	1.776	1.948	2.312	2.078	2.006
South Africa	0.265	0.530	0.852	1.117	1.482	1.328	1.144	0.909	0.805	0.734
South Sudan				0.805	1.161	1.174	1.261	1.338	0.785	0.482
Sudan	0	0	0							
Tanzania	3.354	10.724	12.160	11.269	11.744	15.566	13.249	14.440	16.786	17.495
Togo				0.019	0.506	0.780	1.661	3.445	5.163	5.693
Tunisia	1.450	1.450	1.450	1.800	1.800	1.800	1.800	1.800	1.800	
Uganda	1.295	2.171	4.087	5.771	7.770	11.100	13.743	13.126	12.928	12.237
Zambia				0.208	1.116	1.567	2.926	4.626	5.521	5.826
Zimbabwe	1.916	2.076	1.861	2.059	2.586	2.926	2.605	2.830	2.021	1.578
Asia	192.672	222.421	240.543	188.863	222.340	250.379	282.587	255.006	217.604	146.317
Afghanistan	0.470	0.941	1.509	1.672	2.089	1.642	1.157	0.579	0.409	0.113
Bangladesh	141.347	165.675	175.684	126.114	139.234	121.079	110.301	102.943	95.589	56.684
Bhutan	0.023									
Cambodia	0.541	0.735	1.238	1.889	1.993	1.436	1.212	0.684	0.049	0.038
India	29.873	33.584	38.727	35.800	54.858	91.823	118.572	100.506	78.401	50.712
Indonesia	1.926	2.195	2.179	2.036	1.850	9.332	12.539	12.529	5.616	2.685
Malaysia				0.045	0.151	0.201	0.181	0.186	0.217	0.266
Mongolia	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524
Myanmar	0.133	0.257	0.289	0.252	0.667	1.298	15.259	15.462	16.010	15.608
Nepal	6.931	7.575	9.214	9.287	9.105	9.771	7.997	5.482	4.248	3.579
Pakistan	0.085	0.166	0.264	0.250	0.693	1.259	2.265	3.570	3.607	3.217
Philippines		0.033	0.178	0.223	0.343	1.145	1.698	1.722	2.166	2.139
Sri Lanka	7.791	7.723	7.724	7.713	7.696	7.613	7.613	7.613	7.613	7.613
Thailand				0.045	0.137	0.257	0.270	0.208	0.155	
Timor Leste		0.013	0.013	0.013						0.141
Viet Nam	0.027									

C America + Carib	0.456	0.644	0.673	0.981	1.572	1.613	2.087	2.009	1.894	2.194
Bahamas	0.025	0.126	0.147	0.143	0.031					
Belize	0.001	0.001	0.001	0.001	0.001					
Costa Rica	0.283	0.283	0.283	0.410	0.410	0.171	0.171	0.171	0.044	0.044
Cuba		0.009	0.017	0.030	0.515	0.528	0.880	0.871	0.859	0.374
Dominica					0	0	0			
Dominican Rep				0.027	0.054	0.069	0.051	0.033	0.009	0.029
Guatemala		0.005	0.005	0.032	0.260	0.282	0.404	0.403	0.386	0.139
Haiti	0.002	0.002		0.027	0.072	0.086	0.081	0.063	0.079	0.532
Honduras	0.139	0.193	0.193	0.261	0.136	0.373	0.305	0.306	0.301	0.782
Nicaragua	0.005	0.005	0.005	0.002	0.001					
Panama		0.021	0.021	0.048	0.064	0.074	0.166	0.161	0.217	0.294
Puerto Rico					0.028	0.028	0.028			
Middle East	0.122	0.214	0.526	1.108	2.040	1.915	3.058	2.610	2.690	1.963
Iraq				0.162	0.301	0.301	0.377	0.239	0.239	0.128
Jordan	0.122	0.214	0.526	0.460	0.340					
Lebanon				0.162	0.457	0.496	0.732	0.443	0.443	0.245
United Arab Em				0.162	0.485	0.554	0.589	0.563	0.602	0.526
Yemen				0.162	0.457	0.565	1.360	1.366	1.406	1.064
Oceania	1.198	1.554	2.331	2.711	2.940	3.204	3.469	3.133	4.673	7.568
Australia				0.045	0.067	0.099	0.101	0.094	0.070	0.096
Fiji	0.737	0.929	0.929	0.974	1.102	1.217	1.216	1.182	1.735	2.152
Kiribati	0.214	0.277	0.711	0.674	0.635	0.606	0.558			
Nauru	0.008	0.008	0.008	0.052	0.065	0.057	0.026	0.023	0.010	
Papua N Guin	0.119	0.229	0.572	0.703	0.659	0.571	0.911	1.201	2.323	3.552
Samoa				0.045	0.073	0.073	0.042	0.039	0.025	0.013
Tonga	0.119	0.111	0.111	0.111	0.100	0.240	0.580	0.615	0.594	0.510
Vanuatu				0.108						1.755
S America	1.044	1.129	1.306	1.517	1.636	0.903	1.169	1.002	0.912	16.294
Argentina				0.027	0.037	0.066	0.198	0.217	0.215	0.510
Bolivia	0.349	0.353	0.356	0.335	0.367	0.120	0.108	0.102	0.131	0.196
Chile				0.005	0.008	0.008	0.008	0.008	0.008	0.003
Colombia				0.027	0.049	0.063	0.203	0.222	0.244	0.218
Guyana	0.018	0.002	0.002	0.948	1.128	1.178	0.647	0.653	0.453	0.314
Peru	0.676	0.775								15.367

Solar lights (<11 W)

Lampes solaires (<11 W)

Lámparas solares (<11 W)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	29.233	46.396	55.607	54.505	74.999	114.227	142.698	126.157	102.459	75.076
Africa	14.442	24.058	28.759	27.968	28.015	28.717	32.042	31.891	35.130	35.950
Angola				0.008	0.011	0.023	0.024	0.032	0.032	0.073
Benin			0.064	0.091	0.129	0.109	0.339	0.526	0.648	0.757
Botswana			0.001	0.002	0.002	0.001			0.033	0.033
Burkina Faso	0.162	0.287	0.456	0.387	0.413	0.252	0.262	0.219	0.338	0.334
Burundi	0.010	0.023	0.029	0.034	0.054	0.066	0.095	0.201	0.275	0.403
Cabo Verde				0.018	0.029	0.042	0.026	0.016	0.003	
Cameroon				0.013	0.044	0.196	0.470	0.748	0.935	0.760
Cent Afr Rep				0.008	0.019	0.034	0.031	0.019	0.017	0.016
Chad				0.008	0.016	0.080	0.075	0.085	0.062	0.109
Comoros				0.015	0.027	0.027	0.013			
Congo DR	0.284	0.503	0.567	0.378	0.680	0.606	0.669	0.194	0.244	0.267
Congo Rep				0.008	0.024	0.031	0.029	0.032	0.071	0.114
Cote d Ivoire			0.055	0.086	0.114	0.092	0.150	0.178	0.194	0.167
Eq Guinea				0.018	0.029	0.029	0.011			
Eritrea				0.015	0.027	0.027	0.024	0.012	0.020	0.009
Eswatini				0.001	0.001	0.001	0.013	0.013	0.013	
Ethiopia	3.171	5.597	6.324	5.515	3.909	3.666	4.718	5.261	5.070	3.477
Gabon				0.008	0.021	0.027	0.030	0.022	0.018	0.010
Gambia				0.020	0.036	0.057	0.059	0.049	0.028	0.008
Ghana	0.016	0.018	0.071	0.250	0.396	0.443	0.292	0.202	0.144	0.131
Guinea				0.018	0.034	0.049	0.040	0.048	0.060	0.056
Guinea Bissau				0.018	0.029	0.045	0.041	0.030	0.053	0.039
Kenya	4.441	7.830	9.411	9.526	8.828	9.307	9.129	8.796	8.467	8.619
Lesotho				0.001	0.001	0.001	0.015	0.021	0.021	0.007
Liberia			0.024	0.048	0.064	0.055	0.050	0.131	0.170	0.174
Madagascar				0.015	0.066	0.180	0.317	0.447	0.607	0.955
Malawi	0.144	0.222	0.568	0.817	1.005	0.744	0.614	0.734	1.462	2.149
Mali			0.116	0.202	0.410	0.350	0.327	0.180	0.151	0.112
Mauritania				0.018	0.031	0.039	0.026	0.014	0.006	
Mauritius	0.126	0.107	0.134	0.124	1.692	1.626	2.886	2.198	2.198	0.986
Mozambique	0.010	0.031	0.031	0.047	0.108	0.108	0.156	0.339	0.802	1.461
Namibia				0.009	0.049	0.087	0.105	0.094	0.105	0.113
Niger		0.015	0.015	0.033	0.034	0.046	0.040	0.048	0.048	0.038
Nigeria	0.282	0.500	0.861	1.097	1.263	1.391	1.407	1.631	2.380	3.561
Rwanda	0.589	1.039	1.013	1.337	1.429	1.687	1.148	0.856	1.468	2.315
Sao Tome Prn				0.018	0.029	0.029	0.017	0.007	0.007	
Senegal	0.049	0.097	0.303	0.426	0.724	0.746	0.671	0.356	0.186	0.168
Seychelles				0.015	0.027	0.027	0.013			
Sierra Leone				0.129	0.187	0.249	0.146	0.122	0.144	0.175
Somalia				0.009	0.065	0.439	0.542	0.623	0.954	1.014
South Africa			0.057	0.058	0.146	0.181	0.213	0.165	0.164	0.171
South Sudan				0.015	0.043	0.055	0.084	0.161	0.351	0.336
Sudan	0	0	0							
Tanzania	2.941	5.187	5.534	3.746	1.571	0.822	1.466	1.859	2.221	2.035
Togo				0.018	0.030	0.054	0.069	0.077	0.100	0.080
Uganda	0.303	0.528	0.926	1.774	2.759	3.488	3.922	3.527	3.145	2.623
Zambia				0.208	0.326	0.428	0.501	0.915	1.195	1.474
Zimbabwe	1.916	2.076	1.861	1.184	0.919	0.704	0.375	0.404	0.210	0.380
Asia	14.456	21.686	25.512	24.273	43.461	82.162	106.939	91.243	64.281	36.030
Afghanistan	0.342	0.683	1.025	1.041	1.050	0.731	0.375	0.023	0.001	0.112
Bangladesh		0.184	0.208	0.437	0.434	0.552	0.376	0.210	0.180	
Bhutan	0.023									
Cambodia			0.055	0.086	0.181	0.156	0.126	0.047	0.031	0.030
India	13.404	19.863	22.908	21.696	40.664	72.079	93.822	78.664	59.665	34.418
Indonesia	0.290	0.560	0.543	0.386	0.187	7.665	10.856	10.791	3.336	0.330
Malaysia				0.031	0.113	0.163	0.144	0.094	0.070	0.094
Myanmar	0.133	0.257	0.289	0.239	0.127	0.114	0.187	0.197	0.178	0.088
Nepal			0.014	0.075	0.088	0.129	0.069	0.055	0.001	
Pakistan	0.085	0.166	0.264	0.231	0.178	0.116	0.129	0.468	0.434	0.517
Philippines		0.033	0.106	0.137	0.238	0.412	0.535	0.446	0.323	0.233
Sri Lanka	0.178	0.111	0.112	0.101	0.083	0.163	0.144	0.081	0.033	0.028
Thailand				0.031	0.113					
Timor Leste		0.013	0.013	0.013						

C America + Carib	0.033	0.136	0.156	0.240	0.260	0.306	0.292	0.222	0.227	0.193
Bahamas	0.025	0.126	0.147	0.143	0.031	0	0	0	0	0
Dominica					0.018	0.036	0.051	0.033	0.016	0.033
Dominican Rep					0.018	0.036	0.058	0.080	0.078	0.070
Guatemala					0.018	0.063	0.077	0.072	0.053	0.054
Haiti	0.002	0.002			0.018	0.063	0.077	0.072	0.053	0.041
Honduras		0.003	0.003	0.022	0.031	0.047	0.028	0.029	0.021	0.042
Nicaragua	0.005	0.005	0.005	0.002	0.001					
Panama					0.018	0.034	0.045	0.051	0.047	0.081
Puerto Rico						0.028	0.028	0.028		0.078
Middle East	0.122	0.214	0.526	1.108	2.040	1.837	2.351	1.903	1.983	1.256
Iraq					0.162	0.301	0.301	0.377	0.239	0.239
Jordan	0.122	0.214	0.526		0.460	0.340				0.128
Lebanon					0.162	0.457	0.457	0.621	0.332	0.332
United Arab Em					0.162	0.485	0.554	0.520	0.494	0.534
Yemen					0.162	0.457	0.526	0.833	0.879	0.537
Oceania	0.119	0.229	0.572	0.809	0.991	0.923	0.755	0.650	0.520	1.397
Australia					0.031	0.041	0.065	0.050	0.044	0.033
Fiji					0.031	0.149	0.193	0.171	0.075	0.062
Nauru					0.031	0.034	0.034	0.003		0.301
Papua N Guin	0.119	0.229	0.572	0.629	0.557	0.336	0.306	0.393	0.340	0.758
Samoa					0.031	0.047	0.047	0.016	0.013	0.013
Vanuatu					0.056	0.164	0.249	0.210	0.126	0.073
S America	0.061	0.073	0.082	0.106	0.232	0.282	0.319	0.248	0.318	0.250
Argentina					0.018	0.028	0.029	0.055	0.075	0.081
Bolivia	0.056	0.059	0.062	0.032	0.059	0.078	0.066	0.036	0.045	0.031
Colombia					0.018	0.034	0.049	0.082	0.078	0.109
Peru	0.005	0.015	0.020	0.037	0.111	0.126	0.115	0.060	0.083	0.126

Solar home systems (SHS 11-50 W)

Systèmes solaires domestiques (SSD 11-50 W)

Sistemas solares domésticos (SSD 11-50 W)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	61.775	53.682	46.289	37.416	41.508	51.441	69.027	76.154	84.060	98.068
Africa	1.884	3.472	5.971	9.353	12.835	22.427	38.482	52.035	63.575	80.275
Angola					0.002	0.002	0.042	0.042	0.081	0.107
Benin					0.004	0.014	0.143	0.288	0.473	0.680
Burkina Faso					0.004	0.014	0.148	0.294	0.479	0.649
Burundi					0.135	0.157	0.157	0.168	0.202	0.085
Cabo Verde					0.004	0.014	0.014	0.014	0.010	
Cameroon						0.003	0.016	0.060	0.060	0.099
Cent Afr Rep						0.001	0.001	0.001	0.001	
Chad						0.001	0.002	0.002	0.040	0.049
Comoros					0.135	0.157	0.157	0.157	0.22	
Congo DR						0.003	0.004	0.048	0.085	0.460
Congo Rep						0.001	0.001	0.001	0.001	0.005
Cote d Ivoire					0.004	0.071	0.417	0.959	1.176	1.354
Eq Guinea					0.004	0.014	0.014	0.014	0.010	
Eritrea					0.135	0.157	0.157	0.157	0.157	0.022
Ethiopia	0.007	0.007		0.159	0.202	0.492	1.737	2.328	2.318	2.333
Gabon						0.001	0.001	0.010	0.010	0.014
Gambia						0.004	0.014	0.014	0.014	0.010
Ghana	0.128	0.128	0.128	0.132	0.199	0.206	0.338	0.503	0.732	0.832
Guinea					0.004	0.014	0.048	0.089	0.121	0.166
Guinea Bissau					0.004	0.014	0.014	0.014	0.014	0.058
Kenya	0.620	1.178	1.755	2.403	4.254	9.129	18.553	28.888	35.557	40.259
Liberia					0.004	0.017	0.051	0.107	0.273	0.430
Madagascar					0.135	0.184	0.287	0.411	0.411	0.390
Malawi					0.135	0.157	0.354	0.481	0.540	0.552
Mali					0.004	0.014	0.048	0.179	0.341	0.637
Mauritania					0.004	0.014	0.014	0.014	0.014	0.010
Mauritius					0.135	0.178	0.191	0.199	0.219	0.108
Mozambique					0.129	0.178	0.281	0.289	0.421	0.471
Namibia							0.002	0.002	0.002	0.009
Niger					0.004	0.017	0.036	0.091	0.091	0.218
Nigeria					0.127	0.163	0.363	0.964	1.667	3.746
Rwanda	0.103	0.196	0.292	0.472	0.561	0.779	0.849	1.053	1.200	2.328
Sao Tome Prn					0.004	0.014	0.014	0.026	0.026	0.013
Senegal					0.004	0.071	0.133	0.553	0.759	1.040
Seychelles					0.135	0.157	0.157	0.157	0.157	0.046
Sierra Leone					0.004	0.071	0.117	0.263	0.448	0.750
Somalia					0.135	0.157	0.171	0.240	0.240	0.152
South Africa							0.076	0.124	0.203	0.365
South Sudan					0.135	0.157	0.215	0.215	0.128	0.146
Tanzania	0.413	0.785	1.169	1.410	1.834	2.338	2.665	2.968	3.510	5.244
Togo					0.001	0.015	0.049	0.139	0.152	0.391
Uganda	0.620	1.178	2.620	2.894	3.145	4.123	5.253	4.478	4.393	4.396
Zambia					0.135	0.178	1.107	1.851	2.104	2.398
Zimbabwe					0.219	0.249	0.446	0.454	0.474	0.358
Asia	58.768	48.940	38.370	25.663	26.107	26.725	27.064	21.041	16.926	13.610
Afghanistan	0.064	0.128	0.289	0.372	0.509	0.446	0.382	0.221	0.137	0.001
Bangladesh	34.764	26.781	11.813	0.019	0.215	0.339	1.212	1.779	2.413	2.239
Cambodia	0.541	0.735	1.183	1.803	1.813	1.279	1.085	0.637	0.017	0.008
India	16.469	13.722	15.820	14.104	13.856	16.406	16.761	13.068	9.963	7.858
Indonesia					0.014	0.026	0.031	0.047	0.094	0.151
Malaysia					0.014	0.038	0.038	0.038	0.092	0.147
Myanmar					0.014	0.540	0.658	0.880	0.942	1.017
Nepal	6.931	7.575	9.200	9.212	8.811	6.935	5.221	2.719	1.540	1.077
Pakistan					0.019	0.177	0.301	0.967	1.019	1.000
Philippines					0.065	0.079	0.199	0.345	0.342	0.417
Thailand						0.014	0.023	0.094	0.126	0.122

