

# **OFF-GRID RENEWABLE ENERGY STATISTICS 2022**

# **STATISTIQUES D'ÉNERGIE RENOUVELABLE HORS RÉSEAU 2022**

# **ESTADÍSTICAS DE ENERGÍA RENOVABLE AISLADA 2022**

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

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

Off-grid capacity  
Capacité hors réseau  
Capacidad aislada



# Hydropower Hydroélectricité Hidroeléctrica

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	624.068	643.021	659.252	706.133	722.571	770.617	764.314	806.392	807.524	815.034
Africa	159.229	161.234	164.088	190.522	197.284	231.642	241.682	265.035	265.051	269.964
Angola	21.659	21.659	22.859	24.059	24.059	36.479	36.479	36.479	36.479	36.479
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	97.000	97.800	97.800	110.900	110.900	121.700	131.700	141.600	141.600	141.600
Eswatini	1.690	1.690	1.690	1.690	1.690	1.690	1.690	1.690	1.690	1.690
Ethiopia	1.449	1.449	1.449	1.449	1.469	1.469	1.469	1.469	1.469	1.469
Guinea	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220	2.220
Kenya	9.495	9.495	10.135	10.135	13.655	19.775	19.775	31.575	31.575	31.575
Lesotho	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190
Liberia	4.800	4.800	4.860	4.860	4.860	4.860	4.860	4.860	4.860	4.860
Madagascar	0.160	0.220	0.878	0.938	0.938	1.018	1.018	1.118	1.118	1.118
Malawi	1.400	1.400	1.400	1.400	1.700	1.700	1.740	1.740	1.740	2.153
Mali	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Mauritius	0.350	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700
Mozambique	0.065	0.065	0.065	0.549	0.549	0.549	0.549	0.549	0.549	0.549
Nigeria				0.400	0.400	0.400	0.400	0.400	0.400	0.400
Rwanda	1.530	2.230	2.230	2.230	2.252	2.252	2.252	2.265	2.281	2.281
Sierra Leone	0.250	0.250	0.250	0.250	0.250	4.890	4.890	4.890	4.890	4.890
South Africa	7.445	7.540	7.836	7.986	7.986	7.986	7.986	7.986	7.986	11.986
Tanzania	6.860	6.860	6.860	17.900	20.800	21.098	21.098	21.998	21.998	22.498
Uganda	0.406	0.406	0.406	0.406	0.406	0.406	0.406	0.406	0.406	0.406
Zambia	1.720	1.720	1.720	1.720	1.720	1.720	1.720	2.360	2.360	2.360
Zimbabwe	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338
Asia	244.064	257.406	267.906	282.137	291.577	296.340	305.897	319.356	320.472	322.249
Afghanistan	20.748	24.197	27.646	31.095	34.544	37.993	37.993	37.993	37.993	37.993
Bhutan	1.240	1.240	1.240	1.240	1.240	1.240	1.240	1.240	1.240	1.240
India	79.237	82.169	83.377	84.079	84.675	84.675	84.675	84.675	84.675	84.675
Indonesia	10.105	12.065	13.314	15.007	15.437	15.437	15.597	15.597	15.597	15.597
Malaysia	0.163	0.172	0.532	0.580	0.655	0.688	0.737	0.737	0.737	0.737
Myanmar	2.949	2.974	3.165	6.890	6.890	6.890	6.890	6.890	6.890	6.890
Nepal	38.802	42.168	45.456	49.102	51.012	52.257	53.506	54.959	56.075	57.823
Pakistan	16.104	16.874	17.339	17.339	19.789	19.825	19.905	21.911	21.911	21.911
Philippines	12.858	12.858	12.903	12.926	12.926	12.926	20.944	30.944	30.944	30.973
Sri Lanka	5.003	5.248	5.493	5.738	6.068	6.068	6.068	6.068	6.068	6.068
Tajikistan	13.272	13.858	13.858	14.358	14.558	14.558	14.558	14.558	14.558	14.558
Thailand	0.258	0.258	0.258	0.458	0.458	0.458	0.458	0.458	0.458	0.458
Timor Leste	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325
Viet Nam	43.000	43.000	43.000	43.000	43.000	43.000	43.000	43.000	43.000	43.000
C America + Carib	3.658	3.964	4.341	10.139	10.375	10.450	10.480	11.659	11.659	12.479
Cuba				5.432	5.432	5.432	5.432	5.432	5.432	5.432
Dominican Rep	0.362	0.514	0.801	1.077	1.208	1.238	1.268	1.343	1.343	1.343
El Salvador	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140
Guatemala	0.150	0.150	0.240	0.330	0.420	0.465	0.465	0.465	0.465	0.465
Haiti	2.170	2.170	2.170	2.170	2.185	2.185	2.185	2.185	2.185	2.185
Honduras		0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129
Nicaragua	0.836	0.861	0.861	0.861	0.861	0.861	0.861	1.965	1.965	2.785
Oceania	77.543	77.543	77.543	77.643	77.643	77.643	77.643	77.643	77.643	77.643
Fiji	1.000	1.000	1.000	1.100	1.100	1.100	1.100	1.100	1.100	1.100
Papua N Guin	76.395	76.395	76.395	76.395	76.395	76.395	76.395	76.395	76.395	76.395
Solomon Is	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148
S America	139.574	142.874	145.374	145.692	145.692	154.542	128.612	132.699	132.699	132.699
Argentina	2.445	2.445	2.445	2.445	2.445	2.445	2.445	2.445	2.445	2.445
Brazil	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Colombia				0.318	0.318	5.318	5.318	9.405	9.405	9.405
Peru	137.109	140.409	142.909	142.909	142.909	146.759	120.829	120.829	120.829	120.829

# Solar lights and solar home systems (SHS)

## Lampes solaires et systèmes solaires domestiques (SDD)

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

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	105.603	156.055	201.915	239.360	257.704	317.641	364.896	436.244	424.571	336.541
Africa	6.627	17.932	34.807	55.225	77.208	99.560	125.277	165.367	196.265	164.268
Angola					0.008	0.104	0.116	1.046	1.053	1.041
Benin				0.064	0.227	0.448	0.557	1.708	2.749	2.570
Botswana					0.001	0.014	0.014	0.013	0.012	0.012
Burkina Faso	0.088	0.230	0.411	0.637	0.753	0.990	1.071	1.628	2.118	1.881
Burundi		0.010	0.023	0.029	0.824	1.172	1.184	1.224	1.364	0.555
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	1.468
Cent Afr Rep					0.008	0.020	0.035	0.032	0.049	0.035
Chad					0.008	0.017	0.081	0.077	0.125	0.062
Comoros					0.805	1.146	1.146	1.131	1.118	0.328
Congo DR	0.086	0.284	0.503	0.567	0.378	0.774	0.701	1.697	3.877	3.823
Congo Rep					0.008	0.025	0.032	0.030	0.490	0.483
Cote d Ivoire				0.055	0.222	0.779	1.820	3.929	6.125	5.956
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	0.340
Eswatini					0.001	0.001	0.001	0.013	0.013	0.013
Ethiopia	0.975	3.171	5.604	6.332	6.330	5.072	5.477	8.446	9.853	7.842
Gabon					0.008	0.022	0.028	0.040	0.032	0.026
Gambia					0.155	0.355	0.377	0.378	0.369	0.211
Ghana		0.144	0.146	0.199	0.515	0.904	1.173	1.989	2.565	2.328
Guinea					0.154	0.353	0.617	1.231	1.847	1.697
Guinea Bissau		0.051	0.102	0.152	0.358	0.602	0.618	0.614	0.553	0.350
Kenya	1.556	5.060	9.007	11.256	12.675	16.844	24.142	38.850	56.927	52.507
Lesotho	0.097	0.097	0.097	0.097	0.098	0.098	0.001	0.015	0.021	0.021
Liberia				0.024	0.183	0.387	0.548	0.978	1.811	1.660
Madagascar					0.805	1.212	1.429	1.690	2.182	1.277
Malawi	0.081	0.144	0.222	0.568	1.607	2.123	2.417	2.540	3.082	2.177
Mali		0.070	0.140	0.326	0.617	1.079	1.199	1.896	2.033	1.771
Mauritania					0.154	0.350	0.358	0.345	0.333	0.189
Mauritius	0.087	0.126	0.107	0.134	0.915	3.287	3.440	4.815	4.148	3.357
Morocco	0.564	0.004		10.936	10.936	10.936	10.936	10.936		
Mozambique		0.010	0.031	0.031	0.832	1.247	1.350	1.533	2.111	1.326
Namibia					0.009	0.049	0.089	0.107	0.096	0.058
Niger			0.015	0.015	0.169	0.357	0.387	0.514	0.701	0.554
Nigeria	0.086	0.748	1.431	2.258	3.218	6.152	9.570	13.060	18.405	17.126
Rwanda	0.212	0.692	1.235	1.815	2.975	4.401	6.030	9.423	10.998	9.788
Sao Tome Prn					0.154	0.348	0.348	0.349	0.339	0.203
Senegal		0.049	0.097	0.303	0.562	1.100	1.400	2.521	3.015	2.651
Seychelles					0.805	1.146	1.146	1.131	1.118	0.328
Sierra Leone				0.129	0.323	0.626	0.568	1.272	2.082	1.921
Somalia					0.799	1.183	1.776	1.948	2.312	1.148
South Africa		0.265	0.530	0.852	1.117	1.482	1.328	1.144	0.909	0.552
South Sudan					0.805	1.161	1.174	1.261	1.338	0.534
Tanzania	1.031	3.354	10.724	12.160	11.269	11.744	15.566	13.249	14.440	13.245
Togo					0.019	0.506	0.780	1.661	3.445	3.420
Tunisia	0.310	0.213	0.136	0.130	0.437	0.340	0.340	0.340	0.340	
Uganda	0.563	1.295	2.171	4.087	5.771	7.770	11.100	13.743	13.126	10.950
Zambia				0.208	1.116	1.567	2.926	4.626	5.521	4.450
Zimbabwe	0.890	1.916	2.076	1.861	2.059	2.586	2.926	2.605	2.830	1.665
Asia	97.045	135.669	164.231	181.404	176.318	209.568	230.254	259.232	216.742	162.612
Afghanistan		0.470	0.941	1.509	1.672	2.089	1.642	1.157	0.579	0.409
Bangladesh	65.911	93.769	118.097	128.106	126.065	139.234	121.079	110.291	88.025	78.095
Bhutan	0.023	0.023								
Cambodia		0.541	0.735	1.238	1.889	1.993	1.436	1.212	0.684	0.034
India	21.043	29.873	33.584	38.727	35.800	54.858	91.823	118.572	100.506	59.290
Indonesia	0.358	0.557	0.574	0.543	0.400	0.214	0.344	0.330	0.320	0.131
Malaysia					0.045	0.151	0.201	0.181	0.186	0.123
Mongolia	1.381	1.105	0.829	0.553	0.276					
Myanmar	0.041	0.133	0.257	0.289	0.252	0.667	1.298	15.259	15.462	15.399
Nepal	5.434	6.931	7.575	9.214	9.287	9.105	9.771	7.997	5.482	4.032
Pakistan	0.026	0.085	0.166	0.264	0.250	0.693	1.259	2.265	3.570	3.495
Philippines			0.033	0.178	0.223	0.343	1.145	1.698	1.722	1.461
Sri Lanka	2.801	2.154	1.427	0.770	0.101	0.083				
Thailand					0.045	0.137	0.257	0.270	0.208	0.145
Timor Leste			0.013	0.013	0.013					
Viet Nam	0.027	0.027								
C America + Carib	0.168	0.173	0.340	0.368	0.526	0.854	1.196	1.579	1.533	1.378
Bahamas	0.020	0.025	0.126	0.147	0.143	0.031				
Cuba			0.009	0.017	0.030	0.515	0.528	0.880	0.871	0.859
Dominican Rep					0.027	0.045	0.060	0.042	0.024	
Guatemala			0.005	0.005	0.032	0.055	0.078	0.200	0.198	0.167
Haiti	0.002	0.002	0.002	0.027	0.072	0.086	0.081	0.063	0.041	
Honduras	0.146	0.146	0.198	0.198	0.266	0.136	0.444	0.376	0.377	0.311
Nicaragua	0.006	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	0.142
Puerto Rico						0.028	0.028	0.028		



Middle East	0.056	0.122	0.214	0.526	1.108	2.040	1.915	3.058	2.610	2.473
Iraq					0.162	0.301	0.301	0.377	0.239	0.239
Jordan	0.056	0.122	0.214	0.526	0.460	0.340				
Lebanon					0.162	0.457	0.496	0.732	0.443	0.443
United Arab Em					0.162	0.485	0.554	0.589	0.563	0.494
Yemen					0.162	0.457	0.565	1.360	1.366	1.297
Oceania	0.387	0.546	0.711	0.648	0.890	0.845	1.715	2.257	2.612	2.364
Australia					0.045	0.067	0.099	0.101	0.094	0.056
Fiji	0.387	0.546	0.711	0.648	0.693	0.551	0.474	0.287	0.253	0.196
Nauru					0.014	0.023	0.023	0.023	0.023	0.010
Papua N Guin					0.075	0.102	0.236	0.605	0.808	0.733
Samoa					0.014	0.026	0.026	0.026	0.026	0.013
Vanuatu					0.051	0.076	0.857	1.214	1.407	1.356
S America	1.319	1.613	1.613	1.190	1.654	4.775	4.540	4.751	4.808	3.448
Argentina	1.319	1.319	1.319	0.896	0.009	0.009	0.037	0.143	0.143	0.134
Bolivia		0.293	0.293	0.293	0.302	0.308	0.042	0.042	0.069	0.060
Brazil					0.159	3.263	3.263	3.263	3.263	3.104
Chile						0.005	0.008	0.008	0.008	0.008
Colombia					0.882	0.888	0.888	0.993	1.020	0.139
Peru					0.303	0.303	0.303	0.303	0.306	0.003

