

GLOBAL ELECTRICITY PRICES

GPP Quarterly Report

GLOBALPETROLPRICES.COM

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OVERVIEW

In September 2018, households around the world paid 0.154 USD for a kWh of electricity. That average is based on data from 100 countries that account for over 90 percent of the world electricity consumption. We use their GDP in the calculation to give more weight to larger economies. Prices were relatively low in Africa (0.084 USD per kWh) and relatively high in Australia (0.255 USD per kWh) and Europe (0.228 USD per kWh).

Prices increased on every continent and in most individual countries since June 2018 when we last collected electricity price data. The largest increase was in Europe (3.37 percent) where a record heat wave during the summer boosted electricity demand and lowered hydro-energy production. Increasing oil prices and an appreciating dollar contributed further in that direction. Prices in Asia changed little (0.76 percent), anchored by the stable electricity prices in China.

Continent	Electricity price, USD per kWh	Percent change from June 2018
World	0.154	1.87
Africa	0.084	2.34
Asia	0.119	0.76
Australia	0.255	1.20
Europe	0.228	3.37
North America	0.128	1.40
South America	0.157	2.87

The averages conceal large differences between countries. Prices in Kuwait, Qatar and a few other countries were less than 0.03 USD per kWh. Electricity prices in several countries including Germany and Portugal were ten times higher.

Please [contact us](#) if you would like to receive the country level data.

SIGNIFICANT PRICE CHANGES

The following countries experienced substantial changes in electricity prices since June 2018.

Country	Percent change from June 2018	Country	Percent change from June 2018
Argentina	-12.66	Sweden	8.86
Barbados	14.81	Tunisia	16.67
Brazil	9.30	Turkey	18.87
Kenya	40.79	Uganda	18.96
Spain	8.41		

Argentina

The Province of Buenos Aires removed two key electricity taxes: The Special Electricity Development Fund tax of 10 percent and the Special Fund for Large Provincial Electric Works tax of 5.5 percent.

Barbados

The Barbados Light and Power Company, which is the sole electricity supplier in Barbados, uses fuel for power generation and the electricity bills have a fuel adjustment clause built into them. Hence, the rising price of crude oil in recent months immediately impacted the electricity prices.

Brazil

The recent increase of electricity prices in Brazil follows a longer term trend of rising power prices in that country. To increase investment, electricity providers have been asking for, and have been receiving, permission for rate increases from the regulator ANEEL. Besides, electricity bills in Brazil contain substantial charges for subsidies to the electricity sector that have pushed electricity prices in Brazil higher than the South American average.

Kenya

One July 1, the electricity tariff structure in Kenya changed significantly. The fixed monthly charge was eliminated while the charge per kWh used increased about four times. The outcome of that change varies by household but the average consumer now faces much higher prices.

Spain

The rise of electricity prices in Spain is due to the greater demand during the summer season, the lower intensity of rainfall and wind which lowered electricity production, and the rising prices of fossil fuels used for electricity generation. These factors pushed up wholesale electricity prices by over 30 percent. The rise in retail prices was more moderate at 8.41 percent as the wholesale price is only one component of the electricity bill. Moreover, many households have long-term electricity contracts with predetermined prices.

Sweden

The effects of record high temperatures and low rainfall in Europe this summer are still felt on the electricity market as hydro-energy production, important in Sweden, has struggled. Lower supply has raised prices in Sweden and elsewhere on the continent.

Tunisia

The decision of the Ministry of Energy, Mines and Renewable Energies to raise the electricity price is due to rising crude oil prices. The other factor is the peak demand of energy in the summer months.

Turkey

The collapse of the Turkish lira in recent months has raised the cost of imported commodities, including natural gas that generates a third of the electricity in Turkey. Hence, the energy regulator (the Energy Market Regulation Authority) approved an increase in electricity prices.

Uganda

The Electricity Regulatory Authority set a higher electricity tariff for households following the depreciation of the Uganda Shilling against the U.S. Dollar and the increase in crude oil prices.

OUR SOURCES

Very few countries report up-to-date statistical data on electricity prices. Therefore, we collect data from the current price offers of electricity companies and produce a national average that takes into account the market shares of those companies and the relative population of regions within the country.

For each country, we investigate the structure of its electricity market and answer the following questions: Are prices set by a regulator or the market? What companies handle the distribution of energy and what companies sell electricity? How many companies serve the households and what their market shares are? What is the average household consumption of electricity according to national sources and the World Energy Council? Are prices determined

on a regional basis or nationwide? What are the types of contracts available: fixed, variable, spot? What are the current price packages? Are there any taxes and fees that are not reported in the contracts but consumers actually pay?

