

## ENERGY SUPPLY PER CAPITA

Total primary energy supply per capita is a common, albeit imperfect, measure of energy efficiency in a country. For instance, neither the impact of climate on energy use (heating, cooling) nor the size of the country and the density of the population are taken into account when comparing countries. Energy analysts usually prefer to compare energy use per unit of output or per unit of GDP. However, energy supply per capita is presented here since its use is widespread.

### Definition

The table refers to total primary energy supply (TPES) per head of population. The ratio is expressed in tonnes of oil equivalent (toe) per person (see the International Energy Agency sources below for details on how TPES is calculated). TPES consists of primary energy production adjusted for net trade, bunker use and stock changes. Production of secondary energy (e.g. oil/coal products, electricity from fossil fuels, etc.) is not included since the “energy equivalent” of the primary fuels used to create the secondary products or electric power has already been counted.

### Overview

The level of energy supply on a per capita basis varied significantly across OECD countries. The countries with the highest ratios are those with the smallest populations. In 2010, the energy supply per capita for Iceland was 16.8 toe/capita, while that for Luxembourg was 8.3 toe/capita. The high ratio for Iceland is explained partly by the climate but also by the availability of cheap – and non-polluting – thermal energy from hot springs. In the case of Luxembourg, the high ratio is partly due to low sales taxes on petroleum products, which encourage motorists and other consumers from neighbouring countries – Belgium, France and Germany – to buy their supplies in Luxembourg.

The United States and Canada also have high energy supply per capita, with ratios of 7.2 and 7.5 toe/capita in 2010. At the other end of the scale, the countries with the lowest TPES/capita were Turkey (1.4 toe/capita) and Mexico (1.6 toe/capita). Between 1971 and 2010, trends in energy supply per capita differ markedly across OECD countries. Compared to 1971, TPES/capita in 2010 was almost ten times higher in Korea and three times higher in Iceland, Portugal and Turkey. On the other hand, the ratio decreased over this period in five OECD countries: Luxembourg (-30%), the United Kingdom (-12%), the United States (-6%), Denmark (-5%) and the Czech Republic (-5%).

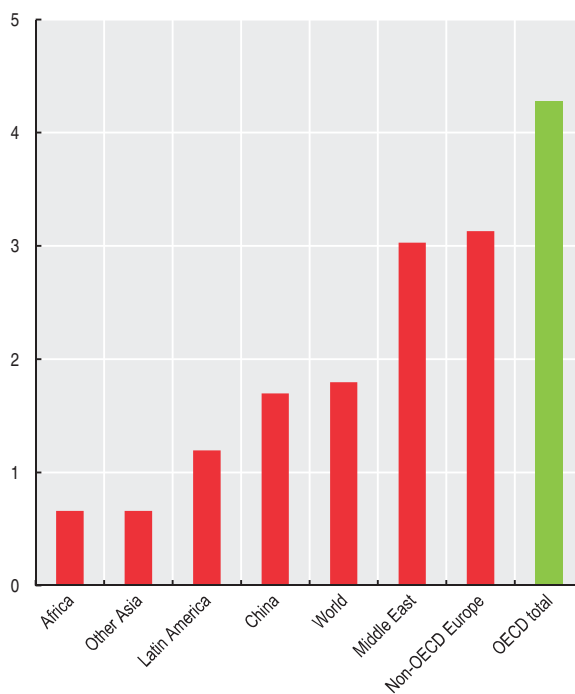
In general, the TPES/capita ratios of non-OECD countries are lower than for OECD countries. In 2009, the ratio for China (1.7 toe/capita) was four times greater than in 1971 and that of Indonesia (0.9 toe/capita) was three times greater. For the ratio India (0.6 toe/capita) doubled over the period while that of South Africa (2.9 toe/capita) and Brazil (1.2 toe/capita) grew slightly more slowly.

### Comparability

Care should be taken when comparing energy supply per capita between countries and over time. Different national circumstances (such as density of population, country size, temperatures, economic structure and domestic energy resources) affect the ratios. Data for Latin America include the Caribbean islands. Data for non-OECD Europe refer to non-OECD Europe and Eurasia.

### Total primary energy supply per capita

Tonnes of oil equivalent (toe) per capita, 2009



StatLink <http://dx.doi.org/10.1787/888932504823>

### Sources

- IEA (2011), *Energy Balances of Non-OECD Countries*, IEA, Paris.
- IEA (2011), *Energy Balances of OECD Countries*, IEA, Paris.

