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Visualizing China's Energy Transition in 5 Charts



Published 3 months ago on July 15, 2021

By **Bruno Venditti**

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VISUALIZING

CHINA'S ENERGY TRANSITION

IN 5 CHARTS

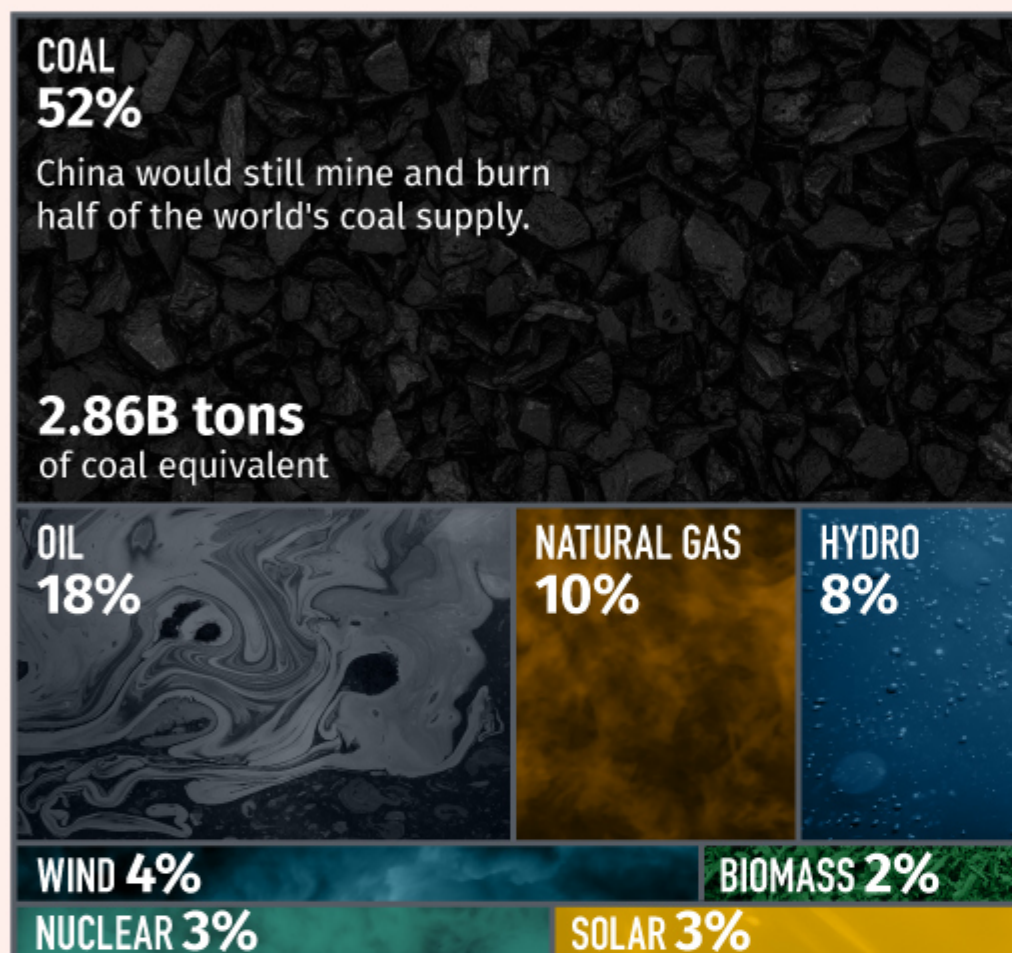
CHINA HAS AN AMBITIOUS PLAN TO COMPLETELY CHANGE ITS ENERGY MIX AND REDUCE ITS CARBON EMISSIONS.