## Solar lights (<11 W)

### Lampes solaires (<11 W)

### Lámparas solares (<11 W)

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	11.676	29.232	46.395	55.606	54.504	74.999	106.874	132.125	115.584	81.613
Africa	4.799	14.442	24.057	28.759	27.968	28.015	28.717	32.042	31.891	22.942
Angola					0.008	0.011	0.023	0.024	0.032	0.019
Benin				0.064	0.091	0.129	0.109	0.339	0.526	0.482
Botswana					0.001	0.002	0.002	0.001		
Burkina Faso	0.049	0.162	0.287	0.456	0.387	0.413	0.252	0.262	0.219	0.175
Burundi		0.010	0.023	0.029	0.034	0.054	0.066	0.095	0.201	0.182
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	0.596
Cent Afr Rep					0.008	0.019	0.034	0.031	0.019	0.005
Chad					0.008	0.016	0.080	0.075	0.085	0.022
Comoros					0.015	0.027	0.027	0.013		
Congo DR	0.086	0.284	0.503	0.567	0.378	0.680	0.606	0.669	0.194	0.140
Congo Rep					0.008	0.024	0.031	0.029	0.032	0.025
Cote d'Ivoire				0.055	0.086	0.114	0.092	0.150	0.178	0.145
Eq Guinea					0.018	0.029	0.029	0.011		
Eritrea					0.015	0.027	0.027	0.024	0.012	0.012
Eswatini					0.001	0.001	0.001	0.013	0.013	0.013
Ethiopia	0.975	3.171	5.597	6.324	5.515	3.909	3.666	4.718	5.261	4.058
Gabon					0.008	0.021	0.027	0.030	0.022	0.016
Gambia					0.020	0.036	0.057	0.059	0.049	0.028
Ghana		0.016	0.018	0.071	0.250	0.396	0.443	0.292	0.202	0.101
Guinea					0.018	0.034	0.049	0.040	0.048	0.033
Guinea Bissau					0.018	0.029	0.045	0.041	0.030	0.015
Kenya	1.366	4.441	7.830	9.411	9.526	8.828	9.307	9.129	8.796	5.729
Lesotho					0.001	0.001	0.001	0.015	0.021	0.021
Liberia				0.024	0.048	0.064	0.055	0.050	0.131	0.115
Madagascar					0.015	0.066	0.180	0.317	0.447	0.333
Malawi	0.081	0.144	0.222	0.568	0.817	1.005	0.744	0.614	0.734	0.620
Mali				0.116	0.202	0.410	0.350	0.327	0.180	0.124
Mauritania					0.018	0.031	0.039	0.026	0.014	0.006
Mauritius	0.087	0.126	0.107	0.134	0.124	1.692	1.626	2.886	2.198	2.198
Mozambique		0.010	0.031	0.031	0.047	0.108	0.108	0.156	0.339	0.339
Namibia					0.009	0.049	0.087	0.105	0.094	0.056
Niger			0.015	0.015	0.033	0.034	0.046	0.040	0.048	0.036
Nigeria	0.086	0.282	0.500	0.861	1.097	1.263	1.391	1.407	1.631	1.077
Rwanda	0.180	0.589	1.039	1.013	1.337	1.429	1.687	1.148	0.856	0.491
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	0.128
Seychelles					0.015	0.027	0.027	0.013		
Sierra Leone				0.129	0.187	0.249	0.146	0.122	0.144	0.118
Somalia					0.009	0.065	0.439	0.542	0.623	0.248
South Africa				0.057	0.058	0.146	0.181	0.213	0.165	0.073
South Sudan					0.015	0.043	0.055	0.084	0.161	0.148
Tanzania	0.904	2.941	5.187	5.534	3.746	1.571	0.822	1.466	1.859	1.596
Togo					0.018	0.030	0.054	0.069	0.077	0.052
Uganda	0.093	0.303	0.528	0.926	1.774	2.759	3.488	3.922	3.527	2.330
Zambia				0.208	0.326	0.428	0.501	0.915	1.195	0.915
Zimbabwe	0.890	1.916	2.076	1.861	1.184	0.919	0.704	0.375	0.404	0.113
Asia	6.755	14.456	21.686	25.512	24.273	43.461	74.810	96.366	80.670	41.657
Afghanistan		0.342	0.683	1.025	1.041	1.050	0.731	0.375	0.023	0.001
Bangladesh				0.184	0.208	0.437	0.434	0.552	0.376	0.195
Bhutan	0.023	0.023								
Cambodia				0.055	0.086	0.181	0.156	0.126	0.047	0.016
India	6.407	13.404	19.863	22.908	21.696	40.664	72.079	93.822	78.664	40.564
Indonesia	0.090	0.290	0.560	0.543	0.386	0.187	0.312	0.283	0.218	0.044
Malaysia					0.031	0.113	0.163	0.144	0.094	0.045
Myanmar	0.041	0.133	0.257	0.289	0.239	0.127	0.114	0.187	0.197	0.147
Nepal				0.014	0.075	0.088	0.129	0.069	0.055	0.001
Pakistan	0.026	0.085	0.166	0.264	0.231	0.178	0.116	0.129	0.468	0.412
Philippines			0.033	0.106	0.137	0.238	0.412	0.535	0.446	0.199
Sri Lanka	0.168	0.178	0.111	0.112	0.101	0.083				
Thailand					0.031	0.113	0.163	0.144	0.081	0.032
Timor Leste			0.013	0.013	0.013					
C America + Carib	0.029	0.033	0.136	0.156	0.240	0.260	0.305	0.292	0.222	0.145
Bahamas	0.020	0.025	0.126	0.147	0.143	0.031				
Dominican Rep					0.018	0.036	0.051	0.033	0.016	
Guatemala					0.018	0.036	0.058	0.080	0.078	0.055
Haiti	0.002	0.002	0.002		0.018	0.063	0.077	0.072	0.053	0.040
Honduras			0.003	0.003	0.021	0.031	0.047	0.028	0.029	0.014
Nicaragua	0.006	0.005	0.005	0.005	0.002	0.001				
Panama					0.018	0.034	0.045	0.051	0.047	0.036
Puerto Rico						0.028	0.028	0.028		

Middle East	0.056	0.122	0.214	0.526	1.108	2.040	1.837	2.351	1.903	1.765
Iraq					0.162	0.301	0.301	0.377	0.239	0.239
Jordan	0.056	0.122	0.214	0.526	0.460	0.340				
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	0.425
Yemen					0.162	0.457	0.526	0.833	0.839	0.770
Oceania	0.037	0.119	0.229	0.572	0.809	0.991	0.923	0.755	0.650	0.347
Australia					0.031	0.041	0.065	0.050	0.044	0.019
Fiji					0.031	0.149	0.193	0.171	0.075	0.031
Nauru					0.031	0.034	0.034	0.003		
Papua N Guin	0.037	0.119	0.229	0.572	0.629	0.557	0.336	0.306	0.393	0.243
Samoa					0.031	0.047	0.047	0.016	0.013	0.013
Vanuatu					0.056	0.164	0.249	0.210	0.126	0.041
S America	0.001	0.060	0.072	0.082	0.106	0.232	0.282	0.319	0.248	0.188
Argentina					0.018	0.028	0.029	0.055	0.075	0.074
Bolivia	0.000	0.056	0.059	0.062	0.032	0.059	0.078	0.066	0.036	0.014
Colombia					0.018	0.034	0.049	0.082	0.078	0.063
Peru	0.001	0.004	0.014	0.020	0.037	0.111	0.126	0.115	0.060	0.038

**Solar home systems (SHS 11-50 W)**  
**Systèmes solaires domestiques (SSD 11-50 W)**  
**Sistemas solares domésticos (SSD 11-50 W)**

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	87.109	121.193	145.587	162.478	163.337	179.277	170.354	170.311	153.153	134.123
Africa	0.539	1.884	3.472	5.971	9.353	12.835	22.427	38.482	52.035	48.512
Angola						0.002	0.002	0.042	0.042	0.042
Benin					0.004	0.014	0.143	0.288	0.473	0.469
Burkina Faso					0.004	0.014	0.148	0.294	0.479	0.475
Burundi					0.135	0.157	0.157	0.168	0.202	0.067
Cabo Verde					0.004	0.014	0.014	0.014	0.014	0.010
Cameroon						0.003	0.016	0.060	0.060	0.060
Cent Afr Rep						0.001	0.001	0.001	0.001	0.001
Chad						0.001	0.002	0.002	0.040	0.040
Comoros					0.135	0.157	0.157	0.157	0.157	0.022
Congo DR						0.003	0.004	0.048	0.085	0.085
Congo Rep						0.001	0.001	0.001	0.001	0.001
Cote d'Ivoire					0.004	0.071	0.417	0.959	1.176	1.172
Eq Guinea					0.004	0.014	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	2.177
Gabon						0.001	0.001	0.010	0.010	0.010
Gambia					0.004	0.014	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	0.500
Guinea					0.004	0.014	0.048	0.089	0.121	0.117
Guinea Bissau					0.004	0.014	0.014	0.014	0.014	0.010
Kenya	0.190	0.620	1.178	1.755	2.403	4.254	9.129	18.553	28.888	28.190
Liberia					0.004	0.017	0.051	0.107	0.273	0.269
Madagascar					0.135	0.184	0.287	0.411	0.411	0.276
Malawi					0.135	0.157	0.354	0.481	0.540	0.405
Mali					0.004	0.014	0.048	0.179	0.341	0.338
Mauritania					0.004	0.014	0.014	0.014	0.014	0.010
Mauritius					0.135	0.178	0.191	0.199	0.219	0.084
Mozambique					0.129	0.178	0.281	0.289	0.421	0.292
Namibia							0.002	0.002	0.002	0.002
Niger					0.004	0.017	0.036	0.091	0.091	0.087
Nigeria					0.127	0.163	0.363	0.964	1.667	1.540
Rwanda	0.032	0.103	0.196	0.292	0.472	0.561	0.779	0.849	1.053	0.864
Sao Tome Prn					0.004	0.014	0.014	0.026	0.026	0.022
Senegal					0.004	0.071	0.133	0.553	0.759	0.755
Seychelles					0.135	0.157	0.157	0.157	0.157	0.022
Sierra Leone					0.004	0.071	0.117	0.263	0.448	0.444
Somalia					0.135	0.157	0.171	0.240	0.240	0.105
South Africa							0.076	0.124	0.203	0.203
South Sudan					0.135	0.157	0.157	0.215	0.215	0.081
Tanzania	0.127	0.413	0.785	1.169	1.410	1.834	2.338	2.665	2.968	2.693
Togo					0.001	0.015	0.049	0.139	0.152	0.151
Uganda	0.190	0.620	1.178	2.620	2.894	3.145	4.123	5.253	4.478	4.155
Zambia					0.135	0.178	1.107	1.851	2.104	1.969
Zimbabwe					0.219	0.249	0.446	0.454	0.474	0.255
Asia	85.981	117.774	140.255	154.479	151.501	164.351	146.190	129.059	98.243	83.191
Afghanistan		0.064	0.128	0.289	0.372	0.509	0.446	0.382	0.221	0.137
Bangladesh	65.911	93.769	118.097	127.922	125.858	138.460	119.804	103.207	78.981	69.233
Cambodia		0.541	0.735	1.183	1.803	1.813	1.279	1.085	0.637	0.017
India	14.636	16.469	13.722	15.820	14.104	13.856	16.406	16.761	13.068	9.951
Indonesia					0.014	0.026	0.031	0.047	0.094	0.081
Malaysia					0.014	0.038	0.038	0.038	0.092	0.079
Myanmar					0.014	0.540	0.658	0.880	0.942	0.928
Nepal	5.434	6.931	7.575	9.200	9.212	8.811	6.935	5.221	2.719	1.323
Pakistan					0.019	0.177	0.301	0.967	1.019	1.000
Philippines				0.065	0.079	0.098	0.199	0.345	0.342	0.329
Thailand					0.014	0.023	0.094	0.126	0.126	0.113
C America + Carib	0.146	0.146	0.221	0.221	0.305	0.172	0.174	0.310	0.310	0.225
Dominican Rep					0.009	0.009	0.009	0.009	0.009	
Guatemala			0.005	0.005	0.014	0.019	0.019	0.120	0.120	0.112
Haiti					0.009	0.009	0.010	0.010	0.010	0.001
Honduras	0.146	0.146	0.195	0.195	0.245	0.105	0.106	0.056	0.056	0.007
Panama			0.021	0.021	0.029	0.030	0.030	0.115	0.115	0.106
Middle East							0.078	0.707	0.707	0.707
Lebanon							0.039	0.112	0.112	0.112
United Arab Em								0.069	0.069	0.069
Yemen							0.039	0.527	0.527	0.527

Oceania					0.180	0.276	0.701	0.900	1.103	0.922
Australia					0.014	0.026	0.034	0.050	0.050	0.037
Fiji					0.014	0.023	0.095	0.116	0.178	0.165
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	0.282
Samoa					0.014	0.026	0.026	0.026	0.026	0.013
Vanuatu					0.051	0.076	0.331	0.405	0.468	0.416
S America	0.444	1.390	1.639	1.806	1.997	1.643	0.784	0.852	0.756	0.565
Argentina					0.009	0.009	0.037	0.143	0.143	0.134
Bolivia		0.293	0.293	0.293	0.302	0.308	0.042	0.042	0.066	0.057
Chile						0.005	0.008	0.008	0.008	0.008
Colombia					0.009	0.015	0.015	0.120	0.145	0.136
Peru	0.444	1.096	1.345	1.513	1.677	1.307	0.683	0.539	0.395	0.230

