



About the dams

Hydroelectric power is created by one of the most common forces on earth – gravity. A dam's ability to produce hydroelectric power involves converting mechanical energy into electrical energy.

Water flowing through a dam turns turbines. The turbines are connected to generators, which convert the mechanical force of the turning turbine into electrical energy. From there, transformers change the electrical energy into the various voltage levels suitable for industrial and residential use.

One key element in determining how much hydroelectric power can be generated is the distance that the water falls. The level of water above the dam is called the head; the level below the dam is called the tailwater. The difference between the two is called the net headwater.

The importance of these factors is best seen during flood conditions. Hydroelectric generation is hindered when too much water flows through the system. Why? Because, while the head remains fairly constant, the tail rises and the net head is reduced. A smaller net head means less generating capacity.

Hydroelectric generation is maximized by uniform flow. The system of natural lakes, man-made reservoirs and flowages on the Wisconsin River help us make flow more uniform. Water is stored in the reservoirs in the spring and during rainy periods and then released to supplement natural flow in drier seasons.