RENEWABLE ENERGY 101

Renewable energy is energy that is derived from sources that can naturally replenish – or renew over time. These energy sources are alternatives to more finite or limited energy sources like fossil fuels. Renewable energy can be derived from a variety of sources and processed and converted into many forms of energy.

The term "renewable energy" can describe various forms of energy, such as bioenergy, geothermal energy, hydropower, marine energy, solar energy, and wind energy.

Renewable energy is essential for mitigation efforts for climate change as it provides environment-friendly energy that we can use to power daily processes such as powering a home or business, charging an electric vehicle, and so much more. For example, we receive more solar energy from the sun in one hour than is used by the entire planet *for a full year*. The anticipated potential of energy generated from the ocean using kinetic (movement) or thermal (heat) energy would also greatly outmatch the energy we consume.

Some renewable energy sources like wind, solar, marine, geothermal, and hydropower also allow for energy to be consumed without releasing carbon or methane emissions, which is essential for reducing greenhouse gases and pollution in the atmosphere.

As of September 2023, over 400 companies have pledged to go 100% renewable in partnership with the climate organization Renewable Energy 100 (also known as RE100). Companies that have pledged include Apple, Google, Meta, Pepsico, and Starbucks.

Green Schools Campaign

RENEWABLE ENERGY AROUND YOU!

In 2022, [over 20% of all energy generated within the United States came from renewable energy sources](). This means you've probably seen renewable energy technologies such as wind turbines spinning in the breeze or solar panels soaking up the sun – and you may have even used renewable energy in your home!

Renewable energy could also be a lot closer to you than you might expect! Think about solar panels on the roof of your house or school, which would be an example of solar energy. Think about your school or schools around you. Are they environmentally friendly? Are there solar panels or wind turbines at your school? Schools are not often thought of as hubs of renewable energy, however, many recent organizations have been taking steps to change that.

Recently, there's been a push to provide further access to renewable energy in schools and there has been [a myriad of subsidies or grants]() to support these efforts.

US schools are estimated to [emit 78 million metric tons of CO2 each year](), a number which could be almost completely diminished through a transition to renewable energy and environmentally friendly practices. This effort would be the equivalent of removing 17 million cars from roads.

It is also estimated that US schools shifting to renewable energy and implementing green retrofits to existing buildings [could provide 935,000 jobs per year, around 270,000 of which would be construction or on-site maintenance positions](). Green efforts in schools also provide further opportunities for students to engage with science, technology, engineering, the arts, and mathematics (STEAM) in ways that directly benefit them and their community.

For example, the recently enacted Inflation Reduction Act (IRA) now provides tax benefits for schools that switch to renewable energy by subsidizing (paying for part of) the cost of switching to those systems. The IRA also incentivizes the use of clean vehicles, such as electric school buses. [Schools can also receive benefits for simply taking measures to become more increase efficiency](), such as by improving the heating, cooling, ventilation, and hot water systems and upgrading the insulation! Thinking about this, what are ways that your school or schools around you are becoming or could become more energy efficient?

THINK….

What would it mean for you to go "renewable"? What would or does it look like in your community? What would the world around you look like if it was committed to renewable energy?

If this is a future you would like to see, you can get involved with the Green Schools Campaign to advocate for and create a community dedicated to environmental consciousness and change!

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