C America + Carib	0.139	0.215	0.215	0.299	0.377	0.378	0.515	0.515	0.488	0.390
Dominican Rep				0.009	0.009	0.009	0.009	0.009		0.029
Guatemala		0.005	0.005	0.014	0.224	0.224	0.325	0.325	0.316	0.106
Haiti				0.009	0.009	0.010	0.010	0.010	0.001	0.046
Honduras	0.139	0.189	0.189	0.239	0.105	0.106	0.056	0.056	0.036	0.075
Panama		0.021	0.021	0.029	0.030	0.030	0.115	0.115	0.135	0.135
Middle East						0.078	0.707	0.707	0.707	0.707
Lebanon						0.039	0.112	0.112	0.112	0.112
United Arab Em						0.069	0.069	0.069	0.069	0.069
Yemen						0.039	0.527	0.527	0.527	0.527
Oceania		0.509	0.690	0.786	1.211	1.409	1.103	1.770	2.523	
Australia				0.014	0.026	0.034	0.050	0.050	0.037	0.070
Fiji				0.014	0.023	0.095	0.116	0.178	0.236	0.313
Kiribati		0.509	0.509	0.509	0.509	0.509	0.509			
Nauru				0.014	0.023	0.023	0.023	0.023	0.010	
Papua N Guin				0.075	0.102	0.192	0.278	0.357	1.038	1.667
Samoa				0.014	0.026	0.026	0.026	0.026	0.013	
Vanuatu				0.051	0.076	0.331	0.405	0.468	0.437	0.472
S America	0.983	1.056	1.224	1.410	1.404	0.622	0.850	0.753	0.594	0.564
Argentina				0.009	0.009	0.037	0.143	0.143	0.134	0.134
Bolivia	0.294	0.294	0.294	0.303	0.308	0.042	0.042	0.066	0.086	0.081
Chile					0.005	0.008	0.008	0.008	0.008	0.003
Colombia				0.009	0.015	0.015	0.120	0.145	0.136	0.159
Guyana	0.018	0.002	0.002	1.090	1.067	0.521	0.537	0.393	0.230	0.187
Peru	0.671	0.760	0.928							

Solar home systems (SHS >50 W)

Systèmes solaires domestiques (SSD >50 W)

Sistemas solares domésticos (SSD >50 W)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	131.094	169.706	207.863	189.633	234.205	241.554	277.448	303.993	307.069	285.724
Africa	7.421	13.174	26.736	46.171	65.091	80.513	101.224	129.656	139.158	168.307
Angola					0.091	0.091	0.980	0.980	1.009	0.960
Benin				0.132	0.306	0.306	1.082	1.750	2.590	4.643
Botswana					0.012	0.012	0.012	0.012	0.012	
Burkina Faso	0.068	0.124	0.181	0.362	0.564	0.670	1.072	1.419	1.916	2.337
Burundi				0.656	0.961	0.961	0.961	0.961	0.462	0.156
Cabo Verde				0.132	0.306	0.306	0.306	0.306	0.174	
Cameroon							0.355	0.812	0.842	0.949
Cent Afr Rep								0.029	0.029	0.029
Comoros				0.656	0.961	0.961	0.961	0.961	0.306	
Congo DR					0.091	0.091	0.980	3.598	6.158	8.778
Congo Rep								0.457	0.457	0.486
Cote d'Ivoire				0.132	0.594	1.310	2.819	4.771	5.924	7.084
Egypt				4.889	4.889	4.889	4.889	4.889		
Eq Guinea				0.132	0.306	0.306	0.306	0.306	0.174	
Eritrea				0.656	0.961	0.961	0.961	0.961	0.306	
Ethiopia				0.656	0.961	1.319	1.991	2.263	2.138	2.158
Gabon									0.029	
Gambia				0.132	0.306	0.306	0.306	0.306	0.317	0.144
Ghana				0.132	0.308	0.524	1.360	1.859	1.960	2.235
Guinea				0.132	0.306	0.521	1.102	1.678	1.952	2.944
Guinea Bissau	0.051	0.102	0.152	0.335	0.560	0.560	0.560	0.509	0.732	0.507
Kenya		0.090	0.746		3.761	5.706	11.168	19.244	24.442	31.250
Lesotho	0.097	0.097	0.097	0.097						
Liberia				0.132	0.306	0.441	0.821	1.407	1.537	2.022
Madagascar				0.656	0.961	0.961	0.961	1.323	0.933	1.292
Malawi				0.656	0.961	1.319	1.445	1.807	1.383	1.644
Mali	0.070	0.140	0.210	0.411	0.655	0.801	1.390	1.511	1.886	2.301
Mauritania				0.132	0.306	0.306	0.306	0.306	0.174	
Mauritius				0.656	1.418	1.623	1.730	1.730	1.075	0.312
Morocco	4.583	4.583	15.857	15.857	15.857	15.857	15.857	15.857	15.857	15.857
Mozambique				0.656	0.961	0.961	1.087	1.351	0.986	1.323
Niger				0.132	0.306	0.306	0.383	0.563	0.431	0.708
Nigeria	0.466	0.931	1.397	1.994	4.726	7.816	10.688	15.107	20.447	38.179
Rwanda		0.510		1.166	2.411	3.565	7.425	9.089	9.679	8.917
Sao Tome Prn				0.132	0.306	0.306	0.306	0.306	0.174	
Senegal				0.132	0.306	0.521	1.297	1.900	2.756	3.187
Seychelles				0.656	0.961	0.961	0.961	0.961	0.306	
Sierra Leone				0.132	0.306	0.306	0.887	1.490	1.763	1.941
Somalia				0.656	0.961	1.166	1.166	1.450	0.972	0.788
South Africa	0.265	0.530	0.794	1.059	1.336	1.071	0.806	0.541	0.276	0.153
South Sudan				0.656	0.961	0.961	0.961	0.961	0.306	
Tanzania		4.753	5.457	6.113	8.338	12.406	9.119	9.613	11.054	10.216
Togo					0.462	0.677	1.453	3.217	4.672	4.562
Tunisia	1.450	1.450	1.450	1.800	1.800	1.800	1.800	1.800	1.800	1.800
Uganda	0.372	0.466	0.540	1.103	1.866	3.488	4.569	5.122	5.390	5.218
Zambia				0.656	0.961	1.319	1.860	2.222	1.954	2.385
Zimbabwe				0.656	1.418	1.776	1.776	1.953	1.453	0.812
Asia	119.448	151.796	176.662	138.926	152.773	141.492	148.584	142.722	136.397	96.678
Afghanistan	0.065	0.130	0.195	0.259	0.530	0.465	0.400	0.335	0.270	
Bangladesh	106.584	138.894	163.688	125.887	138.582	120.307	108.537	100.788	92.965	54.265
India					0.338	3.339	7.989	8.774	8.774	8.436
Indonesia	1.636	1.636	1.636	1.636	1.636	1.636	1.636	1.643	2.129	2.129
Malaysia									0.021	
Mongolia	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	
Myanmar						0.526	14.192	14.323	14.816	14.914
Nepal					0.206	2.707	2.707	2.707	2.707	2.502
Pakistan					0.338	0.842	1.169	2.083	2.174	1.836
Philippines			0.008	0.008	0.008	0.534	0.817	0.933	1.426	1.439
Sri Lanka	7.613	7.613	7.613	7.613	7.613	7.613	7.613	7.613	7.613	7.613
Viet Nam	0.027									

C America + Carib	0.284	0.293	0.302	0.441	0.935	0.929	1.281	1.272	1.179	1.611
Belize	0.001	0.001	0.001	0.001	0.001					
Costa Rica	0.283	0.283	0.283	0.410	0.410	0.171	0.171	0.171	0.044	0.044
Cuba		0.009	0.017	0.030	0.515	0.528	0.880	0.871	0.859	0.374
Dominican Rep					0.009	0.009	0.009	0.009	0.009	
Haiti									0.023	0.445
Honduras						0.221	0.221	0.221	0.244	0.666
Panama										0.081
Oceania	1.078	1.325	1.249	1.213	1.163	1.596	2.114	2.320	3.344	3.648
Fiji	0.737	0.929	0.929	0.929	0.929	0.929	0.929	0.929	1.437	1.538
Kiribati	0.214	0.277	0.201	0.165	0.126	0.097	0.049			
Nauru	0.008	0.008	0.008	0.008	0.008					
Papua N Guin						0.044	0.327	0.451	0.946	1.127
Tonga	0.119	0.111	0.111	0.111	0.100					
Vanuatu						0.526	0.809	0.940	0.961	0.983
S America	2.863	3.118	2.915	2.882	14.243	17.024	24.246	28.022	26.990	15.480
Argentina	1.319	1.319	0.896							0.340
Bolivia									0.003	0.003
Brazil				0.159	3.263	3.263	3.263	3.263		0.084
Colombia				0.873	0.873	0.873	0.873	0.873	0.876	0.003
Guyana	0.905	0.903	0.718	0.550	0.367	0.183				0.003
Peru	0.639	0.896	1.301	1.301	9.741	12.705	20.110	23.880	23.880	15.053

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

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	39.758	51.012	133.607	323.594	356.944	415.237	425.320	544.514	568.926	572.582
Africa	7.475	9.787	71.887	260.725	291.154	310.884	316.379	328.606	334.522	337.618
Algeria	0.454	0.454	49.100	219.100	219.100	219.100	219.100	219.100	219.100	219.100
Benin			0.122	0.697	0.697	0.737	0.807	0.807	0.807	0.807
Burkina Faso	0.203	0.203	0.203	0.203	0.252	0.312	0.900	0.900	0.900	0.900
Cabo Verde	0.027	0.039	0.089	0.089	0.148	0.148	0.186	0.186	0.186	0.186
Cameroon	0.049	0.049	0.121	0.193	11.470	23.985	23.985	23.988	23.988	24.042
Chad			0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122
Congo DR					1.032	1.132	2.462	2.462	2.462	2.462
Côte d'Ivoire			0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218
Egypt			10.000	10.000	10.000	10.125	10.180	10.180	10.180	10.180
Eritrea				0.350	14.350	16.850	16.850	16.850	16.850	16.850
Ethiopia					0.018	0.018	0.343	0.343	0.343	0.343
Gabon							0.400	0.400	0.400	0.400
Gambia			0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.180
Ghana			0.256	0.256	0.606	0.797	0.797	0.797	0.797	0.797
Guinea						0.077	0.077	0.077	0.077	0.077
Guinea Bissau				0.312	0.312	0.920	0.920	0.920	0.920	0.920
Kenya	0.834	0.884	1.490	1.629	1.629	1.659	2.347	2.475	2.475	2.987
Lesotho					0.157	0.324	0.324	0.327	0.327	0.050
Liberia								0.327	0.327	0.327
Madagascar	0.006	0.006	0.161	0.161	0.293	0.293	0.477	1.097	1.217	1.217
Malawi							0.085	1.477	1.477	1.477
Mali	3.050	3.930	4.772	4.858	6.236	6.597	6.929	7.059	7.419	7.488
Mauritania	0.015	0.150	0.150	16.768	16.768	16.768	16.768	16.768	16.768	16.768
Mozambique	1.324	1.331	1.331	1.331	1.331	1.331	1.331	1.331	2.457	3.382
Namibia	0.202	0.494	0.494	0.494	0.494	0.494	0.494	0.644	0.644	0.644
Niger	0.028	0.028	0.028	0.028	0.097	0.165	0.165	0.568	0.568	0.568
Nigeria	0.216	0.425	1.208	1.463	3.321	3.583	4.535	5.879	7.197	7.287
Rwanda			0.046	0.046	0.046	0.106	0.156	0.156	0.156	0.256
Senegal	0.005	0.005	0.005	0.005	0.005	1.025	1.025	1.025	1.025	1.075
Seychelles							5.000	5.400	5.400	5.400
Sierra Leone	0.005	0.005	0.005	0.005	0.198	0.198	1.398	2.698	4.188	4.188
South Africa	0.001	0.001	0.001	0.001	0.033	0.033	0.033	0.033	0.033	0.033
Tanzania	0.033	0.107	0.141	0.243	0.494	0.494	0.500	0.500	0.500	0.540
Togo					0.400	0.700	0.730	0.730	0.770	0.770
Tunisia										0.200
Uganda	0.851	1.478	1.565	1.795	1.818	1.818	2.532	2.532	2.879	3.815
Zambia	0.200	0.200	0.201	0.201	0.401	0.775	1.101	1.101	1.306	1.306
Zimbabwe				0.099	0.099	0.099	0.099	0.199	0.258	0.258
Asia	31.270	38.506	50.049	51.140	53.862	88.696	91.716	192.495	198.729	199.109
Afghanistan	0.344	1.394	1.394	1.797	1.797	1.797	1.797	2.137	2.137	2.137
Bangladesh	0.200	0.640	1.871	2.021	3.089	5.199	5.887	6.555	6.555	6.703
Cambodia					0.021	0.021	0.021	0.021	0.065	0.065
India	5.340	6.420	6.940	7.080	7.460	8.000	8.010	108.010	108.010	108.010
Indonesia	22.323	25.261	34.056	34.106	35.025	64.415	66.105	65.245	71.085	71.085
Lao PDR	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.171	0.171	0.171
Malaysia	1.525	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412	2.412
Maldives		0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204
Myanmar			0.079	0.292	0.524	0.579	0.747	1.035	1.035	1.035
Nepal	2.904	2.904	2.935	2.993	3.116	3.335	3.569	3.869	3.879	4.110
Pakistan						0.500	0.500	0.500	0.500	0.500
Philippines				0.030	0.030	2.030	2.240	2.361	2.361	2.361
Sri Lanka				0.046	0.046	0.046	0.046	0.046	0.046	0.046
Thailand						0.020	0.270	0.270	0.270	0.270

C America + Carib	0.175	0.175	0.421	0.448	0.648	0.957	0.957	0.957	12.957	12.957
Belize	0.175	0.175	0.175	0.199	0.199	0.199	0.199	0.199	0.199	0.199
Haiti			0.246	0.249	0.449	0.449	0.449	0.449	0.449	0.449
Honduras						0.300	0.300	0.300	0.300	0.300
Nicaragua						0.009	0.009	0.009	0.009	0.009
Puerto Rico										
Middle East	0.071	0.071	1.551	1.581	1.581	1.597	1.597	4.717	4.717	4.717
Palestine	0.071	0.071	0.801	0.831	0.831	0.847	0.847	0.967	0.967	0.967
United Arab Em			0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
Yemen								3.000	3.000	3.000
Oceania	0.014	0.199	0.754	0.754	0.754	2.476	3.223	3.299	3.299	3.299
Australia								0.011	0.011	0.011
Cook Is						1.722	2.459	2.459	2.459	2.459
Fiji			0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555
Kiribati		0.185	0.185	0.185	0.185	0.185	0.185	0.185	0.185	0.185
Samoa	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Vanuatu								0.075	0.075	0.075
S America	0.754	2.274	8.945	8.945	8.945	10.626	11.447	14.440	14.701	14.883
Argentina								0.118	0.118	0.118
Bolivia			5.260	5.260	5.260	5.327	5.747	5.747	5.747	5.928
Brazil	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Chile								0.003	0.003	0.003
Colombia	0.629	0.629	0.888	0.888	0.888	1.031	1.031	3.521	3.521	3.521
Ecuador	0.012	1.533	1.533	1.533	1.533	2.485	2.485	2.485	2.485	2.485
Guyana									0.228	0.228
Peru	0.072	0.072	0.072	0.072	0.072	0.072	0.354	0.854	0.888	0.888
Suriname							0.520	0.520	0.520	0.520
Uruguay			0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052
Venezuela			1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100

Solar pumps Pompes solaires Bombas solares

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	25.376	57.850	117.727	208.356	388.881	583.803	617.094	853.621	993.391	1 354.982
Africa	4.772	5.768	7.555	26.844	28.246	32.007	32.274	36.058	36.323	36.431
Algeria	0.050	0.050	0.053	0.053	0.053	0.058	0.058	0.058	0.058	0.058
Botswana	0.003	0.003	0.003	0.025	0.025	0.027	0.027	0.027	0.027	0.027
Burkina Faso	0.016	0.017	0.417	0.417	0.417	0.417	0.417	0.417	0.417	0.417
Burundi				0.002	0.002	0.002	0.002	0.002	0.002	0.002
Cabo Verde						0.041	0.047	0.047	0.047	0.047
Cameroon	0.006	0.006	0.008	0.008	0.010	0.010	0.010	0.010	0.010	0.010
Chad	0.008	0.008	0.008	0.008	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	0.005	0.005	0.005	0.005
Congo Rep	0.015	0.019	0.020	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Cote d'Ivoire		0	0	0	0	0	0	0	0	0
Djibouti	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043
Egypt	0.325	0.611	1.141	1.392	1.578	1.578	1.578	1.578	1.578	1.578
Eritrea	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Ethiopia	0.031	0.041	0.058	17.506	17.533	17.564	17.564	17.564	17.564	17.564
Gabon	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Gambia	0.223	0.249	0.249	0.554	0.665	0.672	0.672	0.672	0.672	0.672
Ghana		0.020	0.035	0.039	0.040	0.040	0.040	0.040	0.119	0.186
Guinea		0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Guinea Bissau	0.020	0.020	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033
Kenya	0.111	0.220	0.298	0.349	0.422	0.562	0.562	0.662	0.662	0.662
Libya	0	0	0	0	0	0	0	0	0	0
Madagascar	0.016	0.027	0.027	0.027	0.027	0.032	0.032	0.032	0.032	0.032
Malawi	0.091	0.136	0.181	0.496	0.504	0.514	0.514	0.600	0.600	0.602
Mali	0.139	0.139	0.139	0.153	0.153	0.153	0.153	0.153	0.153	0.153
Mauritania	0.014	0.030	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Morocco	0.654	0.823	1.037	1.330	1.385	1.385	1.473	1.574	1.574	1.574
Mozambique	0.001	0.008	0.011	0.021	0.021	0.027	0.027	0.031	0.031	0.031
Namibia	0.952	0.952	0.952	0.953	0.953	0.953	0.953	0.953	0.953	0.953
Niger	0.008	0.011	0.026	0.031	0.031	0.059	0.059	0.059	0.059	0.059
Nigeria	0.982	0.982	1.007	1.007	1.007	1.008	1.008	1.008	1.008	1.008
Reunion	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Rwanda					0.004	3.308	3.372	6.692	6.703	6.703
Senegal	0.054	0.094	0.139	0.240	0.439	0.462	0.485	0.606	0.626	0.641
Sierra Leone	0	0	0	0	0.243	0.280	0.303	0.303	0.327	0.331
Somalia	0.020	0.071	0.103	0.103	0.103	0.104	0.104	0.104	0.104	0.104
South Africa	0.427	0.491	0.494	0.504	0.504	0.504	0.504	0.504	0.504	0.504
South Sudan	0.045	0.045	0.045	0.087	0.167	0.167	0.179	0.179	0.179	0.179
Sudan	0.038	0.038	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057
Tanzania	0.162	0.251	0.316	0.381	0.496	0.581	0.625	0.629	0.629	0.644
Tunisia	0.096	0.102	0.256	0.278	0.291	0.291	0.323	0.382	0.414	0.420
Uganda	0.157	0.202	0.250	0.505	0.523	0.563	0.622	0.622	0.622	0.622
Zambia	0.001	0.001	0.001	0.001	0.087	0.087	0.087	0.087	0.087	0.087
Zimbabwe	0.028	0.043	0.080	0.126	0.303	0.303	0.303	0.303	0.303	0.303
Asia	20.335	51.462	109.264	180.020	355.312	544.463	576.607	807.908	946.132	1 306.958
Afghanistan	0.029	0.029	0.029	0.092	0.117	0.118	0.118	0.118	0.118	0.118
Bangladesh	0.211	0.964	3.547	9.198	18.560	28.226	40.872	46.023	48.627	49.331
Cambodia	0.007	0.007	0.007	0.034	0.034	0.039	0.063	0.063	0.083	0.083
India	19.453	49.598	104.323	168.966	333.955	513.051	532.383	757.367	891.622	1 251.704
Indonesia	0.115	0.178	0.374	0.517	0.827	1.053	1.123	1.180	1.221	1.262
Korea DPR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Korea Rep	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Lao PDR	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Malaysia	0.004	0.004	0.004	0.006	0.017	0.017	0.017	0.017	0.017	0.017
Myanmar	0.054	0.061	0.061	0.098	0.100	0.101	0.131	0.131	0.136	0.136
Nepal	0.302	0.377	0.578	0.694	0.879	0.879	0.879	1.963	3.247	3.247
Pakistan	0.077	0.102	0.149	0.149	0.315	0.315	0.315	0.315	0.315	0.315
Philippines	0.006	0.016	0.020	0.034	0.207	0.287	0.315	0.339	0.353	0.353
Sri Lanka	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Thailand	0.022	0.063	0.109	0.169	0.239	0.314	0.328	0.330	0.330	0.330
Timor Leste	0.013	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019