This graphic uses data from Tsinghua University's Environment, and Economy, which details how the consumer of energy expects to achieve carbon ne

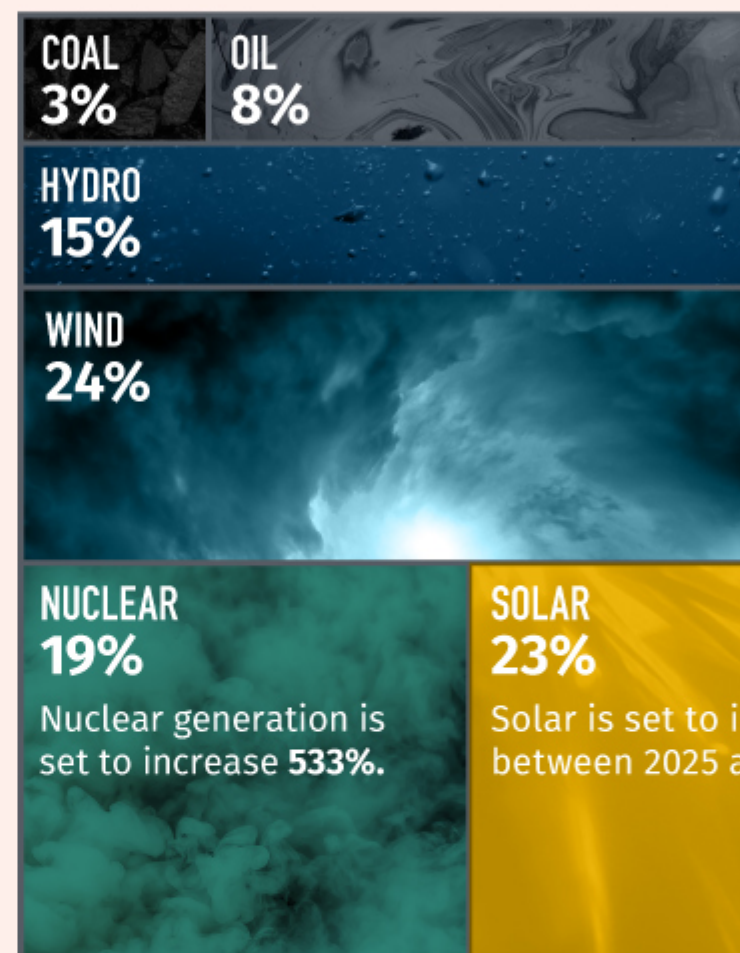


CHINA'S EVOLVING ENERGY MIX

2025



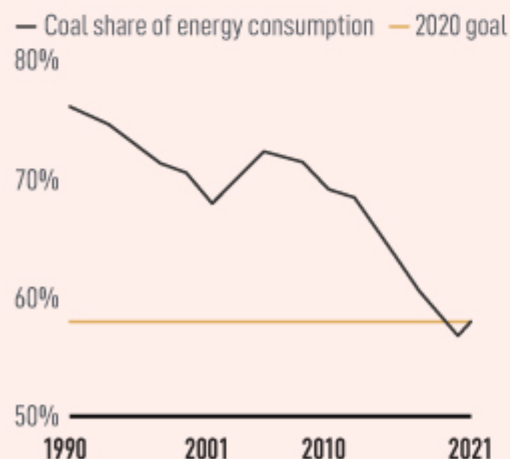
2060



Despite China's continued reliance on fossil fuels in 2025, the country's energy mix is already moving towards its long term goal of carbon neutrality



