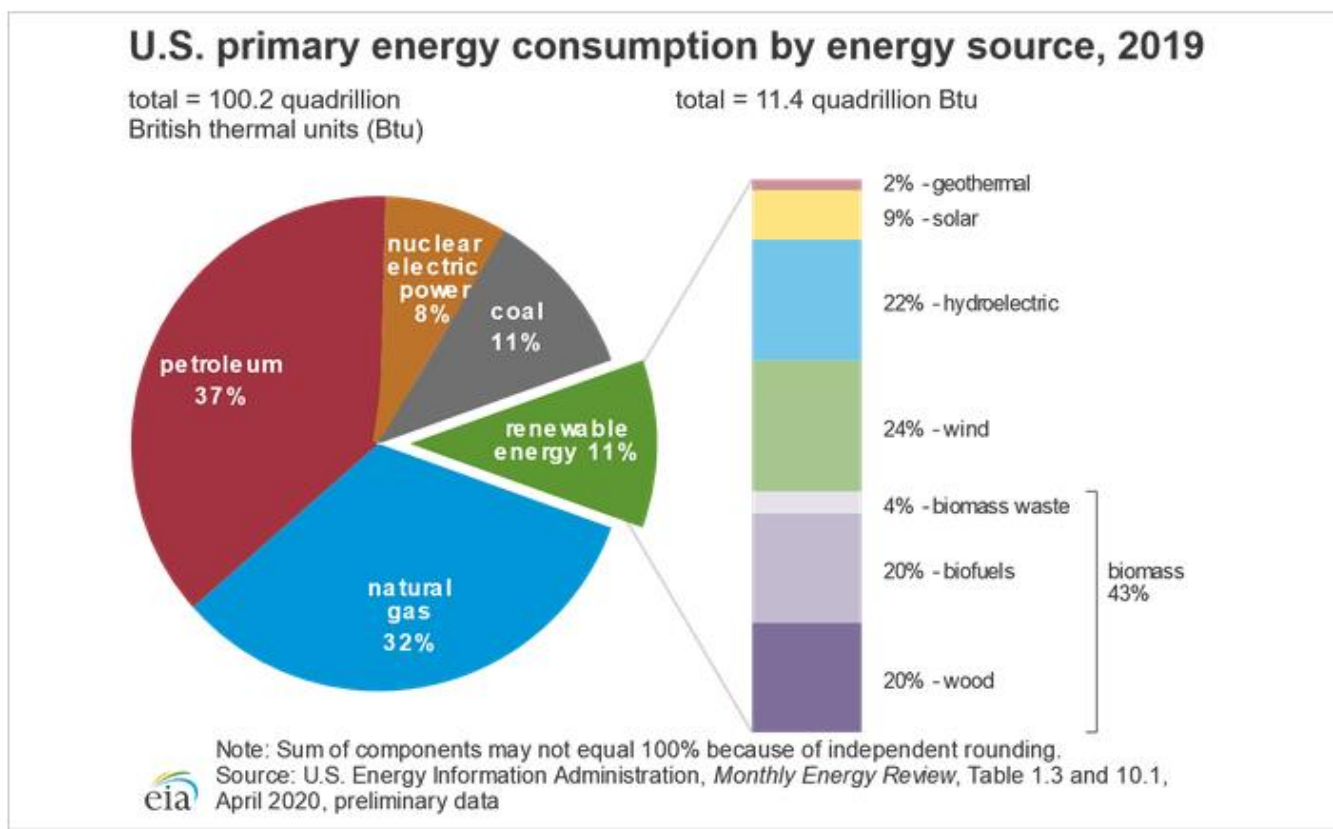




Example Task

LEARN ABOUT RENEWABLE ENERGY

Wind, waves, tides, sunlight, geothermal heat, and biomass are sources of energy that are replenished without human intervention and on a human timescale. That is why energy derived from these sources is called renewable. Renewables can replace conventional fuels such as oil, coal, and natural gas in electricity generation, heating, transportation, and off-grid energy services.