C America + Carib	0.031	0.035	0.072	0.159	0.599	0.652	0.786	0.855	1.245	1.286
Barbados	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Belize	0	0	0	0	0.004	0.006	0.006	0.006	0.006	0.006
Cayman Is	0.002	0.002	0.002	0.020	0.044	0.058	0.059	0.063	0.068	0.074
Costa Rica	0.007	0.007	0.007	0.028	0.110	0.110	0.164	0.164	0.164	0.164
Cuba	0.002	0.002	0.021	0.021	0.045	0.045	0.047	0.051	0.092	0.097
Dominican Rep	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002
El Salvador	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Guadeloupe	0.001	0.011	0.039	0.039	0.052	0.091	0.103	0.256	0.270	0.270
Guatemala	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Haiti	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Honduras	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Jamaica	0.006	0.008	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Martinique	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003
Nicaragua	0.004	0.004	0.004	0.020	0.024	0.044	0.056	0.066	0.096	0.107
Panama	0.009	0.009	0.009	0.013	0.013	0.013	0.013	0.013	0.013	0.013
St Kitts Nevis	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Trinidad Tobago	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Middle East	0.073	0.391	0.588	0.908	3.495	4.995	5.045	5.745	5.760	5.911
Bahrain	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.003	0.003	0.003
Iran IR	0.009	0.039	0.039	0.039	0.130	0.130	0.157	0.265	0.265	0.265
Iraq	0.032	0.269	0.289	0.554	0.821	2.321	2.321	2.405	2.405	2.413
Kuwait	0.016	0.016	0.016	0.021	0.021	0.021	0.021	0.022	0.036	0.178
Lebanon	0.002	0.002	0.002	0.002	0.017	0.017	0.017	0.017	0.017	0.017
Oman	0.051	0.228	0.278	0.278	2.468	2.468	2.492	2.997	2.997	2.997
Syrian AR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
United Arab Em	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Yemen	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Oceania	0.011	0.012	0.015	0.017	0.051	0.078	0.100	0.154	0.192	0.197
Australia	0.011	0.011	0.015	0.016	0.026	0.053	0.074	0.129	0.167	0.171
Kiribati	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002
Papua N Guin	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tonga	0.001	0.001	0.001	0.001	0.022	0.022	0.022	0.022	0.022	0.022
Vanuatu	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
S America	0.154	0.184	0.234	0.408	1.178	1.608	2.282	2.900	3.739	4.200
Argentina	0.035	0.037	0.037	0.066	0.243	0.371	0.600	0.820	1.110	1.285
Bolivia	0.001	0.002	0.027	0.059	0.097	0.128	0.250	0.272	0.384	0.423
Brazil	0.001	0.001	0.001	0.003	0.031	0.051	0.073	0.073	0.085	0.085
Chile	0.035	0.045	0.055	0.087	0.094	0.155	0.191	0.196	0.329	0.329
Colombia	0.023	0.032	0.038	0.042	0.107	0.123	0.222	0.336	0.369	0.381
Ecuador	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Guyana	0	0	0	0	0	0	0	0	0	0
Paraguay	0.044	0.048	0.048	0.055	0.125	0.160	0.179	0.300	0.360	0.444
Peru	0.011	0.013	0.021	0.034	0.053	0.169	0.274	0.361	0.479	0.604
Uruguay	0.003	0.005	0.007	0.060	0.079	0.103	0.146	0.194	0.274	0.297
Venezuela	0.001	0.001	0.001	0.001	0.347	0.347	0.347	0.347	0.348	0.351

Solar pumps (of which agriculture) Pompes solaires (dont agriculture) Bombas solares (de los que agricultura)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	20.992	52.309	109.388	198.481	376.881	569.558	602.284	666.332	804.277	1 165.443
Africa	1.373	1.683	2.274	20.760	21.643	25.163	25.275	25.638	25.859	25.873
Algeria			0.003	0.003	0.003	0.008	0.008	0.008	0.008	0.008
Botswana				0.011	0.011	0.012	0.012	0.012	0.012	0.012
Burkina Faso				0	0	0	0	0	0	0
Cabo Verde							0.006	0.006	0.006	0.006
Congo Rep	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Djibouti	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
Egypt	0.090	0.288	0.603	0.718	0.904	0.904	0.904	0.904	0.904	0.904
Ethiopia		0.010	0.010	17.433	17.433	17.433	17.433	17.433	17.433	17.433
Gambia	0.210	0.236	0.236	0.537	0.647	0.647	0.647	0.647	0.647	0.647
Ghana			0.020	0.035	0.035	0.037	0.037	0.037	0.116	0.116
Kenya		0.024	0.060	0.060	0.132	0.272	0.272	0.372	0.372	0.372
Madagascar		0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Malawi	0.001	0.001	0.001	0.271	0.279	0.289	0.289	0.289	0.289	0.289
Mali	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
Mauritania		0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Morocco		0.115	0.364	0.418	0.418	0.418	0.418	0.506	0.607	0.607
Mozambique	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
Namibia	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838
Niger	0.006	0.006	0.006	0.010	0.010	0.038	0.038	0.038	0.038	0.038
Nigeria	0.026	0.026	0.026	0.026	0.026	0.027	0.027	0.027	0.027	0.027
Rwanda				0.004	3.308	3.372	3.392	3.403	3.403	3.403
Senegal			0.037	0.203	0.214	0.218	0.313	0.313	0.313	0.313
South Africa		0.003	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012
Tanzania	0.019	0.019	0.019	0.036	0.054	0.060	0.060	0.060	0.060	0.068
Tunisia	0.086	0.086	0.184	0.206	0.219	0.219	0.251	0.310	0.342	0.347
Uganda		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zambia				0.086	0.086	0.086	0.086	0.086	0.086	0.086
Zimbabwe			0.030	0.196	0.196	0.196	0.196	0.196	0.196	0.196
Asia	19.573	50.428	106.894	177.378	352.099	540.921	572.944	635.611	772.519	1 133.314
Afghanistan	0.018	0.018	0.018	0.064	0.064	0.064	0.064	0.064	0.064	0.064
Bangladesh	0.115	0.836	3.419	9.070	18.433	28.099	40.745	45.895	48.499	49.204
Cambodia				0.025	0.025	0.025	0.025	0.025	0.025	0.025
India	19.415	49.547	103.293	167.900	332.889	511.956	531.287	588.771	723.026	1 083.108
Indonesia		0.021	0.054	0.201	0.247	0.250	0.273	0.310	0.319	0.319
Malaysia			0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Myanmar	0.024	0.024	0.024	0.024	0.025	0.025	0.052	0.052	0.052	0.052
Nepal		0.117	0.233	0.350	0.350	0.350	0.350	0.350	0.350	0.350
Pakistan				0.056	0.056	0.056	0.056	0.056	0.056	0.056
Philippines				0.005	0.046	0.046	0.051	0.062	0.073	0.073
Thailand	0.002	0.002	0.005	0.049	0.051	0.062	0.062	0.062	0.062	0.062
C America + Carib			0.019	0.101	0.116	0.167	0.181	0.370	0.387	
Belize					0.002	0.002	0.002	0.002	0.002	0.002
Costa Rica					0.001	0.001	0.001	0.001	0.001	0.002
Dominican Rep				0.014	0.094	0.094	0.122	0.122	0.122	0.122
El Salvador									0.039	0.044
Guatemala				0.001	0.001	0.011	0.023	0.035	0.077	0.089
Honduras					0.001	0.011	0.013	0.013	0.121	0.121
Nicaragua					0.002	0.002	0.003	0.003	0.003	0.003
Panama				0.004	0.004	0.004	0.004	0.004	0.004	0.004

Middle East	0.032	0.178	0.178	0.178	2.586	2.586	2.586	3.175	3.185	3.212
Iraq					0.026	0.026	0.026	0.026	0.026	0.026
Kuwait					0.011	0.011	0.011	0.011	0.011	0.011
Lebanon	0.030	0.176	0.176	0.176	0.352	0.352	0.352	0.436	0.436	0.441
Oman					0.013	0.013	0.013	0.013	0.013	0.013
Syrian AR									0.010	0.032
United Arab Em	0.002	0.002	0.002	0.002	0.017	0.017	0.017	0.017	0.017	0.017
Yemen					2.168	2.168	2.168	2.673	2.673	2.673
Oceania			0.004	0.005	0.009	0.035	0.055	0.080	0.109	0.110
Australia			0.004	0.005	0.009	0.035	0.055	0.080	0.109	0.110
S America	0.014	0.020	0.038	0.141	0.443	0.735	1.258	1.647	2.235	2.547
Argentina					0.023	0.184	0.298	0.515	0.720	1.006
Bolivia					0.003	0.030	0.059	0.150	0.166	0.208
Brazil					0.010	0.029	0.042	0.042	0.042	0.042
Chile	0.006	0.016	0.039	0.045	0.097	0.132	0.137	0.269	0.269	
Colombia					0.011	0.027	0.092	0.104	0.105	0.105
Paraguay	0.013	0.013	0.013	0.016	0.078	0.113	0.127	0.246	0.305	0.390
Peru					0.008	0.015	0.024	0.032	0.094	0.116
Uruguay	0.001	0.001	0.001	0.045	0.061	0.081	0.106	0.117	0.149	0.159

Solar pumps (of which public water supply)

Pompes solaires (dont alimentation en eau publique)

Bombas solares (de los que suministro público de agua)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	2.582	3.098	4.980	6.028	7.956	10.007	10.324	15.045	16.611	16.786
Africa	2.143	2.433	3.141	3.724	4.171	4.394	4.527	7.918	7.954	7.981
Algeria	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Botswana				0.012	0.012	0.012	0.012	0.012	0.012	0.012
Burkina Faso			0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
Burundi				0.002	0.002	0.002	0.002	0.002	0.002	0.002
Cabo Verde						0.041	0.041	0.041	0.041	0.041
Cameroon		0	0.001	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Chad	0.005	0.005	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Congo DR				0.004	0.004	0.004	0.004	0.004	0.004	0.004
Congo Rep				0.009	0.009	0.009	0.009	0.009	0.009	0.009
Egypt				0.039	0.039	0.039	0.039	0.039	0.039	0.039
Eritrea	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Ethiopia	0.031	0.031	0.031	0.035	0.062	0.093	0.093	0.093	0.093	0.093
Gambia						0.007	0.007	0.007	0.007	0.007
Ghana						0.003	0.003	0.003	0.003	0.003
Kenya	0.084	0.169	0.211	0.262	0.263	0.263	0.263	0.263	0.263	0.263
Madagascar	0.016	0.016	0.016	0.016	0.016	0.016	0.021	0.021	0.021	0.021
Malawi	0.090	0.135	0.180	0.225	0.225	0.225	0.225	0.311	0.311	0.313
Mali	0.013	0.013	0.013	0.027	0.027	0.027	0.027	0.027	0.027	0.027
Mauritania	0.014	0.014	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029
Morocco	0.046	0.046	0.049	0.058	0.058	0.058	0.058	0.058	0.058	0.058
Mozambique				0.003	0.003	0.003	0.009	0.009	0.013	0.013
Namibia	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113
Niger					0	0	0	0	0	0
Nigeria	0.954	0.954	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979
Rwanda								3.300	3.300	3.300
Senegal	0.004	0.011	0.023	0.041	0.070	0.071	0.073	0.073	0.090	0.105
Sierra Leone					0.243	0.275	0.298	0.298	0.318	0.322
Somalia	0.020	0.020	0.052	0.052	0.052	0.053	0.053	0.053	0.053	0.053
South Africa	0.375	0.423	0.423	0.424	0.424	0.424	0.424	0.424	0.424	0.424
South Sudan	0.045	0.045	0.045	0.087	0.167	0.167	0.179	0.179	0.179	0.179
Sudan	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Tanzania	0.120	0.180	0.240	0.304	0.338	0.402	0.435	0.435	0.435	0.441
Tunisia				0.025	0.025	0.025	0.025	0.025	0.025	0.025
Uganda	0.147	0.192	0.237	0.492	0.510	0.550	0.609	0.609	0.609	0.609
Zimbabwe	0.002	0.002	0.002	0.014	0.025	0.025	0.025	0.025	0.025	0.025
Asia	0.437	0.572	1.706	1.852	2.353	2.562	2.640	3.753	5.038	5.038
Afghanistan				0.017	0.042	0.043	0.043	0.043	0.043	0.043
Bangladesh	0.063	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Cambodia						0.006	0.006	0.006	0.006	0.006
India			0.980	0.980	0.980	1.010	1.010	1.010	1.010	1.010
Indonesia	0.054	0.081	0.145	0.218	0.323	0.476	0.535	0.554	0.554	0.554
Malaysia					0.011	0.011	0.011	0.011	0.011	0.011
Myanmar	0.020	0.020	0.020	0.053	0.053	0.054	0.058	0.058	0.058	0.058
Nepal	0.300	0.375	0.459	0.459	0.527	0.527	0.527	1.611	2.895	2.895
Pakistan					0.111	0.111	0.111	0.111	0.111	0.111
Philippines				0.008	0.167	0.176	0.181	0.191	0.191	0.191
Thailand		0.001	0.007	0.022	0.045	0.060	0.064	0.064	0.064	0.064
C America + Carib	0.002	0.002	0.022	0.055	0.401	0.431	0.460	0.511	0.658	0.660
Belize					0.004	0.004	0.004	0.004	0.004	0.004
Costa Rica				0.002	0.015	0.028	0.029	0.033	0.038	0.038
Dominican Rep				0.005	0.007	0.007	0.007	0.007	0.007	0.007
El Salvador			0.021	0.021	0.045	0.045	0.045	0.045	0.045	0.045
Guadeloupe						0.002	0.002	0.002	0.002	0.002
Guatemala				0.026	0.026	0.029	0.055	0.055	0.144	0.144
Haiti					0.105	0.105	0.105	0.105	0.105	0.105
Honduras					0.195	0.195	0.195	0.233	0.286	0.286
Martinique	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003
Nicaragua					0.002	0.014	0.015	0.025	0.025	0.027

Middle East	0.091	0.111	0.376	0.555	2.055	2.055	2.069	2.069	2.193
Bahrain							0.003	0.003	0.003
Iraq				0.065	0.065	0.065	0.077	0.077	0.077
Lebanon	0.091	0.111	0.376	0.467	1.967	1.967	1.967	1.967	1.971
Syrian AR									0.121
Yemen				0.023	0.023	0.023	0.023	0.023	0.023
Oceania				0.029	0.030	0.030	0.036	0.036	0.039
Australia				0.005	0.005	0.005	0.011	0.011	0.014
Kiribati				0.002	0.002	0.002	0.002	0.002	0.002
Tonga				0.022	0.022	0.022	0.022	0.022	0.022
Vanuatu				0.001	0.001	0.001	0.001	0.001	0.001
S America	0.021	0.447	0.536	0.612	0.760	0.856	0.876		
Argentina		0	0.004	0.005	0.005	0.013	0.013	0.014	
Bolivia		0.018	0.019	0.021	0.021	0.021	0.037	0.037	
Brazil			0.010	0.010	0.010	0.010	0.010	0.010	
Chile			0.001	0.006	0.006	0.006	0.006	0.006	
Colombia			0.054	0.054	0.087	0.160	0.189	0.200	
Guyana			0	0	0	0	0	0	
Paraguay			0	0	0	0	0	0	
Peru	0.002		0.011	0.090	0.131	0.186	0.235	0.241	
Uruguay			0.001	0.001	0.004	0.016	0.019	0.019	
Venezuela			0.347	0.347	0.347	0.347	0.347	0.347	0.347

