

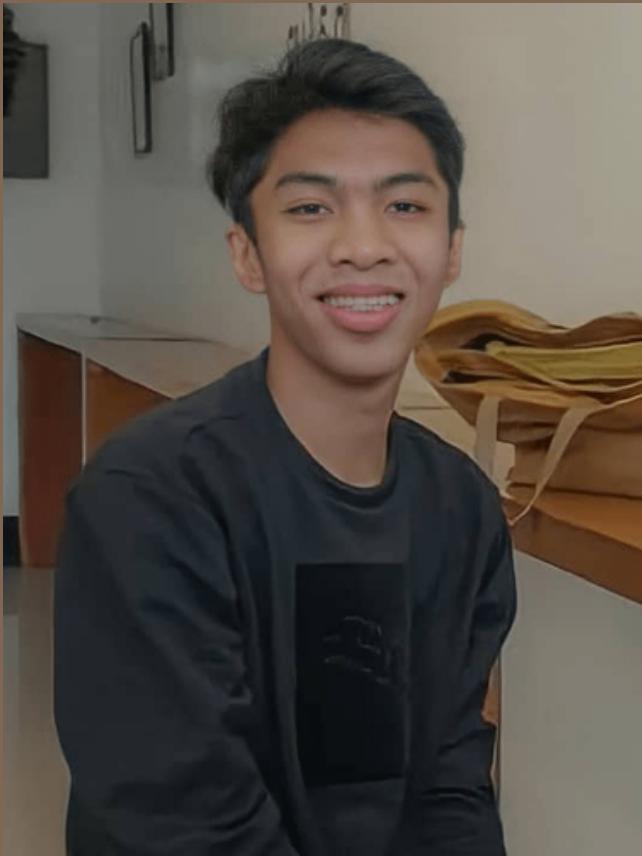


**DRIVING DOWN GREENHOUSE
GAS EMISSIONS THROUGH
CLEAN ENERGY**

PLANTEERS' TEAM MEMBERS



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EFFECTS OF GREENHOUSE GAS EMISSIONS



ENVIRONMENTAL AND HEALTH EFFECTS

According to National Geographic, greenhouse gasses produce far-ranging environmental and health effects. They cause climate change and oil the wheels of respiratory disease from smog and air pollution. Furthermore, extreme weather, food supply disruptions, and increased wildfires are the other effects of climate change generated by greenhouse gasses.