### Further information

#### Analytical publications

- IEA (2011), *Energy Policies of IEA Countries*, series, IEA, Paris.
- IEA (2011), *IEA Scoreboard 2011: Implementing Energy Efficiency Policy: Progress and challenges in IEA member countries*, OECD Publishing.
- IEA (2011), *World Energy Outlook*, IEA, Paris.
- IEA (2009), *Implementing Energy Efficiency: are IEA Countries on Track?*, IEA, Paris.

#### Online databases

- IEA World Energy Statistics and Balances.

#### Websites

- International Energy Agency, [www.iea.org](http://www.iea.org).

## Total primary energy supply per capita

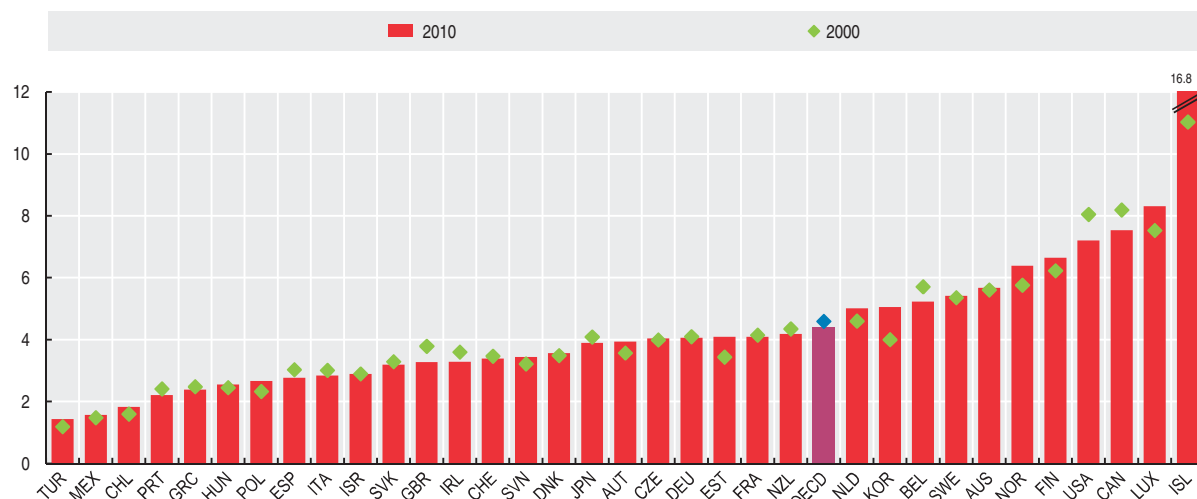
Tonnes of oil equivalent (toe) per capita

