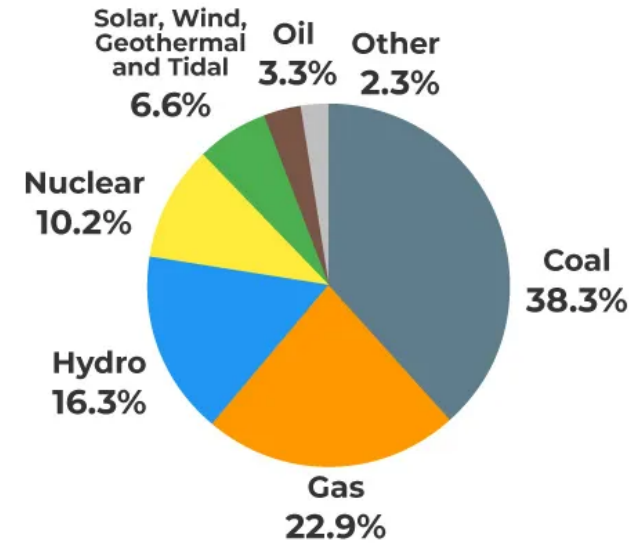


# NUCLEAR ENERGY




























## World electricity production

Nuclear energy provides 10% of the world's electricity.



Thirty countries generate electricity from 440 nuclear power reactors.

Terawatt-hour (TWh) is a measure of electrical energy.

 US 808.0 TWh	 Canada 94.4 TWh	 Spain 53.4 TWh	 Switzerland 24.5 TWh	 Slovakia 13.8 TWh	 Argentina 6.5 TWh
 France 395.9 TWh	 Ukraine 79.5 TWh	 Japan 49.3 TWh	 Finland 21.9 TWh	 Mexico 13.2 TWh	 Iran 6.3 TWh
 China 277.1 TWh	 Germany 71.9 TWh	 India 35.4 TWh	 Bulgaria 15.4 TWh	 South Africa 10.6 TWh	 Slovenia 5.5 TWh
 Russia 191.3 TWh	 Sweden 65.9 TWh	 Czech 28.3 TWh	 Hungary 14.9 TWh	 Romania 10.5 TWh	 Netherlands 3.3 TWh
 South Korea 127.1 TWh	 UK 59.1 TWh	 Belgium 27.3 TWh	 Brazil 14.8 TWh	 Pakistan 9.3 TWh	 Armenia 1.9 TWh



Source: IEA Electricity Information 2019, IAEA 2019



<https://www.aljazeera.com/features/2020/7/23/is-nuclear-power-a-problem-or-a-solution>

# Nuclear Energy: Environmental Impact at a Glance

Exploring the Impacts of Nuclear Energy

## Environmental Impact:

Low Greenhouse Gas Emissions: Nuclear power emits **30 times less CO<sub>2</sub>** than coal.

High Energy Output: One uranium fuel pellet generates as much energy as **17,000 cubic feet of natural gas**.

One nuclear reactor requires between **1,514L and 2,725L** litres of water per MWh, equating to billions of gallons of water per year.



USA, France, China, Russia and South Korea

## A Global Perspective:

- 11%** Nuclear Power contributes to the world's electricity.
- 450** Nuclear reactors are in operation worldwide.
- 470** Nuclear energy saves carbon dioxide emissions annually.
- 92%** Highest capacity factor among energy sources, operating at maximum power most of the time.



## Safety:

Deaths per TWh for nuclear energy are only **0.07**, compared to higher rates for fossil fuels.

Nuclear power is one of the **safest** forms of energy.



## Comparative CO<sub>2</sub> Emissions:

Nuclear: **12 grams CO<sub>2</sub>/kWh**

Coal: **820 grams CO<sub>2</sub>/kWh**

Natural Gas: **490 grams CO<sub>2</sub>/kWh**

## Waste Management:

**95%** of used nuclear fuel can be recycled. Radioactive waste can remain hazardous for thousands of years.



*For a sustainable future, the balance between benefits and challenges of nuclear energy must be carefully managed.*

<https://www.greenmatch.co.uk/blog/nuclear-energy-bad-for-environment>