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## Researchers: Power 'supergrid' something to consider

URBANA, Ill. (AP) — Imagine a system of underground pipes crisscrossing the United States through which electricity and hydrogen fuel zip to places that need them most, ending energy shortages such as California experienced in 2000 and 2001.

Such a system would be expensive but is technologically feasible, says a University of Illinois scientist.

"We don't see any showstoppers to doing this," said electrical and computer engineering professor Tom Overbye. "In 20 years, we can envision this system being built."

Overbye and five other U of I professors were part of a national review panel that explored the possibility.

The proposed energy "supergrid" would involve low-temperature superconducting lines wrapped around a hollow center through which liquid hydrogen would flow, acting as a coolant.

The grid could move large amounts of electricity over long distances quickly with little loss, unlike the current regional or local power grid systems, which are designed to accommodate power production close to the user.

It could move power efficiently from remote nuclear plants, coal-fired power plants and alternate sources like wind-energy farms.

Additionally, the scientists say, hydrogen could be extracted for use to fuel a new generation of vehicles powered by hydrogen fuel cells.

The review panel concedes that such an endeavor would not come cheaply. Its report said the cost "could well reach the order of \$1 trillion over 50 to 100 years at an average rate of perhaps \$10 billion a year using a combination of public and private funding."

Overbye compared the potential government investment to the interstate highway system. The supergrid would be like an interstate for moving energy and would connect to regional and local distribution systems, he said.

Although the technology exists to build such a grid, it must be refined and must become less expensive, the researchers said.

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