



## A Dam failure in Missouri

Posted by [Heading Out](#) on December 14, 2005 - 10:35am

Topic: [Alternative energy](#)

Tags: [dam](#), [pumped storage](#), [taum sau](#) [\[list all tags\]](#)

Normally, tragic though it is, I would not comment on the dam failure that occurred in Missouri. However reports are that the [upper Taum Sauk Lake Dam](#) has failed, causing a flood of water to flow down the Black River Valley. UPDATE [here](#)

The Lake is part of a [pumped storage](#) system put in for balancing electric power supplies. Essentially, when demand is light, the turbines pump water from a lower reservoir up into an upper lake. Then at times of high demand the water flows back through the turbines generating [350 Megawatts](#) of power.

The system is useful since the use of coal power for electricity generation is best applied to systems that run under steady load. Load however fluctuates during the day. Thus the storage and then use of power using the pumped storage concept is, to a degree, similar to a large battery in the system. The power station can run under steady load, and the variations are provided for by running the turbines in either direction depending on the level of demand.

Oil and gas fired power plants are more flexible and thus do not require this type of control, since the fuel flows can be more easily controlled. (Think of the difference between a coal fire and a gas stove).

---

The initial cause of the failure is blamed on heavy rain, but it should be noted that the dam is located relatively close to the New Madrid Fault. Small vibrations in a wet soil could make the potential for failure that much higher.

The site is [federally licensed](#)



This work is licensed under a [Creative Commons Attribution-Share Alike 3.0 United States License](#).