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Can Nuclear Energy Help Fight Climate Change—and If So, How?



Nuclear energy is a powerful way to make electricity, and it could help us fight climate change. But how does it work, and why does it matter for our planet?

Let's start with how electricity is usually made. Most of the world's electricity comes from burning fossil fuels like coal, oil, or gas. These fuels create a lot of energy, but they also release gases like carbon dioxide into the air. These gases trap heat in Earth's atmosphere. This is what causes climate change, which makes our planet warmer and weather more extreme.

Nuclear energy works differently. It does not burn fuel. Instead, it splits tiny parts of atoms in a process called fission. This splitting releases heat, which is used to boil water. The steam from the water turns a turbine, which creates electricity. This process does not release carbon dioxide into the air. That's why nuclear energy is called a clean energy source—it doesn't add to climate change.

Some people are unsure about using nuclear power. They worry about safety and what happens to the leftover materials, called nuclear waste. These materials can stay dangerous for a long time and must be stored carefully. But many scientists say that with the right safety rules, nuclear energy can be a smart part of the solution.

Other clean energy sources, like solar and wind power, are also very important. But they don't always work when the sun isn't shining or the wind isn't blowing. Nuclear power plants can make electricity all day and night, in any weather. This helps provide a steady supply of energy without pollution.

In the fight against climate change, we need many solutions. Using nuclear energy safely and wisely could be one way to reduce the pollution that's heating up our planet.