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

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	7.305	6.911	11.606	23.470	42.443	65.798	89.400	135.394	157.169	136.231
Africa	1.289	1.606	7.278	20.495	39.887	58.710	74.132	94.843	112.339	92.814
Angola						0.091	0.091	0.980	0.980	0.980
Benin					0.132	0.306	0.306	1.082	1.750	1.618
Botswana						0.012	0.012	0.012	0.012	0.012
Burkina Faso	0.039	0.068	0.124	0.181	0.362	0.564	0.670	1.072	1.419	1.231
Burundi					0.656	0.961	0.961	0.961	0.961	0.306
Cabo Verde					0.132	0.306	0.306	0.306	0.306	0.174
Cameroon								0.355	0.812	0.812
Cent Afr Rep									0.029	0.029
Chad										
Comoros					0.656	0.961	0.961	0.961	0.961	0.306
Congo DR						0.091	0.091	0.980	3.598	3.598
Congo Rep									0.457	0.457
Cote d'Ivoire					0.132	0.594	1.310	2.819	4.771	4.640
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	1.607
Gambia					0.132	0.306	0.306	0.306	0.306	0.174
Ghana					0.132	0.308	0.524	1.360	1.859	1.728
Guinea					0.132	0.306	0.521	1.102	1.678	1.546
Guinea Bissau		0.051	0.102	0.152	0.335	0.560	0.560	0.560	0.509	0.326
Kenya				0.090	0.746	3.761	5.706	11.168	19.244	18.588
Lesotho	0.097	0.097	0.097	0.097	0.097					
Liberia					0.132	0.306	0.441	0.821	1.407	1.276
Madagascar					0.656	0.961	0.961	0.961	1.323	0.667
Malawi					0.656	0.961	1.319	1.445	1.807	1.151
Mali		0.070	0.140	0.210	0.411	0.655	0.801	1.390	1.511	1.310
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
Morocco	0.564	0.004		10.936	10.936	10.936	10.936	10.936		
Mozambique					0.656	0.961	0.961	1.087	1.351	0.695
Niger					0.132	0.306	0.306	0.383	0.563	0.431
Nigeria		0.466	0.931	1.397	1.994	4.726	7.816	10.688	15.107	14.509
Rwanda				0.510	1.166	2.411	3.565	7.425	9.089	8.433
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	1.768
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	1.358
Somalia					0.656	0.961	1.166	1.166	1.450	0.794
South Africa		0.265	0.530	0.794	1.059	1.336	1.071	0.806	0.541	0.276
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	8.957
Togo						0.462	0.677	1.453	3.217	3.217
Tunisia	0.310	0.213	0.136	0.130	0.437	0.340	0.340	0.340	0.340	
Uganda	0.279	0.372	0.466	0.540	1.103	1.866	3.488	4.569	5.122	4.466
Zambia					0.656	0.961	1.319	1.860	2.222	1.567
Zimbabwe					0.656	1.418	1.776	1.776	1.953	1.297
Asia	4.310	3.440	2.290	1.413	0.544	1.756	9.255	33.806	37.829	37.764
Afghanistan		0.065	0.130	0.195	0.259	0.530	0.465	0.400	0.335	0.270
Bangladesh						0.338	0.842	6.532	8.667	8.667
India						0.338	3.339	7.989	8.774	8.774
Indonesia	0.267	0.267	0.015		0.000	0.000	0.000	0.000	0.007	0.007
Mongolia	1.381	1.105	0.829	0.553	0.276					
Myanmar							0.526	14.192	14.323	14.323
Nepal						0.206	2.707	2.707	2.707	2.707
Pakistan						0.338	0.842	1.169	2.083	2.083
Philippines				0.008	0.008	0.008	0.534	0.817	0.933	0.933
Sri Lanka	2.634	1.975	1.317	0.658						
Viet Nam	0.027	0.027								
C America + Carib			0.009	0.017	0.030	0.515	0.819	1.171	1.162	1.150
Cuba			0.009	0.017	0.030	0.515	0.528	0.880	0.871	0.859
Haiti										
Honduras							0.291	0.291	0.291	0.291
Middle East										

Oceania	0.387	0.546	0.711	0.648	0.648	0.378	0.756	1.136	1.391	1.391
Fiji	0.387	0.546	0.711	0.648	0.648	0.378	0.186			
Papua N Guin							0.044	0.327	0.451	0.451
Vanuatu							0.526	0.809	0.940	0.940
S America	1.319	1.319	1.319	0.896	1.335	4.439	4.439	4.439	4.447	3.113
Argentina	1.319	1.319	1.319	0.896						
Bolivia									0.003	0.003
Brazil					0.159	3.263	3.263	3.263	3.263	3.104
Colombia					0.873	0.873	0.873	0.873	0.876	0.003
Peru					0.303	0.303	0.303	0.303	0.306	0.003

# Solar mini-grids

## Mini-réseaux solaires

### Mini-redes solares

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	30.860	40.867	49.870	129.054	302.763	321.613	346.137	352.093	470.980	472.891
Africa	3.660	7.213	8.975	71.020	243.258	259.277	277.901	282.806	294.510	296.378
Algeria	0.454	0.454	0.454	49.100	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
Burkina Faso	0.143	0.203	0.203	0.203	0.203	0.252	0.312	0.900	0.900	0.900
Cabo Verde	0.027	0.027	0.039	0.089	0.089	0.148	0.148	0.186	0.186	0.186
Cameroon	0.010	0.010	0.010	0.082	0.154	11.431	23.851	23.851	23.851	23.851
Chad				0.122	0.122	0.122	0.122	0.122	0.122	0.122
Congo DR							1.032	1.132	2.462	2.462
Cote d'Ivoire				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
Eritrea					0.350	0.350	2.600	2.600	2.600	2.600
Ethiopia							0.018	0.018	0.343	0.343
Gabon									0.400	0.400
Gambia				0.060	0.060	0.060	0.060	0.060	0.060	0.060
Ghana				0.256	0.256	0.606	0.797	0.797	0.797	0.797
Guinea								0.077	0.077	0.077
Guinea Bissau					0.312	0.312	0.920	0.920	0.920	0.920
Kenya	0.714	0.834	0.884	1.490	1.629	1.629	1.659	2.347	2.475	2.475
Liberia						0.157	0.254	0.254	0.257	0.257
Madagascar	0.003	0.003	0.003	0.148	0.148	0.280	0.280	0.464	1.084	1.084
Malawi								0.085	1.477	1.477
Mali	1.172	3.050	3.380	4.222	4.308	5.686	5.797	5.929	5.929	5.929
Mauritania			0.135	0.135	0.153	0.153	0.153	0.153	0.153	0.153
Morocco								0.008	0.008	0.008
Mozambique		1.324	1.331	1.331	1.331	1.331	1.331	1.331	1.331	1.331
Namibia	0.202	0.202	0.494	0.494	0.494	0.494	0.494	0.494	0.494	0.494
Niger			0.028	0.028	0.028	0.097	0.165	0.165	0.568	0.568
Nigeria	0.083	0.216	0.425	1.208	1.463	3.005	3.259	4.131	4.834	4.834
Senegal							1.020	1.020	1.020	1.020
Seychelles									5.000	5.400
Sierra Leone		0.005	0.005	0.005	0.005	0.198	0.198	1.398	2.698	4.038
South Africa	0.001	0.001	0.001	0.001	0.001	0.033	0.033	0.033	0.033	0.033
Tanzania		0.033	0.107	0.141	0.243	0.488	0.488	0.494	0.494	0.494
Togo						0.400	0.700	0.730	0.730	0.730
Uganda	0.851	0.851	1.478	1.565	1.795	1.818	1.818	2.518	2.518	2.646
Zambia				0.001	0.001	0.113	0.113	0.185	0.185	0.185
Zimbabwe					0.099	0.099	0.099	0.099	0.199	0.199
Asia	24.935	31.109	38.345	49.857	50.732	53.361	57.866	58.781	159.898	159.908
Afghanistan	0.100	0.344	1.394	1.394	1.797	1.797	1.797	1.797	1.797	1.797
Bangladesh	0.200	0.200	0.640	1.871	2.021	3.089	5.199	5.887	6.555	6.555
India	5.030	5.340	6.420	6.940	7.080	7.460	8.000	8.010	108.010	108.010
Indonesia	16.703	22.323	25.261	34.056	34.106	35.025	36.225	36.225	36.225	36.225
Malaysia			1.525	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
Myanmar				0.079	0.211	0.443	0.443	0.443	0.443	0.443
Nepal	2.902	2.902	2.902	2.902	2.902	2.932	3.088	3.304	3.504	3.514
Pakistan							0.500	0.500	0.500	0.500
Thailand									0.250	0.250
C America + Carib	0.346	0.521	0.521	0.721	0.724	0.736	1.036	1.036	1.036	1.036
Belize		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175
El Salvador	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044
Guatemala	0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108
Haiti	0.093	0.093	0.093	0.293	0.296	0.296	0.296	0.296	0.296	0.296
Honduras	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063
Nicaragua	0.039	0.039	0.039	0.039	0.039	0.039	0.339	0.339	0.339	0.339
Puerto Rico						0.012	0.012	0.012	0.012	0.012
Middle East	0.017	0.017	0.017	3.767	3.767	3.767	3.767	3.767	6.767	6.767
Palestine	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
United Arab Em				3.750	3.750	3.750	3.750	3.750	3.750	3.750
Yemen									3.000	3.000
Oceania				0.555	0.555	0.555	0.555	0.566	0.641	0.641
Australia								0.011	0.011	0.011
Fiji				0.555	0.555	0.555	0.555	0.555	0.555	0.555
Vanuatu									0.075	0.075



S America	1.903	2.008	2.012	3.135	3.727	3.918	5.012	5.138	8.128	8.161
Argentina								0.118	0.118	0.118
Bolivia	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119
Brazil	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Colombia		0.105	0.109	0.109	0.701	0.892	1.034	1.034	3.524	3.524
Ecuador	0.096	0.096	0.096	0.096	0.096	0.096	1.048	1.048	1.048	1.048
Paraguay	0.079	0.079	0.079	0.079	0.079	0.079	0.079	0.079	0.079	0.079
Peru	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.199	0.699	0.732
Uruguay				0.052	0.052	0.052	0.052	0.052	0.052	0.052
Venezuela	1.377	1.377	1.377	2.448	2.448	2.448	2.448	2.448	2.448	2.448