Other off-grid solar PV

Autre solaire PV hors réseau

Otra solar PV aislada

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	257.581	401.095	538.792	671.589	826.581	1 087.753	1 179.876	1 282.544	1 410.083	1 425.762
Africa	4.218	26.692	48.937	63.908	71.596	133.807	154.570	201.932	301.657	302.568
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	0.320	0.320	0.320	0.320
Benin	0.050	0.050	0.061	0.081	0.081	0.081	0.081	0.081	0.081	0.081
Botswana	0.412	0.557	0.850	0.850	0.972	1.276	1.276	1.276	1.276	1.276
Burkina Faso	0.893	1.193	1.493	1.793	1.793	17.095	17.095	17.095	17.095	17.095
Burundi			0.291	0.291	0.291	0.291	0.291	0.291	0.291	0.291
Cameroon	0.011	0.011	0.017	0.023	0.023	0.023	1.298	1.423	1.423	1.423
Cent Afr Rep		0.095	0.099	0.201	0.254	0.264	0.264	0.289	0.289	0.289
Chad	0.043	0.043	0.043	0.043	0.043	0.351	0.351	0.351	0.851	0.851
Comoros						0.034	0.034	0.034	0.034	0.034
Congo DR	0.104	0.757	0.787	3.731	5.390	19.093	19.243	19.243	19.243	19.243
Cote d'Ivoire		0.009	0.010	0.010	0.010	0.059	0.059	0.059	0.059	0.059
Djibouti					0.012	0.025	0.025	0.025	0.025	0.025
Egypt					0.006	0.006	0.156	27.246	27.246	27.246
Eq Guinea				0.006	0.006	0.006	0.006	0.006	0.006	0.006
Eritrea	0.019	7.843	7.843	7.843	7.843	7.853	7.911	7.911	7.911	7.911
Eswatini					0.003	0.003	0.003	0.003	0.003	0.003
Ethiopia	0.142	3.485	3.500	10.624	10.628	14.193	14.759	15.324	15.890	15.890
Gabon	0.026	0.026	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Gambia	0.030	0.030	0.030	0.030	0.030	0.040	0.041	0.041	0.041	0.041
Ghana		4.550	8.553	9.791	10.469	10.473	10.473	10.473	10.620	10.620
Guinea	0.071	0.071	0.071	0.071	0.071	12.281	12.705	12.705	12.705	12.705
Kenya	0.609	3.296	14.457	14.766	16.525	17.487	17.566	17.975	29.010	29.010
Lesotho						0.015	0.015	0.015	0.015	0.015
Liberia	0.018	0.109	0.109	0.179	0.187	0.241	0.251	0.303	0.303	0.303
Madagascar	0.250	0.250	0.250	0.250	0.250	0.250	0.800	0.975	0.975	0.975
Malawi	0.074	0.074	0.127	0.127	0.167	0.167	0.173	0.204	0.211	0.235
Mali	0.088	0.098	0.098	0.237	0.237	0.251	0.256	0.256	30.256	30.265
Mauritania	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Morocco								41.700	41.700	
Mozambique	0.038	0.124	0.256	0.488	0.488	0.528	0.528	0.564	0.564	0.564
Namibia						12.000	12.999	18.349	18.424	18.424
Niger	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Nigeria	0.293	1.126	6.126	7.793	8.387	9.137	16.757	25.881	32.271	32.311
Reunion							1.340	1.500	1.500	1.500
Rwanda	0	0	0	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Senegal	0.008	0.008	0.012	0.012	0.077	0.677	0.677	0.677	0.687	
Seychelles			0.500	0.500	0.500	1.250	1.340	3.330	5.830	5.830
Sierra Leone	0.064	0.064	0.064	0.269	0.333	0.333	1.443	1.443	7.443	7.475
Somalia	0	0.060	0.060	0.203	0.295	0.388	0.388	0.388	0.505	0.505
South Africa	0.048	0.867	0.867	0.867	3.252	3.267	3.879	3.879	3.879	3.879
South Sudan	0.053	0.053	0.062	0.076	0.083	0.585	0.684	0.685	1.024	1.809
Sudan	0.007	0.007	0.007	0.007	0.046	0.055	0.055	0.055	0.055	0.055
Tanzania	0.078	0.078	0.150	0.335	0.377	0.740	0.988	1.024	1.064	1.064
Togo	0.007	0.022	0.062	0.063	0.066	0.122	0.127	0.758	0.791	0.791
Tunisia							5.000	6.500	6.500	6.500
Uganda	0.122	0.167	0.212	0.435	0.461	0.479	0.784	0.786	1.062	1.073
Zambia	0	0.276	0.276	0.276	0.283	0.641	0.669	0.669	0.669	0.669
Zimbabwe	0.001	0.551	0.551	0.551	0.552	0.674	0.674	0.734	0.734	0.734
Asia	241.575	320.215	373.802	467.785	589.857	635.567	650.321	697.802	720.009	723.063
Afghanistan	16.000	16.000	16.000	16.638	16.638	16.858	16.858	16.862	16.862	
Bangladesh	0.008	1.388	10.403	13.703	33.783	36.313	43.932	50.805	51.725	53.679
Brunei Darussalam							0.008	0.008	0.008	
Cambodia						0.002	0.002	0.049	0.049	
India	218.405	295.233	339.629	429.130	479.703	517.376	518.198	544.792	555.048	556.009
Indonesia	4.993	4.993	5.069	5.125	5.226	10.509	14.459	21.269	29.179	29.179
Korea DPR	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
Malaysia	1.008	1.008	1.008	1.008	1.008	1.008	1.008	0.180	0.180	0.180
Mongolia	0	0	0	0.146	0.256	0.256	0.256	0.256	0.256	0.256
Myanmar	0	0	0	0.146	0.256	0.256	0.256	0.256	0.256	0.256
Nepal	0.015	0.015	0.015	0.029	40.037	40.042	40.247	40.253	40.253	40.330
Pakistan	0	0.026	0.031	0.108	11.308	11.308	12.460	12.460	12.517	12.573
Philippines	0.021	0.427	0.522	0.522	0.522	0.522	0.525	0.531	0.533	0.537
Singapore								6.000	6.000	
Thailand	0	0	0	0.250	0.250	0.250	0.250	1.250	4.262	4.262
Timor Leste	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Viet Nam	1.067	1.067	1.067	1.067	1.067	1.067	2.067	2.067	2.067	2.067

C America + Carib	2.987	4.521	6.705	8.526	12.814	12.663	28.523	29.193	29.223	29.246
Antigua Barb					0.010	0.414	0.414	0.414	0.414	0.414
Aruba		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Bahamas	0.375	0.375	0.720	0.720	0.720	0.720	1.020	1.020	1.020	1.020
Belize	0.020	0.020	0.026	0.026	0.039	0.039	0.657	0.712	0.712	0.712
Costa Rica	0.092	0.092	0.092	0.163	0.163	0.172	0.172	0.377	0.377	0.377
Cuba		0.006	0.332	0.332	0.332	0.332	7.332	7.332	7.332	7.332
Dominican Rep	1.500	3.000	4.500	6.233	9.098	9.098	9.152	9.171	9.199	9.199
El Salvador	0.053	0.053	0.053	0.053	0.053	0.053	4.039	4.039	4.039	4.039
Guatemala	0.129	0.144	0.144	0.151	0.151	0.151	0.151	0.151	0.151	0.151
Haiti	0.693	0.693	0.701	0.701	0.824	0.937	1.014	1.081	1.081	1.081
Honduras	0.075	0.076	0.076	0.077	0.653	0.675	2.097	2.421	2.423	2.423
Nicaragua	0.047	0.047	0.047	0.047	0.047	0.047	2.447	2.447	2.447	2.447
Panama	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.027
Puerto Rico					0.308	0.013	0.013	0.013	0.013	0.013
US Virgin Is					0	0	0	0	0	0
Middle East	2.408	43.148	97.873	118.274	138.419	289.703	325.785	326.385	327.335	339.007
Iraq		37.600	37.600	37.600	37.600	37.600	37.600	37.600	37.600	40.100
Jordan	0	0	0	0	0	1.128	1.128	1.128	2.078	2.078
Kuwait						8.200	8.200	8.200	8.200	10.700
Lebanon	0.035	0.127	0.134	0.268	0.288	0.294	0.294	0.294	0.294	0.306
Palestine	0.005	0.005	0.005	0.005	0.005	0.005	0.255	0.255	0.255	0.255
Saudi Arabia		0.014	0.014	0.014	0.014	0.014	0.154	0.154	0.154	0.154
Syrian AR			0	0	0.126	0.126	0.126	0.126	0.126	0.126
United Arab Em			0.120	0.228	0.228	0.228	27.720	28.320	28.320	28.620
Yemen	2.369	5.403	60.000	80.159	100.159	250.309	250.309	250.309	250.309	256.669
Oceania	0.212	0.245	1.373	2.412	2.550	2.704	2.961	3.343	3.551	3.551
Australia						0.012	0.210	0.561	0.741	0.741
Christmas Is						0.012	0.012	0.012	0.012	0.012
Cook Is	0.056	0.056	0.056	0.056	0.056	0.157	0.157	0.157	0.157	0.157
Fiji	0.024	0.028	0.728	1.728	1.769	1.769	1.796	1.796	1.824	1.824
Kiribati	0.091	0.091	0.148	0.158	0.158	0.158	0.158	0.158	0.158	0.158
Micronesia	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Papua N Guin	0.011	0.040	0.305	0.334	0.431	0.461	0.491	0.501	0.501	0.501
Solomon Is	0.010	0.010	0.010	0.010	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	0.116	0.138	0.138	0.138
S America	6.182	6.275	10.102	10.684	11.344	13.308	17.717	23.888	28.307	28.327
Argentina	1.286	1.286	1.878	1.866	1.866	1.866	1.866	1.866	1.866	1.866
Bolivia	0.074	0.074	0.074	0.074	0.074	0.223	0.229	0.229	0.229	0.229
Brazil	0.680	0.680	3.880	3.880	3.880	3.880	3.880	3.880	3.880	3.880
Chile	0.023	0.023	0.023	0.023	0.133	0.133	0.133	0.213	0.213	0.213
Colombia			0.013	0.015	0.015	1.070	4.004	7.600	10.848	10.848
Ecuador	0.527	0.527	0.527	0.596	0.596	0.796	0.796	0.796	0.819	0.819
Guyana	0.021	0.021	0.021	0.021	0.024	0.028	0.069	0.069	0.069	0.069
Paraguay	0.062	0.062	0.062	0.062	0.065	0.065	0.065	0.065	0.065	0.065
Peru	0.471	0.478	0.481	0.484	0.497	0.497	0.505	2.693	2.753	2.773
Uruguay	0.520	0.540	0.560	1.080	1.611	2.166	3.586	3.893	4.981	4.981
Venezuela	2.518	2.584	2.584	2.584	2.584	2.584	2.584	2.584	2.584	2.584

Other off-grid solar PV (of which public lighting) Autre solaire PV hors réseau (dont éclairage public) Otra solar PV aislada (de los que alumbrado público)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	11.848	14.492	20.154	22.651	26.343	53.248	64.891	83.145	95.711	96.322
Africa	0.094	0.228	0.228	0.280	0.319	12.546	12.616	12.616	12.616	12.616
Algeria	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062
Cent Afr Rep					0.011	0.011	0.011	0.011	0.011	0.011
Cote d Ivoire		0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
Guinea					12.210	12.210	12.210	12.210	12.210	12.210
Kenya	0.024	0.137	0.137	0.137	0.137	0.137	0.137	0.137	0.137	0.137
Malawi				0.039	0.039	0.039	0.039	0.039	0.039	0.039
Mozambique				0.052	0.052	0.052	0.052	0.052	0.052	0.052
Nigeria	0.005	0.005	0.005	0.005	0.005	0.005	0.075	0.075	0.075	0.075
Senegal	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
Somalia							0	0	0	0
Sudan	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
Uganda					0.007	0.007	0.007	0.007	0.007	0.007
Asia	11.754	14.264	16.726	19.063	22.714	37.387	48.919	67.173	79.739	80.350
Afghanistan				0.093	0.093	0.093	0.093	0.093	0.093	0.093
Bangladesh	0.008	0.008	0.008	0.008	2.428	4.298	11.058	17.168	17.168	17.168
India	10.680	13.190	15.540	17.750	18.880	26.400	27.222	32.557	37.213	37.823
Indonesia			0.033	0.067	0.168	5.451	9.401	16.211	24.121	24.121
Philippines			0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
Viet Nam	1.066	1.066	1.066	1.066	1.066	1.066	1.066	1.066	1.066	1.066
Middle East				0.108						
United Arab Em				0.108	0.108	0.108	0.108	0.108	0.108	0.108
S America			3.200	3.200	3.203	3.207	3.248	3.248	3.248	3.248
Brazil			3.200	3.200	3.200	3.200	3.200	3.200	3.200	3.200
Guyana				0.003	0.007	0.048	0.048	0.048	0.048	0.048

Other off-grid solar PV (of which health) Autre solaire PV hors réseau (dont santé) Otra solar PV aislada (de los que salud)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	2.072	6.537	7.256	15.694	17.859	27.074	41.251	42.916	44.023	48.148
Africa	0.892	5.269	5.950	13.695	15.228	23.028	25.996	26.812	27.918	28.618
Angola	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021
Benin					0.020	0.020	0.020	0.020	0.020	0.020
Burkina Faso					0.303	0.303	0.303	0.303	0.303	0.303
Burundi		0.288	0.288	0.288	0.288	0.288	0.288	0.288	0.288	0.288
Cameroon	0	0	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Cent Afr Rep	0.095	0.099	0.201	0.254	0.254	0.254	0.279	0.279	0.279	0.279
Chad	0.043	0.043	0.043	0.043	0.351	0.351	0.351	0.351	0.351	0.351
Comoros					0.034	0.034	0.034	0.034	0.034	0.034
Congo DR	0.104	0.757	0.787	3.527	4.186	5.889	5.889	5.889	5.889	5.889
Cote d Ivoire		0.001	0.001	0.001	0.012	0.025	0.025	0.025	0.025	0.025
Djibouti					0.012	0.025	0.025	0.025	0.025	0.025
Eq Guinea				0.006	0.006	0.006	0.006	0.006	0.006	0.006
Eritrea	0.004	0.018	0.018	0.018	0.018	0.028	0.086	0.086	0.086	0.086
Ethiopia	0.073	2.672	2.672	5.181	5.184	8.750	9.315	9.881	10.446	10.446
Gambia	0.027	0.027	0.027	0.027	0.027	0.037	0.038	0.038	0.038	0.038
Guinea	0.071	0.071	0.071	0.071	0.071	0.071	0.495	0.495	0.495	0.495
Kenya	0.006	0.006	0.018	0.032	0.132	0.384	0.404	0.404	0.404	0.404
Lesotho					0.015	0.015	0.015	0.015	0.015	0.015
Liberia	0.018	0.109	0.109	0.179	0.180	0.234	0.244	0.296	0.296	0.296
Madagascar						0.460	0.460	0.460	0.460	0.460
Malawi	0.074	0.074	0.127	0.127	0.128	0.128	0.128	0.159	0.166	0.166
Mali	0.081	0.081	0.081	0.221	0.221	0.221	0.221	0.221	0.221	0.221
Mauritania	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Mozambique	0.005	0.007	0.063	0.160	0.160	0.160	0.160	0.160	0.160	0.160
Niger	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Nigeria	0.190	1.018	1.183	2.683	3.084	3.084	3.084	3.227	3.327	3.327
Rwanda	0	0	0	0	0	0	0	0	0	0
Senegal	0	0	0.004	0.004	0.069	0.669	0.669	0.669	0.669	0.669
Sierra Leone	0.024	0.024	0.024	0.229	0.293	0.293	1.403	1.403	1.403	1.403
Somalia	0	0.060	0.060	0.203	0.295	0.388	0.388	0.388	0.505	0.505
South Sudan	0.039	0.039	0.048	0.062	0.062	0.082	0.082	0.082	0.082	0.782
Sudan					0.039	0.048	0.048	0.048	0.048	0.048
Tanzania	0.023	0.023	0.023	0.023	0.029	0.357	0.380	0.380	0.420	0.420
Togo	0.007	0.022	0.062	0.063	0.066	0.122	0.127	0.127	0.127	0.127
Uganda	0.068	0.088	0.109	0.306	0.311	0.314	0.572	0.572	0.849	0.849
Zambia	0	0	0	0	0.007	0.365	0.365	0.365	0.365	0.365
Zimbabwe	0.001	0.001	0.001	0.001	0.002	0.054	0.054	0.054	0.054	0.054
Asia	0.088	0.088	0.105	0.529	0.537	0.757	1.909	1.915	1.915	1.987
Afghanistan				0.187	0.187	0.407	0.407	0.407	0.407	0.407
India	0	0	0	0	0	0	0	0	0	0
Indonesia			0	0	0	0	0	0	0	0
Korea DPR	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
Myanmar	0	0	0	0.146	0.146	0.146	0.146	0.146	0.146	0.146
Nepal	0.008	0.008	0.008	0.023	0.031	0.031	0.031	0.037	0.037	0.109
Pakistan	0	0	0	0.077	0.077	0.077	1.229	1.229	1.229	1.229
Philippines	0.021	0.021	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037
Thailand	0	0	0	0	0	0	0	0	0	0
Timor Leste	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Viet Nam	0	0	0	0	0	0	0	0	0	0
C America + Carib	0.694	0.700	0.707	0.707	1.066	0.952	1.058	1.125	1.125	1.125
Bahamas						0	0	0	0	0
Belize						0.019	0.019	0.019	0.019	0.019
Costa Rica						0.002	0.002	0.002	0.002	0.002
Cuba	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Haiti	0.693	0.693	0.701	0.701	0.824	0.921	0.998	1.065	1.065	1.065
Honduras	0	0	0	0	0	0.010	0.020	0.020	0.020	0.020
Nicaragua	0	0	0	0	0	0	0	0	0	0
Puerto Rico					0.236	0.013	0.013	0.013	0.013	0.013
US Virgin Is					0	0	0	0	0	0