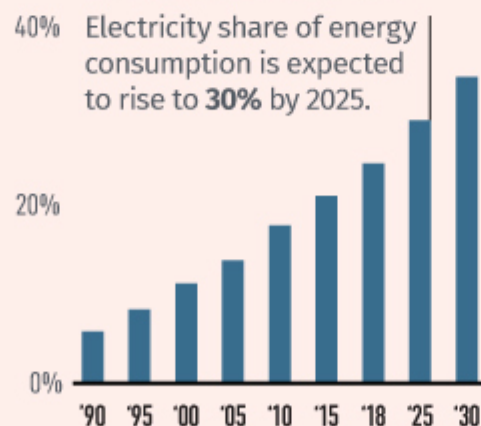
THE DECLINE OF COAL USE



Source: National Bureau of Statistics



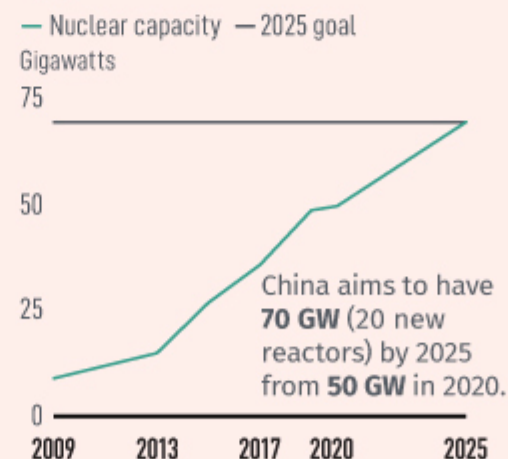
ELECTRICITY'S SHARE OF ENERGY CONSUMPTION



Source: International Energy Agency; State Grid Corp. of China



CHINA'S NEW NUCLEAR PLAN



Source: Bloomberg; National Energy Administration



CHINA SOLAR CAPACITY



Source: China Industry Association

Source: Tsinghua University Institute of Energy, Environment and Economy; U.S. Energy Information Administration (EIA)

ELEMENTS



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We live in a

Visualizing China's Energy Transition in 5 Charts

In September 2020, China's President Xi Jinping announced the steps his nation would take to reach carbon neutrality by 2060 via videolink before the United Nations Assembly in New York.

This infographic takes a look at what this ambitious plan for China's energy would look like and what efforts are underway towards this goal.

China's Ambitious Plan

A carbon-neutral China requires changing the entire economy over the next 40 years, a change the IEA compares to the ambition of the reforms that industrialized the country's economy in the first place.

China is the world's largest consumer of electricity, well ahead of the second place consumer, the United States. Currently, 80% of China's energy comes from fossil fuels, but this plan envisions only 14% coming from coal, oil, and natural gas in 2060.

Energy Source	2025	2060	% Change
Coal	52%	3%	-94%
Oil	18%	8%	-56%
Natural Gas	10%	3%	-70%
Wind	4%	24%	+500%
Nuclear	3%	19%	+533%
Biomass	2%	5%	+150%
Solar	3%	23%	+667%

Energy Source	2025	2060	% Change
Hydro	8%	15%	+88%

Source: Tsinghua University Institute of Energy, Environment and Economy; U.S. EIA

According to the [Carbon Brief](#), China's 14th five-year plan appears to enshrine Xi's goal. This plan outlines a general and non specific list of projects for a new energy system. It includes the construction of eight large-scale clean energy centers, coastal nuclear power, electricity transmission routes, power system flexibility, oil-and-gas transportation, and storage capacity.

Progress Towards Renewables?

While the goal seems far off in the future, China is on a trajectory towards reducing the carbon emissions of its electricity grid with declining coal usage, increased nuclear, and increased solar power capacity.

According to [ChinaPower](#), coal fueled the rise of China with the country using 144 million tonnes of oil equivalent "Mtoe" in 1965, peaking at 1,969 Mtoe in 2013. However, its share as part of the country's total energy mix has been declining since the 1990s from ~77% to just under ~60%.

Another trend in China's energy transition will be the greater consumption of [energy as electricity](#). As China urbanized, its cities expanded creating greater demand for electricity in homes, businesses, and everyday life. This trend is set to continue and approach 40% of total energy consumed by 2030 up from ~5% in 1990.

Under the new plan, by 2060, China is set to have 42% of its energy coming from solar and nuclear while in 2025 it is only expected to be 6%. China has been adding nuclear and solar

capacity and expects to add the equivalent of 20 new reactors by 2025 and enough solar power for 33 million homes (110GW).

Changing the energy mix away from fossil fuels, while ushering in a new economic model is no small task.