# Solar pumps

## Pompes solaires

### Bombas solares

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	20.008	26.300	59.161	119.859	193.027	370.011	563.105	596.581	664.752	669.853
Africa	3.765	4.873	5.902	7.648	9.534	10.838	14.546	14.792	18.335	18.413
Algeria	0.056	0.057	0.073	0.076	0.076	0.076	0.081	0.081	0.081	0.081
Angola	0.010	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Botswana	0.003	0.003	0.003	0.003	0.025	0.025	0.027	0.027	0.027	0.027
Burkina Faso	0.009	0.016	0.017	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
Cabo Verde							0.041	0.041	0.041	0.041
Cameroon	0.002	0.006	0.006	0.007	0.007	0.009	0.009	0.009	0.009	0.009
Chad	0.003	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
Congo Rep	0.003	0.015	0.019	0.020	0.032	0.032	0.032	0.032	0.032	0.032
Cote d'Ivoire			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Djibouti	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043
Egypt	0.097	0.325	0.607	1.138	1.389	1.575	1.575	1.575	1.575	1.575
Eritrea	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Ethiopia	0.031	0.031	0.041	0.058	0.102	0.129	0.160	0.160	0.160	0.160
Gabon	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Gambia	0.163	0.223	0.249	0.249	0.561	0.562	0.569	0.569	0.569	0.569
Ghana				0.020	0.034	0.038	0.039	0.039	0.039	0.118
Guinea				0.002	0.002	0.002	0.002	0.002	0.002	0.002
Guinea Bissau	0.016	0.018	0.018	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Kenya	0.069	0.111	0.220	0.298	0.349	0.422	0.562	0.562	0.662	0.662
Libya		0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Madagascar			0.011	0.011	0.011	0.011	0.011	0.016	0.016	0.016
Malawi	0.045	0.091	0.137	0.182	0.497	0.505	0.505	0.505	0.591	0.591
Mali	0.125	0.138	0.138	0.138	0.152	0.152	0.152	0.152	0.152	0.152
Mauritania	0.014	0.014	0.030	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Morocco	0.318	0.634	0.800	1.014	1.307	1.361	1.361	1.361	1.392	1.392
Mozambique	0.001	0.001	0.008	0.011	0.021	0.021	0.021	0.021	0.021	0.021
Namibia	0.952	0.952	0.952	0.952	0.953	0.953	0.953	0.953	0.953	0.953
Niger	0.008	0.008	0.011	0.026	0.031	0.031	0.053	0.053	0.053	0.053
Nigeria	0.985	0.985	0.985	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Rwanda						0.004	3.308	3.357	6.657	6.657
Senegal	0.030	0.089	0.136	0.164	0.261	0.459	0.470	0.494	0.520	0.520
Sierra Leone	0.002	0.002	0.002	0.002	0.002	0.245	0.280	0.302	0.302	0.302
Somalia	0.020	0.020	0.095	0.128	0.128	0.128	0.128	0.128	0.128	0.128
South Africa	0.370	0.430	0.493	0.496	0.506	0.506	0.506	0.506	0.506	0.506
South Sudan	0.030	0.045	0.045	0.045	0.087	0.167	0.167	0.179	0.179	0.179
Sudan	0.007	0.020	0.020	0.022	0.022	0.022	0.022	0.022	0.022	0.022
Tanzania	0.076	0.209	0.279	0.345	0.409	0.524	0.592	0.635	0.635	0.635
Tunisia	0.105	0.105	0.113	0.260	0.282	0.310	0.310	0.343	0.343	0.343
Uganda	0.122	0.167	0.212	0.260	0.515	0.533	0.573	0.632	0.632	0.632
Zambia							0.089	0.089	0.089	0.089
Zimbabwe	0.015	0.053	0.075	0.112	0.157	0.332	0.332	0.332	0.332	0.332
Asia	15.438	20.408	51.476	109.324	180.066	355.149	544.031	576.137	639.821	643.683
Afghanistan	0.022	0.029	0.029	0.029	0.092	0.117	0.118	0.118	0.118	0.118
Bangladesh	0.127	0.211	0.964	3.547	9.198	18.560	28.226	40.872	46.023	48.617
Cambodia	0.007	0.007	0.007	0.007	0.034	0.034	0.034	0.034	0.034	0.034
India	14.739	19.415	49.547	104.273	168.880	333.869	512.936	532.268	589.752	589.752
Indonesia	0.064	0.116	0.179	0.317	0.457	0.826	0.909	0.968	0.968	0.968
Korea DPR					0.004	0.004	0.004	0.004	0.004	0.004
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	0.004	0.006	0.017	0.017	0.017	0.017	0.017
Myanmar	0.052	0.054	0.061	0.061	0.095	0.101	0.102	0.132	0.132	0.132
Nepal	0.227	0.302	0.377	0.578	0.694	0.869	0.869	0.869	1.919	3.187
Pakistan	0.187	0.233	0.261	0.307	0.329	0.360	0.360	0.360	0.360	0.360
Philippines		0.006	0.007	0.130	0.140	0.187	0.234	0.259	0.259	0.259
Sri Lanka	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Thailand	0.005	0.010	0.012	0.043	0.109	0.176	0.194	0.208	0.208	0.208
Timor Leste		0.017	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
C America + Carib	0.075	0.145	0.209	0.305	0.423	0.558	0.576	0.705	0.770	1.100
Barbados		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Belize							0.002	0.002	0.002	0.002
Costa Rica	0.002	0.002	0.002	0.002	0.020	0.044	0.046	0.047	0.051	0.055
Dominican Rep	0.004	0.007	0.007	0.007	0.019	0.101	0.101	0.154	0.154	0.154
El Salvador				0.021	0.021	0.045	0.045	0.047	0.051	0.093
Guadeloupe							0.002	0.002	0.002	0.002
Guatemala			0.001	0.011	0.025	0.025	0.027	0.066	0.078	0.195
Haiti	0.026	0.047	0.068	0.089	0.110	0.110	0.110	0.110	0.110	0.110
Honduras	0.039	0.078	0.117	0.156	0.195	0.195	0.195	0.223	0.263	0.415
Jamaica		0.006	0.008	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Martinique	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003
Nicaragua	0.002	0.002	0.002	0.002	0.012	0.015	0.024	0.030	0.035	0.050
Panama	0.000	0.000	0.000	0.000	0.005	0.005	0.005	0.005	0.005	0.005
St Kitts Nevis			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

Middle East	0.027	0.075	0.745	1.685	1.929	2.054	2.343	2.624	2.956	2.967
Iran IR	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Iraq	0.004	0.009	0.039	0.039	0.039	0.104	0.104	0.131	0.239	0.250
Lebanon	0.002	0.032	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269
Oman			0.002	0.002	0.013	0.013	0.013	0.013	0.013	0.013
Syrian AR	0.008	0.018	0.018	0.018	0.024	0.024	0.024	0.024	0.024	0.024
United Arab Em		0.002	0.002	0.017	0.017	0.017	0.017	0.017	0.017	0.017
Yemen			0.403	1.326	1.554	1.614	1.902	2.157	2.381	2.381
Oceania	0.010	0.011	0.012	0.016	0.043	0.048	0.075	0.094	0.153	0.191
Australia	0.010	0.011	0.011	0.015	0.016	0.021	0.048	0.066	0.126	0.163
Papua N Guin			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Tonga					0.026	0.026	0.026	0.026	0.026	0.026
Vanuatu							0.001	0.001	0.001	0.001
S America	0.693	0.787	0.818	0.881	1.031	1.364	1.534	2.229	2.716	3.499
Argentina	0.006	0.035	0.037	0.037	0.064	0.236	0.301	0.521	0.733	1.026
Bolivia		0.001	0.002	0.025	0.054	0.093	0.095	0.215	0.237	0.350
Brazil				0.009	0.011	0.029	0.044	0.065	0.065	0.077
Chile	0.035	0.037	0.042	0.052	0.075	0.081	0.100	0.148	0.152	0.285
Colombia	0.012	0.023	0.032	0.038	0.042	0.088	0.099	0.193	0.307	0.340
Ecuador	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Paraguay	0.012	0.042	0.048	0.062	0.067	0.090	0.090	0.134	0.134	0.134
Peru	0.000	0.018	0.023	0.023	0.035	0.048	0.093	0.198	0.285	0.403
Uruguay		0.001	0.005	0.007	0.053	0.070	0.084	0.126	0.173	0.254
Venezuela	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.629

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

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	16.786	22.495	54.649	113.269	185.564	361.638	554.320	587.393	650.889	654.537
Africa	1.797	2.564	3.236	4.228	5.509	6.308	9.799	9.890	10.020	10.099
Algeria	0.006	0.008	0.023	0.026	0.026	0.026	0.031	0.031	0.031	0.031
Botswana	0.003	0.003	0.003	0.003	0.014	0.014	0.014	0.014	0.014	0.014
Cameroon			0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Congo DR		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Congo Rep	0.003	0.015	0.019	0.020	0.023	0.023	0.023	0.023	0.023	0.023
Djibouti	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043
Egypt	0.097	0.325	0.607	1.138	1.358	1.543	1.543	1.543	1.543	1.543
Eritrea	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ethiopia			0.010	0.010	0.034	0.034	0.034	0.034	0.034	0.034
Gabon	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Gambia	0.163	0.223	0.249	0.249	0.554	0.555	0.555	0.555	0.555	0.555
Ghana			0.020	0.020	0.034	0.038	0.039	0.039	0.039	0.118
Kenya	0.027	0.027	0.051	0.087	0.087	0.159	0.299	0.299	0.399	0.399
Madagascar			0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Malawi		0.001	0.002	0.002	0.272	0.280	0.280	0.280	0.280	0.280
Mali	0.093	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106
Mauritania	0.000	0.000	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Morocco	0.272	0.588	0.754	0.965	1.240	1.294	1.294	1.294	1.324	1.324
Mozambique	0.001	0.001	0.008	0.008	0.018	0.018	0.018	0.018	0.018	0.018
Namibia	0.839	0.839	0.839	0.839	0.840	0.840	0.840	0.840	0.840	0.840
Niger	0.006	0.006	0.006	0.006	0.010	0.010	0.032	0.032	0.032	0.032
Nigeria	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Rwanda						0.004	3.308	3.357	3.357	3.357
Senegal	0.006	0.036	0.073	0.089	0.169	0.338	0.343	0.347	0.347	0.347
Somalia			0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
South Africa		0.055	0.055	0.058	0.067	0.067	0.067	0.067	0.067	0.067
Sudan	0.005	0.018	0.018	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Tanzania	0.008	0.063	0.073	0.079	0.079	0.098	0.110	0.116	0.116	0.116
Tunisia	0.105	0.105	0.113	0.235	0.257	0.285	0.285	0.318	0.318	0.318
Uganda				0.004	0.004	0.004	0.004	0.004	0.004	0.004
Zambia						0.089	0.089	0.089	0.089	0.089
Zimbabwe	0.013	0.051	0.073	0.110	0.143	0.309	0.309	0.309	0.309	0.309
Asia	14.893	19.705	50.632	107.268	177.877	352.655	541.427	573.457	636.092	638.686
Afghanistan	0.018	0.018	0.018	0.018	0.064	0.064	0.064	0.064	0.064	0.064
Bangladesh	0.069	0.148	0.869	3.452	9.102	18.465	28.131	40.777	45.928	48.522
Cambodia					0.025	0.025	0.025	0.025	0.025	0.025
India	14.739	19.415	49.547	103.293	167.900	332.889	511.956	531.287	588.771	588.771
Indonesia	0.018	0.018	0.054	0.165	0.233	0.445	0.451	0.454	0.454	0.454
Lao PDR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Malaysia			0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Myanmar	0.024	0.024	0.024	0.024	0.029	0.030	0.030	0.056	0.056	0.056
Nepal			0.117	0.233	0.350	0.350	0.350	0.350	0.350	0.350
Pakistan	0.016	0.062	0.090	0.137	0.157	0.187	0.187	0.187	0.187	0.187
Philippines		0.006	0.007	0.010	0.020	0.028	0.045	0.055	0.055	0.055
Sri Lanka	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Thailand	0.005	0.010	0.012	0.043	0.102	0.161	0.175	0.190	0.190	0.190
Timor Leste			0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
C America + Carib	0.014	0.018	0.020	0.030	0.076	0.178	0.182	0.251	0.306	0.506
Barbados		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Belize							0.002	0.002	0.002	0.002
Costa Rica	0.002	0.002	0.002	0.002	0.020	0.037	0.038	0.038	0.042	0.044
Dominican Rep	0.003	0.006	0.006	0.006	0.018	0.100	0.100	0.127	0.127	0.127
El Salvador								0.002	0.002	0.042
Guatemala				0.011	0.012	0.012	0.012	0.024	0.036	0.042
Haiti	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Honduras								0.028	0.068	0.220
Jamaica		0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Martinique	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003
Nicaragua	0.002	0.002	0.002	0.002	0.012	0.014	0.014	0.014	0.014	0.014
Panama	0.000	0.000	0.000	0.000	0.005	0.005	0.005	0.005	0.005	0.005
Middle East	0.009	0.041	0.564	1.504	1.721	1.846	2.134	2.389	2.613	2.613
Iraq						0.065	0.065	0.065	0.065	0.065
Lebanon	0.002	0.032	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178
Oman				0.002	0.013	0.013	0.013	0.013	0.013	0.013
Syrian AR	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
United Arab Em		0.002	0.002	0.017	0.017	0.017	0.017	0.017	0.017	0.017
Yemen			0.377	1.300	1.506	1.566	1.854	2.109	2.333	2.333
Oceania	0.010	0.011	0.012	0.016	0.017	0.022	0.049	0.068	0.122	0.160
Australia	0.010	0.011	0.011	0.015	0.016	0.021	0.048	0.066	0.121	0.158
Papua N Guin			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Vanuatu							0.001	0.001	0.001	0.001

S America	0.064	0.155	0.185	0.223	0.365	0.629	0.729	1.337	1.735	2.473
Argentina	0.006	0.035	0.037	0.037	0.062	0.182	0.192	0.401	0.606	0.899
Bolivia		0.001	0.002	0.007	0.033	0.061	0.062	0.152	0.174	0.271
Brazil					0.002	0.018	0.033	0.055	0.055	0.067
Chile	0.035	0.037	0.042	0.052	0.075	0.081	0.093	0.139	0.143	0.276
Colombia	0.011	0.023	0.031	0.037	0.042	0.088	0.098	0.164	0.206	0.210
Paraguay	0.012	0.042	0.048	0.062	0.067	0.090	0.090	0.134	0.134	0.134
Peru	0.000	0.015	0.020	0.021	0.032	0.042	0.083	0.188	0.275	0.393
Uruguay		0.001	0.005	0.007	0.052	0.068	0.078	0.105	0.142	0.223
Venezuela										0.001