Middle East	0.005	0.086	0.086	0.346	0.472	1.750	11.700	11.700	11.700	15.033
Jordan	0	0	0	0	0	1.128	1.128	1.128	1.128	1.128
Kuwait						8.200	8.200	8.200	8.200	8.200
Lebanon		0.081	0.081	0.182	0.182	0.182	0.182	0.182	0.182	0.182
Palestine	0.005	0.005	0.005	0.005	0.005	0.005	0.255	0.255	0.255	0.255
Syrian AR			0	0	0.126	0.126	0.126	0.126	0.126	0.126
United Arab Em						1.500	1.500	1.500	1.500	1.500
Yemen				0.159	0.159	0.309	0.309	0.309	0.309	3.642
Oceania	0.068	0.068	0.080	0.090	0.228	0.258	0.258	0.268	0.268	0.268
Cook Is	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Fiji	0.024	0.024	0.024	0.024	0.065	0.065	0.065	0.065	0.065	0.065
Kiribati			0.007	0.017	0.017	0.017	0.017	0.017	0.017	0.017
Micronesia	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Papua N Guin	0.003	0.003	0.003	0.003	0.101	0.131	0.131	0.141	0.141	0.141
Solomon Is	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Vanuatu	0.010	0.010	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
S America	0.327	0.327	0.327	0.327	0.328	0.329	0.330	1.097	1.097	1.117
Bolivia	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Colombia						0.001	0.001	0.001	0.001	0.001
Guyana	0	0	0	0	0	0	0	0	0	0
Peru	0.325	0.326	0.326	0.326	0.327	0.327	0.328	1.095	1.095	1.115

Other off-grid solar PV (of which education)

Autre solaire PV hors réseau (dont éducation)

Otra solar PV aislada (de los que educación)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	2.145	2.381	18.113	18.287	18.438	18.824	26.394	36.504	41.034	42.971
Africa	0.182	0.413	16.145	16.197	16.334	16.343	23.164	31.848	36.361	36.467
Burundi				0.001	0.001	0.001	0.001	0.001	0.001	0.001
Egypt							0.090	0.090	0.090	0.090
Eritrea	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Ethiopia	0.034	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
Gambia	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Kenya	0.009	0.009	10.881	10.881	10.881	10.881	10.885	11.061	11.061	11.061
Liberia					0.007	0.007	0.007	0.007	0.007	0.007
Madagascar							0.073	0.073	0.073	0.073
Malawi							0.006	0.006	0.006	0.030
Mali		0	0	0	0	0	0	0	0	0
Mozambique	0.012	0.012	0.012	0.022	0.022	0.022	0.022	0.056	0.056	0.056
Nigeria			4.835	4.852	4.972	4.972	11.772	20.022	24.535	24.535
Sierra Leone	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
South Africa						0.004	0.004	0.004	0.004	0.004
South Sudan							0.001	0.001	0.001	0.083
Tanzania	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
Uganda	0.054	0.079	0.104	0.128	0.138	0.144	0.153	0.153	0.153	0.153
Zimbabwe							0.060	0.060	0.060	0.060
Asia	0.007	0.007	0.007	0.095	0.095	0.097	0.297	0.303	0.320	0.320
Afghanistan				0.073	0.073	0.073	0.073	0.073	0.073	0.073
Bangladesh				0.014	0.014	0.014	0.014	0.014	0.014	0.014
Cambodia								0.014	0.014	0.015
Indonesia			0	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Nepal	0.007	0.007	0.007	0.007	0.007	0.009	0.209	0.209	0.209	0.209
Philippines							0.006	0.008	0.008	0.008
C America + Carib	0.001	0.002	0.002	0.008	0.011	0.018	0.375	0.375	0.375	0.375
Belize					0.002	0.002	0.356	0.356	0.356	0.356
Costa Rica						0.007	0.007	0.007	0.007	0.007
Guatemala				0.007	0.007	0.007	0.007	0.007	0.007	0.007
Honduras	0	0	0	0	0	0	0.004	0.004	0.004	0.004
Panama	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Middle East	0.001	0.001	0.001	0.026	0.026	0.026	0.218	0.218	0.218	2.049
Lebanon	0.001	0.001	0.001	0.026	0.026	0.026	0.026	0.026	0.026	0.026
United Arab Em							0.192	0.192	0.192	0.192
Yemen										1.831
Oceania						0.100	0.100	0.100	0.100	0.100
Cook Is						0.100	0.100	0.100	0.100	0.100
S America	1.954	1.959	1.959	1.961	1.972	2.240	2.240	3.661	3.661	3.661
Argentina	1.264	1.264	1.264	1.264	1.264	1.264	1.264	1.264	1.264	1.264
Bolivia	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Brazil	0.680	0.680	0.680	0.680	0.680	0.680	0.680	0.680	0.680	0.680
Colombia				0.002	0.002	0.270	0.270	0.270	0.270	0.270
Peru	0.002	0.007	0.007	0.007	0.019	0.019	0.019	1.440	1.440	1.440

Other off-grid solar PV (of which tourism) Autre solaire PV hors réseau (dont tourisme) Otra solar PV aislada (de los que turismo)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	1.000	1.515	3.828	5.247	8.573	10.454	11.207	11.730	14.307	14.330
Africa	0.622	1.137	2.279	2.448	5.259	7.140	7.688	7.724	10.299	10.299
Botswana	0.412	0.557	0.850	0.850	0.972	1.276	1.276	1.276	1.276	1.276
Cameroon	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Eswatini					0.003	0.003	0.003	0.003	0.003	0.003
Kenya	0.192	0.262	0.539	0.539	0.849	1.509	1.563	1.563	1.563	1.563
Mozambique						0.040	0.040	0.040	0.040	0.040
Namibia							0.199	0.199	0.274	0.274
Seychelles			0.500	0.500	0.500	1.250	1.250	1.250	3.750	3.750
South Africa		0.300	0.300	0.300	2.634	2.634	2.704	2.704	2.704	2.704
South Sudan	0.007	0.007	0.007	0.007	0.013	0.031	0.031	0.031	0.031	0.031
Tanzania			0.072	0.241	0.277	0.313	0.538	0.574	0.574	0.574
Uganda				0	0	0.003	0.003	0.003	0.003	0.003
Zimbabwe						0.070	0.070	0.070	0.070	0.070
Asia				0.250	0.360	0.360	0.363	0.543	0.543	0.543
Malaysia								0.180	0.180	0.180
Myanmar					0.110	0.110	0.110	0.110	0.110	0.110
Nepal							0.003	0.003	0.003	0.003
Thailand				0.250	0.250	0.250	0.250	0.250	0.250	0.250
C America + Carib	0.378	0.378	0.729	0.729	1.133	1.134	1.331	1.638	1.640	1.663
Antigua Barb					0.404	0.404	0.404	0.404	0.404	0.404
Bahamas	0.375	0.375	0.720	0.720	0.720	0.720	0.720	0.720	0.720	0.720
Belize			0.006	0.006	0.006	0.006	0.204	0.210	0.210	0.210
Costa Rica						0.001	0.001	0.001	0.001	0.001
Honduras								0.300	0.302	0.302
Panama	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.026
Middle East			0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120
United Arab Em			0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120
Oceania			0.700	1.700	1.700	1.700	1.705	1.705	1.705	1.705
Fiji			0.700	1.700	1.700	1.700	1.705	1.705	1.705	1.705

Other off-grid solar PV (of which communication) Autre solaire PV hors réseau (dont communication) Otra solar PV aislada (de los que comunicación)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	122.575	178.875	220.735	265.932	374.998	386.998	387.077	387.940	387.940	387.940
Africa	1.937	2.237	2.813	8.000	9.006	21.006	21.085	21.085	21.085	21.085
Algeria	0.623	0.623	0.623	0.623	0.623	0.623	0.623	0.623	0.623	0.623
Burkina Faso	0.693	0.993	1.293	1.593	1.593	1.593	1.593	1.593	1.593	1.593
Congo DR				0.204	1.204	13.204	13.204	13.204	13.204	13.204
Egypt					0.006	0.006	0.006	0.006	0.006	0.006
Ethiopia					4.600	4.600	4.600	4.600	4.600	4.600
Kenya	0.352	0.352	0.352	0.419	0.419	0.419	0.419	0.419	0.419	0.419
Madagascar	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
Nigeria	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019
South Sudan						0.079	0.079	0.079	0.079	0.079
Tanzania					0.016	0.016	0.016	0.016	0.016	0.016
Zambia				0.276	0.276	0.276	0.276	0.276	0.276	0.276
Asia	120.565	176.565	217.513	257.513	365.573	365.573	365.573	366.436	366.436	366.436
Afghanistan	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
Bangladesh					16.860	16.860	16.860	16.860	16.860	16.860
India	98.564	154.564	195.496	235.496	275.496	275.496	275.496	276.359	276.359	276.359
Indonesia	4.993	4.993	5.009	5.009	5.009	5.009	5.009	5.009	5.009	5.009
Mongolia	1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008
Nepal					40.000	40.000	40.000	40.000	40.000	40.000
Pakistan					11.200	11.200	11.200	11.200	11.200	11.200
C America + Carib					0.010	0.010	0.010	0.010	0.010	0.010
Antigua Barb					0.010	0.010	0.010	0.010	0.010	0.010
Oceania	0.074	0.074	0.410							
Kiribati	0.074	0.074	0.074	0.074	0.074	0.074	0.074	0.074	0.074	0.074
Papua N Guin			0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
Vanuatu			0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100

Other off-grid solar PV (of which industry) Autre solaire PV hors réseau (dont industrie) Otra solar PV aislada (de los que industria)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	1.584	10.584	12.096	13.398	17.202	44.202	50.891	61.497	99.125	99.430
Africa	0.084	7.584	7.584	7.634	8.698	35.698	41.264	44.683	78.160	78.160
Burkina Faso					15.000	15.000	15.000	15.000	15.000	15.000
Cameroon						0.125	0.125	0.125	0.125	0.125
Egypt						1.000	1.000	1.000	1.000	1.000
Eritrea		7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500
Kenya				0.991	0.991	0.991	0.991	0.991	0.991	0.991
Madagascar						0.090	0.185	0.185	0.185	0.185
Mali								30.000	30.000	
Morocco								1.700	1.700	
Namibia					12.000	12.000	12.000	12.000	12.000	
Nigeria	0.084	0.084	0.084	0.084	0.157	0.157	0.157	0.857	2.634	2.634
Rwanda				0.050	0.050	0.050	0.050	0.050	0.050	0.050
South Africa						0.473	0.473	0.473	0.473	0.473
South Sudan						0.003	0.003	0.003	0.003	0.003
Tunisia						5.000	6.500	6.500	6.500	6.500
Asia		0.012	0.014	0.014	0.014	1.014	8.014	11.035	11.040	
Indonesia		0.012	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Nepal										0.005
Pakistan										0.009
Singapore								6.000	6.000	6.000
Thailand								1.000	4.012	4.012
Viet Nam							1.000	1.000	1.000	1.000
C America + Carib	1.500	3.000	4.500	5.750	8.490	8.490	8.490	8.490	8.490	8.490
Dominican Rep	1.500	3.000	4.500	5.750	8.490	8.490	8.490	8.490	8.490	8.490
Middle East							0.123	0.123	1.073	1.373
Jordan									0.950	0.950
Saudi Arabia								0.123	0.123	0.123
United Arab Em									0.300	
Oceania								0.187	0.367	0.367
Australia								0.187	0.367	0.367

Other off-grid solar PV (of which commercial/public) Autre solaire PV hors réseau (dont commercial/public) Otra solar PV aislada (de los que comercial/público)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	1.120	41.238	44.539	46.508	48.183	50.066	97.030	148.762	212.803	219.517
Africa	0.335	2.787	2.811	2.891	3.061	4.339	8.824	43.226	101.133	101.228
Burkina Faso	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
Burundi			0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Cameroon			0.006	0.006	0.006	0.006	1.273	1.273	1.273	1.273
Chad									0.500	0.500
Egypt						0.150	26.150	26.150	26.150	26.150
Eritrea	0.013	0.323	0.323	0.323	0.323	0.323	0.323	0.323	0.323	0.323
Ethiopia	0.035	0.068	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083
Kenya	0.025	2.040	2.040	2.048	2.206	2.256	2.256	2.488	13.523	13.523
Madagascar								0.008	0.008	0.008
Mali	0.007	0.016	0.016	0.016	0.016	0.029	0.035	0.035	0.035	0.035
Morocco								40.000	40.000	40.000
Mozambique	0.021	0.106	0.106	0.178	0.178	0.178	0.178	0.178	0.178	0.178
Namibia						0.800	6.150	6.150	6.150	6.150
Nigeria						0.750	1.500	1.532	1.532	1.572
Reunion							1.340	1.500	1.500	1.500
Senegal									0.010	0.010
Seychelles						0.090	2.080	2.080	2.080	2.080
Sierra Leone									6.000	6.032
South Sudan	0.007	0.007	0.007	0.007	0.007	0.471	0.489	0.489	0.828	0.830
Tanzania	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
Togo								0.631	0.664	0.664
Uganda					0.012	0.013	0.049	0.049	0.049	0.060
Zambia						0.028	0.028	0.028	0.028	0.028
Asia		2.244	3.039	3.235	3.339	3.364	19.422	24.465	24.876	
Afghanistan				0.282	0.282	0.282	0.282	0.282	0.285	0.285
Bangladesh			2.225	2.720	2.916	3.019	3.039	3.039	3.039	3.039
Brunei Darussalam							0.008	0.008	0.008	0.008
Cambodia						0.002	0.002	0.034	0.034	0.034
India							16.050	21.050	21.400	
Indonesia			0.014	0.033	0.033	0.033	0.033	0.033	0.033	0.033
Pakistan			0.005	0.005	0.005	0.005	0.005	0.013	0.069	
Philippines						0.003	0.003	0.003	0.008	
C America + Carib	0.112	0.124	0.449	1.004	1.668	1.608	16.708	16.936	16.936	16.936
Aruba		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Bahamas							0.300	0.300	0.300	0.300
Belize	0.020	0.020	0.020	0.020	0.030	0.030	0.034	0.034	0.034	
Costa Rica	0.092	0.092	0.092	0.163	0.163	0.163	0.163	0.367	0.367	0.367
Cuba			0.326	0.326	0.326	0.326	7.326	7.326	7.326	7.326
Dominican Rep				0.483	0.490	0.490	0.490	0.490	0.490	0.490
El Salvador					0.490	0.490	0.490	3.986	3.986	3.986
Honduras			0.001	0.001	0.001	0.577	0.589	1.999	2.023	2.023
Nicaragua							2.400	2.400	2.400	2.400
Puerto Rico					0.072					
Middle East	0.004	37.604	37.604	37.604	37.604	37.610	63.410	64.010	64.010	70.218
Iraq		37.600	37.600	37.600	37.600	37.600	37.600	37.600	37.600	40.100
Kuwait										2.500
Lebanon	0.004	0.004	0.004	0.004	0.004	0.010	0.010	0.010	0.010	0.022
United Arab Em							25.800	26.400	26.400	26.400
Yemen										1.196

Oceania	0.071	0.103	0.183	0.212	0.212	0.213	0.341	0.397	0.400	0.400
Australia							0.081	0.138	0.138	0.138
Cook Is	0.046	0.046	0.046	0.046	0.046	0.047	0.047	0.047	0.047	0.047
Fiji		0.004	0.004	0.004	0.004	0.004	0.021	0.021	0.024	0.024
Kiribati	0.017	0.017	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068
Papua N Guin	0.008	0.037	0.066	0.094	0.094	0.094	0.124	0.124	0.124	0.124
S America	0.599	0.620	1.248	1.758	2.403	2.958	4.383	4.770	5.859	5.859
Argentina	0.022	0.022	0.614	0.602	0.602	0.602	0.602	0.602	0.602	0.602
Bolivia	0	0	0	0	0	0	0.006	0.006	0.006	0.006
Chile	0.023	0.023	0.023	0.023	0.133	0.133	0.133	0.213	0.213	0.213
Colombia			0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Guyana	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021
Paraguay	0.011	0.011	0.011	0.011	0.014	0.014	0.014	0.014	0.014	0.014
Peru	0.001	0.003	0.005	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Uruguay	0.520	0.540	0.560	1.080	1.611	2.166	3.586	3.893	4.981	4.981

Other off-grid solar PV (of which residential) Autre solaire PV hors réseau (dont résidentiel) Otra solar PV aislada (de los que residencial)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	0.029	0.916	0.923	0.932	1.070	1.856	4.906	8.607	11.924	11.924
Africa		0.430	0.430							
Kenya		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430
Asia		0.432	0.473	0.473						
Pakistan	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.067	0.067
Philippines	0.406	0.406	0.406	0.406	0.406	0.406	0.406	0.406	0.406	0.406
C America + Carib					0.118	0.118	0.217	0.285	0.313	0.313
Belize							0.045	0.093	0.093	0.093
Dominican Rep					0.118	0.118	0.172	0.192	0.220	0.220
Middle East	0.029	0.054	0.061	0.070	0.090	0.090	0.107	0.107	0.107	0.107
Lebanon	0.029	0.040	0.047	0.056	0.076	0.076	0.076	0.076	0.076	0.076
Saudi Arabia	0.014	0.014	0.014	0.014	0.014	0.014	0.031	0.031	0.031	0.031
Oceania								0.038	0.038	0.038
Australia								0.015	0.015	0.015
Vanuatu								0.023	0.023	0.023
S America						0.786	3.720	7.316	10.565	10.565
Colombia						0.786	3.720	7.316	10.565	10.565

Other off-grid solar PV (of which agriculture) Autre solaire PV hors réseau (dont agriculture) Otra solar PV aislada (de los que agricultura)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total		0.066	0.066	0.297	0.497	0.545	0.663	0.763	0.788	0.797
Africa		0.066	0.066	0.297	0.497	0.497	0.505	0.508	0.508	0.518
Benin				0.011	0.011	0.011	0.011	0.011	0.011	0.011
Cameroon						0.008	0.008	0.008	0.008	0.008
Ethiopia	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Kenya	0.060	0.060	0.280	0.480	0.480	0.480	0.481	0.481	0.481	0.481
Mali								0.002	0.002	0.002
Mozambique										0.009
Asia						0.025	0.025	0.030	0.030	0.030
Bangladesh						0.025	0.025	0.025	0.025	0.025
Mongolia							0.005	0.005	0.005	0.005
Oceania						0.023	0.133	0.224	0.249	0.249
Australia						0.012	0.121	0.213	0.213	0.213
Christmas Is						0.012	0.012	0.012	0.012	0.012
Fiji								0.025	0.025	0.025

Other off-grid solar PV (of which multi-purpose) Autre solaire PV hors réseau (dont polyvalente) Otra solar PV aislada (de los que multiusos)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	0.661	0.676	0.676	0.691	0.691	0.857	0.864	0.865	0.865	0.865
Africa				0.015	0.015	0.015	0.015	0.016	0.016	0.016
Ethiopia				0.015	0.015	0.015	0.015	0.015	0.015	0.015
Uganda							0.001	0.001	0.001	0.001
C America + Carib	0.303	0.318	0.318	0.318	0.318	0.334	0.334	0.334	0.334	0.334
El Salvador	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053
Guatemala	0.129	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144
Haiti						0.017	0.017	0.017	0.017	0.017
Honduras	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
Nicaragua	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046
S America	0.358	0.358	0.358	0.358	0.358	0.508	0.515	0.515	0.515	0.515
Bolivia	0.065	0.065	0.065	0.065	0.065	0.214	0.214	0.214	0.214	0.214
Ecuador	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Paraguay	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Peru	0.143	0.143	0.143	0.143	0.143	0.143	0.150	0.150	0.150	0.150

