

People Can Use Hydropower

Early settlers used **water wheels** to grind grain and run sawmills. Factories used water wheels to run their machines. In many countries, water wheels are still used.

Water wheels can use the energy of moving water. A water wheel has buckets around a big wheel. The buckets fill with water at the top of the wheel. The weight of the water turns the wheel and dumps the water at the bottom.

Moving Water Can Make Electricity

Moving water can be used to make **electricity**. First, a **dam** is built across a river. This stops the water and makes a big lake behind the dam. This lake is called a **reservoir**.

When gates in the dam are opened, water flows down big pipes called **penstocks** and turns giant wheels, called turbines. The **turbines** power **generators** to make electricity. The first hydropower plant was built on the Fox River in Appleton, Wisconsin, in 1882. Today, there are more than 2,200 dams in the United States that make about six percent of our electricity.

Hydropower is Clean Energy

Hydropower is a clean source of energy. No fuel is burned, so the air is not polluted. It is the cheapest source of electricity because the water is free to use. And we won't run out of water—it is renewable.

The reservoirs are used for swimming, fishing, boating, and other sports. When dams are built, the reservoirs flood a lot of land. They change the flow of the rivers. Sometimes, fish can't swim up the rivers and lay their eggs like they could before, so dams have **fish ladders**, elevators, and other devices to help fish move up the river.