Answering these questions allows us to compute a national average price based on the specifics of each country. Below are a few examples:

Australia

Five of the Australian states: the Australian Capital Territory, New South Wales, Queensland, South Australia, and Victoria have liberalized electricity markets while the Northern Territory, Tasmania, and Western Australia regulate the electricity prices. In the liberalized markets, we take the prices of the largest electricity suppliers in the capital cities:

- ActewAGL in the Australian Capital Territory;
- AGL, Energy Australia, Red Energy, and Origin Energy in New South Wales;
- AGL, Energy Australia, and Origin Energy in Queensland (and Ergon Energy in the remote areas);
- AGL, Origin, and EnergyAustralia in South Australia; and
- AGL Victoria, Energy Australia, and Origin Australia in Victoria.

In the states with regulated electricity prices, we take the tariffs from the regional regulators: The Utilities Commission of the Northern Territory (Jacana Energy as a major supplier); the Tasmanian Economic Regulator (usually sets the electricity rates once per year and the only supplier is Aurora Energy); and the Government of Western Australia (with Synergy as a major electricity supplier).

The national average electricity price for Australia is a weighted average price per kWh using the relative population of each state. We take into account the level of annual household electricity consumption for each state: 9316 kWh (Australian Capital Territory), 6753 kWh (Northern Territory), 6935 kWh (New South Wales), 5512 kWh (Queensland), 6059 kWh (South Australia), 9939 kWh (Tasmania), 7008 kWh (Victoria), and 6205 kWh (Western Australia).

Ivory Coast

Companie Ivorienne d'Electricite (CIE) controls the distribution and sale of electricity in the Ivory Coast. The National Electricity Sector Regulatory Authority (ANARE) regulates the electricity sector.

The electricity bill in the Ivory Coast is bimonthly. It consists of two consumption tiers. The first is for households with consumption between 0 and 80 kWh of electricity per month while the second is for consumption above 80 kWh. Prices at the second tier are two times higher than at the first one. Moreover, VAT is levied only on electricity consumption above 80 kWh per month. In addition, there is a fixed bimonthly energy charge irrespective of the consumption level. Other components of the electricity price are the Rural Electrification fee and a municipal tax. Our calculations are based on 1100 kWh which is the average annual household consumption for the country. Hence, 960 kWh of energy are charged at the lower tier pricing and the remaining 140 kWh are charged at the higher tier pricing.

Sweden

Swedish households sign two contracts: 1) one with a distributor company that maintains the grid and 2) another with an electricity supplier that sells electricity. The country is divided into four regions for the purposes of electricity distribution and there can be multiple distributor companies within a region with Ellivio, E.on and Vattenfall as leaders in the market. Customers pay a fixed monthly amount and a per kWh amount to the distribution companies that vary across regions. The monthly fees in the North region are more than double what households in Stockholm pay because the cost of the maintenance of the electricity grid is spread among fewer consumers in the sparsely populated North region. These prices are regulated by the Swedish government as each distributor is a natural monopoly in the area where it operates.

There are numerous suppliers of electricity across Sweden with a large variety of choices in terms of packages. Households can choose from over 500 contracts with fixed or flexible prices and by selecting the type of energy source: wind, solar, or hydro. Yet, competition ensures that the cost in these contracts expressed in kronas per kWh are very similar across

the companies and the regions of Sweden as suppliers have access to the same wholesale market: the NordPool energy bourse. Hence, almost all of the variation between regions in terms of retail electricity prices comes from the fixed cost of distribution.

To compute the average prices we identified the main distributor companies in the four regions of the country and obtained their distribution charges. Then, for the largest cities in each region we obtained the average cost in the electricity contracts for all electricity suppliers. The sum of the two gives the total average per kWh cost. The calculations are based on 8000 kWh consumption per year.

United Arab Emirates

To calculate the national average electricity price, we take the tariffs offered by the three suppliers operating in the two largest Emirates: Abu Dhabi and Dubai. The Al Ain Distribution company provides electricity in the eastern part of Abu Dhabi whereas the Abu Dhabi Distribution Co. supplies in the rest of that Emirate. The Emirate of Dubai is served by the Dubai Electricity Authority.

We use the electricity prices of the three companies and the population of each Emirate to derive a weighted average price per kWh for the country. We take into account the fact that in Abu Dhabi the majority of the population are immigrants and are charged higher electricity rates compared to UAE citizens. Hence, for this Emirate, we calculate a weighted average price taking into account the two different rates. The average annual consumption per household in the UAE is about 17 000 kWh.

ABOUT GLOBALPETROLPRICES.COM

We track retail fuel and electricity prices using data from companies, government institutions, regulatory agencies, statistical institutes, and major media outlets. The fuel price data are collected weekly for over 100 countries. The electricity prices are collected quarterly for about 100 countries.

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