SUSTAINABLE DEVELOPMENT GOALS



GOAL 7: AFFORDABLE AND CLEAN ENERGY

ENERGY-EFFICIENT APPLIANCES AND LIGHT BULBS

Energy is central to nearly every major challenge and opportunity

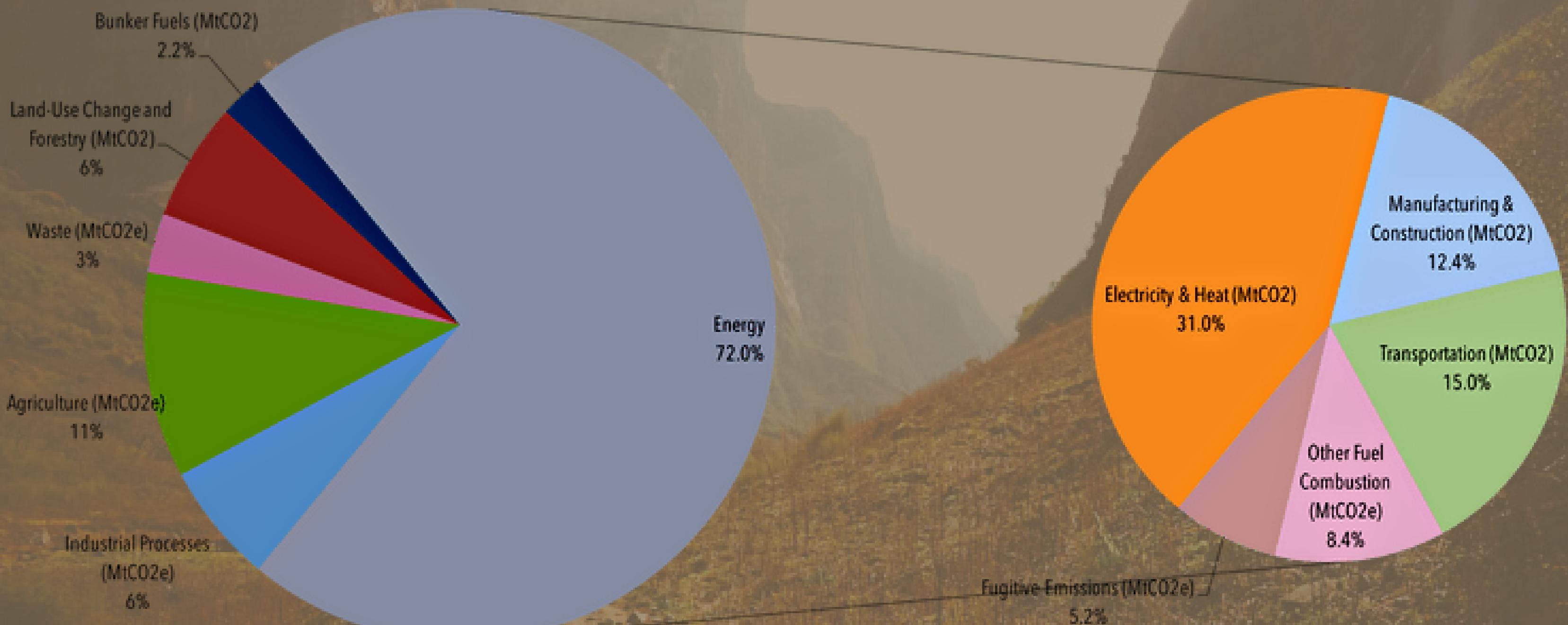


GOAL 13: CLIMATE ACTION

ACT NOW TO STOP GLOBAL WARMING

Climate change is a global challenge that affects everyone, everywhere.

Globally, the primary sources of greenhouse gas emissions are electricity and heat (31%), agriculture (11%), transportation (15%), forestry (6%) and manufacturing (12%). Energy production of all types accounts for 72 percent of all emissions.