## Solar pumps (public water supply)

### Pompes solaires (alimentation en eau publique)

### Bombas solares (suministro público de agua)

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	3.222	3.805	4.511	6.589	7.462	8.373	8.783	9.186	13.861	15.314
Africa	1.968	2.309	2.665	3.419	4.025	4.529	4.745	4.900	8.312	8.312
Algeria	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Angola	0.009	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Botswana					0.012	0.012	0.012	0.012	0.012	0.012
Burkina Faso	0.009	0.016	0.017	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
Cabo Verde							0.041	0.041	0.041	0.041
Cameroon	0.002	0.006	0.006	0.006	0.006	0.008	0.008	0.008	0.008	0.008
Chad	0.003	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Congo DR					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
Egypt					0.032	0.032	0.032	0.032	0.032	0.032
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	0.048	0.068	0.095	0.126	0.126	0.126	0.126
Gambia					0.007	0.007	0.014	0.014	0.014	0.014
Guinea				0.002	0.002	0.002	0.002	0.002	0.002	0.002
Guinea Bissau	0.016	0.018	0.018	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Kenya	0.042	0.084	0.169	0.211	0.262	0.263	0.263	0.263	0.263	0.263
Libya		0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Madagascar					0.000	0.000	0.000	0.005	0.005	0.005
Malawi	0.045	0.090	0.135	0.180	0.225	0.225	0.225	0.225	0.311	0.311
Mali	0.032	0.032	0.032	0.032	0.046	0.046	0.046	0.046	0.046	0.046
Mauritania	0.014	0.014	0.014	0.029	0.029	0.029	0.029	0.029	0.029	0.029
Morocco	0.046	0.046	0.046	0.049	0.067	0.067	0.067	0.067	0.067	0.067
Mozambique				0.003	0.003	0.003	0.003	0.003	0.003	0.003
Namibia	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113
Niger	0.002	0.002	0.006	0.021	0.021	0.021	0.021	0.021	0.021	0.021
Nigeria	0.954	0.954	0.954	0.979	0.979	0.979	0.979	0.979	0.979	0.979
Rwanda									3.300	3.300
Senegal	0.024	0.053	0.063	0.075	0.091	0.121	0.127	0.147	0.173	0.173
Sierra Leone	0.002	0.002	0.002	0.002	0.002	0.245	0.280	0.302	0.302	0.302
Somalia	0.020	0.020	0.063	0.095	0.095	0.095	0.096	0.096	0.096	0.096
South Africa	0.315	0.375	0.438	0.438	0.439	0.439	0.439	0.439	0.439	0.439
South Sudan	0.030	0.045	0.045	0.045	0.087	0.167	0.167	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	0.068	0.146	0.206	0.266	0.330	0.426	0.482	0.519	0.519	0.519
Tunisia				0.025	0.025	0.025	0.025	0.025	0.025	0.025
Uganda	0.122	0.167	0.212	0.257	0.512	0.529	0.570	0.629	0.629	0.629
Zimbabwe	0.002	0.002	0.002	0.002	0.014	0.022	0.022	0.022	0.022	0.022
Asia	0.545	0.703	0.844	2.055	2.190	2.494	2.604	2.679	3.729	4.997
Afghanistan	0.004	0.011	0.011	0.011	0.027	0.052	0.053	0.053	0.053	0.053
Bangladesh	0.058	0.063	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Cambodia	0.007	0.007	0.007	0.007	0.009	0.009	0.009	0.009	0.009	0.009
India				0.980	0.980	0.980	0.981	0.981	0.981	0.981
Indonesia	0.046	0.098	0.125	0.152	0.224	0.381	0.458	0.513	0.513	0.513
Korea DPR					0.004	0.004	0.004	0.004	0.004	0.004
Lao PDR	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Malaysia	0.004	0.004	0.004	0.004	0.004	0.014	0.014	0.014	0.014	0.014
Myanmar	0.028	0.030	0.036	0.036	0.066	0.072	0.073	0.076	0.076	0.076
Nepal	0.227	0.302	0.377	0.461	0.461	0.519	0.519	1.569	1.569	2.837
Pakistan	0.170	0.170	0.170	0.170	0.173	0.173	0.173	0.173	0.173	0.173
Philippines				0.120	0.120	0.160	0.189	0.204	0.204	0.204
Thailand					0.007	0.016	0.018	0.018	0.018	0.018
Timor Leste		0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
C America + Carib	0.061	0.127	0.189	0.275	0.348	0.381	0.394	0.454	0.464	0.594
Costa Rica						0.007	0.007	0.008	0.009	0.012
Dominican Rep	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.027	0.027	0.027
El Salvador				0.021	0.021	0.045	0.045	0.045	0.049	0.051
Guadeloupe							0.002	0.002	0.002	0.002
Guatemala			0.001	0.001	0.013	0.013	0.016	0.043	0.043	0.153
Haiti	0.021	0.042	0.063	0.084	0.105	0.105	0.105	0.105	0.105	0.105
Honduras	0.039	0.078	0.117	0.156	0.195	0.195	0.195	0.195	0.195	0.195
Jamaica		0.006	0.006	0.012	0.012	0.012	0.012	0.012	0.012	0.012
Nicaragua						0.001	0.010	0.016	0.021	0.036
St Kitts Nevis			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Middle East	0.018	0.034	0.181	0.181	0.208	0.208	0.208	0.235	0.343	0.354
Iran IR	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Iraq	0.004	0.009	0.039	0.039	0.039	0.039	0.039	0.066	0.174	0.185
Lebanon			0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
Syrian AR		0.011	0.011	0.011	0.016	0.016	0.016	0.016	0.016	0.016
Yemen			0.026	0.026	0.048	0.048	0.048	0.048	0.048	0.048

Oceania					0.026	0.026	0.026	0.026	0.031	0.031
Australia									0.005	0.005
Tonga					0.026	0.026	0.026	0.026	0.026	0.026
S America	0.630	0.632	0.632	0.659	0.666	0.735	0.805	0.892	0.981	1.026
Argentina					0.002	0.054	0.109	0.120	0.127	0.127
Bolivia			0.000	0.018	0.021	0.032	0.032	0.063	0.063	0.079
Brazil				0.009	0.010	0.010	0.010	0.010	0.010	0.010
Chile						0.000	0.007	0.009	0.009	0.009
Colombia	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.029	0.101	0.130
Ecuador	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Peru		0.003	0.003	0.003	0.003	0.006	0.010	0.010	0.010	0.010
Uruguay					0.001	0.002	0.006	0.021	0.031	0.031
Venezuela	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628	0.628

## Other off-grid solar PV Autre solaire PV hors réseau Otra solar PV aislada

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	142.734	254.395	399.835	537.649	665.555	820.556	1 059.552	1 149.434	1 263.353	1 369.700
Africa	3.171	4.268	27.175	49.933	60.973	70.541	115.766	145.838	194.144	274.793
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
Benin			0.050	0.050	0.061	0.061	0.061	0.061	0.061	0.061
Botswana	0.312	0.412	0.557	0.850	0.850	0.972	1.276	1.276	1.276	1.276
Burkina Faso	0.593	0.893	1.193	1.493	1.793	1.793	16.793	16.793	16.793	16.793
Burundi			0.291	0.291	0.291	0.291	0.291	0.291	0.291	0.291
Cameroon	0.011	0.011	0.011	0.017	0.023	0.023	0.023	1.298	1.423	1.423
Cent Afr Rep							0.011	0.011	0.011	0.011
Chad		0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.543
Congo DR	0.001	0.104	0.104	0.104	1.787	3.446	16.106	16.256	16.256	16.256
Cote d Ivoire			0.009	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Egypt						0.011	0.011	0.161	27.251	27.251
Eritrea	0.007	0.019	7.843	7.843	7.843	7.843	7.843	7.843	7.843	7.843
Eswatini						0.003	0.003	0.003	0.003	0.003
Ethiopia	0.142	0.142	3.485	3.500	8.557	8.561	8.561	8.561	8.561	8.561
Gabon		0.026	0.026	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Gambia		0.010	0.010	0.010	0.010	0.010	0.010	0.511	0.511	0.511
Ghana	0.004	0.010	4.550	8.572	9.810	10.488	11.043	14.482	15.264	15.411
Guinea		0.071	0.071	0.071	0.076	0.076	0.076	0.076	0.076	0.076
Kenya	0.550	0.742	5.529	17.270	17.580	21.493	23.300	26.649	27.241	39.179
Liberia	0.018	0.018	0.018	0.018	0.018	0.026	0.026	0.036	0.036	0.036
Madagascar	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.340	0.515	0.515
Malawi	0.003	0.003	0.003	0.003	0.003	0.043	0.043	0.049	0.080	0.088
Mali	0.059	0.088	0.098	0.098	0.237	0.237	0.251	0.256	0.256	0.256
Mauritania		0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Morocco										41.700
Mozambique	0.000	0.038	0.124	0.256	0.488	0.488	0.528	0.528	0.564	0.564
Namibia							12.000	12.999	18.149	18.149
Niger		0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Nigeria	0.293	0.293	0.298	5.298	6.948	7.542	7.542	15.162	24.895	34.275
Reunion								1.340	1.500	1.500
Rwanda	0.000	0.000	0.000	0.000	0.050	0.050	0.050	0.050	0.050	0.050
Senegal	0.008	0.008	0.008	0.012	0.012	0.012	0.612	0.612	0.612	0.612
Seychelles				0.500	0.500	0.500	1.250	1.340	3.330	5.830
Sierra Leone	0.048	0.064	0.064	0.064	0.176	0.240	0.240	1.240	1.240	7.240
Somalia	0.000	0.000	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060
South Africa	0.041	0.048	0.867	0.867	0.867	3.257	3.267	3.880	3.880	3.880
South Sudan	0.014	0.053	0.053	0.062	0.076	0.083	0.565	0.664	0.665	1.004
Sudan		0.008	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Tanzania	0.057	0.078	0.078	0.150	0.335	0.377	0.413	0.638	0.674	0.714
Togo		0.007	0.022	0.062	0.063	0.066	0.066	0.071	0.701	0.734
Tunisia								5.000	6.500	6.500
Uganda	0.077	0.122	0.167	0.212	0.258	0.283	0.302	0.411	0.585	0.861
Zambia			0.000	0.276	0.276	0.283	0.283	0.311	0.311	0.311
Zimbabwe		0.001	0.551	0.551	0.551	0.552	1.486	5.454	5.554	13.343
Asia	134.285	241.535	320.175	373.763	467.390	589.447	629.659	638.945	703.496	718.902
Afghanistan	16.000	16.000	16.000	16.000	16.638	16.638	16.638	16.638	16.638	16.638
Bangladesh			1.380	10.395	13.681	33.746	36.276	43.534	44.298	51.692
Brunei Darsm									0.008	0.008
India	112.361	218.405	295.233	339.629	429.130	479.703	517.376	518.198	544.792	549.792
Indonesia	3.841	4.993	4.993	5.069	5.125	5.226	5.229	5.229	5.229	5.229
Korea DPR		0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033
Malaysia									30.180	30.180
Mongolia	1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008	1.008
Myanmar	0.000	0.000	0.000	0.000	0.146	0.256	0.256	0.256	0.256	0.256
Nepal	0.008	0.008	0.008	0.008	0.008	40.016	40.023	40.228	40.234	40.234
Pakistan		0.000	0.026	0.031	0.031	11.231	11.231	11.231	11.231	11.231
Philippines		0.021	0.427	0.522	0.522	0.522	0.522	0.522	0.522	0.522
Singapore									6.000	6.000
Thailand	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	4.012
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	1.067	2.067	2.067	2.067
C America + Carib	1.330	2.911	4.504	6.337	7.651	10.817	10.817	25.026	25.026	25.026
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
Bahamas	0.720	0.720	0.720	0.720	0.720	0.720	0.720	1.020	1.020	1.020
Costa Rica					0.053	0.053	0.053	0.576	0.576	0.576
Cuba			0.006	0.332	0.332	0.332	0.332	7.332	7.332	7.332
Dominican Rep		1.500	3.000	4.500	5.750	8.490	8.490	8.490	8.490	8.490
El Salvador								3.986	3.986	3.986
Haiti	0.609	0.689	0.764	0.772	0.772	0.772	0.772	0.772	0.772	0.772
Honduras			0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002
Nicaragua	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.400	2.400	2.400
Panama	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Puerto Rico						0.022	0.022	0.022	0.022	0.022



Middle East	1.374	2.403	43.143	97.868	118.085	138.106	288.406	324.488	325.088	335.088
Iran IR										10.000
Iraq			37.600	37.600	37.600	37.600	37.900	37.900	37.900	37.900
Kuwait								8.200	8.200	8.200
Lebanon	0.002	0.029	0.122	0.129	0.238	0.258	0.258	0.258	0.258	0.258
Palestine	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.255	0.255	0.255
Saudi Arabia			0.014	0.014	0.014	0.014	0.014	0.154	0.154	0.154
Syrian AR				0.000	0.000	0.001	0.001	0.001	0.001	0.001
United Arab Em				0.120	0.228	0.228	0.228	27.720	28.320	28.320
Yemen	1.367	2.369	5.403	60.000	80.000	100.000	250.000	250.000	250.000	250.000
Oceania	0.063	0.131	0.164	1.241	2.270	2.311	4.146	4.372	4.755	4.962
Australia								0.199	0.549	0.729
Christmas Is							0.012	0.012	0.012	0.012
Cook Is	0.046	0.056	0.056	0.056	0.056	0.056	1.879	1.879	1.879	1.879
Fiji	0.014	0.024	0.028	0.728	1.728	1.769	1.769	1.796	1.796	1.824
Kiribati		0.010	0.010	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
Papua N Guin	0.003	0.011	0.040	0.305	0.334	0.334	0.334	0.334	0.344	0.344
Solomon Is		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
S America	2.511	3.147	4.674	8.507	9.185	9.334	10.758	10.764	10.844	10.928
Argentina	1.311	1.311	1.311	1.928	2.534	2.534	2.534	2.534	2.534	2.534
Bolivia	0.004	0.009	0.009	0.009	0.009	0.009	0.009	0.015	0.015	0.015
Brazil	0.680	0.680	0.680	3.880	3.880	3.880	3.880	3.880	3.880	3.880
Chile						0.133	0.136	0.136	0.216	0.216
Colombia				0.013	0.013	0.013	0.281	0.281	0.281	0.281
Ecuador	0.107	0.434	1.955	1.955	2.024	2.024	3.177	3.177	3.177	3.200
Paraguay						0.003	0.003	0.003	0.003	0.003
Peru	0.410	0.712	0.719	0.722	0.725	0.738	0.738	0.739	0.739	0.799
Venezuela	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

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

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	18.445	23.446	26.921	30.788	39.995	40.207	40.807	40.807	40.807	40.807
Africa	0.141	1.456	1.476	1.476	1.476	1.476	1.476	1.476	1.476	1.476
Gabon		1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200
Ghana	0.120	0.135	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	0.010
Nigeria			0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Senegal		0.100	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	13.961	16.687	19.782	20.599	22.360	22.572	23.172	23.172	23.172	23.172
Bangladesh	4.120	4.250	4.650	4.650	4.650	4.650	4.950	4.950	4.950	4.950
Cambodia		1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
India	3.035	4.131	4.826	5.626	6.712	6.924	7.224	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	0.424	1.099	1.099	1.099	1.099	1.099	1.099
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	2.000
C America + Carib	3.457	4.417	4.677	4.677	6.723	6.723	6.723	6.723	6.723	6.723
Costa Rica	2.216	2.683	2.683	2.683	2.683	2.683	2.683	2.683	2.683	2.683
Dominican Rep	1.227	1.720	1.970	1.970	1.970	1.970	1.970	1.970	1.970	1.970
Honduras	0.014	0.014	0.014	0.014	0.158	0.158	0.158	0.158	0.158	0.158
Nicaragua			0.010	0.010	1.912	1.912	1.912	1.912	1.912	1.912
S America	0.886	0.886	0.986	4.036	9.436	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	0.100
Bolivia				2.000	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	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	6.200