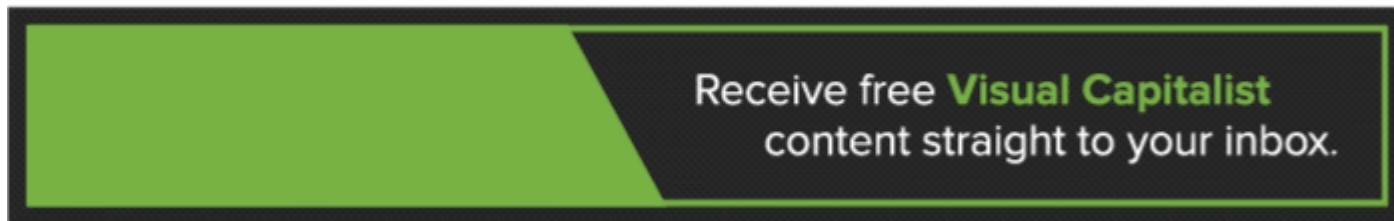
Up to the Task?

China is the world's factory and has relatively young industrial infrastructure with fleets of coal plants, steel mills, and cement factories with plenty of life left.

However, China also is the biggest investor in low-carbon energy sources, has access to massive technological talent, and holds a strong central government to guide the transition.

The direction China takes will have the greatest impact on the health of the planet and provide guidance for other countries looking to change their energy mixes, for better or for worse.

The world is watching...even if it's by videolink.



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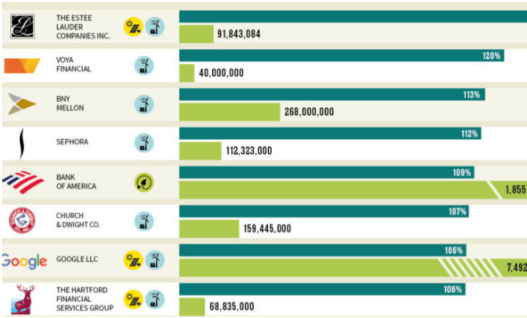
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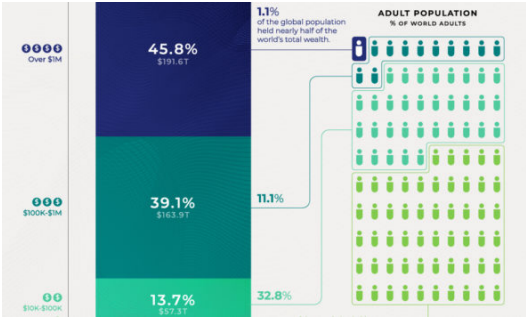
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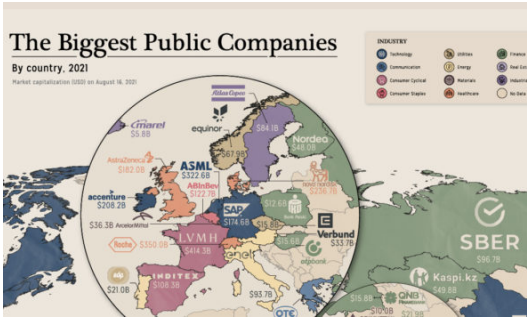
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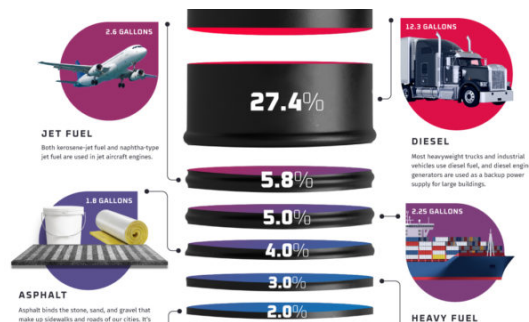
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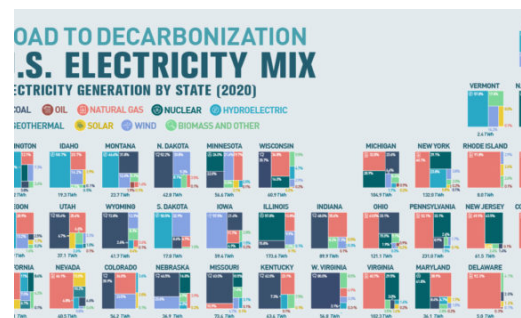
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ENERGY

Ranked: The 50 Companies That Use the Highest Percentage of Green Energy

Which U.S. companies use the most green energy as a percentage of total energy used?