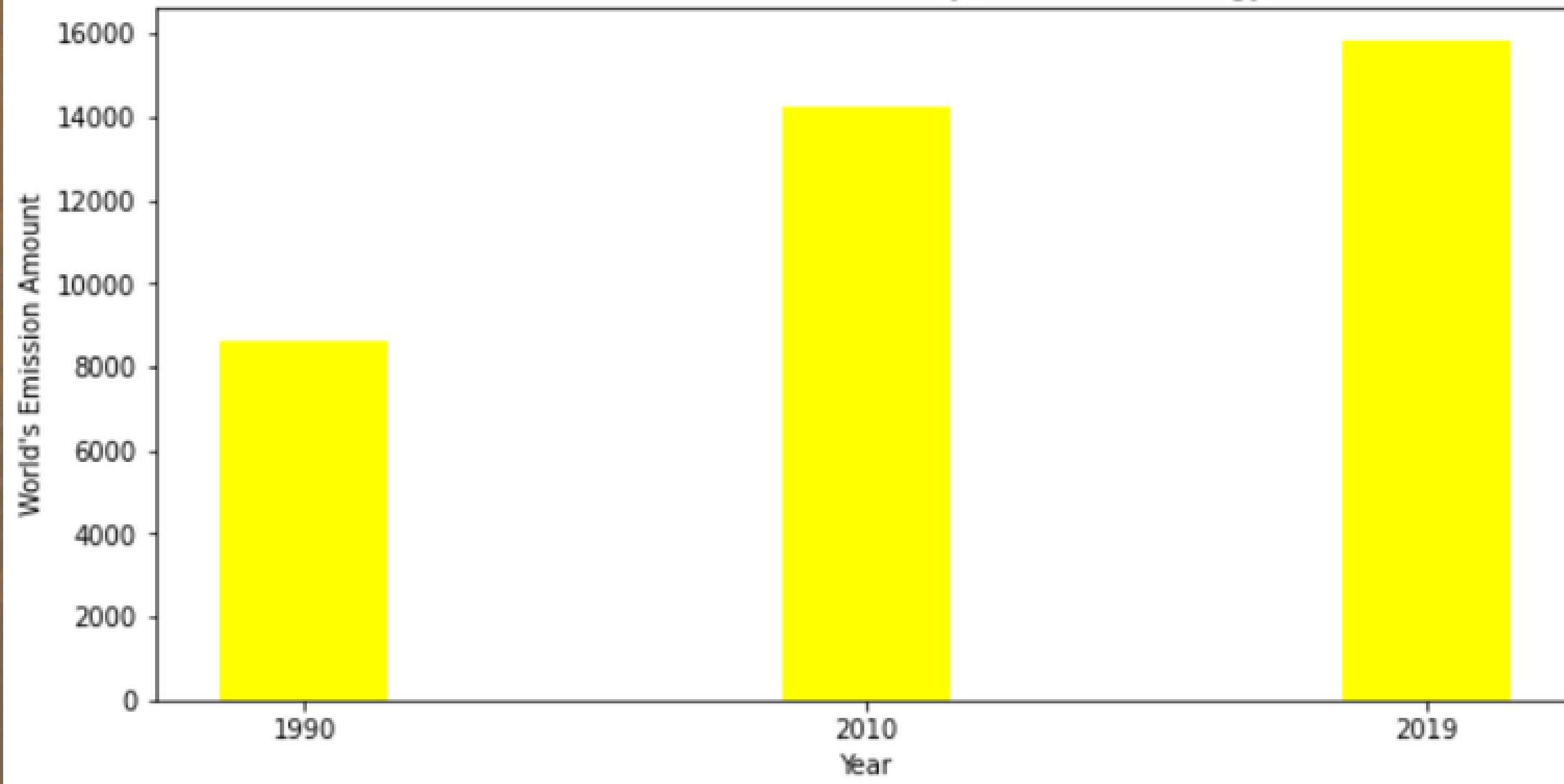
ELECTRICITY/HEAT

The Electricity sector involves the generation, transmission, and distribution of electricity. Carbon dioxide (CO₂) makes up the vast majority of greenhouse gas emissions from the sector, but smaller amounts of methane (CH₄) and nitrous oxide (N₂O) are also emitted. These gases are released during the combustion of fossil fuels, such as coal, oil, and natural gas, to produce electricity. Less than 1% of greenhouse gas emissions from the sector come from sulfur hexafluoride (SF₆), an insulating chemical used in electricity transmission and distribution equipment.

ELECTRICITY TOP 5 COUNTRIES GREENHOUSE GAS EMITTERS

COUNTRY	1990	2010	2019
World	8627.95	14211.19	15834.64
China	728.78	3850.79	5616.35
United States	2171.63	2620.93	1965.56