**Other solid biofuels (electricity)**  
**Autres biocarburants solides (électricité)**  
**Otros biocombustibles sólidos (electricidad)**

MW	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	3499.330	3488.754	4116.406	4342.436	4458.231	3777.233	3960.892	3782.630	3834.955	3846.710
Africa	82.289	86.316	102.730	110.711	116.940	118.894	118.896	123.696	123.696	123.696
Burkina Faso		0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
Burundi	5.691	6.868	5.822	5.803	6.632	6.586	5.788	5.788	5.788	5.788
Congo DR	0.160	0.160	0.160	0.160	0.160	0.160	2.960	2.960	2.960	2.960
Ethiopia	9.000	9.000	9.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000
Ghana	6.774	6.774	8.274	8.274	8.274	8.274	8.274	8.274	8.274	8.274
Madagascar	0.164	0.164	0.164	0.164	0.164	0.164	0.164	0.164	0.164	0.164
Mali	32.000	32.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000
Nigeria	6.000	8.700	12.900	12.900	18.300	18.300	18.300	23.100	23.100	23.100
Tanzania	22.500	22.500	26.260	26.260	26.260	26.260	26.260	26.260	26.260	26.260
Asia	3201.142	3207.996	3780.515	3992.422	4097.358	3409.272	3555.307	3357.827	3399.152	3410.907
Bangladesh				0.400	0.400	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	2.000
India	642.140	695.240	874.540	927.750	1002.140	1023.020	1068.365	1050.835	1163.660	1191.915
Indonesia	1884.000	1606.000	1617.000	1617.000	1617.000	1617.000	1617.000	1617.000	1617.000	1617.000
Malaysia	504.860	732.530	1100.000	1237.800	1243.000	531.640	531.640	531.640	531.640	531.640
Myanmar	43.142	47.226	50.975	46.472	47.818	50.212	54.902	56.952	56.952	56.952
Viet Nam	125.000	125.000	136.000	161.000	185.000	185.000	281.000	99.000	27.500	11.000
C America + Carib	42.537	45.474	45.463	41.675	39.245	44.339	44.461	44.461	44.461	44.461
Costa Rica						4.500	4.500	4.500	4.500	4.500
Dominican Rep	15.037	15.174	15.163	15.175	15.245	15.339	15.461	15.461	15.461	15.461
Panama	27.500	30.300	30.300	26.500	24.000	24.500	24.500	24.500	24.500	24.500
Oceania	15.058	15.064	15.064	15.064	15.064	15.064	15.064	15.064	15.064	15.064
Fiji	0.018	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
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
Vanuatu	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
S America	158.304	133.904	172.634	182.564	189.624	189.664	227.164	241.582	252.582	252.582
Argentina								6.318	6.318	6.318
Bolivia	60.170	60.170	90.500	99.000	99.000	99.000	117.500	122.500	133.500	133.500
Colombia	0.059	0.059	0.059	0.059	0.059	0.099	0.099	0.099	0.099	0.099
Fr Guiana								3.100	3.100	3.100
Guyana	43.275	43.275	43.275	43.305	33.765	33.765	34.365	34.365	34.365	34.365
Peru	54.800	30.400	38.800	38.700	55.300	55.300	73.700	73.700	73.700	73.700
Suriname				1.500	1.500	1.500	1.500	1.500	1.500	1.500



Biogas production

Production de biogaz

Produccion de biogas

# Total biogas production

## Production totale de biogaz

## Producción total de biogás

1,000 m <sup>3</sup>	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	16 816 643	16 818 656	16 482 929	15 791 875	15 808 177	15 748 093	15 677 520	15 593 902	15 485 345	15 375 668
Africa	17 128	25 396	35 735	41 645	47 463	51 090	56 167	54 997	60 004	63 597
Benin	20	26	39	36	34	33	38	33	31	42
Botswana	2	2	2	2	2	2	2	2	2	2
Burkina Faso	737	1 469	1 999	2 482	3 041	3 528	3 781	3 604	3 644	3 612
Burundi					2	2	2	2	2	2
Cameroon	68	85	126	143	139	132	127	113	102	99
Congo DR										2
Ethiopia	2 904	4 720	6 176	7 419	8 748	10 020	12 598	12 363	15 281	17 001
Gabon				610	610	610	610	610	610	610
Ghana	292	298	4 299	4 313	4 515	4 515	4 515	4 515	4 514	4 514
Kenya	4 050	7 057	8 755	9 842	10 453	10 715	11 736	11 530	13 947	16 622
Mali		6	76	113	161	161	160	149	144	144
Mozambique					15	15	15	15	15	15
Nigeria	353	353	298	298	325	325	325	215	215	215
Rwanda	4 599	5 108	6 598	7 216	8 478	8 397	8 293	8 083	7 937	7 610
Senegal	394	612	900	1 600	2 139	3 222	3 188	3 142	3 085	2 920
South Africa				73	73	73	73	73	73	73
Tanzania	1 692	2 425	2 874	3 067	3 508	3 478	3 362	3 271	3 100	2 854
Uganda	1 787	3 004	3 305	3 670	3 885	4 094	4 364	4 308	4 345	4 359
Zambia			35	70	373	617	1 825	1 820	1 814	1 766
Zimbabwe	232	232	253	691	960	1 151	1 151	1 148	1 142	1 136
Asia	16 788 454	16 774 989	16 422 878	15 538 196	15 541 482	15 476 423	15 390 249	15 307 792	15 194 130	15 080 919
Afghanistan					25	25	25	25	25	21
Bangladesh	57 991	63 591	68 881	66 889	64 820	65 119	64 348	64 915	66 689	64 171
Bhutan	168	455	774	1 376	1 944	2 726	2 847	2 797	5 435	8 494
Cambodia	11 023	11 526	12 427	16 302	16 680	16 641	16 706	16 849	17 037	17 116
China	14 349 844	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
India	1 996 494	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
Indonesia	6 951	9 863	12 342	13 697	16 367	17 901	18 711	19 179	18 541	17 428
Lao PDR	4 045	4 021	3 937	3 809	3 639	3 390	3 342	3 175	2 919	2 578
Myanmar	1 073	1 073	1 069	1 069	1 069	1 049	1 049	1 041	1 041	1 041
Nepal	109 903	113 034	123 847	132 791	134 618	137 205	144 450	140 586	133 906	130 295
Pakistan	3 367	4 577	6 320	6 501	6 695	6 606	6 415	6 120	5 937	5 652
Philippines	8 761	8 761	8 761	8 761	8 761	8 761	8 761	8 761	8 761	8 761
Sri Lanka	4 272	4 247	4 222	4 103	3 854	3 569	3 259	2 974	2 681	2 457
Thailand				490	490	768	768	768	768	768
Viet Nam	234 564	270 039	298 641	340 848	358 682	350 011	350 245	339 151	333 682	331 533
C America + Carib	7 736	14 950	17 417	17 673	20 746	21 623	21 370	21 366	21 336	21 314
Costa Rica	505	7 468	7 468	7 774	9 965	9 965	9 965	9 965	9 965	9 965
Cuba	6 536	6 649	8 795	8 021	7 919	8 563	8 299	8 299	8 299	8 299
Dominican Rep	693	830	1 075	1 507	1 726	1 726	1 726	1 726	1 726	1 726
El Salvador					120	120	120	120	120	120
Grenada					2	21	23	23	23	23
Guatemala							8	8	8	8
Honduras			17	17	17	17	17	17	17	17
Jamaica	2	2	2	2	2	2	2	5	5	5
Nicaragua		1	61	352	738	951	951	945	914	892
Panama				0	250	250	250	250	250	250
St Lucia					8	8	8	8	8	8
St Vincent Gren							1	1	1	1
Middle East	0	0	1	1	1	1	1	1	1	1
Iraq	0	0	1	1	1	1	1	1	1	1
Oceania								37	38	42
Amer Samoa										3
Fiji								0	1	3
Tuvalu								29	29	29
Vanuatu								7	7	7

S America	3 324	3 320	6 898	194 360	198 485	198 956	209 734	209 709	209 836	209 794
Argentina	5	5	5	5	4 002	4 002	4 007	4 007	4 007	4 007
Bolivia	195	191	187	196	192	371	346	321	296	271
Brazil			1	187 435	187 437	187 437	187 437	187 437	187 437	187 437
Colombia				7	25	317	317	317	316	316
Ecuador	146	146	146	151	264	264	322	322	321	303
Peru	1 478	1 478	1 478	1 486	1 486	1 486	1 486	1 486	1 641	1 641
Uruguay			3 580	3 580	3 580	3 580	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 <sup>3</sup>	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	16 791 566	16 784 760	16 439 631	15 553 674	15 560 926	15 499 239	15 416 544	15 332 890	15 224 110	15 114 429
Africa	15 230	23 483	29 162	33 130	38 248	41 693	46 769	45 600	50 607	54 200
Benin	20	26	39	36	34	33	38	33	31	42
Botswana									1	1
Burkina Faso	737	1 469	1 999	2 482	3 041	3 528	3 781	3 604	3 644	3 612
Cameroon	68	85	126	143	139	132	127	113	102	99
Congo DR										2
Ethiopia	2 904	4 720	6 176	7 419	8 748	10 020	12 598	12 363	15 281	17 001
Ghana				1	2	2	2	2	2	2
Kenya	3 911	6 918	8 386	9 473	10 084	10 346	11 367	11 161	13 578	16 253
Mali		6	76	113	113	113	112	101	95	95
Nigeria	347	347	292	292	294	294	294	185	185	185
Rwanda	3 139	3 648	4 715	4 853	5 940	5 859	5 755	5 544	5 399	5 072
Senegal	394	612	900	1 235	1 774	2 857	2 823	2 777	2 720	2 555
Tanzania	1 692	2 424	2 870	3 063	3 497	3 467	3 351	3 260	3 088	2 843
Uganda	1 787	2 995	3 296	3 661	3 876	4 084	4 355	4 299	4 336	4 350
Zambia			35	70	373	617	1 825	1 820	1 814	1 766
Zimbabwe	232	232	253	288	332	340	340	337	331	324
Asia	16 775 461	16 760 292	16 407 282	15 517 817	15 519 734	15 453 754	15 366 265	15 283 783	15 170 055	15 056 845
Afghanistan					25	25	25	25	25	21
Bangladesh	57 407	62 864	68 005	65 985	63 831	64 131	63 360	63 927	65 635	63 117
Bhutan	168	455	774	1 376	1 944	2 726	2 847	2 797	5 435	8 494
Cambodia	11 023	11 526	12 427	13 382	13 760	13 721	13 786	13 929	14 117	14 196
China	14 349 844	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
India	1 995 081	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
Indonesia	6 951	9 863	12 341	13 696	16 366	17 899	18 710	19 177	18 540	17 426
Lao PDR	4 045	4 021	3 937	3 809	3 639	3 390	3 342	3 175	2 919	2 578
Myanmar	152	152	148	148	148	128	128	120	120	120
Nepal	109 903	113 034	123 847	132 791	134 618	137 205	144 450	140 586	133 906	130 295
Pakistan	2 053	3 263	5 006	5 187	5 381	5 256	5 064	4 770	4 587	4 302
Sri Lanka	4 272	4 247	4 222	4 080	3 770	3 459	3 148	2 838	2 546	2 321
Thailand						277	277	277	277	277
Viet Nam	234 564	270 039	298 641	340 848	358 257	349 586	349 820	338 726	333 257	331 108
C America + Carib	696	810	3 014	2 527	2 634	3 487	3 223	3 216	3 186	3 164
Cuba	696	809	2 955	2 181	2 079	2 723	2 459	2 459	2 459	2 459
Nicaragua		1	59	346	555	764	763	757	727	705
Oceania								29	29	29
Tuvalu								29	29	29
S America	180	176	172	200	310	306	287	262	233	191
Argentina					0	0	5	5	5	5
Bolivia	180	176	172	180	177	173	148	124	98	73
Colombia				7	7	7	7	7	6	6
Ecuador				5	118	118	118	118	118	100
Peru				7	7	7	7	7	6	6



**Production of biogas for off-grid electricity**  
**Production de biogaz pour l'électricité hors réseau**  
**Producción de biogás para electricidad aislada**

1,000 m <sup>3</sup>	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	21 768	27 107	28 787	30 133	35 206	35 206	35 272	35 272	35 272	35 272
Africa	311	730	767	767	767	767	767	767	767	767
Gabon		305	305	305	305	305	305	305	305	305
Ghana	64	69	69	69	69	69	69	69	69	69
Kenya	243	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	110
Uganda	5	5	5	5	5	5	5	5	5	5
Asia	15 484	19 753	21 061	21 933	23 247	23 247	23 313	23 313	23 313	23 313
Bangladesh	876	903	988	988	988	988	1 054	1 054	1 054	1 054
Cambodia		2 920	2 920	2 920	2 920	2 920	2 920	2 920	2 920	2 920
India	3 723	5 045	5 843	6 701	8 015	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	1 217	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	425
C America + Carib	4 556	5 206	5 432	5 432	5 432	5 432	5 432	5 432	5 432	5 432
Costa Rica	3 464	3 770	3 770	3 770	3 770	3 770	3 770	3 770	3 770	3 770
Dominican Rep	1 075	1 419	1 638	1 638	1 638	1 638	1 638	1 638	1 638	1 638
Honduras	17	17	17	17	17	17	17	17	17	17
Nicaragua			8	8	8	8	8	8	8	8
S America	1 417	1 417	1 527	2 001	5 760	5 760	5 760	5 760	5 760	5 760
Argentina			110	110	110	110	110	110	110	110
Bolivia				183	183	183	183	183	183	183
Colombia				292	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	5 012