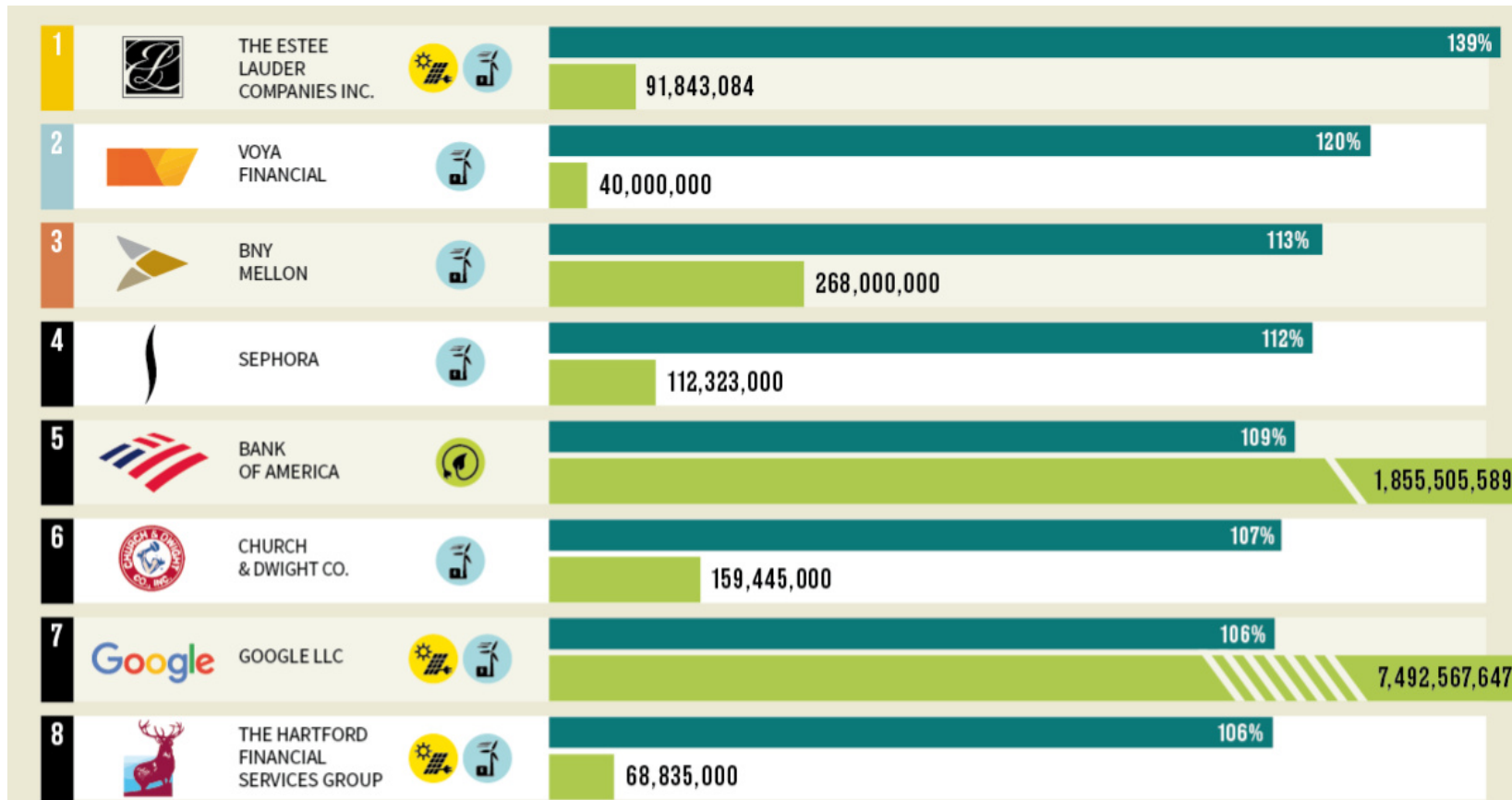
Here are the 50 highest ranked companies according to the EPA.