India	232.96	823.81	1244.78
European Union (27)	1471.48	1338.38	922.76
Russia	1235.01	958.42	871.70

Green House Gas Emission in Electricity/Heat under Energy Sector



8.63 Gt

14.2 Gt

15.8 Gt

TRANSPORTATION

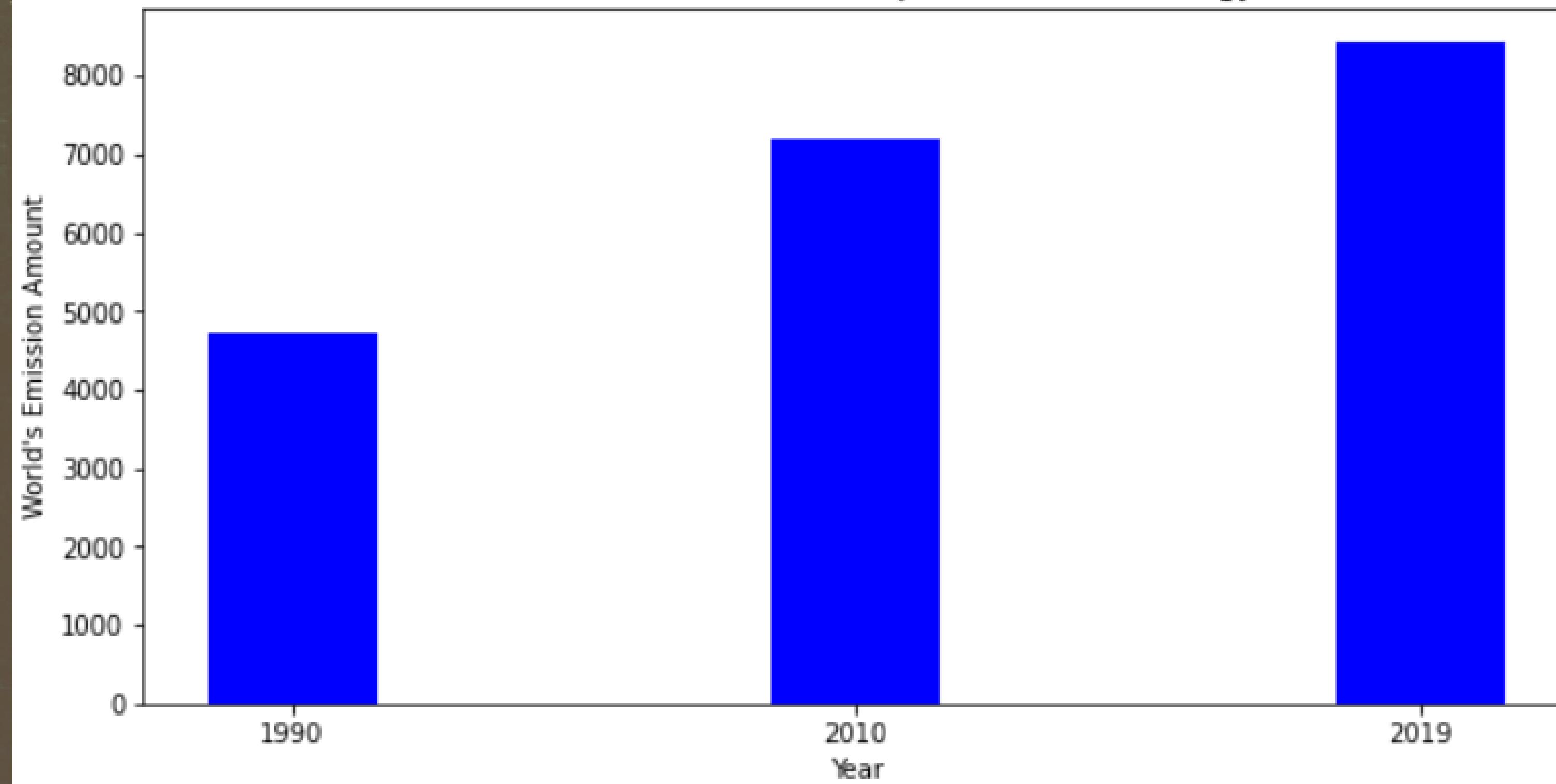
The Transportation sector includes the movement of people and goods by cars, trucks, trains, ships, airplanes, and other vehicles. The majority of greenhouse gas emissions from transportation are carbon dioxide (CO₂) emissions resulting from the combustion of petroleum-based products, like gasoline and diesel fuel, in internal combustion engines. The largest sources of transportation-related greenhouse gas emissions include passenger cars, medium- and heavy-duty trucks, and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans.