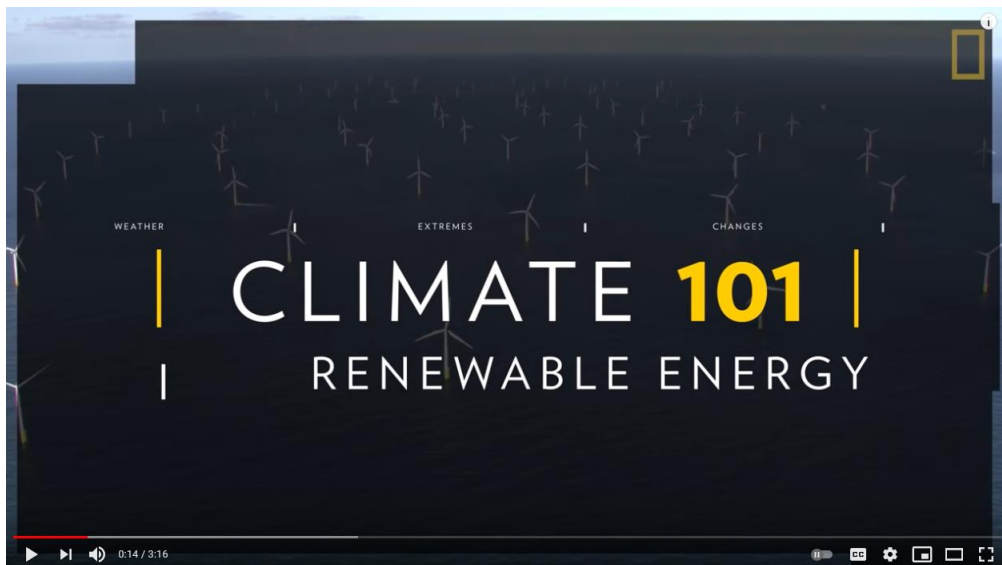
Renewable energy sources are being used to generate an increasing share of US electricity.

They were the source of about 17% of total electricity generation in 2019 compared to 11% in 2018. Here's a list of the major types:

- **Wind** – uses moving air to spin a turbine connected to a generator
- **Solar** – two types: photovoltaic (PV) and solar-thermal power; PV conversion produces electricity directly from sunlight, a solar-thermal power system uses steam turbines connected to a generator
- **Hydropower** – uses flowing water to spin a turbine connected to a generator
- **Geothermal** – uses steam turbines connected to a generator
- **Biomass** – is burned directly in steam-electric power plants, or it can be converted to a gas that can be burned in steam generators, gas turbines, or internal combustion engine generators

Renewable energy sources play an important role in reducing greenhouse gas emissions. Using renewable energy to generate electricity can reduce the use of fossil fuels, a major source of greenhouse gas emissions.

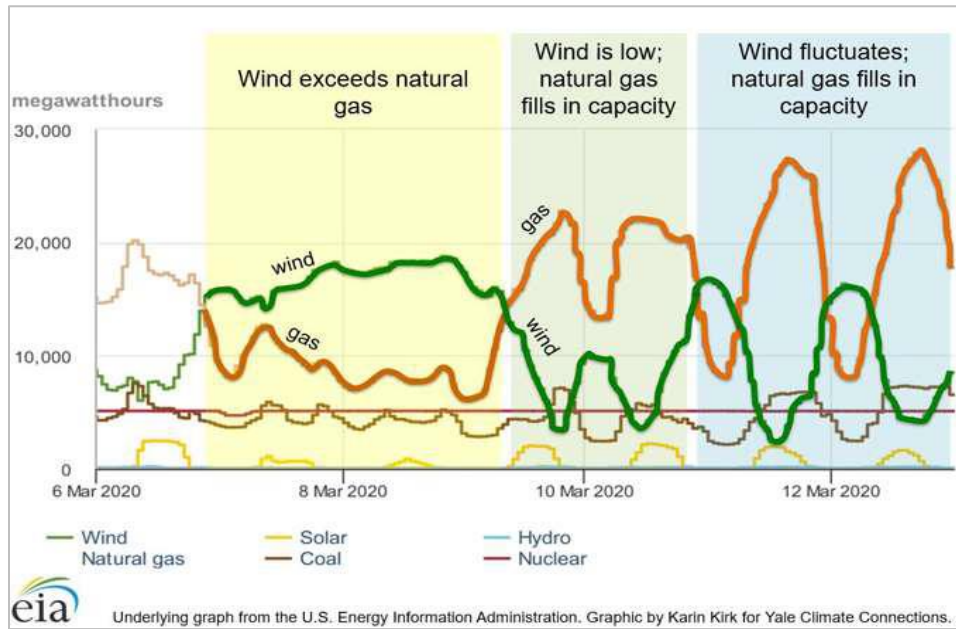
Watch the video below to find out what the benefits of renewable energy are and how it can help humans combat climate change.