Published 1 day ago on September 27, 2021

By **Anshool Deshmukh**





Which Companies Use the Most Green Energy?

Green energy was once a niche segment of the wider energy industry, but it's quickly becoming an essential energy source in many regions and nations across the globe.

Based on data from the Environmental Protection Agency (EPA), this infographic by SolarPower.Guide shows the top 50 greenest companies, based on the highest proportion of green energy used in their overall consumption mix.

Leaders in Green Energy Use

As green energy becomes more affordable, some major businesses like Google, Wells Fargo, and Apple are embracing it in a big way.

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ENERGY

What's Made from a Barrel of Oil?

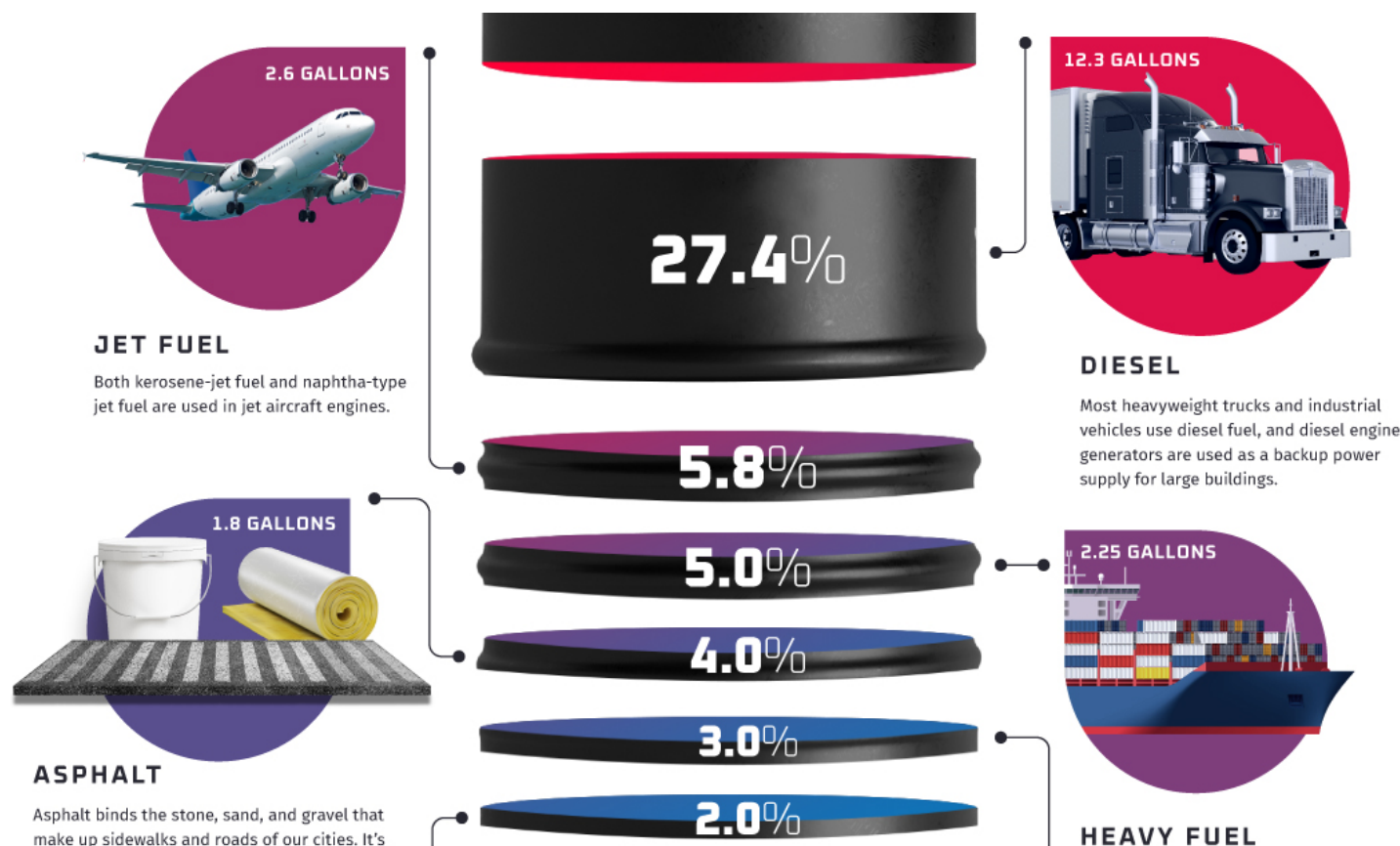
Oil is a building block that makes modern life possible. Here are the proportion of finished products that are created from a barrel of oil.