TRANSPORTATION TOP 5 COUNTRIES GREENHOUSE GAS EMITTERS

COUNTRY	1990	2010	2019
World	4725.54	7188.99	8434.96
United States	1468.6	1733.13	1815.66
China	96.28	584.09	926.36
European Union (27)	660.09	814.44	835.06
India	66.02	197.84	315.88
Russia	305.91	249.18	262.39

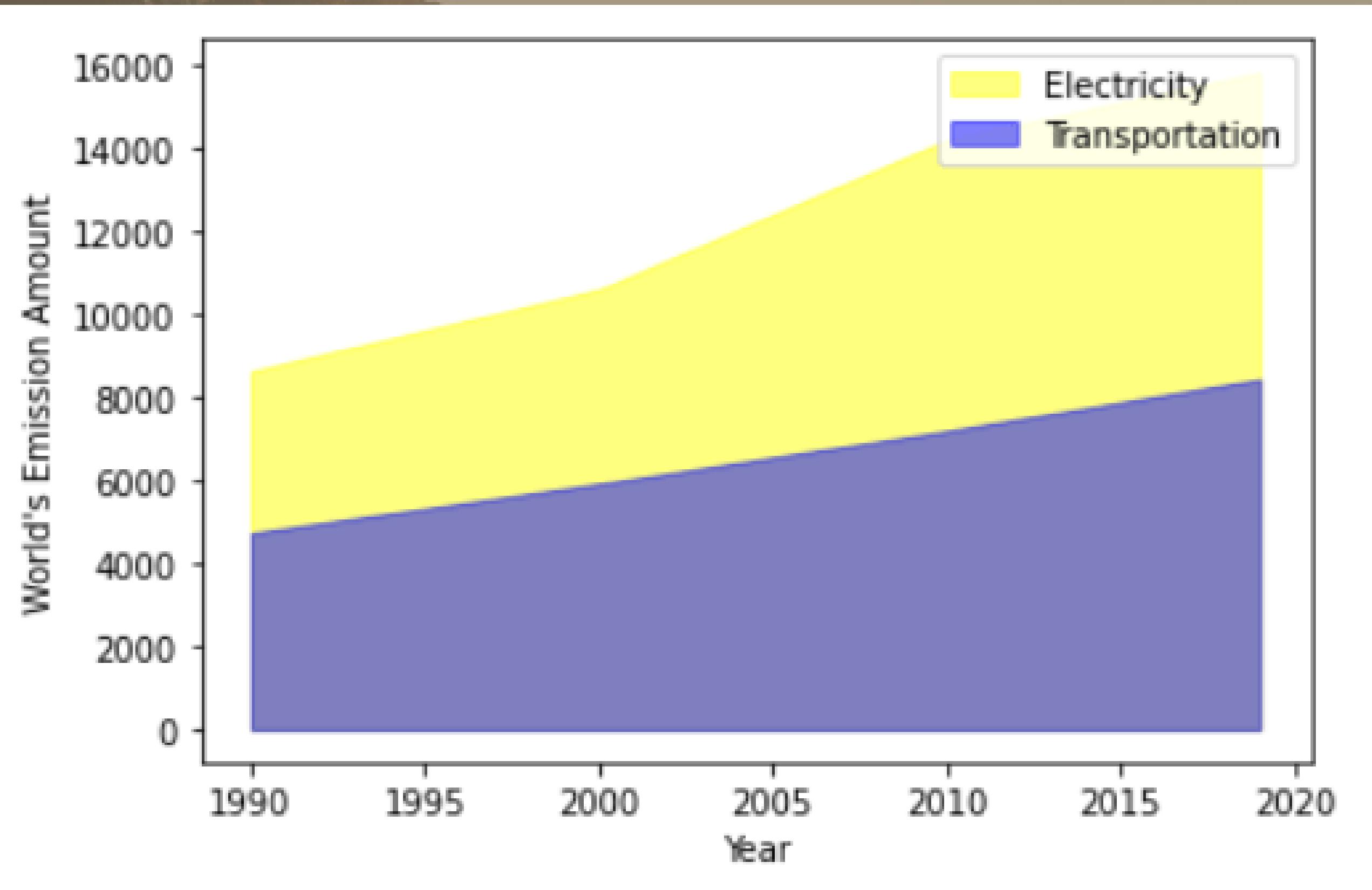
Green House Gas Emission in Transportation under Energy Sector