**Production of biogas for industry**  
**Production de biogaz pour l'industrie**  
**Producción de biogás para la industria**

1,000 m <sup>3</sup>	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	20 758	21 031	21 031	35 050	35 050	35 050	35 050	35 050	35 050	35 050
Africa	4 684	4 795	4 795	4 795	4 795	4 795	4 795	4 795	4 795	4 795
Burundi		1	1	1	1	1	1	1	1	1
Gabon	305	305	305	305	305	305	305	305	305	305
Ghana	4 119	4 228	4 228	4 228	4 228	4 228	4 228	4 228	4 228	4 228
Senegal	256	256	256	256	256	256	256	256	256	256
Uganda	5	5	5	5	5	5	5	5	5	5
C America + Carib	9 921	10 081	10 081	10 081	10 081	10 081	10 081	10 081	10 081	10 081
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	88	88
Nicaragua		160	160	160	160	160	160	160	160	160
S America	3 827	3 829	3 829	10 867	10 867	10 867	10 867	10 867	10 867	10 867
Brazil		2	2	2	2	2	2	2	2	2
Ecuador				57	57	57	57	57	57	57
Uruguay	2 327	2 327	2 327	9 308	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 <sup>3</sup>	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	1 612	1 617	2 048	3 414	6 383	6 750	6 751	6 760	6 760	6 784
Africa	1 589	1 594	2 023	2 982	3 530	3 713	3 713	3 713	3 713	3 715
Botswana	2	2	2	2	2	2	2	2	2	2
Burundi					1	1	1	1	1	1
Ghana	110	115	116	120	211	211	211	211	211	211
Kenya	11	11	11	11	11	11	11	11	11	11
Mali					49	49	49	49	49	49
Nigeria	6	6	6	6	6	6	6	6	6	6
Rwanda	1 460	1 460	1 884	2 363	2 538	2 538	2 538	2 538	2 538	2 538
South Africa				73	73	73	73	73	73	73
Tanzania	0	0	4	4	11	11	11	11	11	11
Togo										2
Zimbabwe				403	628	811	811	811	811	811
Asia	1	1	1	31	92	117	118	144	144	144
Philippines	1	1	1	1	1	1	1	1	1	1
Sri Lanka				23	84	110	111	136	136	136
Thailand				7	7	7	7	7	7	7
C America + Carib	2	2	2	7	2 201	2 202	2 203	2 205	2 205	2 205
Costa Rica					2 191	2 191	2 191	2 191	2 191	2 191
Grenada					2	2	2	2	2	2
Jamaica	2	2	2	2	2	2	2	5	5	5
Nicaragua				5	6	7	7	7	7	7
St Vincent Gren							1	1	1	1
Middle East	0	0	1	1	1	1	1	1	1	1
Iraq	0	0	1	1	1	1	1	1	1	1
Oceania								7	7	11
Vanuatu								7	7	11
S America	20	20	21	21	21	21	21	21	21	40
Argentina	5	5	5	5	5	5	5	5	5	23
Bolivia	15	15	15	15	15	15	15	15	15	15
Brazil			1	1	1	1	1	1	1	1

**Production of biogas for agriculture**  
**Production de biogaz pour l'agriculture**  
**Producción de biogás para la agricultura**

1,000 m <sup>3</sup>	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	1 580	1 698	189 620	193 914	193 960	193 970	193 971	194 128	194 132	194 136
Africa		115	120	122	122	122	122	122	122	122
Ghana			4	4	4	4	4	4	4	4
Kenya		115	115	115	115	115	115	115	115	115
Nigeria				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	110	133	133	133	133	133	133
Thailand			484	484	484	484	484	484	484	484
C America + Carib	11	12	12	398	421	431	431	431	431	431
Costa Rica	11	11	11	11	11	11	11	11	11	11
Cuba										
El Salvador				120	120	120	120	120	120	120
Grenada					20	21	21	21	21	21
Guatemala						8	8	8	8	8
Nicaragua		1	1	9	13	13	13	13	13	13
Panama			0	250	250	250	250	250	250	250
St Lucia				8	8	8	8	8	8	8
Oceania							0	1	5	9
Amer Samoa									3	3
Fiji							0	1	3	7
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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	5 656	5 945	6 392	6 700	6 972	7 014	7 095	7 125	7 196	7 196
<b>Africa</b>	<b>342</b>	<b>343</b>	<b>462</b>	<b>478</b>	<b>617</b>	<b>618</b>	<b>634</b>	<b>634</b>	<b>643</b>	<b>643</b>
Ethiopia	12	12	12	16	16	16	16	16	16	16
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	62	63	63	63	63	63	63	63	63	63
Madagascar		1	1	1	1	1	3	3	3	3
Malawi	35	35	35	39	39	40	40	40	42	42
Mali	2	2	2	2	2	2	2	2	2	2
Mozambique	1	1	11	11	11	11	11	11	11	11
Nigeria			27	27	27	27	27	27	27	27
Rwanda	30	30	30	31	31	31	32	32	32	32
Sierra Leone	4	4	4	4	142	142	142	142	142	142
South Africa	0	0	0	0	0	0	0	0	8	8
Tanzania	37	37	119	125	125	125	126	126	126	126
Uganda	4	4	4	4	4	4	4	4	4	4
Zambia	28	28	28	28	28	28	40	40	40	40
Zimbabwe	2	2	2	2	2	2	2	2	2	2
<b>Asia</b>	<b>5 254</b>	<b>5 537</b>	<b>5 844</b>	<b>6 136</b>	<b>6 268</b>	<b>6 308</b>	<b>6 372</b>	<b>6 401</b>	<b>6 449</b>	<b>6 449</b>
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
Malaysia	1	2	2	3	3	4	4	4	4	4
Myanmar	41	46	101	101	101	101	101	101	101	101
Nepal	1 125	1 212	1 310	1 360	1 394	1 427	1 466	1 496	1 542	1 542
Pakistan	948	955	955	1 056	1 057	1 060	1 085	1 085	1 085	1 085
Philippines	192	192	192	192	192	193	193	193	193	193
Sri Lanka	28	31	35	40	40	40	40	40	40	40
Tajikistan	81	81	84	85	85	85	85	85	85	85
Thailand	19	19	19	19	19	19	19	19	19	19
Timor Leste	5	5	5	5	5	5	5	5	5	5
Viet Nam	380	380	380	380	380	380	380	380	380	380
<b>C America + Carib</b>	<b>53</b>	<b>57</b>	<b>76</b>	<b>78</b>	<b>78</b>	<b>78</b>	<b>79</b>	<b>79</b>	<b>94</b>	<b>94</b>
Cuba			17	17	17	17	17	17	17	17
Dominican Rep	6	9	11	13	13	13	14	14	14	14
El Salvador	1	1	1	1	1	1	1	1	1	1
Guatemala	6	6	6	6	6	6	6	6	6	6
Haiti	34	34	34	34	34	34	34	34	34	34
Honduras	2	2	2	2	2	2	2	2	2	2
Nicaragua	4	4	4	4	4	4	4	4	19	19
<b>Oceania</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
Fiji	3	3	5	5	5	5	5	5	5	5
Solomon Is	3	3	3	3	3	3	3	3	3	3
<b>S America</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Argentina	2	2	2	2	2	2	2	2	2	2
Colombia					1	1	1	1	1	1

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

Thousands	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	15 497	39 625	63 595	87 028	91 045	116 695	141 359	168 178	147 544	112 056
Africa	6 465	19 784	33 229	46 758	47 464	47 171	41 961	45 702	46 727	52 629
Angola					18	23	34	43	53	70
Benin				143	203	289	211	365	476	586
Botswana					1	2	3	2	1	22
Burkina Faso	89	288	508	990	982	1 609	1 298	1 340	790	898
Burundi		26	58	74	86	188	203	274	428	630
Cabo Verde					65	77	84	21	8	1
Cameroon					21	120	614	1 303	1 710	2 439
Cent Afr Rep					18	33	46	47	32	49
Chad					20	34	189	171	203	121
Comoros					37	67	67	31		
Congo DR	139	454	801	1 004	713	1 625	1 449	1 598	464	525
Congo Rep					16	56	69	75	72	140
Cote d'Ivoire				144	250	293	195	182	271	299
Eq Guinea					121	145	145	24		
Eritrea					32	59	59	34	7	25
Eswatini					2	2	2	14	14	14
Ethiopia	1 375	4 471	7 891	10 810	9 705	7 440	5 445	7 244	8 011	7 808
Gabon					18	39	55	83	88	82
Gambia					137	172	229	140	112	55
Ghana		29	32	98	249	447	460	361	265	218
Guinea					113	140	160	77	123	127
Guinea Bissau					113	135	160	59	37	61
Kenya	1 720	5 594	9 864	13 487	13 631	11 791	10 766	12 439	14 692	16 003
Lesotho					1	2	2	9	34	34
Liberia				55	148	169	141	66	144	191
Madagascar					33	190	428	563	645	760
Malawi	109	195	300	606	972	1 401	1 288	1 028	900	1 264
Mali					277	471	791	578	411	370
Mauritania					129	167	176	86	48	40
Mauritius	60	87	74	93	91	1 177	1 131	2 006	1 547	1 547
Mozambique		19	62	62	82	120	120	152	319	759
Namibia					9	34	63	75	94	143
Niger			39	39	134	128	164	117	186	182
Nigeria	117	382	674	1 450	2 060	2 280	2 313	2 345	2 652	3 516
Rwanda	245	796	1 403	1 619	1 736	1 840	1 782	1 286	881	1 272
Sao Tome Prn					65	77	77	21	9	9
Senegal		190	380	744	901	1 356	1 323	1 199	703	524
Seychelles					26	47	47	21		
Sierra Leone				100	303	441	398	270	297	336
Somalia					35	184	1 220	1 420	1 577	2 058
South Africa				200	202	330	252	283	203	188
South Sudan					39	152	218	291	263	512
Sudan			1	1	1					
Tanzania	1 357	4 413	7 783	10 249	8 315	5 025	1 953	1 748	2 170	2 893
Togo					74	92	122	118		232
Uganda	131	426	743	1 405	2 600	4 022	4 521	4 412	3 669	3 271
Zambia				693	938	1 097	708	1 086	1 256	1 914
Zimbabwe	1 123	2 415	2 616	2 417	1 547	1 263	946	596	676	442
Asia	9 031	19 841	30 366	40 270	42 977	68 387	98 250	121 020	99 852	58 458
Afghanistan		221	443	664	686	701	516	274	38	2
Bangladesh				329	360	813	1 158	1 620	1 273	641
Cambodia				46	89	167	159	119	56	48
India	8 624	18 723	28 353	37 413	40 025	65 024	94 467	117 091	96 491	56 136
Indonesia	104	338	655	665	487	208	239	199	174	112
Malaysia					38	100	151	142	113	94
Myanmar	54	175	338	421	348	197	127	192	204	208
Nepal				59	207	243	288	141	105	1
Pakistan	54	176	340	403	412	446	512	501	860	774
Philippines			80	111	152	314	516	634	452	392
Sri Lanka	196	209	129	131	118	98				
Thailand					29	76	115	107	86	48
Timor Leste			28	28	28					
C America + Carib	8	7	9	6	113	324	438	461	315	324
Dominica						1	1	1		
Dominican Rep					18	53	77	58	24	
Guatemala					31	89	148	188	150	116
Haiti	3	3	3		18	63	77	81	47	46
Honduras			2	2	25	44	54	31	37	43
Nicaragua	5	4	4	4	2	1				
Panama					20	44	50	72	57	119
Puerto Rico						31	31	31		



Middle East	104	226	398	977	2 588	5 028	4 517	5 103	4 039	4 494
Iraq					563	1 042	1 042	1 307	828	828
Jordan	104	226	398	977	855	633				
Lebanon					307	863	863	1 055	509	509
United Arab Em					373	1 114	1 177	952	891	1 077
Yemen					490	1 376	1 435	1 789	1 811	2 079
Oceania	58	187	363	836	1 137	1 317	1 324	1 223	1 277	1 067
Australia					23	48	59	52	35	30
Fiji					42	163	272	248	158	113
Nauru					54	72	72	18		
Papua N Guin	58	187	363	836	895	791	568	639	875	760
Samoa					61	93	93	31	11	11
Vanuatu					61	150	260	236	198	153
S America	2	28	51	69	139	271	351	431	367	480
Argentina					17	46	47	97	101	112
Bolivia	1	21	27	33	47	70	96	86	56	81
Colombia					20	45	70	119	114	159
Peru	1	8	25	37	55	110	137	128	96	128