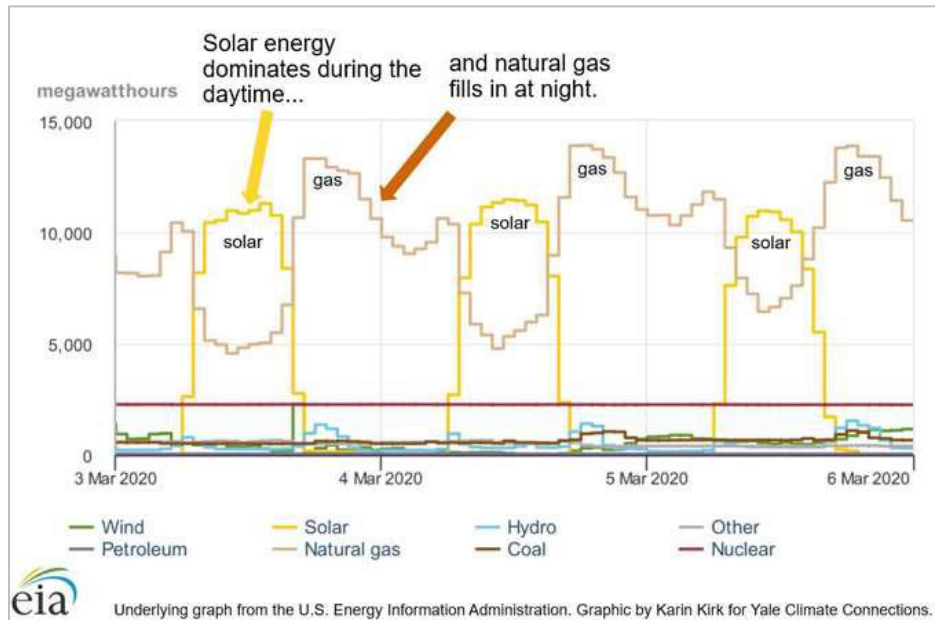
Link: <https://www.youtube.com/watch?v=1kUE0BZtTRc>

Use the following graphs to discover the mix of energy sources used to generate electricity in different regions of the country.

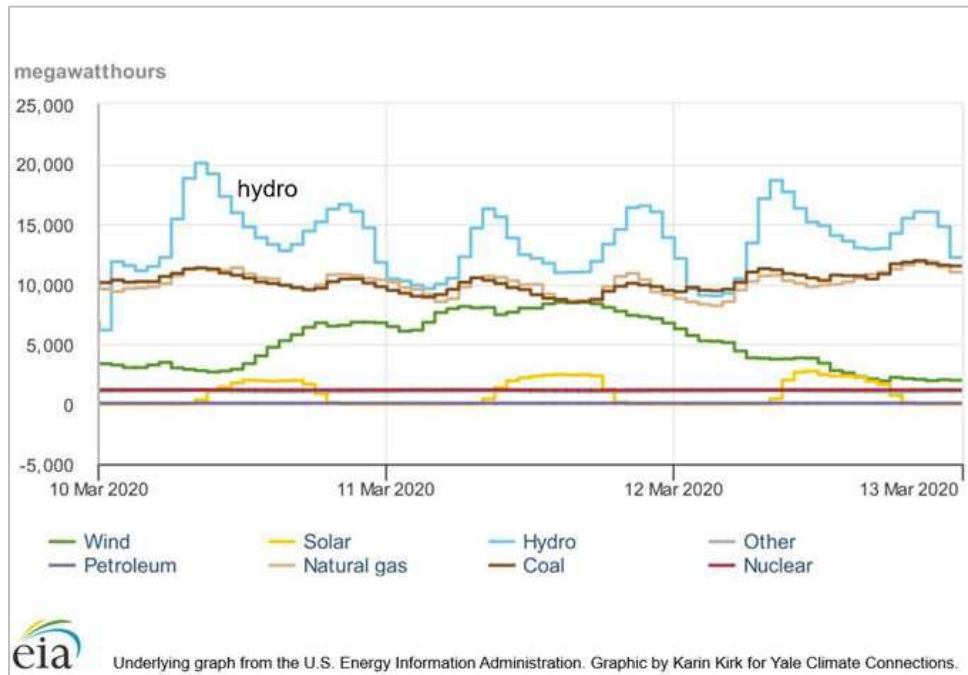
In **Texas**, wind-based generation leads, natural gas generation follows.



In **California**, solar energy supplies electricity during the day, natural gas at night.



In the **Pacific Northwest**, hydro-based generation leads, natural gas and coal follow close behind.



As you have seen in the graphs, there is not one solution but many. **What's the solution where you live?**

What is the mix of energy sources your local electric utility uses to generate electricity?

Do some research to identify what kind(s) of renewable energy sources your local power plant uses to supply your community, school, or home with electricity! Check all that apply.

- Biomass
- Geothermal
- Hydropower
- Solar
- Wind

How many students participated in this task? _____

Submit