Other off-grid solar PV (of which not specified) Autre solaire PV hors réseau (dont non spécifié) Otra solar PV aislada (de los que no especificado)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	112.030	141.230	207.822	279.366	310.143	491.044	492.118	497.228	498.977	500.932
Africa	0.074	6.542	10.633	12.021	12.750	12.765	12.984	12.984	13.131	13.131
Angola		0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299
Benin		0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Congo DR							0.150	0.150	0.150	0.150
Ethiopia		0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
Gabon	0.026	0.026	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Ghana		4.550	8.553	9.791	10.469	10.473	10.473	10.473	10.620	10.620
Mozambique			0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076
Nigeria				0.150	0.150	0.150	0.150	0.150	0.150	0.150
South Africa	0.048	0.567	0.567	0.567	0.618	0.629	0.698	0.698	0.698	0.698
Zimbabwe		0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
Asia	109.160	128.859	136.763	186.850	196.898	227.584	228.425	233.535	235.054	237.009
Afghanistan				0.004	0.004	0.004	0.004	0.004	0.004	0.004
Bangladesh		1.380	8.170	10.962	11.566	12.097	12.936	13.700	14.619	16.574
India	109.160	127.479	128.593	175.884	185.327	215.480	215.480	219.826	220.426	220.426
Nepal					0.003	0.005	0.005	0.005	0.005	0.005
Middle East	2.369	5.403	60.000	80.000	100.000	250.000	250.000	250.000	250.000	250.000
Yemen	2.369	5.403	60.000	80.000	100.000	250.000	250.000	250.000	250.000	250.000
Oceania							0.014	0.014	0.014	0.014
Australia							0.008	0.008	0.008	0.008
Fiji							0.005	0.005	0.005	0.005
S America	0.427	0.427	0.427	0.496	0.496	0.696	0.696	0.696	0.779	0.779
Ecuador	0.427	0.427	0.427	0.496	0.496	0.696	0.696	0.696	0.719	0.719
Peru			0	0	0	0	0	0	0.060	0.060

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

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	16.005	18.445	23.446	26.921	30.808	37.294	37.611	38.211	38.211	38.211
Africa	0.141	0.141	1.456	1.476	1.496	1.496	1.601	1.601	1.601	1.601
Gabon			1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200
Ghana	0.120	0.120	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
Kenya	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Mozambique				0.010	0.010	0.010	0.010	0.010	0.010	0.010
Nigeria				0.010	0.030	0.030	0.135	0.135	0.135	0.135
Senegal			0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Uganda	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
Asia	12.615	13.961	16.687	19.782	20.599	21.685	21.897	22.497	22.497	22.497
Bangladesh	3.420	4.120	4.250	4.650	4.650	4.650	4.650	4.950	4.950	4.950
Cambodia			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
India	2.389	3.035	4.131	4.826	5.626	6.712	6.924	7.224	7.224	7.224
Myanmar	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400
Pakistan	0.406	0.406	0.406	0.406	0.424	0.424	0.424	0.424	0.424	0.424
Philippines	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Viet Nam				2.000	2.000	2.000	2.000	2.000	2.000	2.000
C America + Carib	3.163	3.457	4.417	4.677						
Costa Rica	2.216	2.216	2.683	2.683	2.683	2.683	2.683	2.683	2.683	2.683
Dominican Rep	0.947	1.227	1.720	1.970	1.970	1.970	1.970	1.970	1.970	1.970
Honduras		0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Nicaragua				0.010	0.010	0.010	0.010	0.010	0.010	0.010
S America	0.086	0.886	0.886	0.986	4.036	9.436	9.436	9.436	9.436	9.436
Argentina				0.100	0.100	0.100	0.100	0.100	0.100	0.100
Bolivia					2.000	2.000	2.000	2.000	2.000	2.000
Colombia					1.050	1.050	1.050	1.050	1.050	1.050
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	0.016	0.016
Uruguay		0.800	0.800	0.800	0.800	6.200	6.200	6.200	6.200	6.200

Other solid biofuels (electricity)

Autres biocarburants solides (électricité)

Otros biocombustibles sólidos (electricidad)

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	3092.188	3330.743	3383.624	3380.720	3959.048	4176.557	4281.743	3625.476	3802.503	3607.001
Africa	33.436	42.436	45.456	45.896	49.056	49.856	51.416	88.451	89.251	89.251
Burundi	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
Congo DR	0.160	0.160	0.160	0.160	0.160	0.160	0.160	2.160	2.960	2.960
Ghana	8.274	8.274	8.274	8.274	8.274	8.274	8.274	8.274	8.274	8.274
Liberia				0.070	0.070	0.070	0.130	0.165	0.165	0.165
Madagascar	0.094	0.094	0.164	0.234	0.234	0.234	0.234	0.234	0.234	0.234
Mali	2.408	2.408	5.358	5.358	5.358	5.358	5.358	40.358	40.358	40.358
Nigeria	6.000	6.000	6.000	6.000	7.500	7.500	9.000	9.000	9.000	9.000
Tanzania	7.500	21.500	21.500	21.800	23.460	24.260	24.260	24.260	24.260	24.260
Zimbabwe	5.000									
Asia	2839.035	3056.330	3097.877	3094.396	3639.245	3845.912	3934.008	3230.572	3376.577	3166.697
Bangladesh						0.400	0.400	0.400	0.400	0.400
Cambodia		2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
India	402.000	496.110	538.875	581.640	733.270	781.240	838.790	844.320	889.635	859.705
Indonesia	1864.000	1874.000	1884.000	1606.000	1617.000	1617.000	1617.000	1617.000	1617.000	1617.000
Malaysia	405.800	515.510	504.860	732.530	1100.000	1237.800	1243.000	531.640	531.640	531.640
Myanmar	42.235	43.710	43.142	47.226	50.975	46.472	47.818	50.212	54.902	56.952
Viet Nam	125.000	125.000	125.000	125.000	136.000	161.000	185.000	185.000	281.000	99.000
C America + Carib	83.413	83.273	83.087	83.224	83.213	83.225	83.295	83.389	83.511	83.511
Dominican Rep	19.913	19.773	19.587	19.724	19.713	19.725	19.795	19.889	20.011	20.011
Honduras	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500
Panama	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
Oceania	15.000									
Papua N Guin	14.500	14.500	14.500	14.500	14.500	14.500	14.500	14.500	14.500	14.500
Solomon Is	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
S America	121.304	133.704	142.204	142.204	172.534	182.564	198.024	208.064	238.164	252.542
Argentina										6.318
Bolivia	60.170	60.170	60.170	60.170	90.500	99.000	99.000	99.000	128.500	133.500
Colombia	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.099	0.099	0.059
Fr Guiana										3.100
Guyana	43.275	43.275	43.275	43.275	43.275	43.305	33.765	33.765	34.365	34.365
Peru	17.800	30.200	38.700	38.700	38.700	38.700	63.700	73.700	73.700	73.700
Suriname						1.500	1.500	1.500	1.500	1.500

Wind energy

Énergie éolienne

Energía eólica

MW	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	126.190	140.345	146.053	147.216	153.509	154.034	173.252	173.276	193.270	193.265
Africa	18.155	28.355	29.025	30.142	30.892	30.892	30.892	30.892	50.892	50.892
Algeria		10.200	10.200	10.200	10.200	10.200	10.200	10.200	10.200	10.200
Chad			1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100
Djibouti									20.000	20.000
Egypt	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Eritrea	0.825	0.825	0.825	0.825	0.825	0.825	0.825	0.825	0.825	0.825
Ethiopia			0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Ghana		0.020	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Kenya	0.553	0.553	0.603	0.603	0.603	0.603	0.603	0.603	0.603	0.603
Madagascar	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177
Mauritania	4.400	4.400	4.400	4.400	4.400	4.400	4.400	4.400	4.400	4.400
Morocco	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Somalia	2.200	2.200	2.800	2.800	3.550	3.550	3.550	3.550	3.550	3.550
Asia	10.211	10.897	11.925	11.983	12.426	12.926	28.926	28.920	28.914	28.909
Afghanistan	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Bangladesh	1.000	1.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Cambodia	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
Indonesia	0.024	0.710	0.710	0.710	0.710	1.190	1.190	1.190	1.190	1.190
Korea DPR	0.200	0.200	0.200	0.200	0.600	0.600	0.600	0.600	0.600	0.600
Maldives	1.407	1.407	1.407	1.407	1.407	1.407	1.407	1.407	1.407	1.407
Mongolia	1.006	1.006	1.006	1.006	1.006	1.006	1.006	1.000	0.994	0.989
Myanmar		0.003	0.003	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Nepal	0.069	0.069	0.094	0.152	0.192	0.212	0.212	0.212	0.212	0.212
Pakistan	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155
Philippines						16.000	16.000	16.000	16.000	16.000
Viet Nam	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
C America + Carib	0.930	0.930	4.830	4.830	4.830	4.854	5.155	5.155	5.155	5.155
Bahamas	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
Belize	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Br Virgin Is	0.500	0.500	0.500	0.500	0.500	0.500	0.801	0.801	0.801	0.801
Dominica	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Haiti						0.024	0.024	0.024	0.024	0.024
Honduras			3.900	3.900	3.900	3.900	3.900	3.900	3.900	3.900
US Virgin Is	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Middle East	5.000	6.000	6.000	6.000	6.000	6.000	6.000	6.010	6.010	6.010
Jordan							0.010	0.010	0.010	0.010
Kuwait	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
Lebanon	2.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
Syrian AR	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
Oceania	0.258	0.265	0.265	0.265	0.265	0.266	0.266	0.266	0.266	0.266
Fr Polynesia	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248
Marshall Is	0.010	0.017	0.017	0.017	0.017	0.018	0.018	0.018	0.018	0.018
S America	91.636	93.898	94.008	93.996	99.096	99.096	102.013	102.033	102.033	102.033
Argentina	0.144	0.152	0.179	0.167	0.167	0.167	0.884	0.884	0.884	0.884
Ecuador	2.400	4.650	4.650	4.650	4.650	4.650	4.650	4.650	4.650	4.650
Falklands Malv	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340
Guyana	0.046	0.050	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133
Paraguay							0.020	0.020	0.020	0.020
Peru	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700
South Georgia	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Uruguay					5.100	5.100	7.300	7.300	7.300	7.300
Venezuela	88.000	88.000	88.000	88.000	88.000	88.000	88.000	88.000	88.000	88.000

Off-grid Biogas production

Production de biogaz hors réseau

Producción de biogás aislada

Total biogas production

Production totale de biogaz

Producción total de biogás

1,000 m ³	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	16 779 302	16 445 535	15 739 271	15 757 420	15 724 218	15 661 968	15 590 590	15 486 458	15 378 114	15 269 641
Africa	27 123	37 904	45 472	51 729	59 220	64 722	67 400	72 431	76 178	76 562
Benin	26	39	36	34	33	38	55	53	64	63
Botswana	2	2	2	2	2	2	2	2	2	2
Burkina Faso	1 469	1 999	2 482	3 041	4 172	4 425	4 680	4 720	4 688	4 421
Burundi				2	2	2	2	2	2	2
Cameroon	85	126	143	139	132	127	113	102	99	94
Congo DR									2	2
Ethiopia	4 720	6 145	7 388	8 717	11 721	14 299	14 068	16 986	18 706	21 140
Gabon				610	610	610	610	610	610	610
Ghana	298	4 299	4 313	4 515	4 517	4 526	4 536	4 536	4 536	4 535
Kenya	6 866	8 561	9 595	10 162	11 007	12 036	13 440	15 892	18 595	17 769
Mali	6	76	113	161	161	160	149	144	144	500
Mozambique				15	15	15	15	15	15	15
Nigeria	353	298	298	325	339	339	230	230	229	227
Rwanda	5 108	6 598	8 759	10 021	10 141	10 394	10 351	10 078	9 862	9 145
Senegal	612	900	1 600	2 139	3 222	3 188	3 142	3 085	2 920	2 699
South Africa				73	73	73	73	73	73	73
Tanzania	4 846	5 740	6 128	7 003	6 863	6 769	6 604	6 261	5 770	5 317
Togo										
Uganda	2 500	2 833	3 171	3 449	4 093	4 392	4 918	4 978	5 026	4 783
Zambia				35	70	361	965	2 174	3 263	3 522
Zimbabwe	232	253	691	960	1 151	1 151	1 148	1 142	1 136	1 055
Asia	16 733 908	16 383 315	15 481 833	15 486 548	15 444 554	15 366 015	15 291 951	15 182 683	15 070 650	14 961 805
Afghanistan				25	25	25	25	25	21	21
Bangladesh	63 591	68 881	66 889	64 820	65 119	64 348	64 915	66 689	67 319	66 785
Bhutan	461	780	1 376	1 943	2 719	2 840	3 380	3 909	4 437	4 557
Cambodia	11 526	12 427	16 302	17 572	18 202	18 267	18 882	19 070	19 055	18 990
China	14 304 143	13 962 937	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930
India	1 979 659	1 918 719	1 837 628	1 819 907	1 758 722	1 665 392	1 597 522	1 492 778	1 386 674	1 298 455
Indonesia	9 789	12 367	14 221	16 888	18 425	19 247	19 699	18 982	17 862	16 630
Lao PDR	2 305	2 211	2 091	2 035	1 945	1 897	1 709	1 469	1 357	1 210
Myanmar	1 073	1 069	1 069	1 069	1 049	1 049	1 041	1 041	1 041	1 001
Nepal	113 034	123 847	132 791	134 618	137 205	144 450	140 586	133 906	130 295	121 538
Pakistan	4 570	6 312	6 501	6 696	6 607	6 494	6 295	6 238	6 145	5 894
Philippines	8 761	8 761	8 761	8 761	8 761	8 761	8 761	8 761	8 761	8 761
Sri Lanka	4 247	4 222	4 103	3 854	3 569	3 259	2 974	2 681	2 457	2 232
Thailand				490	490	768	768	768	768	738
Viet Nam	230 748	260 782	285 680	303 939	317 508	325 287	321 465	322 435	320 528	311 062

C America + Carib	14 950	17 417	17 612	20 657	21 462	21 463	21 460	21 436	21 417	21 403
Costa Rica	7 468	7 468	7 774	9 965	9 965	9 965	9 965	9 965	9 965	9 965
Cuba	6 649	8 795	8 021	7 919	8 563	8 299	8 299	8 299	8 299	8 299
Dominican Rep	830	1 075	1 507	1 726	1 726	1 726	1 726	1 726	1 726	1 726
El Salvador				120	120	120	120	120	120	120
Grenada				2	21	23	23	23	23	23
Guatemala					8	8	8	8	8	8
Honduras		17	17	17	20	55	55	55	55	54
Jamaica	2	2	2	2	2	5	5	5	5	5
Nicaragua	1	61	292	649	786	1 006	1 000	976	957	943
Panama			0	250	250	250	250	250	250	250
St Lucia				8	8	8	8	8	8	8
St Vincent Gren					1	1	1	1	1	1
Middle East	0	1	1	1	1	1	1	1	1	1
Iraq	0	1	1	1	1	1	1	1	1	1
Oceania							37	38	42	54
Amer Samoa									3	3
Fiji							0	1	3	7
Tuvalu							29	29	29	29
Vanuatu							7	7	7	16
S America	3 320	6 898	194 352	198 484	198 981	209 765	209 741	209 869	209 826	209 815
Argentina	5	5	5	4 002	4 002	4 007	4 007	4 007	4 007	4 025
Bolivia	191	187	196	192	371	346	321	296	271	246
Brazil		1	187 435	187 437	187 437	187 437	187 437	187 437	187 437	187 437
Colombia				18	335	342	342	342	342	338
Ecuador	146	146	151	264	264	322	322	321	303	303
Peru	1 478	1 478	1 486	1 492	1 492	1 492	1 492	1 647	1 646	1 646
Uruguay		3 580	3 580	3 580	3 580	14 320	14 320	14 320	14 320	14 320
Venezuela	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500

Production of biogas for cooking

Production de biogaz pour la cuisson

Producción de biogás para cocinar

1,000 m ³	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	16 745 402	16 402 233	15 501 066	15 510 164	15 475 357	15 400 967	15 329 554	15 225 199	15 116 851	15 008 347
Africa	25 205	31 327	36 952	42 510	49 818	55 320	57 999	63 029	66 776	67 161
Benin	26	39	36	34	33	38	55	53	64	63
Botswana							1	1	1	1
Burkina Faso	1 469	1 999	2 482	3 041	4 172	4 425	4 680	4 720	4 688	4 421
Cameroon	85	126	143	139	132	127	113	102	99	94
Congo DR									2	2
Ethiopia	4 720	6 145	7 388	8 717	11 721	14 299	14 068	16 986	18 706	21 140
Ghana			1	2	5	14	24	24	24	23
Kenya	6 727	8 192	9 226	9 793	10 638	11 667	13 071	15 523	18 226	17 400
Mali	6	76	113	113	113	112	101	95	95	451
Nigeria	347	292	292	294	309	309	199	199	199	197
Rwanda	3 648	4 715	6 396	7 483	7 603	7 856	7 813	7 540	7 323	6 607
Senegal	612	900	1 235	1 774	2 857	2 823	2 777	2 720	2 555	2 334
Tanzania	4 846	5 736	6 124	6 992	6 851	6 758	6 593	6 250	5 759	5 306
Uganda	2 487	2 819	3 158	3 435	4 079	4 379	4 904	4 964	5 012	4 769
Zambia		35	70	361	965	2 174	3 263	3 522	3 700	4 109
Zimbabwe	232	253	288	332	340	340	337	331	324	244
Asia	16 719 211	16 367 719	15 461 454	15 464 800	15 421 885	15 342 032	15 267 942	15 158 608	15 046 575	14 937 730
Afghanistan				25	25	25	25	25	21	21
Bangladesh	62 864	68 005	65 985	63 831	64 131	63 360	63 927	65 635	66 265	65 731
Bhutan	461	780	1 376	1 943	2 719	2 840	3 380	3 909	4 437	4 557
Cambodia	11 526	12 427	13 382	14 652	15 282	15 347	15 962	16 150	16 135	16 070
China	14 304 143	13 962 937	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930	13 103 930
India	1 976 685	1 914 996	1 832 583	1 814 065	1 752 020	1 657 376	1 589 506	1 484 762	1 378 659	1 290 440
Indonesia	9 789	12 365	14 220	16 886	18 424	19 245	19 697	18 981	17 861	16 629
Lao PDR	2 305	2 211	2 091	2 035	1 945	1 897	1 709	1 469	1 357	1 210
Myanmar	152	148	148	148	128	128	120	120	120	80
Nepal	113 034	123 847	132 791	134 618	137 205	144 450	140 586	133 906	130 295	121 538
Pakistan	3 256	4 998	5 187	5 382	5 257	5 144	4 945	4 888	4 794	4 543
Sri Lanka	4 247	4 222	4 080	3 770	3 459	3 148	2 838	2 546	2 321	2 096
Thailand					277	277	277	277	277	248
Viet Nam	230 748	260 782	285 680	303 514	317 083	324 862	321 040	322 010	320 103	310 637
C America + Carib	810	3 014	2 466	2 545	3 324	3 297	3 291	3 267	3 248	3 233
Cuba	809	2 955	2 181	2 079	2 723	2 459	2 459	2 459	2 459	2 459
Honduras					2	19	19	19	19	18
Nicaragua	1	59	286	466	599	819	813	789	770	756
Oceania							29	29	29	29
Tuvalu							29	29	29	29
S America	176	172	193	309	331	318	294	266	222	194
Argentina				0	0	5	5	5	5	5
Bolivia	176	172	180	177	173	148	124	98	73	49
Colombia					26	33	33	33	33	29
Ecuador			5	118	118	118	118	118	100	100
Peru			7	14	14	14	14	12	11	11