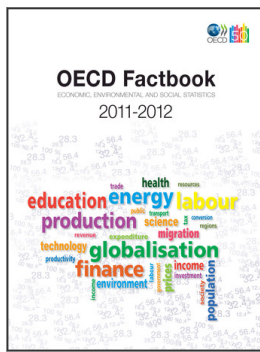
	1971	1990	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Australia	3.91	5.02	5.58	5.61	5.47	5.64	5.65	5.62	5.82	5.86	5.88	5.98	5.93	5.67
Austria	2.51	3.23	3.58	3.57	3.76	3.78	3.97	3.98	4.13	4.08	4.01	4.02	3.79	3.94
Belgium	4.11	4.84	5.69	5.71	5.68	5.46	5.71	5.65	5.60	5.51	5.37	5.47	5.30	5.23
Canada	6.44	7.53	8.04	8.19	7.99	7.92	8.28	8.38	8.44	8.24	8.26	8.00	7.53	7.53
Chile	0.89	1.03	1.62	1.60	1.56	1.59	1.59	1.68	1.70	1.72	1.72	1.75	1.70	1.83
Czech Republic	4.62	4.78	3.79	3.99	4.11	4.17	4.35	4.46	4.39	4.46	4.43	4.28	4.00	4.04
Denmark	3.73	3.38	3.60	3.49	3.58	3.54	3.73	3.60	3.49	3.72	3.62	3.50	3.37	3.56
Estonia	..	6.24	3.49	3.44	3.60	3.46	3.83	3.91	3.83	3.75	4.19	4.06	3.54	4.09
Finland	3.94	5.69	6.28	6.23	6.37	6.68	7.07	7.09	6.53	7.08	6.95	6.64	6.21	6.65
France	3.03	3.85	4.13	4.15	4.26	4.24	4.28	4.32	4.30	4.22	4.15	4.17	3.97	4.09
Germany	3.89	4.43	4.09	4.10	4.22	4.11	4.15	4.16	4.11	4.14	4.03	4.08	3.89	4.06
Greece	0.97	2.07	2.36	2.48	2.56	2.58	2.64	2.69	2.72	2.71	2.70	2.71	2.61	2.39
Hungary	1.84	2.76	2.49	2.45	2.51	2.52	2.58	2.59	2.73	2.71	2.66	2.64	2.48	2.55
Iceland	4.38	8.19	10.69	11.03	11.36	11.40	11.33	11.50	11.76	13.68	15.74	16.46	16.38	16.79
Ireland	2.26	2.85	3.54	3.60	3.74	3.70	3.59	3.58	3.47	3.46	3.45	3.35	3.21	3.29
Israel	1.85	2.45	2.74	2.90	2.97	2.92	2.97	2.89	2.92	2.96	2.99	3.05	2.90	2.89
Italy	1.95	2.58	2.96	3.01	3.02	3.02	3.11	3.13	3.14	3.09	3.02	2.94	2.74	2.84
Japan	2.55	3.55	4.04	4.09	4.01	4.00	3.96	4.09	4.07	4.07	4.03	3.89	3.71	3.90
Korea	0.52	2.17	3.71	4.00	4.03	4.17	4.23	4.33	4.36	4.42	4.58	4.67	4.70	5.05
Luxembourg	11.88	8.93	7.25	7.53	7.91	8.12	8.46	9.29	9.40	9.15	8.72	8.58	7.95	8.31
Mexico	0.86	1.51	1.52	1.48	1.47	1.50	1.51	1.55	1.64	1.64	1.66	1.70	1.63	1.57
Netherlands	3.86	4.39	4.52	4.60	4.71	4.69	4.81	4.86	4.83	4.70	4.84	4.84	4.73	5.01
New Zealand	2.41	3.80	4.28	4.35	4.31	4.32	4.17	4.12	3.99	4.01	3.99	4.03	4.02	4.19
Norway	3.41	4.95	5.90	5.76	5.90	5.49	5.92	5.76	5.79	5.82	5.85	6.25	5.85	6.39
Poland	2.63	2.71	2.43	2.33	2.35	2.32	2.39	2.39	2.42	2.54	2.54	2.57	2.46	2.67
Portugal	0.72	1.67	2.41	2.41	2.41	2.49	2.41	2.46	2.51	2.33	2.39	2.30	2.27	2.21
Slovak Republic	3.13	4.03	3.27	3.29	3.46	3.48	3.47	3.41	3.50	3.46	3.31	3.39	3.09	3.19
Slovenia	..	2.86	3.24	3.22	3.38	3.42	3.46	3.57	3.64	3.65	3.63	3.83	3.41	3.44
Spain	1.24	2.31	2.91	3.03	3.07	3.12	3.17	3.26	3.27	3.21	3.21	3.04	2.75	2.77
Sweden	4.45	5.51	5.66	5.36	5.68	5.80	5.65	5.85	5.71	5.53	5.47	5.38	4.88	5.41
Switzerland	2.58	3.58	3.53	3.47	3.64	3.52	3.51	3.50	3.46	3.58	3.38	3.47	3.45	3.39
Turkey	0.54	0.96	1.11	1.19	1.08	1.12	1.16	1.19	1.23	1.34	1.42	1.39	1.36	1.44
United Kingdom	3.73	3.60	3.78	3.79	3.79	3.68	3.73	3.71	3.69	3.61	3.45	3.39	3.18	3.28
United States	7.64	7.65	7.92	8.05	7.82	7.83	7.77	7.86	7.83	7.68	7.74	7.47	7.03	7.20
EU27 total	..	3.46	3.47	3.49	3.56	3.54	3.61	3.63	3.62	3.60	3.54	3.51	3.31	..
OECD total	3.77	4.25	4.53	4.59	4.55	4.55	4.57	4.63	4.63	4.59	4.59	4.50	4.28	4.40
Brazil	0.71	0.94	1.09	1.09	1.08	1.09	1.10	1.14	1.16	1.19	1.24	1.30	1.24	..
China	0.47	0.76	0.87	0.87	0.86	0.92	1.04	1.21	1.30	1.41	1.49	1.60	1.70	..
India	0.28	0.37	0.45	0.45	0.45	0.46	0.46	0.48	0.49	0.51	0.53	0.54	0.58	..
Indonesia	0.29	0.57	0.75	0.76	0.77	0.79	0.78	0.83	0.83	0.85	0.84	0.84	0.88	..
Russian Federation	..	5.95	4.13	4.22	4.28	4.28	4.45	4.49	4.54	4.70	4.73	4.85	4.56	..
South Africa	2.00	2.67	2.66	2.60	2.56	2.47	2.62	2.82	2.76	2.74	2.88	3.07	2.92	..
World	1.47	1.67	1.64	1.65	1.64	1.65	1.69	1.75	1.78	1.80	1.82	1.84	1.80	..

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## Total primary energy supply per capita

Tonnes of oil equivalent (toe) per capita

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