**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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	7 605	10 893	14 374	16 011	16 449	15 595	15 314	15 474	15 061	13 280
Africa	165	571	1 055	1 825	2 477	3 120	4 725	7 291	9 278	8 583
Angola						0	0	7	7	7
Benin					1	2	24	51	83	82
Burkina Faso					1	3	31	62	101	100
Burundi					26	31	31	35	41	14
Cabo Verde					1	2	2	2	2	1
Cameroon						1	6	14	14	14
Chad						0	1	1	14	14
Comoros					25	30	30	30	30	5
Congo DR						1	1	9	23	23
Cote d'Ivoire					1	13	76	172	214	213
Eq Guinea					1	4	4	4	4	2
Eritrea					22	26	26	26	26	4
Ethiopia			1	1	25	32	114	495	674	650
Gabon						0	0	3	3	3
Gambia					1	4	4	4	4	3
Ghana		35	35	35	36	45	29	47	69	68
Guinea					1	3	12	20	35	34
Guinea Bissau					1	3	3	3	3	2
Kenya	53	173	330	491	633	944	1 595	2 844	4 290	4 134
Liberia					1	4	10	21	47	46
Madagascar					22	32	54	72	72	50
Malawi					21	25	73	91	109	88
Mali					1	3	9	33	64	63
Mauritania					1	4	4	4	4	3
Mauritius					11	14	15	16	19	8
Mozambique					20	29	50	52	85	65
Niger					1	5	12	24	24	23
Nigeria					36	43	87	200	344	309
Rwanda	10	31	59	88	113	134	182	189	244	216
Sao Tome Prn					1	2	2	5	5	5
Senegal					1	20	43	162	230	228
Seychelles					18	21	21	21	21	3
Sierra Leone					1	14	26	57	96	95
Somalia					28	33	35	49	49	22
South Africa							9	14	23	23
South Sudan					27	32	32	42	42	15
Tanzania	42	138	262	390	449	543	615	621	646	575
Togo					0	3	9	24	29	29
Uganda	60	194	369	820	881	933	1 032	1 109	760	684
Zambia					24	33	322	557	627	603
Zimbabwe					42	48	93	95	100	57
Asia	11 284	14 857	17 507	19 180	18 762	17 318	15 671	13 360	9 719	7 645
Afghanistan		6	12	21	29	53	46	40	32	24
Bangladesh	7 440	10 291	13 288	14 155	13 932	12 431	10 551	8 099	5 679	4 602
Cambodia		55	73	115	175	176	122	104	62	3
India	2 822	3 202	2 710	3 150	2 872	2 835	3 340	3 399	2 635	1 982
Indonesia					2	4	5	6	19	17
Malaysia					2	5	5	5	18	16
Myanmar					2	55	81	128	144	142
Nepal	1 022	1 303	1 424	1 730	1 731	1 665	1 339	1 220	750	488
Pakistan					4	75	131	269	284	281
Philippines				10	12	16	40	75	82	79
Thailand					2	3	9	14	14	13
C America + Carib	21	21	34	34	51	32	32	49	49	31
Dominican Rep					2	2	2	2	2	
Guatemala			2	2	5	6	6	22	22	19
Haiti					2	2	2	2	2	0
Honduras	21	21	27	27	34	13	14	8	8	1
Panama			5	5	8	8	8	14	14	12
Middle East							12	204	204	204
Lebanon							5	25	25	25
United Arab Em								24	24	24
Yemen							7	155	155	155
Oceania					30	47	143	185	243	212
Australia					1	3	3	6	6	5
Fiji					3	4	25	32	49	47
Nauru					3	5	5	5	5	2
Papua N Guin					12	17	44	62	86	74
Samoa					4	7	7	7	7	4
Vanuatu					8	11	58	72	89	82

S America	37	124	145	162	186	159	82	94	85	61
Argentina					2	2	5	15	15	13
Bolivia		30	30	30	33	33	6	6	9	7
Chile					1	1	1	1	1	1
Colombia					2	3	3	15	18	15
Peru	37	94	115	132	150	120	67	57	43	25

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

Thousands	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	819	876	948	1 204	2 035	3 237	4 450	6 985	8 920	8 082
Africa	392	439	502	767	1 523	2 613	3 438	4 909	6 637	5 876
Angola						6	6	63	63	63
Benin					9	20	20	66	107	98
Botswana						1	1	1	1	1
Burkina Faso	3	4	8	12	25	41	49	74	100	86
Burundi					34	53	53	53	53	19
Cabo Verde					7	16	16	16	16	9
Cameroon								26	60	60
Cent Afr Rep									2	2
Comoros					33	52	52	52	52	19
Congo DR						6	6	69	254	254
Congo Rep									26	26
Cote d'Ivoire					10	46	101	210	357	347
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	80
Gambia					14	33	33	33	33	19
Ghana					7	17	29	67	92	85
Guinea					12	28	49	103	157	144
Guinea Bissau		3	6	8	23	42	42	42	40	24
Kenya				3	28	181	286	580	1 026	1 000
Lesotho	7	7	7	7	7	7	7	7	7	7
Liberia					9	21	30	56	95	86
Madagascar					29	46	46	46	69	40
Malawi					27	43	64	72	94	66
Mali		5	9	14	28	45	55	94	103	89
Mauritania					14	33	33	33	33	18
Mauritius					14	36	42	46	46	32
Morocco	357	357	357	483	483	483	483	483	483	483
Mozambique					27	43	43	51	62	35
Niger					10	24	24	27	41	31
Nigeria		26	52	79	113	277	464	634	847	813
Rwanda				31	58	115	161	361	451	423
Sao Tome Prn					7	16	16	16	16	9
Senegal					15	35	60	139	209	194
Seychelles					23	36	36	36	36	13
Sierra Leone					11	24	24	71	115	104
Somalia					36	56	72	72	95	59
South Africa		14	27	41	55	69	55	42	28	14
South Sudan					35	55	55	55	55	20
Tanzania			13	60	90	219	395	446	468	438
Togo						30	43	87	200	200
Tunisia	17	12	7	7	24	19	19	19	19	19
Uganda	9	12	15	22	48	81	141	183	208	180
Zambia					32	50	74	99	124	92
Zimbabwe					26	66	86	86	91	65
Asia	395	399	403	407	411	510	835	1 833	2 022	2 019
Afghanistan		4	8	12	15	29	25	21	18	14
Bangladesh						20	49	293	396	396
India						22	134	285	311	311
Indonesia	13	13	13	13	13	13	13	13	13	13
Mongolia	249	249	249	249	249	249	249	249	249	249
Myanmar							31	602	610	610
Nepal						13	91	91	91	91
Pakistan						31	76	95	143	143
Philippines				0	0	0	33	50	57	57
Sri Lanka	134	134	134	134	134	134	134	134	134	134
Viet Nam	1	1								
C America + Carib			0	1	1	7	33	61	61	61
Cuba			0	1	1	7	7	36	35	35
Honduras							26	26	26	26
Oceania	16	22	27	27	27	27	64	102	119	119
Fiji	16	22	27	27	27	27	27	27	27	27
Papua N Guin							3	23	32	32
Vanuatu							34	52	60	60
S America	16	16	16	2	72	80	80	80	80	8
Argentina	16	16	16	2						
Brazil					1	8	8	8	8	7
Colombia					57	57	57	57	57	0
Peru					15	15	15	15	15	0

**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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	394	574	711	821	941	1 005	1 045	1 045	1 125	1 155
Africa	172	240	303	399	486	525	565	565	645	674
Benin			3	81	81	88	90	90	90	90
Burkina Faso					7	7	7	7	7	7
Cameroon	1	1	8	15	19	19	19	19	19	19
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	157	165	165	165	165
Mauritania		16	16	16	16	16	16	16	16	16
Mozambique	1	3	3	3	3	3	3	3	3	3
Nigeria	14	30	45	49	70	71	78	78	78	78
Sierra Leone					24	24	24	24	104	104
Tanzania	2	2	2	2	9	9	9	9	9	9
Togo							4	4	4	4
Uganda	0	0	0	0	0	0	5	5	5	5
Zambia			1	1	1	1	3	3	3	3
Asia		112	187	199	233	258	258	258	259	259
Bangladesh			25	25	25	25	25	25	25	25
India		112	152	165	197	222	223	223	223	223
Myanmar			10	10	11	11	11	11	11	11
Nepal									0	0
S America	222	222	222	222	222	222	222	222	222	222
Peru	9	9	9	9	9	9	9	9	9	9
Venezuela	213	213	213	213	213	213	213	213	213	213

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

Thousands	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	685	782	1 117	1 423	1 651	1 972	2 124	2 293	2 296	2 299
Africa	76	98	258	548	734	992	1 126	1 238	1 241	1 241
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					120	270	270	270	270	270
Chad			1	1	1	1	1	1	1	1
Congo DR						1	3	7	7	7
Cote d'Ivoire			4	4	4	4	4	4	4	4
Egypt			25	25	25	30	31	31	31	31
Eritrea				16	16	56	56	56	56	56
Ethiopia						1	1	10	10	10
Gabon								8	8	8
Gambia			2	2	2	2	2	2	2	2
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
Liberia					1	1	1	1	1	1
Madagascar			6	6	9	9	11	26	26	26
Mali	44	49	65	65	80	82	92	92	92	92
Mozambique	11	11	11	11	11	11	11	11	11	11
Namibia	1	3	3	3	3	3	3	3	3	3
Niger		1	1	1	2	5	5	13	13	13
Nigeria		1	17	21	54	60	74	91	91	91
Senegal						30	30	30	30	30
Seychelles								8	8	8
Sierra Leone	0	0	0	0	0	0	40	79	80	80
Tanzania		2	2	4	6	6	6	6	6	6
Togo					4	7	7	7	7	7
Uganda	9	19	22	25	25	25	38	38	41	41
Zambia					3	3	5	5	5	5
Zimbabwe				3	3	3	3	3	3	3
Asia	605	681	794	808	850	904	922	935	935	939
Afghanistan	5	14	14	20	20	20	20	20	20	20
Bangladesh	4	14	37	41	64	111	126	135	135	138
India	197	197	197	197	197	197	197	197	197	197
Indonesia	266	319	408	408	421	422	422	422	422	422
Malaysia		1	3	3	3	3	3	3	3	3
Maldives		2	2	2	2	2	2	2	2	2
Myanmar				4	10	10	10	10	10	10
Nepal	133	133	133	133	133	135	139	142	142	142
Pakistan						4	4	4	4	4
Thailand								1	1	1
C America + Carib	2	2	5	5	5	9	9	9	9	9
Haiti	2	2	5	5	5	5	5	5	5	5
Nicaragua						3	3	3	3	3
Oceania			14	14	14	14	14	14	14	14
Fiji			14	14	14	14	14	14	14	14
S America	1	1	45	48	48	53	53	97	97	97
Brazil	1	1	1	1	1	1	1	1	1	1
Colombia	0	0	0	3	3	4	4	36	36	36
Ecuador	0	0	0	0	0	4	4	4	4	4
Peru							0	12	12	12
Venezuela			44	44	44	44	44	44	44	44

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

Thousands	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	9.8	44.9	50.3	66.3	89.6	89.6	89.6	89.6	89.6	89.6
Africa	0.1	0.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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	0.6
Asia	9.5	44.6	49.4	65.4	87.5	87.5	87.5	87.5	87.5	87.5
Cambodia		34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
India	9.5	10.3	15.1	31.1	52.8	52.8	52.8	52.8	52.8	52.8
Pakistan					0.4	0.4	0.4	0.4	0.4	0.4
C America + Carib					1.2	1.2	1.2	1.2	1.2	1.2
Nicaragua					1.2	1.2	1.2	1.2	1.2	1.2
S America	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Peru	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

**Number of people using biogas for cooking**  
**Nombre de personnes utilisant le biogaz pour la cuisson**  
**Número de personas que usan biogás para cocinar**

Thousands	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	127 855	127 322	124 746	125 186	125 238	124 955	124 549	124 096	123 482	122 872
Africa	122	193	244	285	338	383	417	406	427	434
Burkina Faso	8	16	22	27	33	39	43	41	42	42
Cameroon	1	1	1	1	1	1	1	1	1	1
Ethiopia	22	36	48	57	67	77	93	92	110	120
Kenya	30	54	65	74	78	80	86	85	91	95
Mali		0	1	2	2	2	2	2	2	2
Nigeria	3	3	2	2	2	2	2	1	1	1
Rwanda	23	27	35	36	44	43	42	41	40	37
Senegal	6	11	19	30	45	71	70	69	67	63
Tanzania	14	20	24	25	29	28	27	27	25	23
Uganda	14	23	25	28	30	31	33	33	33	32
Zambia			0	1	3	5	14	14	14	13
Zimbabwe	2	2	2	2	2	2	2	2	2	2
Asia	127 726	127 122	124 478	124 879	124 877	124 543	124 106	123 663	123 029	122 413
Bangladesh	244	269	291	283	274	276	273	277	285	274
Bhutan	1	4	6	12	16	23	24	23	40	60
Cambodia	94	98	106	114	117	117	118	120	120	120
China	114 668	113 938	111 355	111 938	111 938	111 938	111 938	111 938	111 938	111 938
India	10 713	10 615	10 283	9 841	9 741	9 408	8 900	8 534	7 970	7 401
Indonesia	30	42	53	58	70	76	79	82	81	83
Lao PDR	20	20	19	19	18	17	16	16	14	13
Myanmar	1	1	1	1	1	1	1	1	1	1
Nepal	961	988	1 083	1 161	1 177	1 200	1 248	1 215	1 151	1 112
Pakistan	18	27	43	44	46	45	43	41	39	37
Sri Lanka	18	18	18	17	16	15	13	12	11	10
Thailand						1	1	1	1	1
Viet Nam	957	1 102	1 219	1 391	1 462	1 427	1 450	1 405	1 378	1 363
C America + Carib	4	5	22	19	20	25	24	24	23	23
Cuba	4	5	21	17	16	20	18	18	18	18
Nicaragua		0	0	2	4	5	5	5	5	5
S America	3	3	3	3	3	3	3	3	2	2
Bolivia	3	3	3	3	3	3	2	2	2	1
Ecuador				0	1	1	1	1	1	1







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

