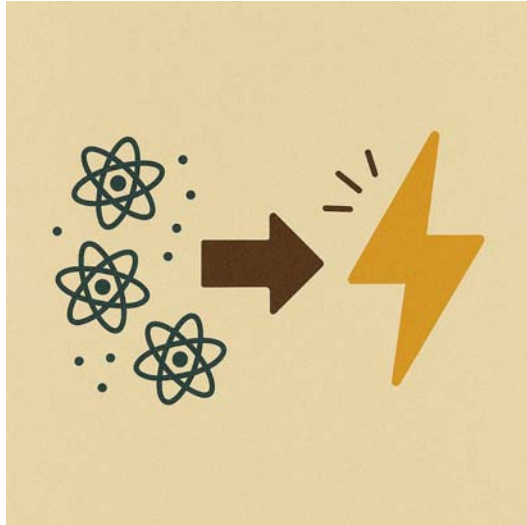


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How A Nuclear Power Plant Turns Tiny Atoms into Electricity

Have you ever wondered how we get electricity from something as small as an atom? At nuclear power plants, this happens every day. These special places use a process called nuclear fission to create lots of energy.

Atoms are tiny parts of everything around us. Inside the power plant, a certain type of atom called uranium is used. When uranium atoms are split apart, they release heat. This splitting process is called fission. It happens inside a large machine called a reactor.

So, how does heat become electricity? The heat from fission boils water to make steam. The steam spins a big fan-like machine called a turbine. The turbine is connected to a generator, which creates electricity. This electricity then travels through power lines to homes, schools, and even whole cities.

Nuclear power is different from other energy sources like coal, gas, wind, or solar. One reason is that it makes a lot of energy from a small amount of fuel. It also doesn't create air pollution or smoke like burning coal does. That's why many people call nuclear energy "clean."

But nuclear power has some challenges too. If something goes wrong inside the reactor, it could be dangerous. Also, the leftover materials, called nuclear waste, need to be stored safely for many years. Scientists are always working on better ways to make nuclear power safer and cleaner.

Still, nuclear power helps many places keep their lights on, even when the sun isn't shining or the wind isn't blowing. It's a powerful way to turn tiny atoms into energy for millions of people.