

The next great improvement in water power was in the 19th century, when the modern water turbine was invented. The turbine was a kind of engine that used the energy of moving water to create power for industrial use. And this turbine design was improved over the years, making it a very efficient machine for powering industry.

At the end of the 19th century, two important things happened. First, hydroelectricity was developed: electricity could be generated from water power. Second, a way was invented to take this electricity over long distances, along power lines.

By the early 20th century, hydroelectric power plants, which included dams, were being built on rivers all over the United States. The famous Hoover Dam, on the Colorado River, was completed in 1936. Today, hydroelectric power is the most common form of **renewable energy** in the world!

Hydroelectric power is relatively cheap, and unlike power plants that burn non-renewable resources like coal, hydroelectric power doesn't directly cause air pollution. But there are still some problems.

For example, when a dam is built as part of a hydroelectric power plant, the environment, including plant and animal life, is affected. Hydroelectric power is not the perfect solution to our energy problems.

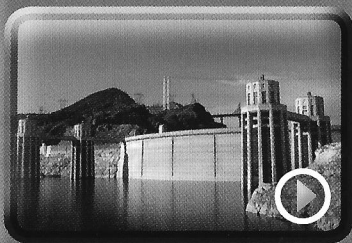
An interesting new idea for water power involves storing⁹ the power from other renewable energy sources, such as wind turbines, when more power is generated than is needed at a particular time. This can be done by pumping¹⁰ water up a mountain to a reservoir¹¹ and storing it there. Then, when power is needed, the water is let out of the reservoir so it can generate hydroelectricity.

⁹**store:** put something somewhere and not use it until you need it

¹⁰**pump:** move a liquid with a machine

¹¹**reservoir:** a place where water is kept before it goes to people's houses

Video Quest



Hoover Dam

Watch this video to learn about the Hoover Dam. How does it use falling water to create electricity?

The Cruachan Dam in Scotland is a pumped storage hydroelectric plant