4.73Gt

7.20Gt

8.43Gt



Comparison

Electricity

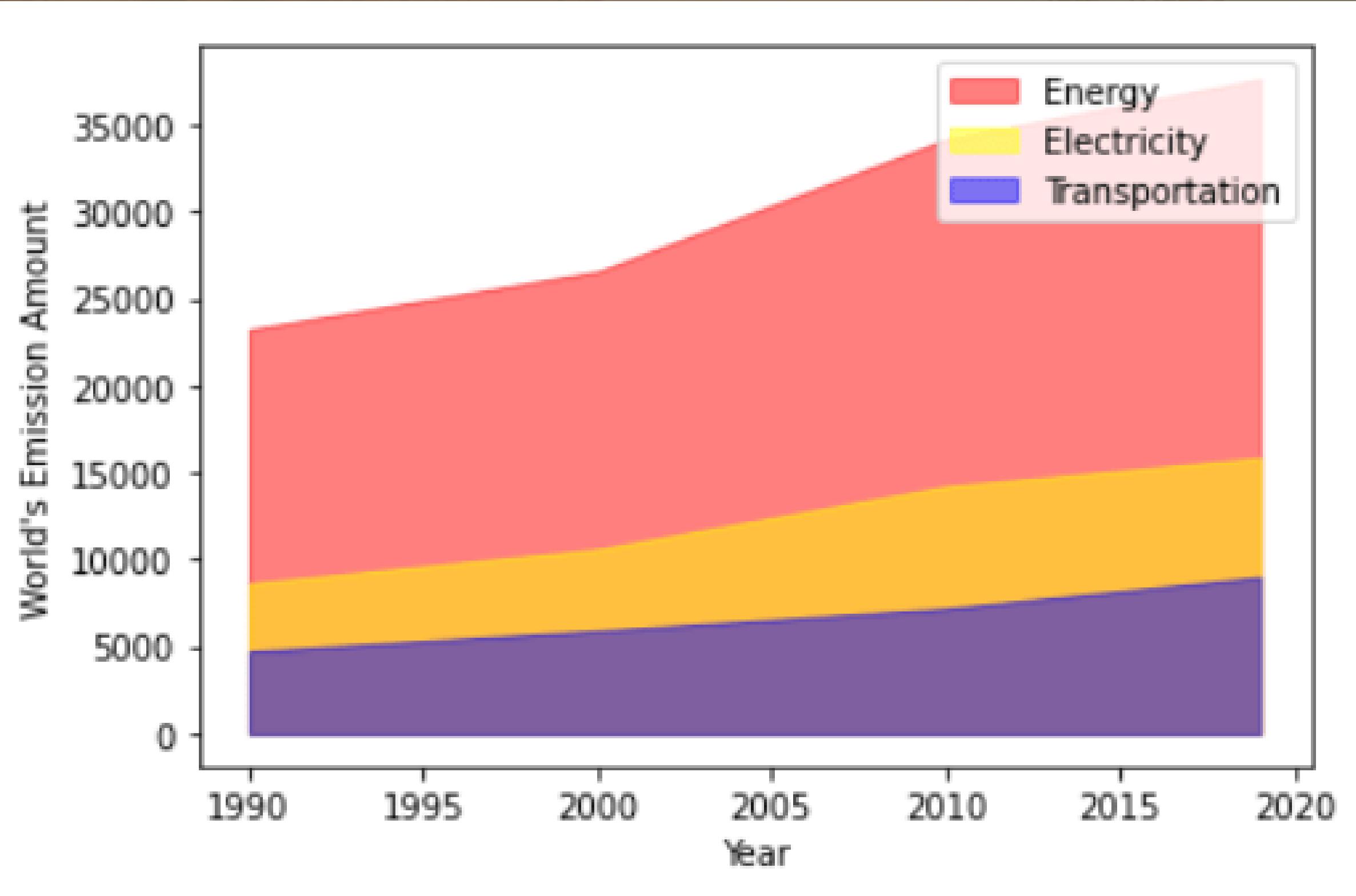
15.8Gt

8.63 Gt

Transportation

8.43Gt

4.73Gt



Energy

37.63Gt

Electricity

15.8Gt

Transportation

8.43Gt

Clean Energy

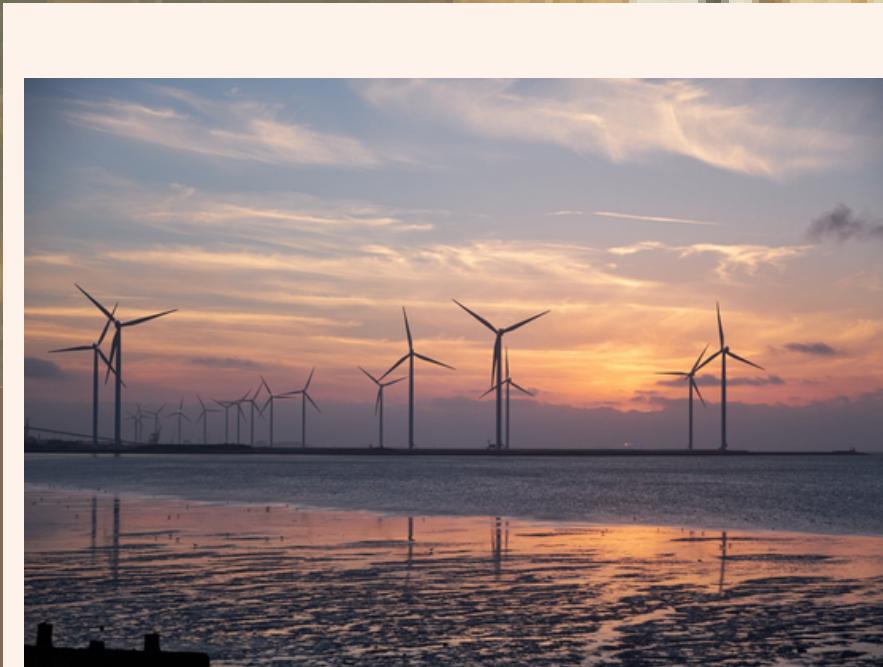
- SOLAR ENERGY
- WIND ENERGY
- HYDRO ENERGY
- TIDAL ENERGY
- GEOTHERMAL ENERGY
- BIOMASS ENERGY



