CAES Computer-Assisted Virtual Environment (CAVE)
The Center for Advanced Energy Studies is a research consortium between Boise State University, Idaho National Laboratory, Idaho State University, University of Idaho, and University of Wyoming.

www.caesenergy.org
The CAVE at CAES

“enter” their data or get a multi-dimensional view of how their completed work might look.

The Computer-Assisted Virtual Environment – or CAVE - at the Center for Advanced Energy Studies (CAES) provides a new way for researchers to analyze data.

Exploring the CAVE

Today’s scientists and engineers rely on computer modeling and simulation to conduct cutting-edge research and invent world-changing technologies.

But high-performance computer modeling systems have limits. Researchers can rotate and manipulate 2D images on a computer screen, but cannot
How does the CAVE™ work?

The four-panel system uses rear projection to display computer graphics on three walls and the floor. By wearing stereo glasses to create depth perception and holding a “wand” to manipulate and control data, users can tour a building that is still under design, plot a new transmission route over terrain, open a valve, or delve into the core of a nuclear reactor.

Certain kinds of data such as LIDAR (Light Detection and Ranging) can be loaded fairly quickly into the system while other information might require additional formatting.

Quick Facts

- CAES operates the CAVE as a user facility so universities, government agencies, and industry can use it to solve various technical problems.

- CAES and Idaho National Laboratory (INL) have provided three portable 3-D visualization systems to Boise State University, Idaho State University, and University of Idaho to help bolster their modeling and simulation capabilities.