

FAMU SPHEROMAK:

FUSION ENERGY for DISTRIBUTED ENERGY RESOURCES



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Deploy modular fusion reactors – Spheromaks – as distributed energy resources (DERs) and integrate them into the Smart Grid

Spheromak Turbulent Physics Experiment (STPX)



A spheromak is a toroidal confinement plasma where the magnetic fields are produced by currents flowing in the plasma and the toroidal field disappears at the wall.

STPX, the world's largest spheromak reactor, is a high-temperature plasma device that achieved first plasma on July 17, 2012 with plasma temperatures of 300 eV and 600 kA plasma currents.

The Smart Grid

"Smart Grid" generally refers to a class of technology people are using to bring utility electricity delivery systems into the 21st century using computer-based remote control and automation.

The "grid" amounts to the networks that carry electricity from the plants where it is generated to consumers. The grid includes wires, substations, transformers, switches and much more.

Distributed Energy Resources (Energy Providers)



Application

The main application of spheromaks would be as distributed energy resources (substations) for situations such as car charging stations and battery farms.