Production of biogas for off-grid electricity

Production de biogaz pour l'électricité hors réseau

Producción de biogás para electricidad aislada

1,000 m ³	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	19 245	21 772	27 111	28 792	30 140	35 230	35 230	35 296	35 296	35 296
Africa	200	315	735	771						
Gabon			305	305	305	305	305	305	305	305
Ghana	64	64	69	69	69	69	69	69	69	69
Kenya	128	243	243	243	243	243	243	243	243	243
Mozambique			15	15	15	15	15	15	15	15
Nigeria			22	22	22	22	22	22	22	22
Senegal			110	110	110	110	110	110	110	110
Uganda	9	9	9	9	9	9	9	9	9	9
Asia	14 587	15 484	19 753	21 061	21 933	23 247	23 247	23 313	23 313	23 313
Bangladesh	727	876	903	988	988	988	988	1 054	1 054	1 054
Cambodia			2 920	2 920	2 920	2 920	2 920	2 920	2 920	2 920
India	2 974	3 723	5 045	5 843	6 701	8 015	8 015	8 015	8 015	8 015
Myanmar	921	921	921	921	921	921	921	921	921	921
Pakistan	1 205	1 205	1 205	1 205	1 217	1 217	1 217	1 217	1 217	1 217
Philippines	8 760	8 760	8 760	8 760	8 760	8 760	8 760	8 760	8 760	8 760
Viet Nam				425	425	425	425	425	425	425
C America + Carib	4 294	4 556	5 206	5 432	5 434	5 452				
Costa Rica	3 464	3 464	3 770	3 770	3 770	3 770	3 770	3 770	3 770	3 770
Dominican Rep	830	1 075	1 419	1 638	1 638	1 638	1 638	1 638	1 638	1 638
Honduras		17	17	17	19	36	36	36	36	36
Nicaragua				8	8	8	8	8	8	8
S America	164	1 417	1 417	1 527	2 001	5 760				
Argentina				110	110	110	110	110	110	110
Bolivia					183	183	183	183	183	183
Colombia					292	292	292	292	292	292
Ecuador	146	146	146	146	146	146	146	146	146	146
Peru	18	18	18	18	18	18	18	18	18	18
Uruguay		1 253	1 253	1 253	1 253	5 012	5 012	5 012	5 012	5 012

Production of biogas for industry

Production de biogaz pour l'industrie

Producción de biogás para la industria

1,000 m ³	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	11 456	17 783	18 431	18 704	18 706	25 762				
Africa	123	4 123	4 684	4 795						
Burundi				1	1	1	1	1	1	1
Gabon			305	305	305	305	305	305	305	305
Ghana	119	4 119	4 119	4 228	4 228	4 228	4 228	4 228	4 228	4 228
Kenya	0	0	0	0	0	0	0	0	0	0
Nigeria			0	0	0	0	0	0	0	0
Senegal			256	256	256	256	256	256	256	256
Uganda	5	5	5	5	5	5	5	5	5	5
C America + Carib	9 833	9 833	9 921	10 081	10 083	10 100				
Costa Rica	3 993	3 993	3 993	3 993	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	5 840
Dominican Rep			88	88	88	88	88	88	88	88
Honduras				2	20	20	20	20	20	20
Nicaragua				160	160	160	160	160	160	160
S America	1 500	3 827	3 827	3 829	3 829	10 867				
Brazil				2	2	2	2	2	2	2
Ecuador					57	57	57	57	57	57
Uruguay	2 327	2 327	2 327	2 327	9 308	9 308	9 308	9 308	9 308	9 308
Venezuela	1 500	1 500	1 500	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 ³	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	1 619	2 049	3 043	5 847	6 059	6 078	6 113	6 113	6 137	6 137
Africa	1 594	2 023	2 982	3 530	3 713	3 713	3 713	3 713	3 715	3 715
Botswana	2	2	2	2	2	2	2	2	2	2
Burundi				1	1	1	1	1	1	1
Ghana	115	116	120	211	211	211	211	211	211	211
Kenya	11	11	11	11	11	11	11	11	11	11
Mali				49	49	49	49	49	49	49
Nigeria	6	6	6	6	6	6	6	6	6	6
Rwanda	1 460	1 884	2 363	2 538	2 538	2 538	2 538	2 538	2 538	2 538
South Africa			73	73	73	73	73	73	73	73
Tanzania	0	4	4	11	11	11	11	11	11	11
Togo									2	2
Zimbabwe			403	628	811	811	811	811	811	811
Asia	1	1	31	92	117	118	144	144	144	144
Philippines	1	1	1	1	1	1	1	1	1	1
Sri Lanka			23	84	110	111	136	136	136	136
Thailand			7	7	7	7	7	7	7	7
C America + Carib	2	2	7	2 202	2 205	2 223	2 226	2 226	2 226	2 226
Costa Rica				2 191	2 191	2 191	2 191	2 191	2 191	2 191
Grenada				2	2	2	2	2	2	2
Haiti				0	0	0	0	0	0	0
Honduras					2	20	20	20	20	20
Jamaica	2	2	2	2	2	2	5	5	5	5
Nicaragua			5	6	7	7	7	7	7	7
St Vincent Gren					1	1	1	1	1	1
Middle East	0	2								
Iraq	0	1	1	1	1	1	1	1	1	1
Jordan	0	0	0	0	0	0	0	0	0	0
Oceania							7	7	11	11
Vanuatu							7	7	11	11
S America	20	21	21	21	22	22	22	22	40	40
Argentina	5	5	5	5	5	5	5	5	23	23
Bolivia	15	15	15	15	15	15	15	15	15	15
Brazil	1	1	1	1	1	1	1	1	1	1
Uruguay					0	0	0	0	0	0

Production of biogas for agriculture

Production de biogaz pour l'agriculture

Producción de biogás para la agricultura

1,000 m ³	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	1 580	1 698	189 620	193 914	193 962	193 990	193 990	194 147	194 151	194 160
Africa	115	120	122							
Ghana		4	4	4	4	4	4	4	4	4
Kenya	115	115	115	115	115	115	115	115	115	115
Nigeria		2	2	2	2	2	2	2	2	2
Asia	110	111	595	595	618	618	618	618	618	618
Indonesia		1	1	1	1	1	1	1	1	1
Pakistan	110	110	110	133	133	133	133	133	133	133
Thailand		484	484	484	484	484	484	484	484	484
C America + Carib	11	12	12	398	423	451	451	451	451	451
Costa Rica	11	11	11	11	11	11	11	11	11	11
El Salvador			120	120	120	120	120	120	120	120
Grenada				20	21	21	21	21	21	21
Guatemala					8	8	8	8	8	8
Honduras				2	20	20	20	20	20	20
Nicaragua	1	1	9	13	13	13	13	13	13	13
Panama		0	250	250	250	250	250	250	250	250
St Lucia			8	8	8	8	8	8	8	8
Oceania						0	1	5	14	
Amer Samoa									3	3
Fiji							0	1	3	7
Vanuatu										5
S America	1 460	1 460	188 894	192 798	192 798	192 798	192 798	192 955	192 955	192 955
Argentina				3 887	3 887	3 887	3 887	3 887	3 887	3 887
Brazil			187 434	187 434	187 434	187 434	187 434	187 434	187 434	187 434
Colombia				18	18	18	18	18	18	18
Peru	1 460	1 460	1 460	1 460	1 460	1 460	1 460	1 616	1 616	1 616

Off-grid Energy access

Accès à l'énergie hors réseau

Acceso a la energía aislada

Number of people connected to hydropower

Nombre de personnes connectées à l'hydroélectricité

Número de personas conectadas a la hidroelectricidad

Thousands	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	5 910	6 195	6 589	6 892	7 172	7 217	7 554	7 605	7 658	7 658
Africa	398	399	469	481	622	626	897	898	904	904
Burkina Faso							250	250	250	250
Ethiopia	12	12	12	13	13	13	13	13	13	13
Gabon	4	4	4	4	4	4	4	4	4	4
Guinea	28	28	28	28	28	28	28	28	28	28
Kenya	97	97	97	97	98	98	98	98	98	98
Lesotho	1	1	1	1	1	1	1	1	1	1
Liberia	63	63	63	63	63	63	63	63	63	63
Madagascar							3	3	3	3
Malawi	34	34	34	38	38	42	47	47	49	49
Mali	2	2	2	2	2	2	2	2	2	2
Mozambique	1	1	1	1	1	1	1	1	1	1
Nigeria			27	27	27	27	27	27	27	27
Rwanda	55	55	55	56	56	56	56	57	57	57
Sierra Leone	4	4	4	4	142	142	142	142	142	142
South Africa	0	0	0	0	0	0	0	0	0	0
Tanzania	65	65	108	114	116	116	117	117	122	122
Uganda	4	4	4	4	4	4	4	4	4	4
Zambia	28	28	28	28	28	28	40	40	40	40
Zimbabwe	1	1	1	1	1	1	2	2	2	2
Asia	4 713	4 994	5 298	5 585	5 720	5 760	5 824	5 873	5 920	5 920
Afghanistan	676	774	871	969	1 066	1 066	1 066	1 066	1 066	1 066
Bhutan	9	9	9	9	9	9	9	9	9	9
India	1 569	1 627	1 661	1 690	1 690	1 690	1 690	1 690	1 690	1 690
Indonesia	180	204	220	227	227	230	230	230	230	230
Lao PDR	46	46	46	46	46	46	46	46	46	46
Malaysia	1	2	2	3	4	4	4	4	4	4
Myanmar	41	46	101	101	101	101	101	101	101	101
Nepal	522	610	707	758	791	825	863	910	956	957
Pakistan	953	961	962	1 063	1 064	1 067	1 092	1 092	1 092	1 092
Philippines	192	192	193	193	193	193	193	193	194	194
Sri Lanka	16	16	16	16	16	16	16	16	16	16
Tajikistan	101	101	104	104	107	107	107	109	109	109
Thailand	21	21	21	21	21	21	21	21	21	21
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	69	73	82	86	90	91	93	94	94	94
Cuba	2	2	3	3	3	3	3	3	3	3
Dominican Rep	6	9	11	13	15	16	18	18	18	18
El Salvador	1	1	1	1	1	1	2	2	2	2
Guatemala	5	6	8	10	12	12	12	12	12	12
Haiti	44	44	49	49	49	49	49	49	49	49
Honduras	2	2	2	2	2	2	2	2	2	2
Nicaragua	8	8	8	8	8	8	8	8	8	8
Oceania	5									
Fiji	2	2	2	2	2	2	2	2	2	2
Solomon Is	3	3	3	3	3	3	3	3	3	3
Vanuatu	0	0	1	1	1	1	1	1	1	1
S America	725	725	734	734	734	734	734	735	735	735
Argentina	2	2	2	2	2	2	2	2	2	2
Bolivia	580	580	589	589	589	589	589	589	589	589
Brazil	0	0	0	0	0	0	0	0	0	0
Chile	10	10	10	10	10	10	10	10	10	10
Colombia	21	21	22	22	22	22	22	22	22	22
Ecuador	47	47	47	47	47	47	47	47	47	47
Fr Guiana	4	4	4	4	4	4	4	4	4	4
Peru	58	58	58	58	58	58	58	58	58	58
Venezuela	3	3	3	3	3	3	3	3	3	3

Number of people using solar lights (<11 W)

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

Número de personas usando lámparas solares (<11 W)

Thousands	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	40 084	64 417	88 916	94 419	122 499	155 443	186 311	164 947	144 192	109 317
Africa	19 784	33 229	46 758	47 464	47 171	41 961	45 702	46 727	52 629	53 277
Angola				18	23	34	43	53	70	98
Benin			143	203	289	211	365	476	586	647
Botswana				1	2	3	2	1	22	22
Burkina Faso	288	508	990	982	1 609	1 298	1 340	790	898	781
Burundi	26	58	74	86	188	203	274	428	630	957
Cabo Verde				65	77	84	21	8	1	
Cameroon				21	120	614	1 303	1 710	2 439	2 163
Cent Afr Rep				18	33	46	47	32	49	43
Chad				20	34	189	171	203	121	180
Comoros				37	67	67	31			
Congo DR	454	801	1 004	713	1 625	1 449	1 598	464	525	442
Congo Rep				16	56	69	75	72	140	166
Cote d'Ivoire			144	250	293	195	182	271	299	278
Eq Guinea				121	145	145	24			
Eritrea				32	59	59	34	7	25	18
Eswatini				2	2	2	14	14		
Ethiopia	4 471	7 891	10 810	9 705	7 440	5 445	7 244	8 011	7 808	5 570
Gabon				18	39	55	83	88	82	44
Gambia				137	172	229	140	112	55	17
Ghana	29	32	98	249	447	460	361	265	218	181
Guinea				113	140	160	77	123	127	131
Guinea Bissau				113	135	160	59	37	61	48
Kenya	5 594	9 864	13 487	13 631	11 791	10 766	12 439	14 692	16 003	16 290
Lesotho				1	2	2	9	34	34	26
Liberia			55	148	169	141	66	144	191	189
Madagascar				33	190	428	563	645	760	1 131
Malawi	195	300	606	972	1 401	1 288	1 028	900	1 264	1 776
Mali			277	471	791	626	578	411	370	249
Mauritania				129	167	176	86	48	40	
Mauritius	87	74	93	91	1 177	1 131	2 006	1 547	1 547	728
Mozambique	19	62	62	82	120	120	152	319	759	1 282
Namibia				9	34	63	75	94	143	191
Niger		39	39	134	128	164	117	186	182	148
Nigeria	382	674	1 450	2 060	2 280	2 313	2 345	2 652	3 516	4 806
Rwanda	796	1 403	1 619	1 736	1 840	1 782	1 286	881	1 272	1 944
Sao Tome Prn				65	77	77	21	9	9	
Senegal	190	380	744	901	1 356	1 323	1 199	703	524	426
Seychelles				26	47	47	21			
Sierra Leone			100	303	441	398	270	297	336	314
Somalia				35	184	1 220	1 420	1 577	2 058	2 281
South Africa			200	202	330	252	283	203	188	225
South Sudan				39	152	218	291	263	512	544
Sudan		1	1	1						
Tanzania	4 413	7 783	10 249	8 315	5 025	1 953	1 748	2 170	2 893	2 770
Togo				74	92	122	118	184	232	185
Uganda	426	743	1 405	2 600	4 022	4 521	4 412	3 669	3 271	2 708
Zambia			693	938	1 097	708	1 086	1 256	1 914	2 552
Zimbabwe	2 415	2 616	2 417	1 547	1 263	946	596	676	442	727
Asia	19 851	30 366	40 270	42 977	68 387	106 852	133 391	112 222	85 199	50 129
Afghanistan	221	443	664	686	701	516	274	38	2	181
Bangladesh			329	360	813	1 158	1 620	1 273	641	368
Bhutan	10									
Cambodia			46	89	167	159	119	56	48	46
India	18 723	28 353	37 413	40 025	65 024	94 467	117 091	96 491	79 065	47 488
Indonesia	338	655	665	487	208	8 842	12 570	12 544	3 926	330
Malaysia				38	100	151	142	113	94	153
Myanmar	175	338	421	348	197	127	192	204	208	130
Nepal			59	207	243	288	141	105	1	1
Pakistan	176	340	403	412	446	512	501	860	774	1 028
Philippines		80	111	152	314	516	634	452	392	366
Sri Lanka	209	129	131	118	98					
Thailand				29	76	115	107	86	48	38
Timor Leste		28	28	28						

C America + Carib	7	9	6	113	324	438	461	315	324	270
Dominica					1	1	1			
Dominican Rep				18	53	77	58	24		
Guatemala				31	89	148	188	150	116	47
Haiti	3	3		18	63	77	81	47	46	26
Honduras		2	2	25	44	54	31	37	43	83
Nicaragua	4	4	4	2	1					
Panama				20	44	50	72	57	119	114
Puerto Rico					31	31	31			
Middle East	226	398	977	2 588	5 028	4 517	5 103	4 039	4 494	3 488
Iraq				563	1 042	1 042	1 307	828	828	445
Jordan	226	398	977	855	633					
Lebanon				307	863	863	1 055	509	509	253
United Arab Em				373	1 114	1 177	952	891	1 077	1 168
Yemen				490	1 376	1 435	1 789	1 811	2 079	1 622
Oceania	187	363	836	1 137	1 317	1 324	1 223	1 277	1 067	1 758
Australia				23	48	59	52	35	30	36
Fiji				42	163	272	248	158	113	342
Nauru				54	72	72	18			
Papua N Guin	187	363	836	895	791	568	639	875	760	1 056
Samoa				61	93	93	31	11	11	11
Vanuatu				61	150	260	236	198	153	313
S America	29	52	69	139	271	351	431	367	480	397
Argentina				17	46	47	97	101	112	45
Bolivia	21	27	33	47	70	96	86	56	81	57
Colombia				20	45	70	119	114	159	90
Peru	8	25	37	55	110	137	128	96	128	205