1



SOLAR ENERGY

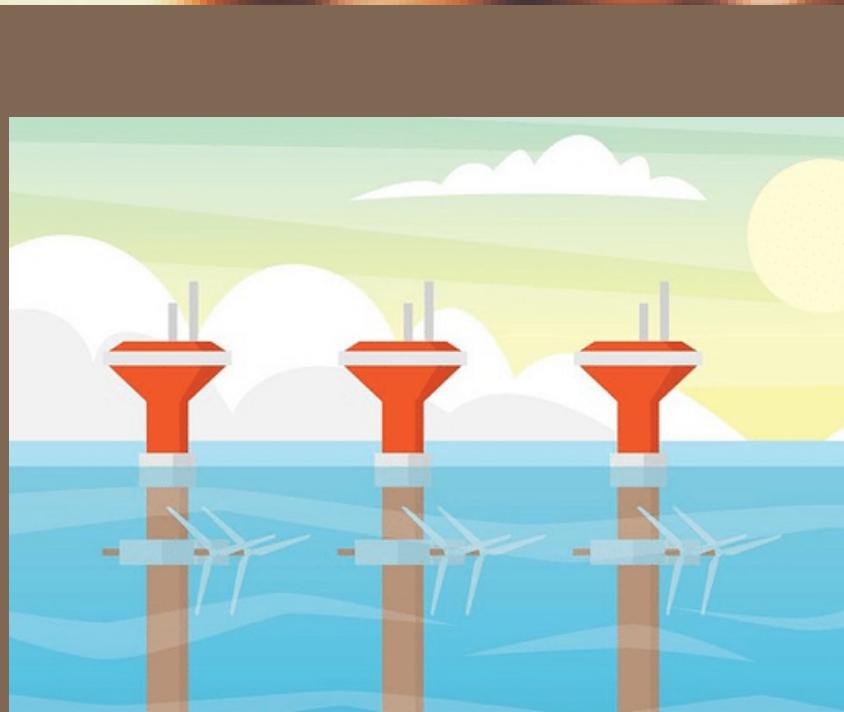


WIND ENERGY

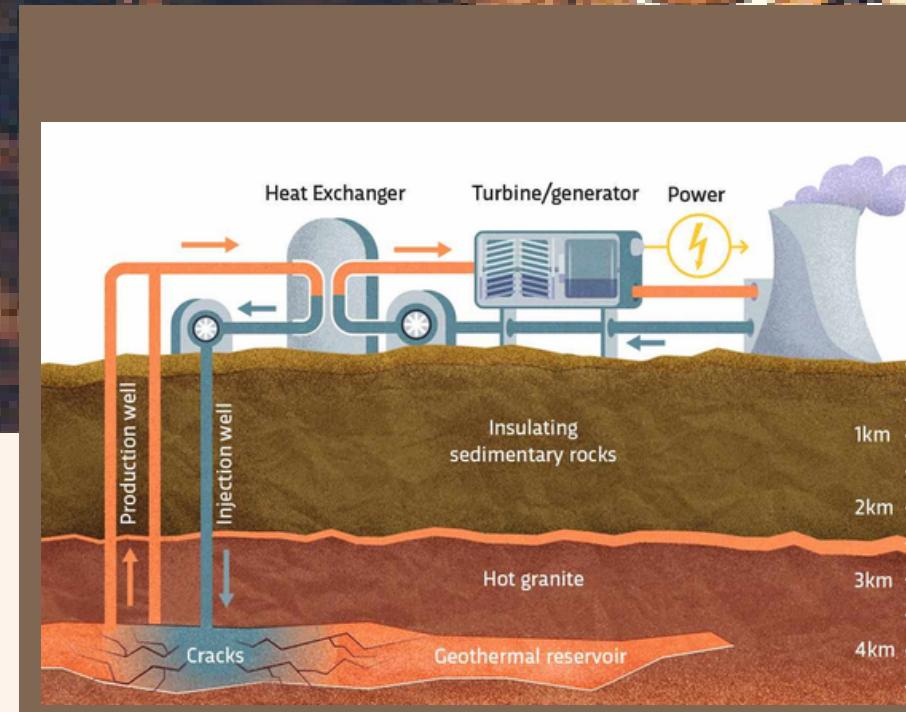


HYDRO ENERGY

2



TIDAL ENERGY



GEOTHERMAL ENERGY



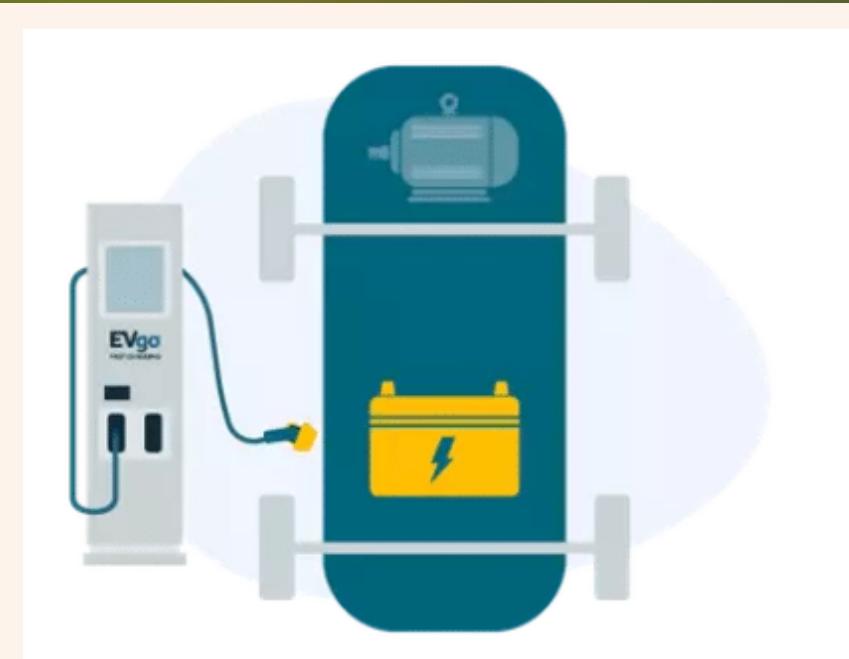
BIO MASS ENERGY

ELECTRIC VEHICLES

The greenhouse gas emissions associated with an electric vehicle over its lifetime are typically lower than those from an average gasoline-powered vehicle, even when accounting for manufacturing.