Published 2 weeks ago on September 14, 2021

By **Niccolo Conte**





What Products Are Made from a Barrel of Oil?

This was originally posted on [Elements](#). Sign up to the [free mailing list](#) to get beautiful visualizations on natural resource megatrends in your email every week.

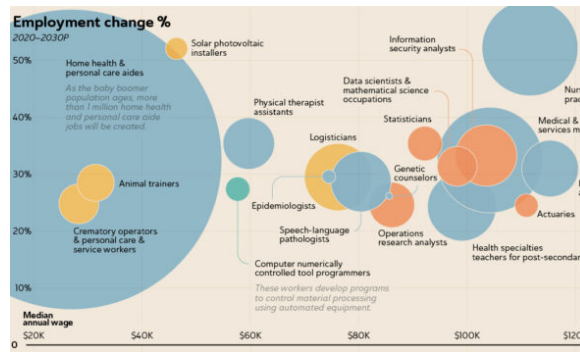
From the gasoline in our cars to the plastic in countless everyday items, crude oil is an essential raw material that shows up everywhere in our lives.

With around [18 million barrels](#) of crude oil consumed every day just in America, this commodity powers transport, utilities, and is a vital ingredient in many of the things we use on a daily basis.

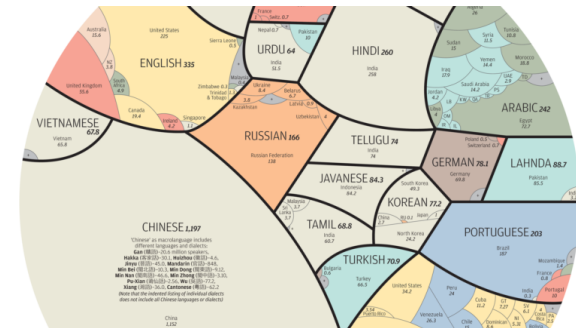
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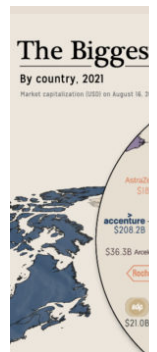
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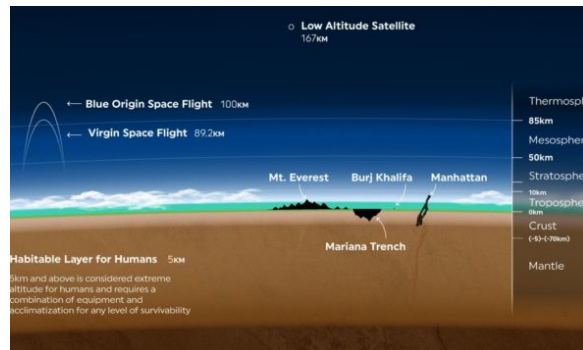
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All World Languages in One Visualization



MARKETS / Mapping Market C

[illegible]

9/11
A Timeline

8:00 The hijacking of American Airlines Flight 11 begins.

8:28 Flight 11 crashes into the North Tower of the World Trade Center.

8:46 Flight 175 crashes into the South Tower of the World Trade Center.

9:03 Flight 77 crashes into the Pentagon.

9:25 Flight 93 crashes into the field near Shanksville, Pennsylvania.

9:58 The South Tower of the World Trade Center collapses.

10:28 The North Tower of the World Trade Center collapses.

11:00 The World Trade Center collapses.

SHOW BRANI

% Growth in brand value (2020-2021)
300%

TESLA

\$42.61B

Total brand value (2021)

200%

100%

12/13

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