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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	9 076	8 353	8 299	7 531	8 362	10 275	13 407	14 316	16 106	19 327
Africa	571	1 055	1 825	2 477	3 120	4 725	7 291	9 279	11 587	15 271
Angola				0	0	7	7	13	16	
Benin			1	2	24	51	83	125	163	
Burkina Faso			1	3	31	62	101	135	182	
Burundi			26	31	31	35	41	17	25	
Cabo Verde			1	2	2	2	2	1	49	
Cameroon				1	6	14	14	21		
Cent Afr Rep				0	0	0	0	0		
Chad				0	1	1	14	17	16	
Comoros			25	30	30	30	30	5		
Congo DR				1	1	9	23	150	200	
Congo Rep				0	0	0	0	1	2	
Cote d'Ivoire			1	13	76	172	214	258	292	
Eq Guinea			1	4	4	4	4	2		
Eritrea			22	26	26	26	26	4		
Ethiopia	1	1	25	32	114	495	674	693	704	
Gabon				0	0	3	3	5	4	
Gambia			1	4	4	4	4	3		
Ghana	35	35	35	36	45	29	47	69	106	128
Guinea				1	3	12	20	35	57	85
Guinea Bissau			1	3	3	3	3	3	25	23
Kenya	173	330	491	633	944	1 595	2 844	4 290	5 280	5 939
Liberia				1	4	10	21	47	83	111
Madagascar				22	32	54	72	72	82	99
Malawi				21	25	73	91	109	128	143
Mali			1	3	9	33	64	118	141	
Mauritania			1	4	4	4	4	3		
Mauritius			11	14	15	16	19	11	8	
Mozambique			20	29	50	52	85	115	128	
Namibia					0	0	0	1	2	
Niger				1	5	12	24	24	23	55
Nigeria			36	43	87	200	344	831	2 490	
Rwanda	31	59	88	113	134	182	189	244	313	658
Sao Tome Prn				1	2	2	5	5	5	3
Senegal			1	20	43	162	230	340	362	
Seychelles			18	21	21	21	21	9	6	
Sierra Leone			1	14	26	57	96	151	183	
Somalia			28	33	35	49	49	35	54	
South Africa					9	14	23	41	52	
South Sudan				27	32	32	42	42	28	35
Tanzania	138	262	390	449	543	615	621	646	746	1 020
Togo				0	3	9	24	29	95	308
Uganda	194	369	820	881	933	1 032	1 109	760	737	703
Zambia				24	33	322	557	627	693	792
Zimbabwe				42	48	93	95	100	83	89
Asia	8 390	7 165	6 325	4 833	4 944	5 213	5 504	4 376	3 646	3 003
Afghanistan	6	12	21	29	53	46	40	32	24	0
Bangladesh	3 824	2 946	1 299	2	57	93	243	336	494	445
Cambodia	55	73	115	175	176	122	104	62	3	1
India	3 202	2 710	3 150	2 872	2 835	3 340	3 399	2 635	1 986	1 564
Indonesia			2	4	5	6	19	32	53	
Malaysia			2	5	5	5	18	32	32	
Myanmar			2	55	81	128	144	161	138	
Nepal	1 303	1 424	1 730	1 731	1 665	1 339	1 220	750	519	423
Pakistan				4	75	131	269	284	281	219
Philippines			10	12	16	40	75	82	100	113
Thailand				2	3	9	14	14	15	14

C America + Carib	21	34	34	51	112	112	129	129	119	50
Dominican Rep				2	2	2	2	2		3
Guatemala		2	2	5	87	87	103	103	99	18
Haiti				2	2	2	2	2	0	5
Honduras	21	27	27	34	13	14	8	8	5	10
Panama		5	5	8	8	8	14	14	15	15
Middle East						12	204	204	204	204
Lebanon						5	25	25	25	25
United Arab Em							24	24	24	24
Yemen						7	155	155	155	155
Oceania				30	47	143	185	243	486	737
Australia				1	3	3	6	6	5	11
Fiji				3	4	25	32	49	66	92
Kiribati										
Nauru				3	5	5	5	5	2	
Papua N Guin				12	17	44	62	86	325	536
Samoa				4	7	7	7	7	4	
Vanuatu				8	11	58	72	89	86	98
S America	94	99	116	140	139	69	94	85	65	62
Argentina				2	2	5	15	15	13	13
Bolivia	30	30	30	33	33	6	6	9	10	9
Chile					1	1	1	1	1	0
Colombia				2	3	3	15	18	15	18
Guyana	4	0	0							
Peru	60	68	85	103	100	54	57	43	25	21

Number of people using SHS (>50 W)

Nombre de personnes utilisant des SSD (>50 W)

Número de personas usando SSD (>50 W)

Thousands	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	12 627	16 593	19 380	16 142	17 634	16 872	17 034	17 562	17 625	15 862
Africa	507	574	839	1 598	2 694	3 519	4 989	6 718	7 671	9 323
Angola					6	6	63	63	65	61
Benin				9	20	20	66	107	163	279
Botswana				1	1	1	1	1	1	1
Burkina Faso	4	8	12	25	41	49	74	100	136	156
Burundi				34	53	53	53	53	31	12
Cabo Verde				7	16	16	16	16	9	
Cameroon							26	60	62	69
Cent Afr Rep							2	2	2	2
Chad								0	0	0
Comoros				33	52	52	52	52	19	
Congo DR					6	6	69	254	435	620
Congo Rep								26	26	28
Cote d'Ivoire				10	46	101	210	357	430	517
Egypt				29	29	29	29	29		
Eq Guinea				13	30	30	30	30	17	
Eritrea				29	45	45	45	45	16	
Ethiopia				29	45	67	97	109	105	108
Gabon										2
Gambia				14	33	33	33	33	35	16
Ghana				7	17	29	67	92	95	101
Guinea				12	28	49	103	157	182	275
Guinea Bissau	3	6	8	23	42	42	42	40	62	43
Kenya			3	28	181	286	580	1 026	1 308	1 665
Lesotho	7	7	7	7						
Liberia				9	21	30	56	95	104	127
Madagascar				29	46	46	46	69	57	81
Malawi				27	43	64	72	94	79	90
Mali	5	9	14	28	45	55	94	103	127	146
Mauritania				14	33	33	33	33	18	
Mauritius				14	36	42	46	46	32	10
Morocco	357	357	483	483	483	483	483	483	483	483
Mozambique				27	43	43	51	62	52	69
Niger				10	24	24	27	41	31	41
Nigeria	26	52	79	113	277	464	634	847	1 076	1 987
Rwanda			31	58	115	161	361	451	490	454
Sao Tome Prn				7	16	16	16	16	9	
Senegal				15	35	60	139	209	308	359
Seychelles				23	36	36	36	36	13	
Sierra Leone				11	24	24	71	115	137	151
Somalia				36	56	72	72	95	71	60
South Africa	14	27	41	55	69	55	42	28	14	8
South Sudan				35	55	55	55	55	20	
Tanzania		13	60	90	219	395	446	468	535	490
Togo					30	43	87	200	293	286
Tunisia	80	80	80	99	99	99	99	99	99	99
Uganda	12	15	22	48	81	141	183	208	229	235
Zambia				32	50	74	99	124	119	151
Zimbabwe				26	66	86	86	91	74	41
Asia	11 989	15 867	18 384	14 341	14 468	12 746	11 142	9 814	8 911	5 739
Afghanistan	4	8	12	15	29	25	21	18	14	
Bangladesh	11 589	15 464	17 977	13 930	13 978	11 960	9 602	8 188	7 197	4 096
India					22	134	285	311	311	290
Indonesia	13	13	13	13	13	13	13	13	38	38
Malaysia										1
Mongolia	249	249	249	249	249	249	249	249	249	249
Myanmar					31	602	610	639	644	
Nepal					13	91	91	91	91	78
Pakistan					31	76	95	143	151	120
Philippines			0	0	0	33	50	57	87	88
Sri Lanka	134	134	134	134	134	134	134	134	134	134
Viet Nam	1									

C America + Carib	0	0	1	1	7	23	51	50	53	76
Belize	0	0	0	0	0					
Costa Rica										
Cuba		0	1	1	7	7	36	35	35	29
Dominican Rep					0	0	0	0	0	
Haiti									1	12
Honduras						15	15	15	16	31
Panama										4
Oceania	26	31	31	31	31	64	102	119	187	208
Fiji	22	27	27	27	27	27	27	27	59	66
Kiribati										
Nauru	0	0	0	0	0					
Papua N Guin						3	23	32	67	80
Tonga	4	3	3	3	3					
Vanuatu						34	52	60	61	63
S America	105	121	125	171	435	521	750	861	804	516
Argentina	16	16	2							7
Bolivia								0	0	5
Brazil				1	8	8	8	8	7	
Colombia				57	57	57	57	57	0	0
Guyana	50	50	40	30	20	10				
Peru	39	56	83	83	350	446	685	796	796	503

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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	190	370	509	630	750	1 951	2 089	2 071	2 407	2 471
Africa	176	243	307	403	490	566	637	651	758	822
Benin			3	81	81	88	90	90	90	90
Burkina Faso					7	7	7	7	7	7
Cabo Verde			0	0	0	0	0	0	0	0
Cameroon	2	2	9	16	20	20	20	20	20	40
Ghana					0	12	12	12	12	12
Kenya	67	67	79	80	80	90	90	90	90	120
Liberia					16	25	25	25	25	25
Madagascar	2	2	2	2	2	2	13	13	13	13
Mali	84	119	144	150	157	194	225	225	225	225
Mauritania	2	18	18	18	18	18	18	18	18	18
Mozambique	1	3	3	3	3	3	3	3	3	3
Namibia							9	9	9	9
Nigeria	14	30	45	49	70	71	78	83	83	83
Rwanda										10
Senegal	1	1	1	1	1	1	1	1	1	1
Sierra Leone					24	24	24	24	104	104
Tanzania	2	2	2	2	9	9	9	9	9	14
Togo							4	4	4	4
Uganda	0	0	0	0	0	0	10	10	20	20
Zambia			1	1	1	1	5	5	24	24
Asia	5	118	193	218	251	1 376	1 443	1 411	1 639	1 639
Bangladesh			25	25	25	25	25	25	25	25
Cambodia									0	0
India		112	152	165	197	222	223	223	223	223
Indonesia						1 099	1 165	1 132	1 360	1 360
Lao PDR	5	5	5	5	5	5	5	6	6	6
Myanmar			10	21	22	22	22	22	22	22
Nepal	0	0	2	2	2	2	4	4	4	4
C America + Carib				0	0	0	0	0	0	0
Haiti				0	0	0	0	0	0	0
S America	9	9	9	9	9	9	9	10	10	10
Chile								1	1	1
Peru	9	9	9	9	9	9	9	9	9	9

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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	692	791	1 137	1 443	2 344	2 697	2 863	3 070	3 122	3 156
Africa	79	100	260	551	1 402	1 676	1 812	1 948	1 981	2 009
Algeria	6	6	91	344	344	344	344	344	344	344
Benin			1	2	2	2	3	3	3	3
Burkina Faso	4	4	4	4	4	5	23	23	23	23
Cabo Verde	0	0	1	1	1	1	1	1	1	1
Cameroon	2	2	2	2	122	275	275	275	275	275
Chad			1	1	1	1	1	1	1	1
Congo DR						1	3	7	7	7
Côte d'Ivoire			4	4	4	4	4	4	4	4
Egypt			25	25	25	30	31	31	31	31
Eritrea				16	674	714	714	714	714	714
Ethiopia						1	1	10	10	10
Gabon								8	8	8
Gambia			2	2	2	2	2	2	2	9
Ghana					4	4	4	4	4	4
Guinea							20	20	20	20
Guinea Bissau				7	7	24	24	24	24	24
Kenya	2	3	3	4	4	4	14	18	18	18
Lesotho								1	1	1
Liberia					1	3	3	3	3	3
Madagascar			6	6	9	9	11	26	29	29
Malawi							0	0	0	0
Mali	44	49	65	65	80	82	92	96	100	103
Mauritania				0	0	0	0	0	0	0
Mozambique	11	11	11	11	11	11	11	11	13	14
Namibia	1	3	3	3	3	3	3	3	3	3
Niger	1	1	1	1	2	5	5	13	13	13
Nigeria	1	17		21	60	67	84	129	133	135
Rwanda						1	1	1	1	1
Senegal						30	30	30	30	33
Seychelles							8	8	8	8
Sierra Leone	0	0	0	0	0	0	40	79	85	85
South Africa	0	0	0	0	0	0	0	0	0	0
Tanzania		2	2	4	6	6	6	6	6	6
Togo					4	7	7	7	7	7
Tunisia										1
Uganda	9	19	22	25	25	25	38	38	42	53
Zambia	0	0	0	0	5	12	14	14	15	15
Zimbabwe				3	3	3	3	3	3	3
Asia	609	684	798	814	859	928	952	976	994	1 000
Afghanistan	5	14	14	20	20	20	20	20	38	38
Bangladesh	4	14	37	41	64	111	126	135	135	138
Cambodia						1	1	1	1	1
India	197	197	197	197	197	197	197	197	197	197
Indonesia	266	319	408	408	421	422	422	422	422	422
Lao PDR	3	3	3	3	3	3	3	3	3	3
Malaysia		1	3	3	3	3	3	3	3	3
Maldives		2	2	2	2	2	2	2	2	2
Myanmar				4	10	11	13	19	19	19
Nepal	133	133	134	134	138	140	143	148	148	150
Pakistan						4	4	4	4	4
Philippines				1	1	14	18	21	21	21
Sri Lanka				1	1	1	1	1	1	1
Thailand								1	1	1

C America + Carib	0	0	4	4	8	11	11	11	11
Belize	0	0	0	0	0	0	0	0	0
Haiti			4	4	8	8	8	8	8
Nicaragua					3	3	3	3	3
Middle East	1	1	1	1	1	1	1	1	1
Palestine	1	1	1	1	1	1	1	1	1
Oceania	0	0	14	14	14	14	14	17	17
Australia							0	0	0
Fiji			14	14	14	14	14	14	14
Samoa	0	0	0	0	0	0	0	0	0
Vanuatu							3	3	3
S America	4	6	59	59	59	66	73	117	117
Argentina							0	0	0
Bolivia			49	49	49	49	52	52	52
Brazil	1	1	1	1	1	1	1	1	1
Colombia	3	3	5	5	5	6	6	38	38
Ecuador	0	2	2	2	2	6	6	6	6
Guyana								0	0
Peru							4	16	16
Suriname						2	2	2	2
Uruguay			0	0	0	0	0	0	0
Venezuela			2	2	2	2	2	2	2

Number of people using biogas electricity
Nombre de personnes utilisant l'électricité biogaz
Número de personas usando electricidad a partir de biogás

Thousands	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	234.3	236.3	271.4	276.8	292.8	314.5	314.5	314.5	314.5	314.5
Africa	0.1	0.1	0.1	0.7						
Uganda	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Mozambique				0.6	0.6	0.6	0.6	0.6	0.6	0.6
Nigeria					0.5	0.5	0.5	0.5	0.5	0.5
Asia	234.0	236.0	271.1	275.9	291.9	313.6	313.6	313.6	313.6	313.6
Cambodia			34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
India	7.5	9.5	10.3	15.1	31.1	52.8	52.8	52.8	52.8	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									
Peru	0.2	0.2	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 usando biogás para cocinar

Thousands	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total	127 168	124 602	124 985	125 050	124 895	124 503	124 116	123 515	122 911	122 308
Africa	207	263	316	372	449	486	504	524	533	527
Benin	0	0	0	0	0	0	1	0	1	1
Botswana							0	0	0	1
Burkina Faso	16	22	27	33	45	49	52	53	54	51
Cameroon	1	1	1	1	1	1	1	1	1	1
Congo DR							0	0	0	0
Ethiopia	36	47	57	67	90	106	105	123	133	148
Ghana			0	0	0	0	0	0	0	0
Kenya	53	64	72	76	83	89	98	103	109	102
Mali	0	1	2	2	2	2	2	2	2	4
Nigeria	3	2	2	2	3	3	2	2	2	2
Rwanda	27	35	47	55	56	58	58	56	54	49
Senegal	11	19	30	45	71	70	69	67	63	58
Tanzania	40	47	50	57	56	55	54	51	47	43
Togo										0
Uganda	19	22	24	26	31	33	36	37	37	35
Zambia		0	1	3	8	17	25	26	28	30
Zimbabwe	2	2	2	2	2	2	2	2	2	2
Asia	126 953	124 315	124 648	124 655	124 418	123 990	123 585	122 964	122 352	121 755
Afghanistan				0	0	0	0	0	0	0
Bangladesh	269	291	283	274	276	273	277	285	293	296
Bhutan	4	7	12	16	23	23	27	30	34	34
Cambodia	98	106	114	124	129	131	137	137	136	134
China	113 938	111 355	111 938	111 938	111 938	111 938	111 938	111 938	111 938	111 938
India	10 615	10 283	9 841	9 741	9 408	8 900	8 534	7 970	7 401	6 927
Indonesia	42	53	61	72	79	81	84	83	85	80
Lao PDR	11	11	10	10	9	9	8	7	7	6
Myanmar	1	1	1	1	1	1	1	1	1	1
Nepal	988	1 083	1 161	1 177	1 200	1 248	1 215	1 151	1 112	1 035
Pakistan	27	43	44	46	45	44	42	40	39	37
Sri Lanka	18	18	17	16	15	13	12	11	10	9
Thailand					1	1	1	1	1	1
Viet Nam	942	1 065	1 166	1 239	1 294	1 326	1 310	1 310	1 296	1 258
C America + Carib	5	22	19	19	24	24	24	23	23	23
Cuba	5	21	17	16	20	18	18	18	18	18
Nicaragua	0	0	2	3	4	5	5	5	5	5
S America	3	3	3	4	4	4	3	3	2	2
Argentina						0	0	0	0	0
Bolivia	3	3	3	3	3	2	2	2	1	1
Colombia					0	0	0	0	0	0
Ecuador			0	1	1	1	1	1	1	1
Peru			0	0	0	0	0	0	0	0



IRENA Headquarters
Masdar City
P.O. Box 236 Abu Dhabi
United Arab Emirates
www.irena.org

