The world's largest fusion reactor, as tall as 6 buildings in Japan

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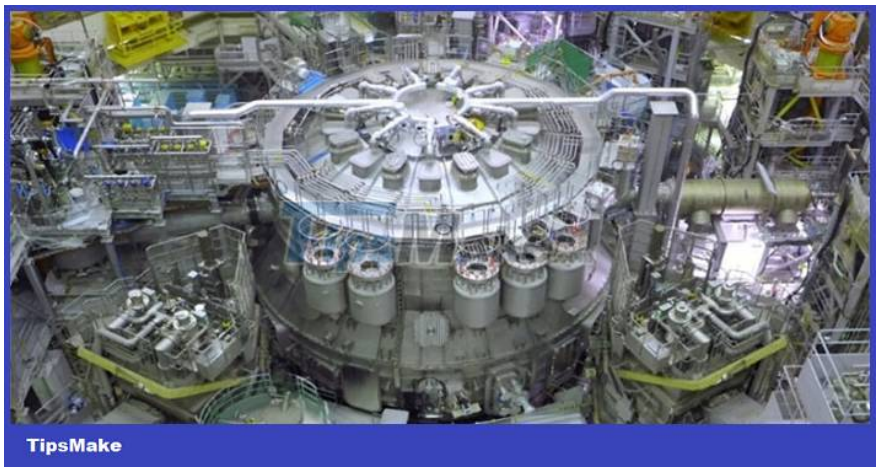
Unlike fission energy used in current nuclear power plants, which splits two nuclear atoms in half, fusion energy fuses these two atoms.



The goal of the JT-60SA reactor is to test its safety, not emit carbon, produce more energy than it consumes (net energy), and see if it can be deployed on a large scale.

The JT-60S reactor includes an annular tokamak furnace, used to hold a rotating plasma stream hot up to 200 million degrees Celsius.

JT-60S is a collaborative project between more than 500 scientists, engineers and more than 700 companies across Europe and Japan. JT-60S is the predecessor of a larger version called the International Thermal Nuclear Experimental Reactor (ITER), under construction in France.

The goal of both projects is to force hydrogen atoms to fuse into the heavier element helium, releasing energy in the form of light and water creating net energy.

JT-60SA is considered the world's most advanced tokamak furnace, which will bring people closer to fusion energy.

Fusion is currently a primitive technology but has less risk of accidents and produces less radioactive waste than today's power plants, and is seen as the answer to future energy needs.