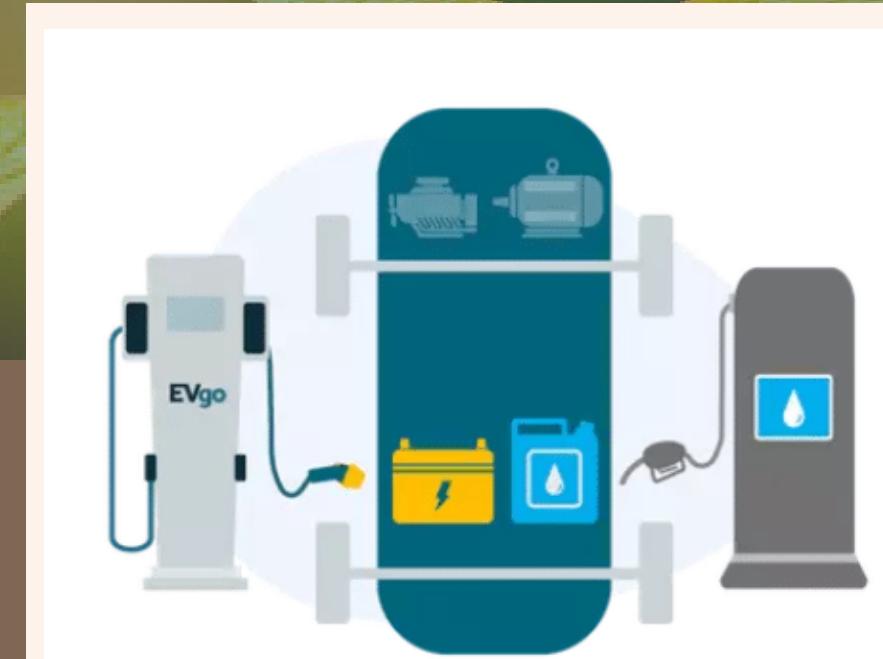


TYPES



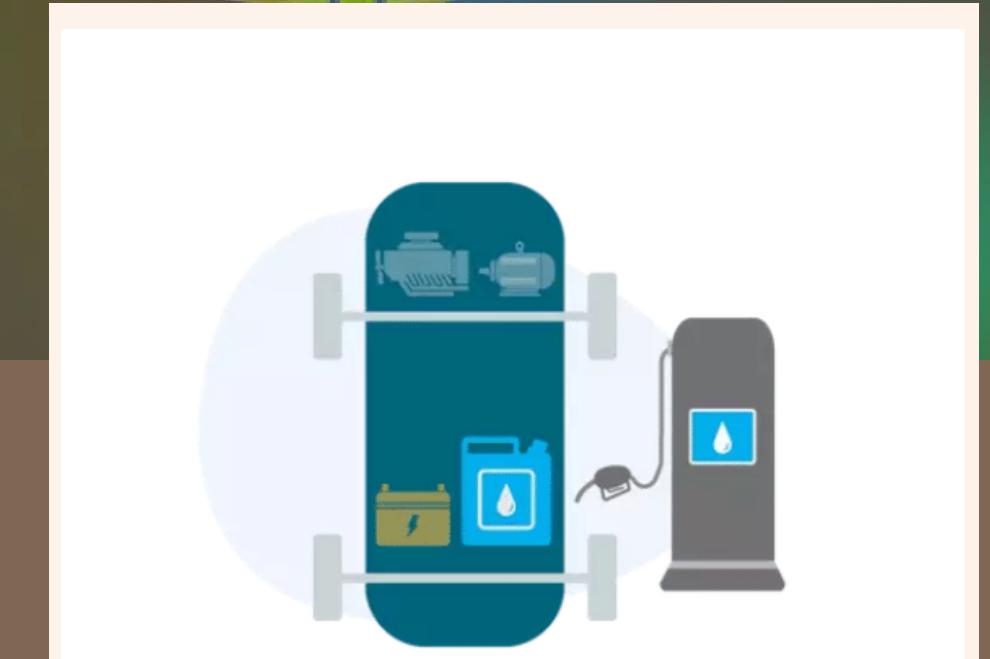
Battery Electric Vehicles (BEVs)

Powered solely by an electric battery, with no gas engine parts. Most BEVs are capable of fast charging and L2 charging. Zero emissions.



Plug-in Hybrid Electric Vehicles (PHEVs)

Similar to a Hybrid, but with a larger battery and electric motor. Has a gas tank and a charging port. Can charge by using L2 chargers.



Hybrid Electric Vehicles (HEVs)

Low-emission vehicles that use an electric motor to assist gas-powered engines. All energy comes from gasoline. Cannot charge with EVgo.



OUR COMMON GROUND

**The Earth is what we
all have in common.**

WENDELL BERRY

References

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- <https://ourworldindata.org/emissions-by-sector>
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A photograph of a dense forest of tall evergreen trees, likely pines or firs, standing against a clear, pale blue sky. The trees are closely packed, creating a dark green canopy. In the foreground, there's a hint of a grassy area.

Thank
you!!